About the Korea Development Institute

KDI, established in 1971, is an independent policy-oriented research organization and a leading think-tank of the Republic of Korea. It has contributed to policy making and institutional reform by conducting research in many areas, including macroeconomics, finance, fiscal policy, social security, labor, industry, trade, economic law, and the economy. It has developed into a comprehensive policy institute of international recognition by taking up diverse roles and functions.

The Public and Private Infrastructure Investment Management Center, the affiliated body of KDI, started its operations in 1999, serving as a gatekeeping agency of the Government of the Republic of Korea, then to procuring economic and social infrastructure, and enhancing efficiency and transparency of public and private infrastructure investments.

About the Asian Development Bank

ADB’s vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region’s many successes, it remains home to two-thirds of the world’s poor: 1.8 billion people who live on less than $2 a day, with 903 million struggling on less than $1.25 a day. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.
## Contents

List of Tables and Figures vi
Abbreviations vii
Foreword ix
Preface x
Acknowledgments ix
Executive Summary xii
  Volume 1: Institutional Arrangements and Performance xiv
  Volume 2: Cases of Build–Transfer–Operate Projects for Seaports
  and Build–Transfer–Lease Projects for Educational Facilities xxvi
Attachment: Global Country Comparison of Public–Private Partnership
  Frameworks and Projects 1
Introduction 3
  Public–Private Partnership Framework of India 7
    Global Comparative Framework—Part 1: Development 7
    Global Comparative Framework—Part 2: Tender 23
    Global Comparative Framework—Part 3: Service Delivery 38
    Global Comparative Framework—Part 4: Completion 42
  Public–Private Partnership Framework of Republic of Korea 46
    Global Comparative Framework—Part 1: Development 46
    Global Comparative Framework—Part 2: Tender 61
    Global Comparative Framework—Part 3: Service Delivery 75
    Global Comparative Framework—Part 4: Completion 78
  Public–Private Partnership Framework of United Kingdom 81
    Global Comparative Framework—Part 1: Development 81
    Global Comparative Framework—Part 2: Tender 102
    Global Comparative Framework—Part 3: Service Delivery 122
    Global Comparative Framework—Part 4: Completion 128
  Public–Private Partnership Framework of Australia 132
    Global Comparative Framework—Part 1: Development 132
    Global Comparative Framework—Part 2: Tender 151
    Global Comparative Framework—Part 3: Service Delivery 170
    Global Comparative Framework—Part 4: Completion 176
Part 2: Country Case Studies of Public–Private Partnership Projects 179
  Port Project of India 181
    Project Summary 181
    Legal, Regulatory, and Institutional Framework 184
<table>
<thead>
<tr>
<th>Project Type</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Road Project of India</strong></td>
<td>190</td>
</tr>
<tr>
<td>Project Summary</td>
<td></td>
</tr>
<tr>
<td>Legal, Regulatory, and Institutional Framework</td>
<td>194</td>
</tr>
<tr>
<td>The Procurement Process</td>
<td>196</td>
</tr>
<tr>
<td>Contractual Arrangements</td>
<td>201</td>
</tr>
<tr>
<td>Outcomes, Issues, and Key Lessons Learned</td>
<td>205</td>
</tr>
<tr>
<td>Key Words and Metadata</td>
<td>207</td>
</tr>
<tr>
<td><strong>Education Project of Japan</strong></td>
<td>209</td>
</tr>
<tr>
<td>Project Summary</td>
<td></td>
</tr>
<tr>
<td>Legal, Regulatory, and Institutional Framework</td>
<td>212</td>
</tr>
<tr>
<td>The Procurement Process</td>
<td>214</td>
</tr>
<tr>
<td>Contractual Arrangements</td>
<td>217</td>
</tr>
<tr>
<td>Outcomes, Issues, and Key Lessons Learned</td>
<td>219</td>
</tr>
<tr>
<td>Key Words and Metadata</td>
<td>224</td>
</tr>
<tr>
<td><strong>Education Project of the Republic of Korea</strong></td>
<td>225</td>
</tr>
<tr>
<td>Project Summary</td>
<td></td>
</tr>
<tr>
<td>Legal, Regulatory, and Institutional Framework</td>
<td>227</td>
</tr>
<tr>
<td>The Procurement Process</td>
<td>229</td>
</tr>
<tr>
<td>Contractual Arrangements</td>
<td>231</td>
</tr>
<tr>
<td>Outcomes, Issues, and Key Lessons Learned</td>
<td>231</td>
</tr>
<tr>
<td>Key Words and Metadata</td>
<td>232</td>
</tr>
<tr>
<td><strong>Port Project of the Republic of Korea</strong></td>
<td>233</td>
</tr>
<tr>
<td>Project Summary</td>
<td></td>
</tr>
<tr>
<td>Legal, Regulatory, and Institutional Framework</td>
<td>236</td>
</tr>
<tr>
<td>The Procurement Process</td>
<td>238</td>
</tr>
<tr>
<td>Contractual Arrangements</td>
<td>242</td>
</tr>
<tr>
<td>Outcomes, Issues, and Key Lessons Learned</td>
<td>245</td>
</tr>
<tr>
<td>Key Words and Metadata</td>
<td>246</td>
</tr>
<tr>
<td><strong>Health Project of the Philippines</strong></td>
<td>248</td>
</tr>
<tr>
<td>Project Summary</td>
<td></td>
</tr>
<tr>
<td>Legal, Regulatory, and Institutional Framework</td>
<td>250</td>
</tr>
<tr>
<td>The Procurement Process</td>
<td>251</td>
</tr>
<tr>
<td>Contractual Arrangements</td>
<td>254</td>
</tr>
<tr>
<td>Outcomes, Issues, and Key Lessons Learned</td>
<td>256</td>
</tr>
<tr>
<td>Key Words and Metadata</td>
<td>257</td>
</tr>
<tr>
<td><strong>Water Supply Project of the Philippines</strong></td>
<td>259</td>
</tr>
<tr>
<td>Project Summary</td>
<td></td>
</tr>
<tr>
<td>Legal, Regulatory, and Institutional Framework</td>
<td>267</td>
</tr>
<tr>
<td>The Procurement Process</td>
<td>270</td>
</tr>
<tr>
<td>Contractual Arrangements</td>
<td>274</td>
</tr>
<tr>
<td>Outcomes, Issues, and Key Lessons Learned</td>
<td>279</td>
</tr>
<tr>
<td>Key Words and Metadata</td>
<td>285</td>
</tr>
<tr>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td><strong>Road Project of the United States</strong></td>
<td>287</td>
</tr>
<tr>
<td>Project Summary</td>
<td>287</td>
</tr>
<tr>
<td>Legal, Regulatory, and Institutional Framework</td>
<td>290</td>
</tr>
<tr>
<td>The Procurement Process</td>
<td>291</td>
</tr>
<tr>
<td>Contractual Arrangements</td>
<td>293</td>
</tr>
<tr>
<td>Outcomes, Issues, and Key Lessons Learned</td>
<td>295</td>
</tr>
<tr>
<td>Key Words and Metadata</td>
<td>296</td>
</tr>
<tr>
<td><strong>Water Supply Project of the United States</strong></td>
<td>298</td>
</tr>
<tr>
<td>Project Summary</td>
<td>298</td>
</tr>
<tr>
<td>Legal, Regulatory, and Institutional Framework</td>
<td>302</td>
</tr>
<tr>
<td>The Procurement Process</td>
<td>303</td>
</tr>
<tr>
<td>Contractual Arrangements</td>
<td>305</td>
</tr>
<tr>
<td>Outcomes, Issues, and Key Lessons Learned</td>
<td>308</td>
</tr>
<tr>
<td>Key Words and Metadata</td>
<td>311</td>
</tr>
<tr>
<td><strong>Water and Wastewater Services Project of the People’s Republic of China</strong></td>
<td>312</td>
</tr>
<tr>
<td>Introduction</td>
<td>312</td>
</tr>
<tr>
<td>Public–Private Partnership Financing in Urban Public Projects</td>
<td>312</td>
</tr>
<tr>
<td>Forms of Public–Private Partnership Financing in the People’s Republic of China</td>
<td>314</td>
</tr>
</tbody>
</table>

**Appendixes**

1. Workshop Program and Details
2. Participants’ List
# Tables and Figures

## Tables

<table>
<thead>
<tr>
<th>Table Number</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>8-1</td>
<td>Overview of University Project Finance Initiatives in Japan</td>
<td>210</td>
</tr>
<tr>
<td>10-1</td>
<td>Capital Structure</td>
<td>243</td>
</tr>
<tr>
<td>10-2</td>
<td>Shareholder Structure</td>
<td>243</td>
</tr>
<tr>
<td>12-1</td>
<td>Capital Structure of Maynilad, 2007 and 2008</td>
<td>276</td>
</tr>
<tr>
<td>12-2</td>
<td>Expansion Targets for the West Zone Concession</td>
<td>277</td>
</tr>
<tr>
<td>15-1</td>
<td>Financing Plan of the Nanjing Urban Water Environment Improvement Project</td>
<td>316</td>
</tr>
</tbody>
</table>

## Figures

<table>
<thead>
<tr>
<th>Figure Number</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Overview of Contractual Arrangements for Consortium Members: India</td>
<td>33</td>
</tr>
<tr>
<td>2</td>
<td>Overview of Contractual Arrangements for Consortium Members: United Kingdom</td>
<td>116</td>
</tr>
<tr>
<td>3</td>
<td>Overview of Contractual Arrangements for Consortium Members: Australia</td>
<td>164</td>
</tr>
<tr>
<td>10-1</td>
<td>Structure of Build–Transfer–Operate Projects</td>
<td>236</td>
</tr>
</tbody>
</table>
Abbreviations

Part 1

ADB – Asian Development Bank
BOO – build–own–operate
BOT – build–operate–transfer
BTL – build–transfer–lease
BTO – build–transfer–operate
DMC – developing member country
KDI – Korea Development Institute
MOD – Ministry of Defense
MOSF – Ministry of Strategy and Finance
MRG – minimum revenue guarantee
NBFC – nonbanking finance company
O&M – operation and maintenance
OJEU – Official Journal of the European Union
PFI – Private Finance Initiative
PIMAC – Public and Private Infrastructure Investment Management Center
PPP – public–private partnership
PRC – Public–Private Partnership Review Committee
PSC – public sector comparator
RFP – request for proposal
SOC – social overhead capital
SOPC – Standardisation of Private Finance Initiative Contracts
SPC – special purpose company
SPV – special purpose vehicle
VFM – value for money
VGF – viability gap fund

Part 2

ABS – asset-backed security
BAC – Bids and Awards Committee
BOOT – build–operate–own–transfer
CAO – contract–add–operate
COD – cash on delivery
CTB – Commonwealth Transportation Board
DBFO – design–build–finance–own
DBOOT – design–build–own–operate–transfer
DCRA – Debt and Capital Restructuring Agreement
DEDPI – Detailed Engineering and Design Plan for Implementation
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPR</td>
<td>detailed project report</td>
</tr>
<tr>
<td>EPA</td>
<td>extraordinary price adjustment</td>
</tr>
<tr>
<td>EPC</td>
<td>engineering, procurement, and construction</td>
</tr>
<tr>
<td>FCDA</td>
<td>foreign currency differential adjustment</td>
</tr>
<tr>
<td>GMB</td>
<td>Gujarat Maritime Board</td>
</tr>
<tr>
<td>HCP</td>
<td>Health Care Projects</td>
</tr>
<tr>
<td>IRP</td>
<td>Independent Review Panel</td>
</tr>
<tr>
<td>IRS</td>
<td>Internal Review Service</td>
</tr>
<tr>
<td>JATC</td>
<td>Joint Administrative and Technical Committee</td>
</tr>
<tr>
<td>MEXT</td>
<td>Ministry of Education, Culture, Sports, Science and Technology</td>
</tr>
<tr>
<td>MLTM</td>
<td>Ministry of Land, Transport and Maritime Affairs</td>
</tr>
<tr>
<td>MOA</td>
<td>Memorandum of Agreement</td>
</tr>
<tr>
<td>MoST</td>
<td>Ministry of Surface Transport</td>
</tr>
<tr>
<td>MPIC</td>
<td>Metro Pacific Investments Corporation</td>
</tr>
<tr>
<td>MWSS</td>
<td>Metropolitan Waterworks and Sewerage System</td>
</tr>
<tr>
<td>NCIC</td>
<td>Nanjing Urban Construction (Holding) Group Co.</td>
</tr>
<tr>
<td>NHAI</td>
<td>National Highways Authority of India</td>
</tr>
<tr>
<td>NHDP</td>
<td>National Highways Development Project</td>
</tr>
<tr>
<td>NKTI</td>
<td>National Kidney and Transplant Institute</td>
</tr>
<tr>
<td>NWRB</td>
<td>National Weather Resources Board</td>
</tr>
<tr>
<td>ODA</td>
<td>official development assistance</td>
</tr>
<tr>
<td>PFI</td>
<td>private finance initiative</td>
</tr>
<tr>
<td>PNC</td>
<td>Pusan Newport Co.</td>
</tr>
<tr>
<td>PPTA</td>
<td>Public–Private Transportation Act</td>
</tr>
<tr>
<td>PRC</td>
<td>People’s Republic of China</td>
</tr>
<tr>
<td>PRCL</td>
<td>Pipavav Railway Corporation Limited</td>
</tr>
<tr>
<td>psi</td>
<td>per square inch</td>
</tr>
<tr>
<td>SBLC</td>
<td>standby letter of credit</td>
</tr>
<tr>
<td>SWFWMD</td>
<td>Southwest Florida Water Management District</td>
</tr>
<tr>
<td>TEU</td>
<td>twenty-foot equivalent units</td>
</tr>
<tr>
<td>TIFIA</td>
<td>Transportation Infrastructure Finance and Innovation Act</td>
</tr>
<tr>
<td>TOT</td>
<td>transfer–operate–transfer</td>
</tr>
<tr>
<td>VDOT</td>
<td>Virginia Department of Transportation</td>
</tr>
</tbody>
</table>

**Currency Equivalents**

(as of 30 October 2009)

<table>
<thead>
<tr>
<th>Currency Unit</th>
<th>won</th>
</tr>
</thead>
<tbody>
<tr>
<td>W1.00</td>
<td>$1.00 = W1,184</td>
</tr>
</tbody>
</table>
Foreword

In Asia and the Pacific, infrastructure investment requirements exceed available public financial resources; thus, the private sector needs to play a larger role in financing infrastructure in partnership with the public sector through public–private partnerships (PPPs). Indeed, there is increasing recognition and emphasis among developing member countries (DMCs) of the need to adopt PPP approaches for the development of infrastructure. Experience has shown that PPP approaches in infrastructure and social service delivery enable governments to use private sector efficiency and investments to improve services for citizens. At the same time, many DMCs experience difficulties in implementing PPP projects.

The Republic of Korea has had rich experience in implementing PPP projects for almost a decade. This experience can provide valuable lessons for most DMCs, and that merits wider dissemination. The two-volume report prepared by the Korea Development Institute (KDI) presents an in-depth assessment of the different components of the PPP framework of the Republic of Korea, including comparing and contrasting the success factors of the Korean PPP model with the experience of other countries through presentations on PPP frameworks and multisector case studies.

The Asian Development Bank (ADB) works with governments to disseminate knowledge, develop capacity, assist in formulating reform agendas, strengthen governance, and create conditions conducive to implementing PPP projects. This publication aims to support the efforts of DMCs engaged in the development of appropriate institutional PPP framework and regulatory reforms along with a well-defined and transparent financial assistance and risk-sharing framework, for facilitating private sector involvement through PPPs. With this publication, ADB hopes that governments, the private sector, and civil society will benefit from the experiences of other countries to understand choices in PPP approaches and eventually to contribute to infrastructure and economic development in Asia and the Pacific.

This knowledge-sharing work was conducted under the regional technical assistance project, Knowledge Sharing on Infrastructure Public–Private Partnerships in Asia (Project Number: 42105-01, financed by the Republic of Korea e-Asia and Knowledge Partnership Fund). Anand Chiplunkar of the Sustainable Infrastructure Division of the Regional and Sustainable Development Department is the task manager of the project. KDI is the implementing agency. We would like to thank the team of experts at KDI, led by Jay-Hyung Kim, for the completion of this report. The successful PPP workshop in Seoul, Republic of Korea in May 2009 also greatly contributed to compiling other country frameworks and case studies for this report. To this end, we thank all the contributors, panelists, and participants in the workshop.

Xianbin Yao
Director General
Regional and Sustainable Development Department
Asian Development Bank
With 15 years of experience in a public–private partnership (PPP) program, the Republic of Korea is often viewed as establishing institutional settings and a matured market. The government has initiated various policies that have facilitated infrastructure financing through PPP approaches. Comprehensive and clear definition of PPP procurement steps—to secure or enhance value for money (VFM)—through a special law and regulations has been an essential element to improve consistency and efficiency and to reduce uncertainty in implementing PPP projects in the country.

The Ministry of Strategy and Finance (MOSF) of the Government of the Republic of Korea is responsible for managing PPP projects, and the Public and Private Infrastructure Investment Management Center (PIMAC) at the Korea Development Institute (KDI) supports MOSF in various ways. The mission and roles of PIMAC, prescribed in the PPP Law, include (i) supporting MOSF in formulating a basic plan for PPP; (ii) supporting the competent authorities and ministries in the procurement process, such as assessment of feasibility and VFM for potential PPP projects, formulation of the request for proposal, designation of the concessionaire, and promoting foreign investment in PPP projects through consultation services and other related activities; and (iii) developing and operating capacity-building programs for public sector practitioners. Along with this technical assistance, PIMAC conducts policy research related to PPP programs and provides policy advice to MOSF and procuring ministries.

Under the Technical Assistance Collaboration Agreement with the Asian Development Bank (ADB), recognizing the need to facilitate PPP in developing member countries, KDI produced this publication based on the Korean experience of PPPs over the last decade. The publication presents not only case studies on institutional arrangements for PPP in the Republic of Korea but also the policies and evidence of maximizing benefits and VFM of PPP while minimizing downsides and risks.

This publication was prepared by PIMAC. I am deeply grateful to the Government of the Republic of Korea, and would like to give special thanks to MOSF for providing valuable support and encouragement. I also would like to thank other ministries and agencies of the government for providing supporting materials and data for the PPP analyses.

Jay-Hyung Kim
Managing Director
Public and Private Infrastructure Investment Management Center
Korea Development Institute
Acknowledgments

We are deeply grateful to the Government of Korea, especially to the Ministry of Strategy and Finance, for providing valuable support and encouragement. We also thank the Ministry of Land, Transport and Maritime Affairs in the Republic of Korea for aiding in the analysis.

The authors are indebted to Woo Ho Kim and Jong-Phil Lee of the Korea Maritime Institute, and to GaHyun Choi of the Korea Fixed Income Research Institute for their contributions to analyzing PPP seaport facility cases or financial models. We thank Ki-Soo Kim and Seyong Kim of the Public and Private Infrastructure Investment Management Center (PIMAC) at the Korea Development Institute (KDI) for the review of and discussion on the volume 2 manuscript. We are also grateful to all participants in the international conference, Knowledge Sharing on Infrastructure Public–Private Partnerships in Asia, held in Seoul in May 2009, which was organized by KDI and the Asian Development Bank (ADB) in collaboration with the ADB Institute and World Bank Institute. Special thanks are extended to Oh-Seok Hyun, President of KDI; Yong Geol Lee, vice minister, Ministry of Strategy and Finance of the Government of the Republic of Korea; and Ursula Schaefer-Preuss, vice-president, Knowledge Management, ADB, for attending the opening ceremony of the conference. I deeply appreciate Anand Chiplunkar, Theresa Audrey O. Esteban, and Woochong Um of ADB who provided assistance and encouragement during the entire process of this publication. Special acknowledgment goes to the staff of KDI, Yoo-Eun Koh and Wonah Seo for their devoted efforts. I also would like to thank Yun Ju Lee and Dong-Young Shin of KDI for their careful editing of the manuscripts. Special thanks is extended to Fred Donovan who carefully edited and proofread the entire manuscript. Lastly, all efforts and contributions of those who, one way or another, provided assistance to this publication are gratefully recognized.
Executive Summary

Background

Following decades of rapid economic growth, the Republic of Korea found itself at the beginning of the 1990s with a serious shortage of infrastructure facilities, such as roads, railways, seaports, and airports. The government, judging there would be limits to its ability to fund the needed construction of infrastructure facilities, had come to feel the need to induce private sector participation in infrastructure investment as an alternative means of replenishing infrastructure. The government began to push for public–private partnership (PPP) projects in earnest with the August 1994 enactment of the Act on Promotion of Private Capital Investment in Social Overhead Capital.

Because of the financial crisis that hit the Republic of Korea in late 1997, however, the promotion of PPP projects fell into a slump. So, the government made an across-the-board amendment, called the Act on Private Participation in Infrastructure, in December 1998, which called for, among other things, reinvigorating PPPs through various government policy supports, including the minimum revenue guarantee (MRG). The government modified this law again in January 2005, expanding the range of facilities covered from economic infrastructure—such as transport facilities like roads, railways, seaports, and environmental facilities—to social infrastructure, such as schools, military residences, housing and welfare facilities for the aged, and cultural facilities. It introduced the build–transfer–lease (BTL) method in addition to the existing build–transfer–operate (BTO) method, expanding the scope of participation in PPP financing and diversifying opportunities. In October 2009, the MRG was abolished and replaced by the government support measure of compensation of base cost where the government shares investment risk within the limit of government’s cost in case the project was conducted as a public project.

Chronologically, the changes in the nation’s PPP project characteristics can be roughly divided into four periods. Phase I covers the period from the 1960s to August 1994, during which the nation sporadically conducted PPP projects based on individual laws that applied to road and port projects.

Phase II covers the period from the enactment of the Act on Promotion of Private Capital Investment in Social Overhead Capital in August 1994 to March 1999, just before its comprehensive revision in the Act on Private Participation in Infrastructure. During this period, the government set clear criteria on concession periods, user fees, and government support, as well as more clearly specified project implementation processes. Despite these changes designed to encourage private investment, private investment sharply declined due to the financial crisis that hit the nation in late 1997. The amount of actual PPP activity during this period remained quite sluggish. From the viewpoint of policy makers, the immediate aftermath of the financial crisis was a period when they badly needed expanded private investment in social infrastructure to stimulate the economy and foreign direct investment to upgrade the Republic of
Korea’s sovereign credit rating to overcome the financial crisis. During this period, there was an even greater need to reinvigorate PPP projects. The government therefore took steps to make a wide range of systemic improvements, including enactment of the Act on Private Participation in Infrastructure in December 1998.

Phase III spans the period from early 1999 to 2004, during which time the government introduced various support systems to reinvigorate private investment projects, including the MRG. The government attempted to solve various problems that had been continuously raised in the course of promoting PPPs. Such measures included removing artificial divisions of facilities eligible for PPP support, diversifying project promotion patterns into solicited and unsolicited projects, requiring feasibility and appropriateness studies for the selection of projects, establishing the Public and Private Infrastructure Investment Management Center ([PIMAC] formerly known as the Private Infrastructure Investment Center of Korea), improving the Korea Infrastructure Credit Guarantee Fund system, establishing and operating an infrastructure fund, and granting private-sector buyout rights.

Finally, Phase IV covers the period from the introduction of the BTL method in January 2005, during which the government revised the Act on Private Participation in Infrastructure, expanding the categories of PPP projects from economic production facilities to social and residential facilities. Also, it diversified the PPP implementation methods, such as implementing the BTL method on solicited projects.

The PPP market in the Republic of Korea has grown and developed into a stable and highly profitable financial market thanks to the government’s systemic support and management to vitalize the PPP program over the past decade or so. The PPP market has solidified its position as a new mode of raising funds to make up for insufficient government funding. Private sector interest is increasing, and the government through various policies is working to reinvigorate PPP financing, as part of its effort to upgrade its PPP promotion strategy. As of the end of 2008, more than 400 projects were under way. Out of those, about 110 BTO projects and 140 BTL projects have been completed and are in operation.

Recently, there has been growing demand in the Republic of Korea to set up a sound fiscal management system for PPP projects. PPP investment has long been treated separately from publicly financed investment and was not included in the accounting and regulation of government expenditures. In terms of settling government subsidy between the competent authorities and the private concessionaire, contracting future payment obligations for 20–30 years and forecasting future expected or contingent government revenues, there is a need to develop a fiscal guideline to define proper level of private sector participation, and the investment portion against the budget and suggested criteria for project selection. The government is considering linking the PPP implementation and investment plans to the government budget within the medium-term expenditure framework.

This study is divided into two volumes of case studies from the Republic of Korea’s experience with PPP infrastructure projects, along with appendixes. The first volume examines the institutional framework of the Korean PPP system, its performance, and recent strategies and initiatives for effective PPP implementation and management. The government’s latest policy measures intended to reinvigorate PPP investment in the aftermath of the recent global financial crisis are included as well. The second
volume summarizes cases involving BTO port and BTL educational facility projects. In the appendixes, a global country comparison is provided, including country PPP frameworks and case studies.

Volume 1: Institutional Arrangements and Performance

Institutional Settings

The first volume of this report describes the details of institutional settings for PPPs in the Republic of Korea. The volume examines the legal framework for PPPs, decision organizations, procurement schemes, government support for land expropriation, financial and tax incentives, concession termination conditions, and training and educational programs for capacity building.

The PPP Act and the Enforcement Decree, the principal components of the legal framework for PPPs, clearly define eligible infrastructure types, procurement types, procurement processes, the roles of the public and private parties, policy supports, etc. The act is a special act that supersedes other acts. The act exempts PPP projects from strict government regulation in the area of national property management and allows a special purpose company (SPC) to play the role of competent authority.

The hierarchy of the legal arrangements for PPPs is

- PPP Act,
- PPP Enforcement Decree,
- PPP Basic Plan, and
- PPP Implementation Guidelines.

The PPP Act lays out the PPP Basic Plan and PPP Implementation Guidelines, which together address, in detail, policy directions, procurement steps, and government supports.

The PPP Act directs the Ministry of Strategy and Finance (MOSF) and PIMAC to issue the PPP Basic Plan. The Basic Plan provides PPP policy directions, PPP project implementation procedures, financing and refinancing options, risk allocation mechanisms, payment schemes for government subsidies, and documentation instructions. PIMAC developed the PPP Implementation Guidelines to improve transparency and objectivity in PPP implementation. Continuous development of the act and related regulations demonstrates a strong commitment on the part of the government to strengthen the private sector’s confidence in the PPP program.

Major players in the PPP program include the MOSF and the concerned line ministries. The MOSF is responsible for implementing the PPP Act, PPP Enforcement Decree, and PPP Basic Plan. The MOSF is responsible for preparing the draft budget for PPPs as well. An important issue concerning the interplay among MOSF and the line ministries is that of fiscal discipline. Given that PPPs involve both the government and the private sector and that the line ministries are the initial contact points and do not frequently keep the MOSF informed, the MOSF often has trouble in managing PPP projects. Therefore, the MOSF exercises tight control on public expenditures in the
implementation stage. Ministries are required to spend within the limits set in the quarterly budget implementation plan. When deemed necessary, the MOSF is able to postpone or block part of PPP program expenditures.

Under the PPP Act, the PPP Review Committee (PRC) is organized and managed by the MOSF. The PRC considers matters concerning the establishment of major PPP policies and key decisions in the process of implementing large-scale PPP projects. The committee is composed of the minister of finance and strategy (chair), vice ministers of line ministries in charge of implementing PPP projects, and private sector experts with knowledge and experience in PPP projects.

The mission and roles of PIMAC are prescribed in the PPP Enforcement Decree. They include supporting the MOSF in the formulation of the PPP Basic Plan; supporting the competent authorities and ministries in the procurement process, such as assessment of feasibility and value for money (VFM) for potential PPP projects, formulation of the request for proposal, designation of the concessionaire, evaluation of project proposals by private companies, negotiation with potential concessionaire, etc.; promoting foreign investment in PPP projects through consultation services and other related activities; and developing and operating capacity-building programs for public sector practitioners. Besides the technical assistance described above, PIMAC conducts policy research related to PPP programs and provides policy advice to the MOSF and procuring ministries.

Under the PPP Act, 46 infrastructure facility types in 15 sectors are eligible for PPP procurement. By listing eligible facility types in the PPP Act, the government aims to induce private capital to invest in the sectors where additional investment is needed for the benefit of the public. Some argue, however, that the listing of eligible facility types may restrict the flexible and innovative application of PPP procurement to new types of facilities. These critics recommend modification of the act for more comprehensive application.

Eligible procurement methods are divided into build–transfer–operate (BTO) and build–transfer–lease (BTL), depending on the structure of the PPP project. Other procurement methods, such as build–operate–transfer (BOT) and build–own–operate (BOO), are applicable as well. PPP projects are categorized into solicited and unsolicited, depending on who initiates the project. For a solicited project, the competent authority, central or local government, identifies a potential PPP project and solicits proposals from the private sector. In the case of an unsolicited project, the private sector identifies a potential PPP project and requests designation of the project as a PPP from the competent authority. The concessionaire is selected under a competitive bidding process, although the initial proponent may obtain extra points in the bid evaluation.

In order to facilitate PPP implementation, the PPP Act grants land expropriation rights to the concessionaire. The concessionaire may entrust the competent authority or the local government with the following responsibilities, execution of the land purchase, compensation for loss, resettlement of residents and others. The overall process of land acquisition or expropriation for public works, such as infrastructure facilities and public buildings, is prescribed by the Land Acquisition Act. Unless a special provision is provided in the PPP Act or related laws, the procedures under the Land Acquisition Act apply to the expropriation or use of land needed for the imple-
vement of PPP projects. Under the Land Acquisition Act, land acquisition is carried out by the concessionaire.

The government promulgates various kinds of policies that can facilitate infrastructure financing. More specifically, the government provides (i) construction subsidies, (ii) compensation for base (raw) cost, (iii) infrastructure credit guarantees via the Infrastructure Credit Guarantee Fund, (iv) tax incentives, and (v) guidelines for early termination payment.

**Trends and Current Status**

In 1995 when PPP projects were first introduced, W400 million was invested in PPP projects (mostly in BTO projects), which was just 0.5% of total social overhead capital investment. However, by late 2008, W3.7 trillion was invested in PPPs, taking up about 17.3% of total social overhead capital investment.

As of September 2009, a total of W66.1 trillion had been invested in 203 BTO projects. These projects were in various stages of development: 110 completed, 44 under construction, 19 in preparation for construction, 24 under negotiations, and 6 preparing to announce request for proposal (RFP). Of these projects, concessionaires were chosen and concession agreements signed for 173 projects. By sectors, there were 61 road projects, 11 railway projects, 17 port projects, 64 environmental facilities, 5 logistics projects, and 45 other types of construction projects, including parking lots and culture and tourism projects. Of the 203 projects, 86 were national projects and 117 were local projects.

Among the signed BTO projects, the annual rate of return in real terms was 9.12% in 2000; this gradually declined to 8.13% in 2004, 6.66% in 2006, falling sharply to 5.13% in 2008.

To promote BTO projects, the government provides subsidies during the construction phase and subsidizes operations through MRGs. Unlike other government support, such as fixed construction subsidies, government guarantees create higher fiscal risks because it is harder to estimate the costs and benefits. Through MRGs, the government guarantees private investors a fraction of expected revenue for a project. If revenue falls below the guaranteed level, the government pays the investor the difference. As of the end of 2008, about W1,390.3 billion in MRG subsidies had been paid to private project companies. Early projects started operation but generated only 50% of expected demand on average. Large amounts of government payments were provided as MRG subsidies annually.

One criticism of the MRG system was that the government took most of the risk, but provided unreasonably high returns to private participants. Higher MRG levels implied more risk transfer from private participants to the government. Another criticism of the MRG system was that the project company may display moral hazard behavior by not trying its best to increase revenue. The worst case of the moral hazard problem arose in projects where the main user of the facility was the project company, such as with port projects. Various efforts were initiated by the government to mitigate the burden from its MRG commitments. One of the most direct efforts was consultation with the project company to develop plans for increasing
Executive Summary

revenue. Other efforts included preparing refinancing guidelines. When the project company refinanced, the company and the government would split the refinancing gains.

In an October 2009 revision of the PPP Basic Plan, the government abolished the MRG scheme. In order to improve PPP project structure, a new risk-sharing structure was developed, under which the government shares investment risk with the private company by compensating the base (raw) cost of the project, calculated as the sum of private investment cost and the interest rate of government bonds. Projects covered by the new structure are government-solicited projects with significant public benefits.

As of September 2009, a total of 242 BTL projects were under way, involving a total investment of W12.2 trillion. These include: 8 signed projects, 92 under construction, and 142 in operation. Among the BTL projects, 136 are projects for primary and middle schools, 56 are for environmental sewage facilities, 10 are for military residential facilities, and 18 are for cultural facilities.

The infrastructure fund is a vehicle that indirectly invests money in PPP projects. This vehicle is established and operated according to the PPP Act. The infrastructure fund is a mutual fund that invests in infrastructure PPP projects. Because it is a special purpose mutual fund, the infrastructure fund is subject to the Act on Business of Operating Indirect Investment Assets (unless the PPP Act directs otherwise). The PPP Act supports the infrastructure fund by exempting it from the Fair Trade Act. This allows the infrastructure fund to hold more than what the Fair Trade Committee allows (listed corporation: 30%; non-listed corporation: 50%). In 2005, the asset size of the infrastructure fund, assisted by recent economic growth in emerging Asian market, increased by 71% compared to the previous year, making its asset value $98.1 billion. This was the result of low interest rates and the pension funds’ expanding investment in the infrastructure fund in order to secure more stable long-term returns. As more funds flowed into private equity funds, in June 2006, the inflow of funds increased by 50% compared to only 2% in early 2000, and the amount raised by issuing stocks was $29 billion, which was more than 7 times the amount raised the previous year.

**Implementation Procedure**

The PPP Act and the PPP Enforcement Decree regulate general procurement procedure for PPP projects. The PPP Basic Plan formulated under the PPP Act provides detailed implementation processes by project types and initiation and defines the roles of associated parties, such as competent authority, private company, the MOSF, line ministries, and PIMAC for each step in the process. A comprehensive and clear definition of the PPP procurement steps in the special law and regulations has been an essential element to improve consistency and efficiency and to reduce uncertainty in implementing PPP projects.

The procurement procedure is designed to secure or enhance value for money (VFM) of PPP projects. In the planning stage, an assessment of a potential project is carried out to ensure VFM of PPP procurement in comparison with traditional public procurement. In the bid selection stage, competitive bidding is mandatory, both for solicited and unsolicited projects; this leads to improving VFM of the project concerned by encouraging bidders to propose higher service quality and reduced project costs.
To secure accountability and conformity of PPP projects with the national infrastructure investment plans and policies, the PPP Act requires the MOSF and the PRC to deliberate on large PPP projects whenever they pass gateways to the next procurement step.

In addition, standard guidelines have been developed by PIMAC for documentation, such as performing a VFM study and formulating an RFP and a PPP contract, to facilitate the procurement process and enhance consistency.

**Ex-Post Management, Refinancing, and Renegotiation**

Up to now, the PPP program has been focused on the ex-ante stage of the projects, meaning project selection and project inducement. However, as more projects enter into the operational phase, issues about the efficiency of project management and contract renegotiation will be highlighted; these issues arise in the ex-post stage. Thus, it is important to understand the progress of PPP projects and their ex-post management system.

Currently, PPP projects in the Republic of Korea are managed by the appropriate competent authority (for example, the Ministry of Land, Transport and Maritime Affairs, the Ministry of Environment, the Seoul Metropolitan Government, the Busan Metropolitan City, etc.) and the management structure is stipulated in each concession agreement. Each competent authority manages projects by implementing guidelines for concession agreements and receiving project progress reports.

The competent authorities must check on all PPP projects on a quarterly basis and submit the results to the MOSF. In addition, they must input status data on a quarterly basis for each project into the InfraInfo System (http://InfraInfo.kdi.re.kr), a database of PPP projects. The MOSF and PIMAC administer the system. The database includes financial status, project progress, and fiscal support-related information.

To carry out fair performance evaluations, the competent authority must form a performance evaluation committee consisting of government officials, the project company (SPC or operator), and experts in the relevant field. The project company first submits a self-evaluation report, which is reviewed by the competent authority. The performance evaluation committee then can decide whether to conduct an additional independent evaluation by a third party. For each evaluation item (e.g., availability, safety and durability, service satisfaction, etc.) the PPP project is given an evaluation grade (e.g., grade A through D) and then scored according to the grade. Weights are given to evaluation items (using methods such as the analytic hierarchy process) to calculate final evaluation results.

A survey was conducted of major stakeholders of BTO road projects currently in operation—competent authorities, project companies, and experts—about user satisfaction, the performance of BTO projects, and other issues. To find out the level of user satisfaction, interviews were conducted with 200 users of three BTO toll roads. E-mail surveys were conducted with 200 people, such as public officials, project company employees, and experts related to the BTO projects.

The results of this survey show that different groups of stakeholders have different perceptions about the performance of BTO projects. In the survey of users, those
who use BTO roads were found to be largely satisfied with the services despite more expensive tolls than government-financed roads. Although the BTO toll roads provide the greatest advantage for shorter travel time compared with alternative roads, a reduction in the price of tolls appeared to be the most important task to increase user satisfaction. The survey of project companies, competent authorities, and experts demonstrated a perception gap between project companies and competent authorities on the performance of BTO projects. While project companies and experts had positive perceptions of BTO projects, competent authorities had somewhat negative responses. This can be attributed to the financial burdens caused by subsidies and MRGs, and additional administrative burdens from higher tolls, outside auditing, and civil complaints.

Results of the surveys of BTL projects’ stakeholders showed that satisfaction levels were high among students, principals, and administrative chiefs for school construction and operation. Stakeholders also had positive appraisals regarding attainment of the BTL’s purposes and VFM. It is noteworthy that the high appraisal of school operation indicates that this new business area of service purchase-type projects is successfully taking root.

Refinancing is the process of changing the project consortium’s equity structure, investment share, debt financing condition, etc. Refinancing clauses were added to the 2004 PPP Basic Plan. Then, in 2007, PIMAC developed Guidelines for Refinancing to clarify some of the details of refinancing. According to the PPP Act, the competent authority is supposed to share the refinancing gains equally with the project company. The competent authority is directed to use its share of the refinancing gains to lower user fees. However, if the competent authority finds that lowering the user fees is inappropriate considering the characteristics of the individual project, then it can lower the MRG level, reduce the concession period, or other similar measure to use refinancing gains.

PIMAC plays a critical role in refinancing. The PPP Basic Plan states that the center should provide advice or act as an intermediary in case of dispute. According to the guidelines, PIMAC must review and validate the financial models, the refinancing gain estimation, and the alternatives for using the refinancing gains before negotiation. As of the end of 2008, six BTO projects had been completely refinanced, and five more projects were in the process of refinancing.

Renegotiation means an adjustment or change in the concession agreement. Terms and conditions of the concession agreement can be renegotiated when the PPP policy or the project scope changes. Renegotiation is also possible when the government wants to rebalance the use of facilities among government facilities and PPP facilities. The PPP Basic Plan and the concession agreement describe the detailed situations where renegotiation is permitted, and how renegotiation proceeds.

Evidence of Cost Savings and Efficiency Gain

This study analyzed the efficiency of PPP projects from the perspectives of three parties: users, concessionaires, and the government. The study examined the risks each party takes and whether the risk sharing schemes are appropriate. From the perspective of users, efficiency can be divided into an analysis of the level of user fees (toll fees and passage fares on PPP roads and railways) based on financial
models and renegotiation issues involving concession agreements. Users pay fees such as tolls for roads and passage fares for railways to use private facilities. By comparing and analyzing the level of user fees between government-financed and private-investment projects, the paper examined whether the difference in user fees between government and PPP projects has decreased over time in relation to experience with PPP projects. The results of comparison found that the difference in user fees between government and PPP projects has steadily decreased in proportion to accumulated experience in PPP projects.

For PPP projects to be carried out efficiently, one of the most important issues is promoting competition among private participants bidding for the project. The paper examined whether there was enough competition among private participants and analyzed government subsidies given the level of competition and return on risk for private participants. In the past, there was not enough competition for PPP projects among private participants. Some 70% of PPP projects were awarded to a sole bidder, with about 30% involving more than one bidder. The level of competition was examined based on the two types of projects—solicited and unsolicited. What is noteworthy is that there was no significant difference in the level of competition between solicited and unsolicited projects. With solicited projects, the problem of asymmetric information among private participants is less serious compared to unsolicited projects. Therefore, more competition among solicited projects would be expected. Real data, however, indicated that there was no significant difference in the level of competition between solicited and unsolicited projects and that many solicited projects were awarded to a sole bidder. The results suggested that bidding for solicited projects may have been carried out less efficiently. Project data by year, however, showed that the number of bidders has increased over time, indicating that PPP projects have become more efficient.

Results of estimated rates of return for private investment projects showed that the real rate of return stands at about 6%–9%, and nominal rate of return at about 11%–14%. The premium against 5-year government bond yield was around 6%–9%. The results of estimation of appropriate rates of return—based on different types of risk and agreement terms across road, railway, and seaport projects—showed that most projects were guaranteed very high rates of return. The appropriate level of premium varied depending on individual projects, but it was around 2%–4% against a 5-year government bond yield on average. The rate of return for private participants in PPP projects was much higher than their level of risk. The good news is that the premium rate of return against a 5-year government bond yield has decreased year by year, which indicates improved efficiency of PPP projects.

Most issues with PPP projects are related to the government, directly or indirectly. The most direct issue is the government subsidy, which is injected into both government-financed and PPP projects. This study examined two cases. According to results of analysis for Project A, if the level of revenue from toll fees falls to less than 66.25%, it would be more efficient to carry out a government-financed project. If the level is at least 66.25%, it would be more efficient to carry out a PPP project. Results also showed that the level of revenue from toll fees in this project must be 80% or higher, at which point the government begins redemption. When the level is at least 80%, the government can begin redemption without having to offer a subsidy, thereby reaping profits. In Project B, if the level of revenue from toll fees falls to less than 75.20%, it would be more efficient to carry out a government-financed project. The
government can begin redemption without offering a subsidy when the level is at least 103%.

The analysis concluded that PPP projects in the Republic of Korea have become more efficient from the perspectives of users, concessionaires, and the government. The key results include (i) user fees of PPP facilities approached those of public facilities over time, (ii) the rate of return to private participants relative to the risks they bear declined thanks to the increased competition in the bidding process, and (iii) the subsidy provided by the government decreased over time. The improved efficiency of PPP projects in the Republic of Korea has been reflected in concession agreements. Overall, concession agreements have developed in the direction of protecting the interests of users and reducing the uncertainty for private participants as well as for the government.

**Evidence of Contribution of PPPs to the National Economy**

The promotion of PPP projects is expected to have ripple effects on the national economy through three channels: economic growth resulting from the inflow of private capital, increased social welfare resulting from the timely delivery of social services and the early realization of social benefits, and reduction in the government’s fiscal burdens through better VFM.

As of the end of 2008, private financial resources of more than W20 trillion had been invested through PPP projects, resulting in estimated gross domestic product (GDP) growth of 0.198% based on the 2008 standard price.

The 14 PPP road projects were opened about 2 years ahead of schedule, resulting in the early realization of social benefits worth about W1.45 trillion. If the 14 PPP road projects had been implemented with government financing alone, their completion and operation would likely have been delayed; thus, the PPP projects have made the early realization of social benefit possible. If the projects had been completed 3 years earlier, the benefit would be about W2.47 trillion, and if the projects had been completed 4 years earlier, the benefit would be about W3.3 trillion.

Based on the results of several experimental VFM tests, VFM enhancement from 66 BTO projects was estimated to reach about W891 billion, while VFM from 30 BTL projects was estimated to be W89.6 billion. In the case of BTO projects, it was estimated to have secured an additional ex-post VFM worth W142.5 billion from the selected 11 projects. The analysis of BTL projects found that they were reducing both cost and time overruns, which worked to enhance the efficiency of investment in social infrastructure facilities. In the case of BTL projects, total project cost was reduced by 10.18% and the construction period shortened by 8.04%, resulting in an advantage over government-financed projects in terms of efficiency.

Although the effects for each category can be separated theoretically, they may overlap to a considerable extent in reality. Therefore, it is necessary to take considerable care in discussing the effects of PPP projects.

**Budgeting, Reporting, and A Safeguard Ceiling for PPPs**

A key to PPP projects is whether a government can maintain fiscal adequacy and stability through the use of PPPs. The growing interest in PPPs has increased the need
for clear rules for budgeting and accounting. An important issue in the Republic of Korea is how to report PPP projects to and get approval from the National Assembly. Even if the government drives a large-scale PPP project forward, which can involve large-scale borrowing, the total project amount must be limited to a suitable amount for maintaining fiscal soundness and sustainability.

There is considerable controversy on the budgeting and reporting rules for PPPs in the Republic of Korea. Some argue that the present value of government payments should be counted as liabilities, and the government should get approval of PPP contracts from the National Assembly in advance. Others argue that the government obligation arising from a PPP contract, which is a service contract, does not constitute a liability and does not need approval from the National Assembly.

The MOSF sets the investment ceiling for BTL projects for the fiscal year and reports this ceiling to the National Assembly in advance of the annual budget submission. In case of BTO projects, however, the fiscal costs and risks associated with them would then be disclosed. This disclosure rule is consistent with the 2004 recommendation from the International Monetary Fund (IMF) that if a government carries the majority of the risk in a PPP project, the government is the economic owner of the asset even where the private partner is the legal owner of the asset.

According to an amendment to the PPP Act, beginning with the 2010 budget year, all BTL projects should be reviewed and pre-approved by the National Assembly. The details of the BTL projects should be reported in advance to the National Assembly with the government budget documents. Future payment obligations for BTL projects, along with the significant terms of the project contracts that may affect the amount, timing, and certainty of future government budget payments (valued to the extent feasible) should be reported. The result of the VFM test on each project should be submitted as well. In the case of BTO projects, there is no change: fiscal costs and risks associated with BTOs would be disclosed as usual.

This study estimated the government’s fiscal burdens and commitments from implemented and planned PPP projects, focusing on their effects on fiscal management in the past and in the future. The study estimated PPP effects on future fiscal commitments by categorizing them into three types. First, the study estimated the amount of fiscal burden from BTO projects that have already been signed and have fixed terms and conditions. Second, it estimated the amount of fiscal burden expected from BTO projects currently being promoted or planned by the government. Third, it estimated the amount of government payments to BTL projects based on two scenarios (Scenario 1 and Scenario 2). Finally, the study analyzed the amount of government disbursements that would be needed to provide MRGs.

The results of the analysis suggested a few policy implications. First, the amount of public financing for signed BTO projects is not yet at a level that can affect the stability of fiscal management; the forecast amount is expected to be far less than the 2% ceiling. Second, the size of the fiscal commitment for planned BTO projects in the medium-term PPP Plan is within the 2% boundary of fiscal stability. However, the amount of public financing could increase if any of the planned BTO projects are signed and implemented. Third, if the government carries out BTL projects within the ceiling of W37.6 trillion from 2005 to 2015, and after that, offers government payment in installments as in Scenario 1, there would be no fiscal problem. However,
if the government carries out BTL projects over the same time period at a total of W81.6 trillion, the government would face difficulty in maintaining the stability of fiscal management. This would have a negative effect on the government’s fiscal operation from the increased burden on public financing over time. Therefore, the study recommended that the government concentrate resources on key BTL projects at a moderate financing level, instead of financing projects that amount to W81.6 trillion for a decade or longer. Fourth, even with the aggregate investment amount of signed and planned BTO plus W37.6 BTL projects, total fiscal commitment of public financing may stay within the boundary of 2% guideline under Scenario 1. The discussion thus far has not considered disbursements of the MRG, but any additional MRG disbursements could aggravate fiscal stability. It stressed, therefore, the government should take into account the additional fiscal burdens of MRG disbursements when making policy judgment about the scale of future BTO and BTL.

The study concluded that for the government to maintain fiscal stability and soundness, it should first conduct basic infrastructure projects on a temporary basis for a certain period (for example, 5 years), repay the governmental disbursements, and resume the remaining projects, instead of continuing to launch large-scale PPP projects over a short period of time.

PPP as Alternative Means of Fiscal Stimulus to Deal with the Global Financial Crisis

Although private participation in infrastructure projects has steadily increased since the introduction of the PPP system in the late 1990s, the initiation of new PPP projects has declined sharply as a result of the recent global financial crisis. The number of contracts signed sharply fell in 2008 and 2009, increasing the likelihood that the amount of private investment actually executed will shrink in the future. The number stood at less than 70% of initial projections because of the financial market crisis and delays in project progress. Accordingly, the government has worked out measures for revitalizing PPP projects by providing financial assistance to projects experiencing financing difficulties and by reducing project risks resulting from external factors.

To ease financial burdens from the global financial crisis, the government announced its first revitalization initiative in February 2009 and revised the PPP Basic Plan accordingly. The government has eased financial burdens on concessionaires by lowering the equity capital requirement ratio. The minimum equity capital requirement ratio was 25% for BTO projects and 5%–15% for BTL projects before the crisis. Under the first revitalization initiative, the ratio has been decreased to 20% for BTO projects and 5% for BTL projects. The government has increased by 50% the upper limit of the payment guarantee provided by the Infrastructure Credit Guarantee Fund (from W200 billion to W300 billion) to help ease difficulties in debt financing for large-scale PPP projects. The government improved the system by easing regulations in case of change in composition of equity investors: projects that do not have MRG provisions are now exempt from refinancing profit-sharing obligation in case of simple changes in composition of equity investors.

For BTO projects, when there is a change of 0.5 percentage points or more in the base interest rate (in the case of 5-year bank bonds with credit grades of AAA, for example) in the concession agreement, the government would make up for the change. For BTL projects, the government has reduced the period for readjusting
the benchmark bond yields (on government bonds) from 5 years to 2 years, while replacing or redeeming 60%–80% of the excess or shortage based on the interest rate gap of 50 basis points between government bonds and bank bonds.

In August 2009, the government announced its second revitalization initiative to create an enabling environment for active private investment in PPPs, while minimizing financial burdens. The changes include improvement in project structure, improvement in conditions for funding, and enhanced reliability.

The project structure improvement involves a special temporary arrangement to pay back the invested funds to the concessionaire when the project agreement is terminated due to inevitable reasons. The arrangement modifies the payback calculation method as follows. When the agreement is terminated during the operation period, the depreciation method for invested private funds has been revised from the current declining balance method to the straight line method. This is to increase the capability of raising senior debt by increasing the security solvency of the project. But in the case where the agreement is terminated because of the concessionaire’s fault, subordinated debt and capital are excluded from the calculation of the amount payable in order to encourage greater responsibility on the part of the private operator. The special temporary arrangement is only applicable to new projects in 2009–2010, although it could be applied to projects for which the financing agreements have not yet been signed, according to the judgment of the competent authorities.

The government’s introduction of a new investment risk-sharing method, known as the new risk-sharing structure, is intended to improve the PPP project structure. Under the new risk-sharing structure, the government shares the investment risk with the private company by compensating the base (raw) cost of the project, calculated as the sum of private investment cost and the interest rate of government bonds. The government payment is made to cover the shortfall in the actual operation revenue compared to the share of investment risk by the government. When the actual operation revenue exceeds the share of investment risk, the private company redeems the government subsidies on the basis of and within the limit of the amount previously paid. Subsidies are provided only when the actual operation revenue surpasses 50% of the share of investment risk.

In response to demands for improvement of funding and procurement, the government introduced measures to reduce burdens caused by regulations and restrictions on financial institutions. One measure involves the exclusion of the loan amounts for PPP projects from the parameters used when estimating loans for small and medium businesses. Also, active investment is encouraged by financial companies through inclusion in the major management evaluation category of the contribution level to social overhead capital (SOC) investment projects such as PPPs. This requires a revision to the enforcement regulations by the Financial Supervisory Service.

The government seeks to establish and operate a neutral dispute arbitration organization for fast and fair resolution of disputes (this requires revision of the PPP Act). The organization, tentatively named the Dispute Arbitration Committee for PPP Projects, would conduct fair arbitration of disputes that are difficult for the parties to settle. In addition, PPP projects need to be expanded to include green SOC so that private companies can actively invest in environmental infrastructure projects.
This may include construction of bicycle roads, new renewable energy facilities, and restoration of ecological streams.

**Challenges Ahead**

Because many of the government obligations for PPP projects are long-term commitments, such as government payments for BTL projects and MRG payments for BTO projects, it is important to examine whether the government can maintain fiscal adequacy and stability while promoting PPPs. One solution is to institute a safeguard ceiling: when the government moves ahead with a large-scale PPP project that involves large-scale borrowing, the total project amount would be limited to a certain level suitable for maintaining fiscal soundness and sustainability. The Five-Year National Fiscal Management Plan, 2007–2011 set a limit to the size of the PPP program. Following the United Kingdom practice, the total annual government payment for PPP projects is limited to less than 2% of total government expenditure. The current forecast of PPP projects in 2009 suggests that the figure will reach 1.9%, which means the government can maintain future PPP payments within a sustainable level. To sustain the 2% limit over time, there remain some questions to address for effective implementation and monitoring, which include: (i) who evaluates the ceiling, (ii) when and how often is the ceiling evaluated, (iii) to what extent is the ceiling mandatory, and (iv) how is the ceiling reported to and approved by the National Assembly. Also, the government will need to develop detailed guidelines for implementing the ceiling.

With regard to BTL-related financial obligations, the government has revised the PPP Act, making future government payments for BTL projects subject to review and approval by the National Assembly. This will considerably improve transparency and strengthen fiscal discipline for implementing BTL projects, but more effort will be needed to assess and disclose more comprehensive PPP-related fiscal burdens and risks, including contingent obligations. With regard to accounting treatment of PPPs, there are no globally accepted accounting rules. The government is introducing accrual basis accounting in 2011. Some argue that parts of future government payments for BTL projects should be recorded as assets and related liabilities on the government balance sheet. In deciding accounting rules, the government should examine not only the technical nature of the payments, but also the impact and implications of the newly introduced accounting principles. This issue is currently under review, and a decision is expected in the near future.

Another issue to address is ex-post management of PPP projects. So far, most of the government efforts have focused on improving the procurement process from the project initiation to the construction stage; relatively little attention has been paid to the operational phase. Currently, competent authorities are in charge of managing and monitoring service performance of individual projects. As many projects enter into the operational phase, however, strengthening ex-post management and monitoring has become an important issue. Strict monitoring is required because large amounts of government payments and support are associated with operational performance in the forms of BTL service or MRG payments. Since common problems often arise from the operational stage of projects, the government should develop general and sector-specific standard guidelines for ex-post operation and management of PPP projects.
Also, several issues should be examined regarding refinancing and renegotiation of contracts in the construction and operational phases. Since refinancing is initiated by the private sector for early realization of financial profits, the government must give extra care to ensure that refinancing does not cause project instability or reduce benefits for public users. Therefore, the government should set clear standards and principles for refinancing. Although it is desirable to maintain contract terms throughout the concession period to reduce uncertainty, renegotiation may be inevitable for some PPP projects. A PPP project entails a long-term contract and substantial changes to the business environment or policy objectives may require contract changes to continue with the project and improve VFM. Therefore, the standard concession agreement should include details of renegotiation conditions that ensure flexibility over the long term.

With 15 years’ experience in PPP projects, the Republic of Korea has established appropriate institutional settings and developed a mature PPP market. However, the government is still facing many controversial issues and challenges that need to be solved to move forward to a more advanced stage of PPP development. The PPP system should continue to be improved in the direction of maximizing benefits and VFM, while minimizing downsides and risks.

**Volume 2: Cases of Build–Transfer–Operate Projects for Seaports and Build–Transfer–Lease Projects for Educational Facilities**

In the Republic of Korea, 46 types of infrastructure facilities in 15 sectors are currently eligible for PPP procurement. Among those most active PPP projects involve transport facilities, such as roads, ports, and railways. Also, some PPP projects include social facilities, such as waste treatment facilities, educational facilities, military housing projects, and bachelor’s resident projects.

Although the performance of PPP projects reveals difference among sectors, both economic and social facilities have successfully employed the PPP method. This volume investigates port facilities and educational facilities in detail because these facilities have demonstrated relatively successful PPP implementation. As discussed earlier, BTO and BTL are the most popular PPP methods in the Republic of Korea. Road and port projects tend to employ the BTO method, while environmental and educational projects use the BTL method. Considering that PPP projects involving port and educational facilities have not had much success in developing countries, detailed case studies of those projects in the Republic of Korea could provide useful lessons and provide a good model for replication.

**Build–Transfer–Operate Projects for Port Facilities**

Due to the rapid increase in transport volumes since 1980, the existing port facilities in the Republic of Korea have run into limitations in handling cargo. From 1994 to 2008, transport volumes at ports increased by 4.9% per year on average. Such an increase in transport volume could not be sustained without timely expansion of port facilities; public investment in port facilities has been on a steady rise every year. In 1994, the government invested W400.5 billion to expand port facilities; it increased that amount by 11.6% per year on average until it reached an investment of W1,858.3 billion in 2008. Despite the increase in the public investment in
port facilities, private investment has also been required to develop or expand port facilities over that period of time; in fact, private investment has gradually replaced a portion of the public investment.

The number of PPP projects in port facilities totaled 19, as of early 2009; their aggregate investment amounted to W7,358.4 billion, which accounted for 12.4% of port investment between 1998 and 2005. Private investment through PPPs has been increasing steadily, surging to W810.5 billion in 2008. The annual investment of purely private capital in port facilities (except for construction subsidies) was W152.7 billion in 2002; this amount was expected to reach a peak of W824.4 billion in 2009 before declining gradually to W53 billion in 2015. This decline is expected because most of the port development projects are planned to be developed by 2011.

All 19 PPP port projects have been implemented under the BTO scheme. As of 2009, six are operational: Busan New Port Phase 1, Mokpo New Outer Port Phase 1-1, Mokpo New Outer Port Phase 1-2, Incheon North Port Phase 1-1, Incheon North Port Multipurpose Warf, and Gunsan Bieung Port. Some of the PPP port projects are progressing well with few problems, but others are experiencing troubles in actual management. For example, the Busan New Port Phase 1 Project is operating smoothly, while the Mokpo New Outer Port Project is experiencing problems.

The implementation process for PPPs in port facilities includes (i) designation of a potential PPP project, (ii) formulation and announcement of an RFP, (iii) submission of proposals, (iv) evaluation of proposals, (v) negotiations and designation of a concessionaire, (vi) introduction and approval of the Detailed Engineering and Design Plan for Implementation, (vii) and project completion and operation.

To evaluate the effects of PPPs on port facilities—such as cost reduction vis-a-vis government projects, facility expansion, and diversification of investors—a survey was conducted among private participants in port projects (concessionaires), experts who conducted research and provided advice as well as those involved in evaluating proposals and negotiations, relevant government officials, and lenders. A total of 78 respondents were asked to rate the effects of PPPs on port facility construction on a scale of 1 to 5. The concessionaire group rated the effects of PPPs on port facilities from 3.20 to 3.85, and the policy and advisory groups rated the effects from 3.11 to 3.89. The survey indicates that stakeholders from both the private and public sectors had positive views of PPPs in port facilities. Specifically, the “facility expansion” effect of PPPs was rated highly, and “cost reduction” and “diversifying investors” effects were rated fairly well.

The efficiency effects of PPP projects can be calculated by comparing the costs incurred from PPP projects in concession agreements and the estimated costs from solely public projects. To estimate the cost incurred by public projects, two procurement methods—turnkey bidding and an alternative bidding method—were considered by applying the successful bidding ratios in public port projects to the costs announced in the RFPs for PPP projects. Among the 19 PPP port projects, 17 were analyzed because they involved signed concession agreements; 2 port projects were still under negotiation as of 2008. By comparing the PPP projects with the turnkey-based government projects, the study estimated that W648.7 billion was saved. By comparing PPP projects with the government projects using an alternative bidding method, the study estimated that W342.3 billion was saved.
To date, the rate of return for PPP port projects has been falling. In the Mokpo New Outer Port Project, a 15.1% rate of return was established in the 2000 concession agreement. Recently, the project has experienced a 6% pre-tax actual rate of return and a 7% after-tax actual rate of return. For the most recent case, the Busan New Port Project Phase 2-3, a 6.26% rate of return was established in the 2006 concession agreement. This downward trend is due to a drop in interest rates and improvement in risk management.

So far, all PPP projects for port facilities have been implemented using the BTO scheme regardless of the facility type. The government should consider implementing even profitable facility projects in ways other than the BTO method, if necessary. A possible alternative would be the BTL scheme.

Cargo throughput is highly sensitive to market conditions and, thus, hard to predict. The problem arises especially when the range of possible changes in cargo throughput gets so broad that a private investor or the government is not able to estimate risks. One solution would be to enable changes to be made in the timing and scale of project implementation by linking these to possible changes in cargo throughput. Under this scenario, a concessionaire would be allowed to request application of a trigger rule for a project under construction. This would enable the concessionaire to consult with the government to adjust the timing and scale of the project, which in turn could improve profitability.

Build–Transfer–Lease Projects for Educational Facilities

As the Republic of Korea’s economy has rapidly advanced since the 1990s, demand for quality education has increased. This led to a popular demand to improve educational conditions. In addition, the aging of the population has led to increasing demand for lifetime education, which requires schools to serve also as training and cultural centers for all people. This, coupled with the increased demand for optimal class sizes amid heightened public interest in educational quality, has led to rising demand for adequate educational facilities.

To meet the new demand for educational investment, government in 2005 introduced BTL projects for educational facilities. Since then, BTL projects for educational facilities have attracted considerable investment, with an accumulated total investment in announced projects reaching over W5 trillion. In terms of location, BTL projects for schools have been promoted not only in the metropolitan areas, including Seoul and Gyeonggi-do, but across the entire nation.

As of January 2008, a total of 137 BTL projects for construction of elementary, middle, and high school facilities were ongoing, with an aggregate investment of W5.31 trillion. In 2005, the first year of the BTL scheme for schools, approximately W1.3 trillion was invested in 38 projects; investment peaked in 2006, with W2.4 trillion invested in 58 projects. Total investment fell in 2007 to W1.6 trillion invested in 41 projects. The scale of annual subsidies for investment in school facilities are projected to be up to W1.5 trillion after 2017.

The implementation process for BTL projects in educational facility includes (i) development of a project proposal; (ii) implementation of a feasibility study and VFM test; (iii) submission of a project proposal, determination of total investment ceiling, and
National Assembly approval; (iv) formulation and announcement of project plans; (v) evaluation of project proposal and designation of potential concessionaire; and (vi) conclusion of concession agreement.

The cost overrun analysis of 14 BTL school projects shows that the concession agreements for all of the projects were concluded with costs that did not exceed the estimated project cost or the total project cost announced in the RFPs. The costs for completing school facilities, which are now in operation, also did not exceed the announced limits in the RFPs. Competition among the bidders contributes to trimming the project costs. On top of this, construction risk is transferred to the concessionaire after the signing of the concession agreement; this lessens the demands from concessionaires to increase construction costs. Construction risk for completed projects is shown to decrease by contrasting the estimated construction periods in the RFPs announced in 2005 with actual construction periods. For example, the construction periods of all the projects analyzed were shorter by 8.45% than the estimated construction periods announced in the RFPs.

In surveys of both facility users and school administrators, satisfaction levels for BTL-built schools were higher (based on t-test) than for government-financed schools.

The strengths of using the BTL method for school facilities can be summarized as follows: the BTL projects have demonstrated higher efficiency than government projects by providing timely educational services for ordinary citizens; and major stakeholders, including students, parents, teachers, and officials, generally expressed higher levels of satisfaction with BTL projects.

Most of the BTL projects are at initial stages and have long operational periods; therefore, the government should make greater efforts to strengthen the process of project operation and performance management and take preemptive measures to stave off potential risks. Ongoing projects for educational facilities are primarily focused on new construction and remodeling existing educational facilities for elementary, middle, and high schools, and college dormitories. However, the government should work to diversify the coverage of BTL projects for educational facilities to serve the various expectations of users. To cultivate the minds and bodies of the youth and meet manifold cultural and welfare demands of the community, the government should pay extra attention to building multipurpose cultural, athletic, and welfare facilities; computer and electronic game centers; and academic instruction centers for students of low-income family. Through development of multi-use community complexes, more diverse BTL projects will be able to serve the diverse needs of the residents of all age groups and improve their quality of life.


As part of regional technical assistance, an international conference entitled “Knowledge Sharing on Infrastructure Public–Private Partnerships in Asia” was held in Seoul. Co-organized by the Korean Development Institute (KDI) and the Asian Development Bank (ADB) in collaboration with the ADB Institute and the World Bank Institute, the conference was held on 19–21 May 2009, which attracted 79 global participants including 20 resource persons and 33 invited participants from developing member...
countries (DMCs) for knowledge sharing. Based on presentations made during the conference, the attachment introduces country public–private partnership (PPP) frameworks and PPP project case studies, providing a comprehensive global country comparison.

The first part presents PPP frameworks of four countries: Australia, India, the Republic of Korea, and the United Kingdom. An in-depth description is provided on the regulatory and legal system of PPP, along with processes of PPP project implementation following PPP procurement procedure for each country, using a comparative framework. This part was intended for comparative assessment of different country approaches to PPP program management and implementation.

The second part includes PPP project case studies of several countries in various sectors: six countries (the People’s Republic of China, India, Japan, the Republic of Korea, the Philippines, and the United States) and five sectors (port, road, education, health, and water). Each detailed case study includes the project summary and rationale of PPP implementation. Also the process of PPP project implementation is provided—from preparation, bid, and evaluation to contractual arrangement. Issues and key lessons are contained in the manuscript, along with realized benefits from PPP implementation. Those case studies of PPP in various sectors try to disseminate features of successful PPP experiences and models to developing member countries that are embarking on, or in the initial stages of, launching their PPP programs.
Attachment: Global Country Comparison of Public–Private Partnership Frameworks and Projects
Introduction

The project, “Knowledge Sharing on Infrastructure Public–Private Partnerships in Asia” adopts two components to meet the project objectives:  

(i) conduct a study that  
(a) brings out the salient features of the public–private partnership (PPP) policy, and the legal and supporting financial framework in the Republic of Korea; and  
(b) captures the successful experience in two infrastructure PPP projects that used this framework; and  
(ii) organize a workshop for policy makers from developing member countries (DMCs) that  
(a) disseminates the findings of the study, and  
(b) provides a platform for sharing similar successful experiences in other DMCs of both PPP frameworks and infrastructure projects.

As a part of the project, a 3-day workshop was organized and conducted. The workshop was intended

• to share multisector and multicountry experiences of the PPP approach relevant to infrastructure development,  
• to discuss a successful policy and legal framework of PPPs, and  
• to disseminate features of successful PPP experiences and models.

Co-organized by the Korea Development Institute (KDI) and the Asian Development Bank (ADB), in collaboration with the ADB Institute and the World Bank Institute, the workshop was held on 19–21 May 2009 in Seoul, Republic of Korea. It was attended by 79 participants, including 20 resource persons and 33 invited participants from DMCs. Major activities included

• a comparative assessment of different country approaches to PPP program management and implementation;  
• case studies of PPP in transport, urban, and social sectors;  
• knowledge sharing of country-specific PPP approaches for PPP global capacity building; and  
• field trip to build–transfer–operate (BTO) and build–transfer–lease (BTL) facilities.

Among the 79 participants were representatives from Afghanistan, Bangladesh, Bhutan, Cambodia, India, Indonesia, Kazakhstan, the Kyrgyz Republic, the Lao People’s Democratic Republic, Mongolia, Nepal, Pakistan, Papua New Guinea, the Philippines, Samoa, Sri Lanka, Thailand, and Viet Nam. The organizers also invited resource persons

---

from Australia, Japan, the Republic of Korea, and the United Kingdom for knowledge sharing. Delegates from five international organizations—ADB, ADB Institute, World Bank, World Bank Institute, and United Nations Economic Commission for Europe—were also present during the workshop.

The major accomplishments of the workshop were as follows:

- It was successfully hosted and organized by multiple, international organizations (ADB, ADB Institute, and World Bank), along with KDI.
- It offered a valuable knowledge-sharing opportunity for senior PPP and infrastructure policy makers from both within and beyond the Asia and Pacific region.
- It discussed a successful policy and legal framework for PPPs by comparing and contrasting the Republic of Korea’s PPP approach with that of Australia, Chile, India, and the United Kingdom.
- It disseminated features of successful PPP experiences and models to DMCs that are embarking on, or in the initial stages of, launching their PPP programs and/or projects.
- It built a tight, active network for cooperation and knowledge sharing among participants.

The following sections present some country PPP frameworks and PPP project case studies based on the workshop presentations, as well as the details of workshop participants and program.
Part 1: 
Country Case Studies of Public–Private Partnership Frameworks
Public–Private Partnership Framework of India

Global Comparative Framework—Part 1: Development

Enabling Environment—Introduction 1

Definition and/or Description of a Public–Private Partnership

The Secretariat for the Committee on Infrastructure of the Planning Commission, Government of India, defines PPP as

“a project based on a contract or concession agreement, between a government or statutory entity on one side and a private sector company on the other side, for delivering an infrastructure service on payment of user charges.”

In other schemes and documents, this has been extended to cover annuity projects as well. In India, PPP projects are being employed for basic infrastructure (e.g., roads and power), social infrastructure (e.g., convention centers and health care), and extensions (e.g., food processing and agrilogistics).

Government Contracting Entity

The Concessioning Authority granting the “concession” is invariably the government or statutory authority. However, in many cases, the procurement could be carried out by a corporate body, as a nodal agency, on behalf of the government. Even in such cases, the concession agreement would be signed by the government or statutory authority.

Structure of Private Sector Contractor

Projects are structured on a stand-alone project finance, nonrecourse construct, with a special purpose vehicle (SPV) as the implementing agency. The SPV is set up by the bid-winning consortium after the project is awarded. Concession agreements contain covenants that lock the consortium members for a certain period of time, but otherwise the government and lenders have no recourse to the consortium members.

Forms of Government Subsidy

Numerous mechanisms provide support to a PPP project. These include:

- a viability gap fund (VGF) as a capital funding support, or a part-capital, part-operations and maintenance (O&M) period support;

---

• land being given on license and/or lease;
• additional land being given for commercial exploitation by the SPV;
• guaranteed cashflows, typically as semi-annuity payments, which remove part or all of the collection risk in annuity projects;
• take-or-pay covenants that mitigate demand risk;
• waivers of stamp duty and registration charges; and
• income tax holidays.

**Most Commonly Adopted Public–Private Partnership Delivery Methods for Economic Infrastructure**

- Design, finance, build, operate, and transfer

**General Responsibilities of Government under Contract Arrangements**

The government provides

- land;
- noncompete covenants until certain levels of capacity utilization are met;
- initial consents to establish from various authorities, such as railways and environmental clearances (although detailed clearances are still required from the project SPV);
- water and power, on similar terms as in other similar projects in the area; and
- police assistance with security- and traffic-related matters, with costs to be shouldered by the SPV.

**General Responsibilities of Private Sector under Contract Arrangements**

The private party

- takes all onus for design, financing, building, and O&M of the project facilities during the period of the concession agreement, including handover requirements;
- obtains and keeps current all clearances, insurances, and approvals; and
- maintains records and reports on project performance (physical and financial).

**Most Commonly Adopted Public–Private Partnership Delivery Methods for Social Infrastructure**

- Design, finance, build, operate, and transfer

**General Responsibilities of Government in Contract Arrangements**

The government provides

- land;
- noncompete covenants until certain levels of capacity utilization are met;
- initial consents to establish from various authorities, such as railways and environmental clearances (although detailed clearances are still required from the project SPV);
- water and power, on similar terms as other similar projects in the area;
• police assistance with security- and traffic-related matters, with costs to be shoulder by the SPV;
• assurance on the flow of grants as stipulated in the concession agreement; and
• termination-related obligations.

**General Responsibilities of Private Sector in Contract Arrangements**

The private party

• takes all onus for design, financing, building, and O&M of the project facilities during the period of the concession agreement, including handover requirements;
• obtains and keeps current all clearances, insurances, and approvals; and
• maintains records and reports on project performance (physical and financial).

**Level and Type of Government Support Provided for Public–Private Partnership**

The central government provides

• standardized documentation for certain infrastructure sectors (e.g., requests for qualification, requests for proposal, concession agreements);
• VGF for PPP projects;
• tax incentives for PPP infrastructure projects;
• PPP cells to work with state governments in developing PPP projects;
• programs that disseminate knowledge and build capacity in the government and industry to undertake PPP projects;
• programs and funds (e.g., the Jawaharlal Nehru National Urban Renewal Mission) to emphasize projects being taken through a PPP format;
• the India Infrastructure Project Development Fund and Planning Commission’s Project Preparation Facility to provide technical assistance; and
• permission to develop real estate on surplus land and/or project assets.

In many cases, state governments have

• established dedicated departments and agencies to undertake PPP projects;
• established policies and/or legislation to facilitate PPP projects;
• given tax benefits for PPP projects, such as stamp duty waivers and entry tax waivers; and
• permitted real estate development on surplus land and/or project assets.

**Identification Process for Potential Public–Private Partnership Projects in the Budget Planning Framework**

In some cases, specifically national highways, project identification has been done in a systematic, budget plan-linked manner. In most cases, however, the identification is done by the concerned government department based on perceived need for the project dependant on systemic, social, and political requirements.
Criteria for Identifying Potential Public–Private Partnership Projects

In some cases, such as road, airport, and seaport projects, there are fairly objective traffic criteria that indicate the need for a project (i.e., “greenfield” or “brownfield”). In most other cases, the identification is based on perceived needs. However, the overriding consideration is the need for funds to provide infrastructure.

Enabling Environment—Introduction 2

Key Delivery Issues Addressed by Public–Private Partnership Procurement

There are two key drivers for PPP procurement. These are

- a shortage of budgetary resources within government agencies, and therefore a reliance on private sector financing; and
- efficiency gains in involving the private sector in timely project implementation and subsequent operations.

Most Commonly Adopted Public–Private Partnership Delivery Method for Transport Infrastructure

- Design, finance, build, operate, and transfer.

Examples of Urban Environment Infrastructure Permitted and/or Delivered under a Public–Private Partnership Arrangement

- Management of municipal solid waste
- Desalination
- Wastewater treatment
- Bulk water supply as well as O&M

Key Delivery Issues Addressed by Public–Private Partnership Procurement

- Efficiency gains in involving the private sector
- Shortage of budgetary revenues of government agencies

Most Commonly Adopted Public–Private Partnership Delivery Method for Urban Environment Infrastructure

- Design, finance, build, operate, and transfer

Examples of Social Infrastructure Permitted and/or Delivered under a Public–Private Partnership Arrangement

- Convention centers
- Health care facilities

Key Delivery Issues Addressed by Public–Private Partnership Procurement

- Efficiency gains involving the private sector
- Shortage of budgetary revenues of government agencies

---

3 “Greenfield” refers to investment in an area where little or no physical infrastructure or facilities exist, while “brownfield” refers to investment in an area where physical infrastructure or facilities already exist but need to be demolished or renovated.
Most Commonly Adopted Public–Private Partnership Delivery Method for Social Infrastructure

- Design, finance, build, operate, and transfer

Examples of Natural Resource and/or Power Infrastructure Permitted and/or Delivered under Public–Private Partnership Arrangement

PPP, as defined, does not appear to have been used for natural resources projects in India. These projects operate either through state-owned undertakings, or through the private sector under an operational license. Power projects have been taken up through PPPs, but they are predominantly generation rather than transmission or distribution.

Key Delivery Issues Addressed by Public–Private Partnership Procurement

- Efficiency gains involving the private sector
- Shortage of budgetary revenues of government agencies

Most Commonly Adopted Public–Private Partnership Delivery Method for Natural Resources and/or Power Infrastructure

- Design, finance, build, operate, and transfer

Enabling Environment—Legal

Government(s) Responsible for Policy

Certain subjects (sectors) are under the central government, and certain sectors are vested with the state governments. Civil aviation, major ports, and national highways are with the central government, while power and urban infrastructure are with the state governments.

Governing Policy

There is no policy at the central government level for the nation. However, as a stand-in for national policy, there are certain guidelines that govern documentation or funding support for PPP projects. Some states have instituted either a policy or a law (e.g., an infrastructure act) that governs PPP projects.

Governing Laws

At the central government level, there are no PPP laws. At the state level, some states have enacted certain acts that cater to PPP infrastructure projects. The present legal structure of either the central or state governments does not deter PPPs.

Public–Private Partnership Units Location

At the central government level, the Planning Commission and the Department of Economic Affairs are involved in tying together PPP initiatives at the central and state levels, into a common framework. Otherwise, the PPP units are located in line departments, although not many departments handle PPP projects. At the state level, some states have their own infrastructure departments or corporate bodies that have been created for developing PPP projects.
Role of the Public–Private Partnership Units

• Identify potential PPP projects, develop and carry out studies, procure the PPP partner, and assist in project implementation and monitoring.

Key Governance Roles

The government agency remains the owner as far as public use is concerned, and therefore discharges its duties as such. A scheme for setting up dedicated PPP cells in the states is under review. A mechanism for monitoring PPP projects is also being put in place. In all projects, generally, there is an independent engineer who provides impartial advice—to the private sector and government agency.

Role of the Government Agency

To the public, the government agency remains the owner of the project and takes final responsibility for the services rendered. It identifies, develops, and procures partners for the project; monitors its implementation; and ensures that service standards are met.

Minister(s) Responsible

• The minister in charge of the government agency concerned.

Legislation Governing Land Acquisition or Resettlement

While most acquisition is done under the Land Acquisition Act of 1894, there are specific industrial land acquisition acts, or the National Highways Act, that permit alternate routes for acquisition.

Process of Land Acquisition and/or Resettlement

The following are the broad steps to be taken:

• undertake preliminary survey and file notification of intent to acquire;
• issue acquisition notices;
• provide a period for filing and hearing objections;
• enter into a contract, including valuation;
• pay landowners appropriate compensation;
• take possession of the land; and
• amend the land record to show the revised land title.

However, court intervention is very common, since landowners can easily approach the court. In some cases, the valuation is done under a consent mechanism through a negotiation chaired by government revenue officers. Resettlement under the Land Acquisition Act is generally through a compensation mechanism only. However, more agencies are preparing far more comprehensive resettlement and rehabilitation plans.

Application of International Standards to Public–Private Partnership Policy

No international standard is specific to PPP policy.
Enabling Environment—Accounting

Public Accounting Legislation Governing Balance Sheet Treatment

There is no separate legislation governing PPP projects or SPV accounts. The Department of Corporate Affairs administers the Companies Act of 1956, which is basic law governing the creation, existence, and dissolution of companies, and the relationships between the shareholders, the company, the public, and the government. The Institute of Chartered Accountants of India is the regulator and standard-setting body for accounting practices. Listed companies also need to abide by the requirements of the Securities and Exchange Board of India, the stock exchange regulator.

Overview of Requirements for a Project to be Considered as Off-Balance Sheet

Off-balance sheet (with reference to the promoter consortium) is possible only in a strict financial investment. In all other cases, the definitions of “subsidiary,” “associate,” and “joint venture” would lead to the consolidation of the financial sectors. However, as long as there is a separate legal entity, there would be no legal recourse from the SPV to the promoter consortium.

Government Entity Responsible for Determining Balance Sheet Treatment

The Department of Corporate Affairs is responsible for determining the treatment of the balance sheet.

Treatment of Depreciation of Assets

The treatment is per the Companies Act and the Income Tax Act.

Key Financial and Tax Incentives Offered

- Income tax holiday under the Income Tax Act (normally a 10-year block in a 20-year window)
- Customs duty waiver on certain capital goods for specific projects
- Stamp duty and entry tax waivers on certain projects

Key Fiscal Management Tools Employed

The management tools are through legislated budgetary allocations, where such allocations are needed. For example, the government set up state-level highway authorities with modern management systems and state-level dedicated road funds. A high-powered committee is currently examining fiscal controls required for annuity-based projects.

Accounting Approach to Future Public–Private Partnership Obligations

Capital investments and future liabilities need to be recognized on the books of the promoter consortium.

Treatment of Public–Private Partnership Projects in the Fiscal Planning and Budget Process

The budgeting process takes into account fiscal requirements for PPP and non-PPP projects. PPP projects requiring support need to compete with other projects. Projects not requiring support often earmark development funds.
Enabling Environment—Leaders and Champions

Role of Leadership and Championing Change in Public–Private Partnership
Policy and Guidelines

Projects are generally championed by the (i) political system and the minister-in-charge, (ii) senior officers of the government, and (iii) industry or public associations.

Government Entities Responsible for Fostering Leadership
in Public–Private Partnership

At the central government level, the responsibility has been taken by the Planning Commission and the Department of Economic Affairs. At the state level, the departments of infrastructure and/or industry generally take the lead.

Involvement of Other Government Entities, Institutions, or International
Agencies in Fostering Public–Private Partnership Leadership

Nationally, there are certain institutions that specialize in PPP project development and finance; the Planning Commission and the Department of Economic Affairs have been the most focused organizations in generating standardized documents and processes. Various states have also set up dedicated organizations that focus only on PPPs. Multilateral agencies (e.g., ADB and World Bank) also contribute significantly to fostering PPPs.

Priority Issues Facing Governments in Leading and Championing
Public–Private Partnership Development and Implementation

- The economic downturn’s impact on promoters’ ability to take up projects
- Failure of some of the early bird projects in delivering the high expectations
- Continuing issues in land acquisition and support infrastructure, which delay the projects
- Incumbent officials’ resistance to change and to adopt PPP policy

Strategies Implemented to Address the Issues

- Space out the projects in a manner that reduces cost while maintaining serviceability
- Conduct capacity-building programs to instill the need for proper project development
- Set in place frameworks that expedite land acquisition—primarily reasonable compensation and proper resettlement and rehabilitation
- Train government officials
- Carefully supervise pilot projects, and
- Provide fiscal stimulus for PPPs.

Enabling Environment—Regulation

Key Regulatory Authorities

There is no special PPP regulator. For most sectors, barring telecommunications and power, there are no regulators even for other projects. In some cases, the regulator is the line ministry itself (e.g., Indian Railways).
Location of Regulatory Units within the Government

There are only some independent regulators—such as for telecommunications and power. In most cases, there are no sector regulators, while in others, the regulator is part of the ministry concerned.

Roles and Responsibilities for Economic Infrastructure
Public–Private Partnership

Generally, the regulation is by contract (as domiciled in the concession agreement), with an independent engineer providing a modicum of arbitration between the parties.

Roles and Responsibilities for Social Infrastructure
Public–Private Partnership

There is no specific regulator, and regulation is achieved only through statutory licensing and by the approval authorities involved.

Role of the Regulator in Contract Performance Monitoring

In the event that there is a regulator, the agreement specifies the role of such regulator in monitoring service delivery and/or pricing. In some cases, such as for greenfield airports, there are clauses in the concession agreement that provide scenarios if a regulator comes in at a later date.

Level and Type of Interaction between the Regulator and the Private Contractor

The regulator performs the same role vis-à-vis a PPP SPV, as with other service providers in the sector.

Advisers

Policy for Adviser Procurement Process and Engagement

The policy for selecting advisers is governed by the General Financial Rules and the Manual of Policies and Procedure for Employment of Consultants issued by the Ministry of Finance. The Planning Commission has also prepared a model request for proposal document to be used by project authorities for selection of technical and legal consultants. One for financial consultants is under preparation. The Planning Commission has also prepared a frequently asked questions document on consultant selection, which also incorporates international best practices. The Planning Commission and the Ministry of Finance suggest that a transparent procurement process be followed.

While it is not mandatory to do so, most state governments are gradually adopting the processes suggested at the central government level.

---

**Government Entity Responsible for Implementing Policies**

While there is no entity responsible for implementing policies related to PPPs at the central government level, the Planning Commission and the Department of Economic Affairs are taking on this responsibility.

At the state level, either the infrastructure development department or the relevant industry departments are in charge.

**Requirement for Local Office and/or Employees**

Generally, this is not required.

**Main Type of Engagement Contracts**

Consultancy agreement.

**Key Stages in the Procurement Process**

The preferred mode is a two-stage technical-financial selection process with 70%–80% weight for technical evaluation and 20%–30% weight for financial bids.

**Key Evaluation Criteria to Determine Engagement**

Technical criteria include prior experience in similar projects, curriculum vitae of key staff, and sometimes a method statement for understanding the intended approach. The highest weight is given to the credentials of the key personnel. In some cases, financial criteria such as turnover may be included. The financial proposal is normally an all-in financial quote.

**Policy on Engagement Conduct and for Managing Conflicts of Interest**

The policy for selecting advisers is governed by the General Financial Rules and the Manual of Policies and Procedure for Employment of Consultants issued by the Ministry of Finance. The Planning Commission has also prepared a model request for proposals document to be used by project authorities for selecting technical and legal consultants. One for financial consultants is under preparation. The Planning Commission has also prepared a frequently asked questions document on consultant selection, which also incorporates international best practices. There are certain guidelines prescribed by the Department of Economic Affairs for use of the transaction advisers’ panel for smaller contracts.

The model request for proposal details what should be construed as a conflict of interest. A guidance note on the issue has also been incorporated to explain the concept.

**Key Stages in the Conflict Management Process**

The bidder is required to certify at the bidding stage that no conflict of interest exists as per the conditions laid down in the request for proposal. Further, if at a later stage it is discovered that such a conflict exists, then the contract is liable to be canceled.
Stakeholders

Stakeholder Participation Policy and/or Guidelines
There is no specific policy and/or guideline for stakeholder participation.

Government Entity Responsible for Conducting Stakeholder Interaction Process
The nodal department or agency concerned is responsible for conducting the stakeholder interaction process.

Procedures for Stakeholder Participation
Public consultations are seldom held. All model documents are prepared by the Planning Commission after two or three rounds of consultations with stakeholders and experts. Representatives from the sector, consultants, and legal and financial experts are involved as well. Normally, there are prebid meetings, which also bring forth the viewpoints of bidders that may lead to changes in the bidding parameters.

Government procedures ensure that departments concerned are involved as part of the appraisal and approval mechanism.

Key Role of Government in Facilitating Stakeholder Participation
Public consultations are seldom held. However, the central government (i.e., Planning Commission) invites all stakeholders and experts at the stage of model document evolution. The government’s internal processes ensure that the departments concerned are involved as part of the administrative approval mechanisms. Other than this, no formal procedures are set out.

Key Approach of Private Sector Contractor in Facilitating Stakeholder Participation
There is no defined role. However, private sector contractors are expected to comment on draft documents and to participate in consultations.

Key Issues that Stakeholder Participation Seeks to Identify and Address
The consultations are normally internal to the government. The objectives of the consultations are

- to define the project with a uniform perspective among various agencies,
- to ensure smooth interactions between the agencies,
- to ensure fiscal responsibility and legal correctness of the project,
- to ensure bankability of the project,
- to stay updated on the standards and specifications currently prevalent in the industry,
- to ensure acceptability of the bid documents and the draft and/or model concession agreement, and
- to ensure that the project is handled in a seamless manner.
Risk Assessment

Risk Analysis Policy and/or Guidelines

There are no explicit risk analysis policies and guidelines, although the standard model concession agreements for various sectors, prepared by the Planning Commission, detail how risks are analyzed and allocated. These documents cover certain sectors only, although documents for other sectors are in the pipeline.

At the state level, there are generally no guidelines.

Roles and Responsibilities in Conducting the Risk Analysis

Where model documents are available, the risks and responsibilities are clearly defined, allocated, and mitigated. The risk analysis is normally conducted by transaction advisers acting for the government agency. However, significant modifications are effected through interactions with bidders during prebid meetings.

Key Steps in the Risk Analysis Process

Risk matrices

- identify risks,
- allocate risks, and
- establish detailed mitigation measures and responsibility.

Independent Standards Governing the Risk Analysis Process

There are no independent standards governing the risk analysis process.

Treatment of Systematic Risks

In all model documents, systematic risks are treated uniformly. Project-specific risks are treated on a case-by-case basis.

Approach to Risk Assessment

Apart from model documents, no specific formulation is followed, and the approach is largely left to the advisers under the guidance of the relevant government agency and debated with the bidders during the prebid meetings.

Level and Type of Risk Register Employed

Risk registers are generally not employed. In some cases, advisers use them at their discretion.

Approach to Risk Quantification

The focus is more on identification and allocation rather than quantification. Quantification is generally through a point estimate-based sensitivity analysis. Very rarely are probability-based methods used.

Risk Allocation

Risk Allocation Policy and/or Guidelines

There are no explicit risk allocation policies and guidelines, although the standard model concession agreements for various sectors, prepared by the Planning
Commission, detail how risks are allocated. However, these documents cover certain sectors only. No allocation policies and/or guidelines are available for other sectors.

At the state level, there are generally no guidelines.

**Approach to Site Risk Allocation**
The relevant government agency generally assumes the site risk in the sense that the underlying land is to be handed over clear and free from encumbrances.

**Approach to Design, Construction, and Commissioning Risk Allocation**
Design, construction, and commissioning risks are allocated to the private sector.

**Approach to Operating and Maintenance Risk Allocation**
O&M risk is allocated to the private sector.

**Approach to Network or Services Interface Risk Allocation**
Network risk is normally not specifically addressed, and, by implication, is allocated to the private sector.

**Approach to Change in Law or Government Policy Risk Allocation**
Change in law (as distinct from change in taxes) is generally allocated to the government in the sense that the government must restructure the project in a manner that puts the project financially in a status-quo-ante position prior to the change in law event.

**Approach to Residual Asset Ownership Risk Allocation**
The private party has clear obligations for the maintenance of the asset during the concession period, and also obligations regarding hand-back of the assets. Any residual risk—in the sense of capacity and obsolescence—rests with the government.

**Approach to Market or Demand Risk Allocation**
Normally, this risk is allocated to the private sector. However, there are certain constructs (e.g., annuity payments) where the demand risks are partly or entirely borne by the government. In some of the standard concession agreements, there are mechanisms that allocate this risk to the private sector but mitigate it by constructs, such as extension of the concession period.

**Approach to Sponsor and Financial Risk Allocation**
Project sponsors are normally locked into the SPV structure, and they (may also) furnish performance securities. Beyond this, the SPV is a legal entity distinct from the sponsors. The SPV bears all financial risks.

**Level and Type of Guidance for Government to Mitigate and Manage Risks during a Contract**
Apart from the structural guidance given in the model concession agreements of the Planning Commission for some sectors, there is no formal guidance on mitigating and managing risks.
Cost Estimation

Public Cost Estimate and/or Public Sector Comparator Policy or Guidance
Total project cost and financial and economic analyses are carried out for each project. A public sector comparator is not used as a decision-making tool in India.

General Purpose and Use of the Cost Estimate
The cost estimate, as stated in the concession agreement and termination payments, is capped by this estimate.

Government Entity Responsible for Determining Appropriateness and Developing the Cost Estimate
The normal administrative approval process would require the government agency concerned to work out benchmark cost estimates to assess the acceptability of the bid. In more complex cases, transaction advisers may do so on behalf of the government agency. There is a mechanism of the government for approving such costs.

Resources Required to Develop the Cost Estimate
Two key elements are used:
- a benchmark cost estimate, and
- reliance on a competitively discovered price through a transparent process.

Key Assumptions
The cost estimate comprises the construction costs, which are escalated by 25% in the case of projects with a smaller gestation period and by 35% for projects with a higher gestation period. This accounts for price increases, interest during construction, and financing charges.

Discount Rate Policy and/or Guidance
No discount rate is specified formally. Discount rates vary from the weighted average cost of capital, government securities rates, and prime lending rates of national banks—at the discretion of the government agency and their transaction advisers.

Government Entity Responsible for Determining the Discount Rate
The government agency, with the advice of the transaction advisers (if any), determines the discount rate. Generally, the administrative approval process also includes the approval of the Finance Department.

Factors Considered in Discount Rate Determination
- Risk-free rate
- Term lending rate of banks for prime borrowers
- Risk-premium prevalent in the sector

Discount Rate Approach for Economic Infrastructure
There is no specified formulation for determining discount rates, and various agencies use their judgment regarding the rates that they use.
Discount Rate Approach for Social Infrastructure
There is no specified formulation for determining discount rates, and various agencies use their judgment regarding the rates that they use.

Value for Money

Description of Value Assessment
Value for money (VFM) aggregates all the direct and indirect benefits of a project, including social and environmental benefits and improvements in service, and compares them against the total costs incurred in implementing the project for optimum combination of whole life costs and quality. India does not have a policy to determine the VFM; however, an economic analysis is carried out prior to taking up a project.

Applicable Policy and/or Guidance for the Value Assessment
There are no formal guidelines for the VFM.

Purpose and Use of Assessment Outcomes
If a project has a low financial internal rate of return but a higher economic internal rate of return (e.g., greater than 14%), there is a case for the government providing support to the project.

Approach to Conducting the Assessment
Conducting the assessment is at the discretion of the government agency and its transaction advisers.

Additional Resources Employed
This is not applicable.

Role of Assessment Outcomes in the Bid Tender and Selection Stage
Bid processes are based on a competitive pricing paradigm subject to experience and financial thresholds, and not on the VFM.

Importance of the Lowest Cost in Assessment
The bid processes are based on a competitive pricing paradigm subject to experience and financial thresholds, and therefore, a form of lowest cost.

Market Factors that Assist in Achieving Value
- Proper project development in terms of studies, option analyses, and documentation
- Transparent procurement processes that encourage serious, open competition
- A mature market with several participants in the development and finance space.

Investment Decision

Project Development Policy and/or Guidelines
No uniform guidelines exist either at the central government or state level. This is largely left to the discretion of the administrative system.
Key Roles and Responsibilities in Project Development and Investment Decisions

Development is the obligation of the government agency tabling the project. In most cases, they are supported by technical advisers and/or transaction advisers.

Key Stages in Project Development and Investment Decisions

The development process is as follows:

- Delineating the project concept and options and/or alternatives;
- Examining the alternatives and choosing the preferred alternative;
- Detailing the alternative through technical studies, financial viability, and economic and social impact assessments;
- Defining the project structure (financial and institutional); and
- Developing the procurement documents and concession agreements.

Additional Resources in Project Development and Investment Decisions

- Technical surveys (e.g., topographical and geotechnical)
- Market surveys
- Traffic surveys
- Willingness-to-pay surveys
- Study of similar projects
- Environment and social impact assessments

Key Considerations in Investment Decisions

- Cost–benefit analysis
- Social and public good imperatives
- Legislative or judicial requirements

Tools Adopted to Support Investment Decisions

Commonly, a cost–benefit analysis and a viability analysis (indicating the financial and economic returns) are the only objective tests that are considered.

Delivery Options Analysis Process

No formal process is set out either at the central government or state level. The process is examined in a discretionary manner by the government agency, supported by transaction advisers.

Tools Adopted to Support Delivery Options Assessment

- Cost–benefit analysis
- Financial and economic viability analysis
- Environmental and social impact assessment
- Risk appraisal
- Precedents of similar projects

Major Issues Encountered in the Investment Decision Process

- Inadequate project development and studies
- Ad hoc decisions in the absence of clear guidelines on carrying out VFM analysis, cost–benefit analysis, or public sector comparator (PSC)
Global Comparative Framework—Part 2: Tender

Introduction

Key Governance Roles

There is no fixed format, and the variations are very large.

- Large projects may have their own high-level committee composed of political appointees in high offices and/or senior bureaucrats.
- The project is typically steered by the government agency, under the guidance of its administrative government department. A nodal officer in the agency usually anchors the project and also interfaces with the transaction advisers.
- There could also be a steering committee that assesses the process of studies and procurement and makes administrative decisions. In some cases, the steering committee only addresses technical issues, and is therefore called a technical committee. The steering and/or technical committee also assists in the bid evaluation stage.

Entity Administering the Procurement Process

The government agency, under the guidance of its administrative government department, administers the procurement process.

Role of a Public–Private Partnership Unit

Not all states have a PPP unit, and even in cases where they do, the units have very few staff members. Some states have an infrastructure department, but this is also more like a facilitating department. Where available, the PPP units assist the government agency in conceptualizing the project, carrying out the project development work, selecting transaction advisers, and supporting the tender process. However, access to the PPP unit is generally at the discretion of the government agency, and there is no formal requirement regarding the use of the PPP unit.

Arrangements for Establishing the Team or Unit to Manage Procurement

This is determined by the government agency, in consultation with the administrative department. The arrangements normally depend on the complexity of the project, previous experience of the agency, and expected cost of the project.

Relationship between the Team Managing the Procurement and the Public–Private Partnership Unit

The relationship is of an advisory and/or facilitator nature.

Process for the Ministry of Finance to Agree to Participate in the Tender Process

The Ministry of Finance (central) or the Department of Finance (state) is not part of the tender process. Finance departments are involved in establishing guidelines for procurement and for granting approvals.

Minister(s) Responsible for the Tender Process

The minister in charge of the government agency is responsible for the tender process.
External Resources Utilized during the Tender Process

- Transaction advisers
- Technical consultants
- Legal consultants

Use of Benchmarking in the Tender Stage

Benchmarks are

- precedents of previous similar projects in the state and/or country,
- cost estimates of similar projects done by the public sector and/or government, and
- price discovery through competitive bidding.

Approach to Assessing the Value of Public-Private Partnership Procurement during the Tender Stage

There is no quantitative assessment of value for PPP procurement. Additions, such as improved service levels and efficiencies, are factored in qualitative manner.

Major Issues Encountered during Implementation of the Tender Process

- Delays in administrative approvals from the government agency
- Multiplicity of agencies and their concurrence and approvals
- Inadequate project development, leading to skewed understanding between the government agency and the private sector, and also to project changes during the process
- Delays in final approvals to the process, and award of work

Process Cycle

Stages in the Tender Process

Normally, a two-stage process is followed:

- the request for qualification stage, where prospective bidders are qualified based on experience and financial thresholds; and
- the request for proposal stage, where technical proposals (if any) and financial proposals are received and evaluated.

The tender process ends with a letter of award to the selected consortium, followed by the signing of the concession agreement. Once the agreements are signed, a conditions precedent, including financial closure, has to be met within 3–6 months for the agreement to be effective.

Average Time for the Tender Process (from Issue of Tender Documents to Contract Award and/or Financial Close)

This varies very widely. Normally, the targeted time is 6 months or less for the entire process up to signing the agreement. However, actual time could end up being 1–2 years.
Degree of Financing Security Sought in Bids

Financial commitment is sought from the private sector in terms of (i) commitments to procure financing in a specified time frame after the contract award, and (ii) bid security. The request for qualification stage also ensures that the bidder has sufficient financial strength to undertake the project.

Degree of Technical Specification Sought in Bids

The government agency gives, as part of the procurement documents, either a feasibility report, or a project information memorandum. These documents serve as the basis for the design.

Degree of Direct Negotiation during the Tender Stage

This is generally not permitted, except with the best bidder, lowest or highest as the case may be.

Private Sector Bid Costs and Approach to Expenses

Costs incurred are charged to the bidder’s account.

Key Advantages of Tender Process

- Transparent process, so there is no accusation of sweetheart deals
- Clear advantage as a price-discovery mechanism
- The process ensures feedback from potential bidders regarding the project structure and enables government agency to fine-tune it.

Key Disadvantages of Tender Process

- Time consuming
- The cost is high—both for bidders and for the government agency.

Preparation

Commencement of Planning and Preparation for the Tender Process

Preparation begins after the feasibility of the project (i.e., technical, financial, environmental, and social) is completed. Based on the project scope, cost, and viability, the tender documents are drafted, and administrative approvals are obtained. The actual process commences only when such approvals are in place.

Key Planning Tools in Planning for the Tender Process

- Project feasibility report
- Project-structuring options
- Decisions on role of the government agency in the process—whether any joint development or investment is proposed
- Market study of potential bidders
- Based on project cost and viability, an assessment of threshold experience and financial capacity is required, which is part of the request for qualification
- Draft concession agreements and/or project development agreements
Key Resources Utilized in Planning for the Tender Process

- Feasibility report—outlining the technical, financial, environmental, and social feasibility
- Approval for the project—administrative, legal, and financial
- Request for qualification document
- Request for proposal document, comprising the project information memorandum and concession agreement (including technical specifications and schedules)
- Details of land to be acquired

Prequalification Document Contents

The prequalification documents contain

- a brief description of project;
- the scope of the private sector partner (i.e., role and responsibility);
- qualification criteria (i.e., experience and finances);
- submission requirements such as documents, formats, and supporting certifications; and
- evaluation process description and next steps, and timelines.

Detailed Tender Documents and Contents

- A project information memorandum that may include the feasibility study and detailed project report is included. In most cases, the documents are stripped of their detailed financial model but furnish the raw data.
- The instructions to bidders—administrative requirements for submission, formats, submission of supporting documents, and certification—is also included.
- The concession agreement or project development agreement is included, with all the technical specifications, performance standards, auxiliary agreements such as site lease agreements, and formats for performance security and consortium agreements.

Approach to Developing the Output Specification

The Planning Commission has standardized performance (i.e., output) specifications for some sectors, such as roads and seaports. For other sectors—particularly for urban and social infrastructure—there is no standard and is dependent on the discretion of the government agency and its transaction advisers.

Additional Tools and/or Procedures Important in the Tender Process

Pre-bid conferences are a critical input into the process, since they bring in serious inputs from the bidders and help identify critical areas of the project definition as well as the procurement process. The process, if taken seriously, also helps moderate expectations from both sides—the government and the private sector.

Major Issues Encountered during Tender Stage Preparations

- Inadequately prepared documentation leading to improper understanding and contract anomalies and ambiguities
- Pre-bid feedback not being taken seriously
- Bidders not having proper due diligence on the project prior to bid and wanting alterations in commercial terms after the process is concluded
• Legal jurisdictions and frameworks not properly considered, leading to administrative problems during or after the bid, especially for environmental or legal issues.

Selection

Prequalification

Average Time of Prequalification (Release of Document to Short List Announcement)

This depends on the complexity of the project. In small projects, this may be folded into the request for proposals stage (i.e., a separate qualification envelope). In complex projects like a metro, this may take more than 6 months.

Bid Criteria and Response Requirements

Consortium members and inter se agreements

Experience criteria include:

• must have done (contract or PPP) similar projects,
• must have done infrastructure projects in other sectors, and
• must have O&M capabilities.

Financial criteria include:

• net worth,
• turnover, and
• cash accruals.

Qualification thresholds are specified for each criteria.

Approach to Prequalification Bid Evaluation

The analysis is objective, and all subjectivity is avoided. The criteria-marking system (or system for adding the experience and financial numbers) is set out in the request for qualification and applied to each consortium. If the consortium passes the thresholds, it is entitled to proceed to the next stage (i.e., request for proposal).

Level and Type of Interaction with Bidders

This is done through a formal bid conference process. Written queries and written responses form a part of the bid process documentation.

Process of Short List Approval and Release of Tender Documents

The request for qualification evaluation is carried out by the government agency or transaction advisers and placed before the competent authority for approval. In some cases, there may be a committee that scrutinizes and accepts the evaluation. Once administrative approval is obtained, the bidders are notified accordingly.

Governance Requirements for the Prequalification Process

Requirements are rather limited because

• parties are not allowed to participate in multiple bids,
• transaction advisers are not allowed to participate in bids with consortia, and
• self-certification for noncollusion and not resorting to corrupt practices is conditioned.

**Detailed Tender**

**Average Time from the Release of the Detailed Tender Documents to Contract Award**

This is variable—ranging from 4 months to 2 years.

**Key Stages in Tender Evaluation and Selection**

- Substantial responsiveness of key submissions is scrutinized, including bid security. Bids that are not substantially responsive are rejected.
- Technical proposals and key submissions are scrutinized for compliance with process and project requirements. In case of doubts and/or ambiguities, clarifications are formally sought and recorded.
- Administrative approval is sought to proceed with opening financial proposals.
- Financial proposals are checked for consistency.
- A tender evaluation report is prepared, and administrative clearance is obtained.
- Administrative clearance is obtained for the award to preferred bidder, including clearances from finance departments.
- The letter of award is issued, specifying time lines for signing agreements.
- The agreement is signed.

**Bid Criteria and Response Requirements**

A number of documents need to be submitted along with the bid. However, a bid award criterion is normally a single number of financial criteria. The ancillary documents include

- bid security,
- a consortium joint venture agreement, and
- a technical proposal (in some cases).

The financial proposal is received in a separate, sealed envelope or through a secure electronic portal.

**Approach to Evaluating Technical Solutions and Service Delivery Aspects of Bids**

The recent trend is not to ask for a technical proposal at all since the fear is that it introduces a subjective element in the evaluation. The schedules to the concession agreement specify exactly what the design parameters and output specifications are, and within these boundaries, the private sector has freedom to refine the design.

In cases where technical proposals are requested, the evaluation is done by a technical evaluation committee, assisted by consultants. The bidders may be asked to make a presentation to clarify the technical approach.

**Approach to Evaluating Financial and Commercial Aspects of Bids**

The financial bid is normally a single-point parameter, and any subjectivity from this aspect of the bid should be removed. In some cases, there may be a net present value assessment to find out the impact of certain commercial terms, but this is also more for internal understanding rather than as an evaluation exercise.
Role of Value Assessment in Tender Evaluation

Value assessment is primarily based on a cost–benefit analysis, benchmarking for similar projects, and, in some cases, assessing the bid through an alternate financial model prepared by the transaction advisers.

Level and Type of Interaction with Bidders

This is done through a formal bid conference process. Written queries and written responses form part of the bid process documentation.

Process for Approval of Preferred Bidder

The Tender Evaluation Committee records its evaluation findings and sends it to the competent authority for approval. The competent authority varies for projects at the central or state government level, and could be a subcommittee of ministers. Enroute to approval, concurrence of law and finance department is obtained.

Governance Requirements for the Detailed Tender and Selection Stage

The requirements are the same as for the request for qualification stage.

Major Issues Encountered during the Tender and Selection Process

Assessing the reasonableness of a bid is a major task, which often gets bogged down in subjective discussions. Most projects draw a limited number of bids (sometimes only one), and this makes price discovery through bidding very difficult.

The second key concern is the approval of key departments (i.e., finance and law), which is seriously considered only at the end of the award process—this leads to various issues being reopened and questioned, and consequent delays.

Finalization

Requirements and Process to Achieve Contract Award and/or Execution

The award process is initiated by a letter of award that sets out the time lines for signing the agreement, payment of success fees (if any) to the government agency, and submission of performance security. After the letter of award, the draft agreements submitted as part of the request for proposal are finalized. This exercise is more of a formality, since any substantial changes are not permitted. The contract agreements are then signed by the parties.

Level of Contract Negotiation Prior to Contract Award and/or Execution

Negotiation is permitted only with the preferred bidder under a formal structure. A date is set for the negotiation, and the government is represented either by the Tender Evaluation Committee, or by a designated officer. Negotiation is restricted to the bid parameter, and other issues are not opened.

Planning and Preparation Activities for the Financial Closure Process

Financial closure is the responsibility of the private sector, and the government agency barely participates. Changing documents is not permitted. The government agency may only sign direct lender agreements, substitution agreements, or trust and retention agreements, if these are specified in the procurement documentation or do not place any additional responsibility on the government agency.
Summary of the Financial Closure Process

Insofar as the government agency is concerned, the financial closure process is of no significance. The government agency may sign direct lender agreements, substitution agreements, or trust and retention agreements, if these are specified in the procurement documentation or do not place any additional responsibility on the government agency.

Government Approach to Managing Prefinancial Closure Risks

The nonachievement of financial closure within the period specified in the agreement would lead to termination of the agreements and forfeiture of performance security. However, in some model documents, financial closure is a conditional precedent—not meeting it would make the agreement ineffective, performance security would not be forfeited.

Legal Framework

Presence of Any Public–Private Partnership Specific Laws

There are no PPP laws at the central government level. However, some states (e.g., Andhra Pradesh and Gujarat) have a PPP law. Some other states (e.g., Karnataka) have similar policies.

Other Applicable Laws

There are no procurement-related laws at the central government level. Many states have either a procurement law, which ensures transparency in public procurement, or have administrative norms that specify procurement practices.

Approach to Gaining Required Authorizations to Deliver Infrastructure Public–Private Partnership

The concerned government agency has to move the approval papers through its administrative department. Depending on the estimated project cost, expected support from the government, and involvement of other agencies, the approval process is routed through the system, and normally also includes a concurrence of the finance department.

Overview of Legal Process to Grant Public–Private Partnership Concession

The authority to grant a PPP concession is vested in the government department in charge of the project, or in a statutory entity vested with such powers. Subject to obtaining the authorizations required, the government department or statutory agency is in a position to grant the PPP concession.

Requirements to Grant Asset Transfer and/or Ownership

The land ownership title is retained with the government agency. It can give the land to the private sector on lease, license, or concession rights to develop the projects.

Requirements to Deliver Service

Performance and delivery standards, as well as monitoring mechanisms, are specified in the concession agreement. The concession agreement generally also has provision
for an independent engineer to monitor performance. Except for the site and basic consents to establish, the private sector is responsible for obtaining and maintaining all licenses and permits.

**Security Arrangements for Private Sector Contractor**

A wide variety of security arrangements are required of financiers. Some of these are

- pledge of shares,
- revenue escrows and trust and retention accounts,
- promoter guarantees to cover cost escalations,
- direct lender agreements with the government agency (including substitution rights),
- pledge of assets (including land when on lease), and
- other collateral security that is external to the project.

**Contracts**

**Key Contracts Legally Establishing the Project**

The concession agreement between the government and private sector is the key contract. In some cases, there are state-support agreements that outline the support the state has agreed to give to the project.

**Key Roles and Responsibilities Governed by These Contracts**

The concession agreement provides for

- basis of the agreement,
- conditions precedent,
- obligations of the concessionaire,
- obligations of the government,
- payments and user fee collection,
- events of default,
- term and termination,
- force majeure,
- payments on termination,
- insurance requirements,
- dispute resolution mechanisms, and
- representations and warranties.

**Party Preparing the Public–Private Partnership Contracts**

The government agency, with the advice of transaction advisers, prepares the PPP contract.

**Jurisdiction of the Public–Private Partnership Contracts**

Sectors in India are divided into (i) a central list, where the central government has jurisdiction (e.g., major seaports, airports, national highways, and railways); (ii) a state list, where the state government has jurisdiction (e.g., state highways and urban infrastructure); and (iii) concurrent lists, where either the central or state government can exercise jurisdiction (e.g., education, electricity, and land).
Key Technical Contracts

The project SPV normally enters into a set of contracts with (i) construction contractors, (ii) O&M contractors, and (iii) project management contracts. These are the responsibilities of the SPV, and the government agency is not involved in these contracts—primarily holding the SPV responsible for service delivery. Concession agreements have covenants and schedules that address the technical specifications and performance parameters.

Key Roles and Responsibilities Governed by these Contracts

The contracts pass on the project implementation onus (i.e., construction and O&M) to the project contractors. These contracts are generally on a lump-sum, fixed-price, turnkey arrangement, although item rate tenders are also in vogue. The risk that the SPV can pass on to the contractors is a matter of negotiation, and while the SPV may want to pass on all risks, the subcontractors may not be willing to take them on. As between parties to the concession agreement, the government agency always holds the SPV responsible, regardless of what the inter se agreements between the SPV and the project contractors indicate.

Provisions for Monitoring and/or Auditing Contractor Performance

The concession agreement has clear monitoring covenants to which the contractor (i.e., project SPV) has to abide. Normally, there are also provisions for having an independent engineer to monitor project performance.

Key Financial Contracts

The financing agreements are among the project sponsors, lenders, and the project SPV. The government agency is not a party to agreements. However, there may be some agreements where the government agency is a signatory, such as the direct lender agreement, substitution agreement, and trust and retention account.

Key Roles and Responsibilities Governed by the Contracts

The financing agreements set out the terms under which finance is provided, the loan amortization schedules, security arrangements, financial covenants by which the borrower has to abide, and default conditions. The trust and retention agreements stipulate the cash escrow mechanisms, cash disbursement waterfall, and standing instructions to the trust and retention agreement bank. The direct lenders agreement is a tripartite agreement among the lender, borrower, and the government agency where the government recognizes the financing agreements and agrees to grant certain rights to the lenders over the borrowers. Intercreditor agreements establish the relationship among the consortium of lenders.

Provisions for Payment of Subsidy or Service Payment

Subsidies or viability gap finance payments are contained either in the concession agreement or in the state support agreement. Service payments or user charges are permitted to be collected under the terms of the concession agreement. However, in many cases, the government may issue a separate charge notification.
Level and Type of Guidance Provided on Commercial Principles

The model concession for some sectors, prepared by the Planning Commission, provides guiding commercial principles. In other cases, no such guidelines exist, and the decisions are at the discretion of the government agency.

Financial Instruments

General Insurance Requirements of Contractor

The model concession agreements, prepared for some sectors by the Planning Commission, stipulate insurance requirements. There are no such guidelines for other sectors, but generally all insurance requirements are to be met by the private sector.

Level and Type of Guarantees

Performance bank guarantees (about 5% of project cost) are universal. In addition, there are stipulations for liquidated damages and interest payments for delays. There are also stipulations that lock in the promoter consortium into the SPV.

Flexibility in Insurance and Guarantee Limits

Insofar as the model concession agreements are concerned, the insurance requirements are stipulated and generally not subject to being altered. Even for other sectors,
all risks are domiciled with the private sector; therefore, it is in the interest of the private sector to have adequate insurance. As far as the guarantees are concerned, the stipulations cannot be changed.

**Private Contractor Approach to Hedging**

Except in a few cases where foreign exchange capital investment is involved, there is no exchange rate hedging. The bulk of the projects are financed in domestic currency. Interest rate hedging is also normally not involved.

**Main Hedging Instruments Employed**

Foreign exchange hedges are contracted through banks that have international operations. One problem is that long-tenure hedges are not available, and the second is that all project income is normally (except in case of airports, seaports, and special economic zones) in Indian rupees. Projects carry a strong residual risk on foreign exchange; therefore, they try for Indian rupee-denominated finance only.

**Government Approach to Hedging**

The government agency is not a party to hedge transactions.

**Main Hedging Instruments Employed**

This is not applicable.

**Level and Type of Third Party Indemnities**

Either party (i.e., the government or private sector) indemnifies the other party for any damage or loss that a third party suffers on account of its actions. These covenants are part of the concession agreement. Such indemnities are open ended, and possibly dependent on the fact that courts in India rarely order exemplary or consequential damages.

**Financing**

**General Range of Gearing for Economic Infrastructure**

- 60%–70% of debt

**General Range of Gearing for Social Infrastructure**

- 60%–70% of debt

**Key Sources of Debt**

- Loans from banks and financial institutions

**Major Debt Participants**

- Banks
- Financial institutions
- Nonbanking finance companies (NBFCs)

**Key Sources of Equity**

- Promoter contribution
- Strategic investors
Proprietary equity books of banks and NBFCs
• Equity funds

Major Equity Participants
• Promoters
• Strategic investors
• Banks and financial institutions
• NBFCs

Approach to Refinancing Bid
Refinancing is not handled separately in the bid process and is an opportunistic call of the private sector. Financing agreements normally have a penal interest on early prepayment of loans through refinancing.

Capital Drawdown Profile
About 30%-50% of equity is typically drawn down before debt can be drawn and disbursed, and subsequent drawal of debt is at an equal rate with equity contribution. The interest liability until commencement of commercial operations is capitalized as interest during construction. There is also a subsequent moratorium on principal repayment (i.e., 1–3 years) until the project stabilizes.

Special Issues
Unsolicited Proposals

Prevalence and/or Role in the Procurement of Public Infrastructure
While unsolicited proposals and memoranda of understanding were more common in the earlier years of PPP, they are not very common today. The present trend is for the government agency to define the project need and to proceed on a transparent basis. However, some states (e.g., Andhra Pradesh and Karnataka) have a construct called Swiss Challenge to handle unsolicited proposals.

Sectors Where Unsolicited Proposals Are Commonly Received and Considered
Unsolicited proposals are not common, but they can be received in any sector. Predominantly, they have been related to projects that have a real estate development link (i.e., commercial or industrial development).

Relevant Policy Framework or Guidance Material for Process and Evaluation
States such as Andhra Pradesh and Karnataka have a construct called Swiss Challenge to handle unsolicited proposals. The proposal received from the initial project proponent is put to open bid, and if there is a more advantageous bid received, the government agency gives a first right to the initial project proponent to match the bid. If this fails, the project is awarded to the better bidder, and the costs of developing the bid basis (i.e., the proposal) are reimbursed to the initial project proponent.

How Policy and/or Guidance Differs from Solicited Proposals
Except for the process difference as outlined above, proposals are treated in the same manner as any PPP procurement.
**Responsible Government Entities for Policy Development and Implementation**
At the state government level, the policies for handling unsolicited proposals are developed by the department responsible for infrastructure development in the state, with the concurrence of the law and finance departments.

**Purpose and Desired Outcomes of the Approach**
The approach seeks to accommodate proposals that have an innovative approach to infrastructure projects, which have been conceptualized by the private sector rather than by the government agency. The approach seeks to convert such a proposal into a market search through competitive bids in a challenge procedure.

**Potential Limitations of the Approach**
The government worries that the process would remain biased to the initial project proponent, hence the reluctance of government agencies to take up this approach extensively. The private sector, too, is in doubt as to whether the proposal that they submit, after incurring some expenditure, will be taken to its logical conclusion. Therefore, the private sector is also reluctant to make the investment of time and money.

**Single Bids Received from Tender**

**Occurrence in the Procurement of Public Infrastructure**
Single bids are treated differently under different jurisdictions. It is not uncommon to receive only a single valid bid. While some jurisdictions are reluctant to proceed with the award, it is common that a rigorous validation benchmarking is used prior to the award.

**Sectors Most Susceptible to Single Bids Being Received**
Single, valid responses to open bids are not restricted to particular sectors.

**Policy Framework or Guidance Material for Process and Evaluation**
Generally, there are no legal restrictions to proceeding with single responses to open tenders. However, since the price discovery through competition is not demonstrated in single bids, some jurisdictions do not permit the process to proceed if there is a single bid. More commonly, a rigorous validation and benchmarking exercise is required to proceed with the award.

**Responsible Government Entities for Policy Development and Implementation**
At the state government level, the policies for handling unsolicited proposals are developed by the department responsible for infrastructure development in the state, with the concurrence of the law and finance departments.

**Purpose and Desired Outcomes of the Approach**
The approach enables the departments to handle a possible event where single, valid responses are obtained in a bid process. A rebid may not yield a better response and could also take more time and effort toward an uncertain outcome.

**Potential Limitations of the Approach**
Since price discovery is not done through a multiplicity of competitive bids, the bid price is difficult to justify.
Approach to Contract Negotiation

Stage in Procurement Where Contract Negotiation Mostly Occurs
Negotiations can be done only with the preferred bidder, and thus occur at a stage when the bid evaluation has reached a conclusive stage. Prior to such negotiation, internal administrative approval is needed for the evaluation report, and concurrence must be received from the competent authority.

Policy Framework or Guidance Material for the Process
There is no specific guideline or policy requirement.

Responsible Government Entities for Policy Development and Implementation
The concerned government agency is responsible for policy development and implementation.

Purpose and Desired Outcomes of the Approach
Negotiations are not meant to reopen any substantial issues in the bid but to seek (i) clarity on issues such as taxes, and (ii) to better the bid from the perspective of the public and/or government.

Potential Limitations of the Approach
If the bidders perceive that there could be aggressive negotiations after the bid, and there is a perception that there are a limited number of bids, there could be a tendency to “pad” the bid and to negotiate downward later.

Conflict Management
Areas of Procurement Where Conflict Issues Arise
Conflicts could arise from

- advisers being involved with the bidders, either directly or through associate companies; and
- consortium members having link and colluding. Since there are a multiplicity of holding companies and SPVs, it may be difficult to track the links.

Main Reasons for Conflict
Few basic firms are in the infrastructure development and investment space in India. Several contracting entities have entered the space due to market demand. A web of financial holding companies, funds, and SPVs where the same firms participate also exists. While financial investors are to act at arms-length, there is still a possibility of conflicts being created.

Policy Framework or Guidance Material for the Conflict Management Process
Apart from restricting companies from filing multiple bids and restricting advisers from participating in the consortia, there are no clear frameworks and/or policies on this.

Responsible Government Entities for Policy Development and Implementation
The government agency carrying out the process is responsible for policy development and implementation.
Purpose and Desired Outcomes of the Approach
This approach ensures that there is no collusion, that the process remains fair and transparent to all, and that the bids received can be trusted to reflect the market.

Potential Limitations of the Approach
Conflict is largely a matter of self-regulation and self-certification, so the bidders be upfront and ethical. It is very difficult (barring the odd case where there is a complaint from someone) for the government agency to unravel the link if any collusion takes place.

Global Comparative Framework—Part 3: Service Delivery

Implementation

Key Stages in Implementation
Implementation covers construction and O&M for delivery of services.

Key Tools Utilized to Plan for Implementation
Implementation is planned as part of initial project studies, and is then incorporated into the concession agreement as performance requirements. The plan also incorporates into the concession agreement performance monitoring mechanisms, penalties for not meeting the standards, and incentives for exceeding standards. The plan has to consider provisions for periodic reporting, surveys (i.e., physical and user), and addressing public complaints. Normally, a provision for independent assessments of performance is necessary through an independent engineer. A procedure, mediated by the Independent Engineer, for resolving disputes, is also key.

Government Entity Responsible for Contract Monitoring
The government agency in charge of the project is responsible for contract monitoring.

Approach to Managing the Relationship with the Contractor
The approach is encapsulated in the concession agreement, and no separate guidelines delineate the relationship. Unlike in a regular sovereign service provider contract, PPP concession agreements have a partnership element, where both parties agree to share some risks and obligations.

Process to Monitor Performance
Concession agreements have provisions for

- periodic reporting requirements;
- surveys (e.g., physical parameters, traffic, and user satisfaction) to be conducted at specified intervals;
- incentive and penalty structures for meeting and/or failing performance standards; and
- an independent engineer to monitor performance.
**Approach to Contractor Refinancing during Implementation**

Refinancing is normally not addressed in the concession agreements and is left to the discretion of the private sector. Refinancing is also not a matter of course, since loan agreements have prepayment penalties that increase the costs of refinancing.

**Approach to Revenue Upside or Gain Sharing with the Contractor**

The model concession agreements of the Planning Commission have certain clauses that trigger a fee share and/or reduction in concession period if there is a revenue upside. Most other concessions do not have any provisions to share the upside with the contractor.

**Major Issues Encountered during Implementation**

While government agencies have proficiency in monitoring construction, they do not have equivalent skills in the O&M and/or service delivery phase. The concession agreement has intricate terms for monitoring with effective real options that impact the operation of the concession agreement. Government agencies are not yet in a position at the field level to understand these intricacies. Even the private sector is still learning about these agreements.

**Key Skills and Required during Implementation**

- Ability to manage contracts efficiently, over a long tenure
- Understanding the differences of administering O&M contracts, rather than construction contracts
- Ability to respond to changing on-the-ground realities over the long tenure of the agreement.

**Process to Review Project Outcomes at Post-Implementation**

Review of project outcomes is normally left to the government agency in charge of the project and its state administrative department. In case the project is complex, it may be reviewed by a high-level committee.

**Measurements of Public–Private Partnership Success and Incentives to Ensure Success**

PPP projects may succeed based on different perspectives:

- from a user’s perspective, if the user charges are reasonable, the tenure limited, and service delivery excellent;
- from the government’s perspective, if the support given has commensurate gains, and user feedback is positive;
- from a lender’s perspective, if the debt service is on schedule; and
- from an equity investor’s perspective, if the anticipated returns on investment materialize.

**Risk**

**Level and Type of Guidance for Government to Mitigate and Manage Risks during the Contract**

No specific guidelines exist for mitigating and managing risk. Mitigation measures must be developed on a case-by-case basis, and are generally part of the consultant
and/or transaction advisers’ mandate when the studies and project structure are being finalized.

**Government Entities and Key Responsibilities for Mitigating and/or Managing Risk during the Contract**

The concerned government agency is responsible for ensuring that the risk mitigation measures are properly addressed in the contract documentation and built into the contracts to the extent required.

**Approach to Dispute Resolution and Key Mechanisms Adopted**

Concession agreements have a graded approach to dispute resolution, the first being through the intermediation of the independent engineer. If the first level fails, provisions exist for amicable settlement through a process of issuing notices and initiating a formal dialogue between senior representatives of both parties. If this too fails, then there is a provision for arbitration under the Arbitration and Conciliation Act of 1996. In some specific cases, international arbitration is also acceptable.

**Treatment of Refinancing Risk**

Refinancing is not covered in the concession agreement and is left to the discretion of the SPV.

**Process and Approach to Manage Renegotiation Risk**

Change of scope is addressed in the concession agreement, such as

- the power to initiate;
- assessment of value and/or cost of change;
- process of negotiation, intermediated by the independent engineer; and
- finalization of change.

Payments for change in scope are either through a cash payment or an extension of the concession period.

**Process and Approach to Manage Termination Risk**

No principles are specified for the management of termination risk across all sectors, but the model concessions of the Planning Commission outline the principles involved:

- identification of defaults and issue of notices,
- cure periods,
- dispute resolution mechanisms,
- step-in and substitution rights to lenders, and
- events of government default kept to a minimum to reduce risk of the private party calling termination.

**Special Issues**

**Public Disclosure Requirements (Post-Financial Close)**

**Type of Public Disclosure Required or Provided**

There are no specific disclosure requirements, although there have been a couple of very interesting developments in the recent past.
India has the Right to Information Act (Act 22 of 2005) under which any citizen can request any government agency or agency with significant government finance to furnish specific information within a stipulated time period. PPP projects could fall under this act. Technically, such information can be obtained through this act—except that it would be a cumbersome process.

• Recent high court judgments have found that PPP projects provide a public service on behalf of the state, and therefore come under the definition of “state.” The implication is that actions of the SPV are open to public scrutiny.

However, detailed information on PPP projects is not easy to find.

**Relevant Policy Framework or Guidance Material for Conflict Management Process**

The Right to Information Act (Act 22 of 2005) is the only framework available. However, since the SPV is normally in the private sector (although the project may have substantial government interest), the SPV can take a stance that this act is not applicable. Otherwise the consultation, conflict management, and disclosure requirements are left to the discretion of the government agency and its administering department.

**Government Entities Responsible for Public Disclosure Policy Development and Implementation**

The government agency and its administering department are involved in public disclosure policy development and implementation.

**Purpose and Desired Outcomes of the Public Disclosure Policy**

Public disclosure encourages the process to be transparent and enables feedback and/or consultation about the project and its implementation methodology.

**Potential Limitations of the Public Disclosure Policy Approach**

The extent of disclosure varies by geography, department, and type of project. This leads to improper information flow to the public and, in some cases, manifest dissatisfaction with the project.

**Renegotiation of Concessions**

**Prevalence in the Procurement of Public Infrastructure**

Major renegotiations are uncommon, especially in the recent past when project understanding has steadily improved.

**Key Reasons for Renegotiation by the Public Sector**

Renegotiation may occur because of

- problems with land handover,
- change in legal and/or regulatory regime, and
- change in extant design standards.
Key Reasons for Renegotiation by the Private Sector
Renegotiation may occur because of

- change in external conditions (e.g., the current credit crunch),
- consortium partners falling out or wanting to exit, and
- lenders asking for key changes for financing.

Sector(s) Most Affected by Renegotiation
This is not specific to any sector.

Relevant Policy or Guidance for the Renegotiation Process
Change-in-scope procedures are a part of most agreements, but most other instances of renegotiation are handled through negotiation.

Government Entities Responsible for Renegotiation Policy Development and Implementation
The concerned government agency and its administrative department are involved in renegotiation of policy development and implementation.

Purpose and Desired Outcomes of the Renegotiation Approach
Renegotiation seeks to recognize changed circumstances and the need to keep the project going as a public service, rather than putting a partner into an untenable position. Further, substantial time and effort have gone into a process, and the project should not be jeopardized.

Potential Limitations of the Renegotiation Policy Approach
The other side of renegotiation is that it vitiates the process by which a bidder has been selected. If the private sector knows that the position can be renegotiated, the tendency is to bid first and manage the system later.

Global Comparative Framework—Part 4: Completion

Completion Arrangements

Recognition of Buyout Rights in Contract
There are no buyout or termination-at-will clauses in the agreements. Substitution rights can be exercised by the lenders under the terms of the direct lender agreement. The government can terminate an agreement if the private party defaults.

Early Termination Payment Calculation
The principles of early termination are as follows.

- If termination is due to the concessionaire, the equity investment is forfeited by the concessionaire.
- If termination is due to the government, the government pays a premium of up to 50% on the equity investment.
In both cases of termination, lenders are protected by ensuring payments of debt due. Although, in the model concession agreements of the Planning Commission, in case of concessionaire default, only 90% of debt due is covered.

**Contract Termination Arrangements**

Termination may occur

- on default by the private sector, and
- on default by the government.

On account of force majeure that includes natural disasters, acts of war, indirect political events, and direct political events, defaults go through a process of notifications, cure periods, and termination if the default is not cured. Force majeure events lead to a suspension of obligations until a long-stop date, when the project can be terminated.

**End of Contract Arrangements**

At the end of the contract period, there are a set of handover requirements. These include

- tests prior to handover, under the supervision of the independent engineer,
- handover maintenance obligations to see that the assets are returned in a serviceable state,
- training of staff prior to handover,
- the independent engineer’s certification that handover requirements are complete, and
- handover done at no cost and no payments are to be made by the government (except those normally due). There may be requirements for subsisting arrangements and contracts to continue to ensure continuity of service.

**Explanatory Note**

**Stage of Public–Private Partnership Development and Implementation**

PPP infrastructure projects in India have not been occurring for a long time, and through the 1990s, only a handful of these were developed. The initial euphoria for these first projects dampened after significant delays and cost increases faced by most of these projects, and highlighted by the spectacular demise of Enron’s Dabhol power project. The second wave of such projects after 2002 has followed a more systematic approach, particularly in designing the contracts and procuring private sector partners. The government and many other agencies have now standardized the procurement and concession frameworks for many types of projects. In addition, specialized financial institutions that deal with such projects have developed appraisal systems to assess the price risk. Capacities have also been built up with consultants, advisers, and certain nodal government departments charged with handling PPP projects. In terms of maturity, the market is more developed in the energy and transport sectors, and comparatively less so in areas like power distribution, urban infrastructure, and social infrastructure.
There is a clear policy directive from the central and state governments that infrastructure creation can be accelerated through PPPs. India’s emphasis on PPPs can be seen from various policy measures set in place at the central and state levels. The Planning Commission, which is India’s apex planning body, has set up the separate Committee on Infrastructure under the Prime Minister. This committee has standardized procurement documents, such as the request for qualification, request for proposal, and concession agreements for various types of projects such as roads, seaports, and airports. The government has also set up funding mechanisms to make PPP projects financially viable propositions through VGFs. The government has also set in place project development funds that enable state governments to carry out the feasibility studies and procurement processes for infrastructure projects in a PPP format. Likewise, state governments have established policies and legislation for PPP projects in infrastructure. For instance, the government of Karnataka has an infrastructure policy that stipulates that infrastructure projects shall be first examined for being amenable to PPP before consideration for budgetary support. The government of Andhra Pradesh has also enacted special legislation that facilitates infrastructure projects through PPPs—this act is called the Andhra Pradesh Infrastructure Development Enabling Act of 2001. Many other states have followed this policy and/or legislation format.

Reference Documents and Other Relevant Materials

- Infrastructure Department, Government of Karnataka: http://idd.kar.nic.in/infrastructure.htm
- Planning Commission, Government of India: Committee on Infrastructure: http://infrastructure.gov.in
- Projects Today, Database on Projects in India: http://www.projectstoday.com
- The Reserve Bank of India: http://rbi.org.in
- Public–Private Infrastructure Advisory Facility of the World Bank: http://ppiaf.org

Approach to Completing Framework Responses

Extensive help can be found in the Department of Economic Affairs and Planning Commission (Committee on Infrastructure) documents and guidelines. At the state level, reliance is placed on policies and legislation enacted for some states, such as Andhra Pradesh, Gujarat, and Karnataka.

Sector-Specific Issues

Extensive help can be found in the Department of Economic Affairs and Planning Commission (Committee on Infrastructure) documents and guidelines. At the state level, reliance is placed on policies and legislation enacted for some states, such as Andhra Pradesh, Gujarat, and Karnataka.

Definition of Comparators

This is not applicable.
Other Suggested Comparators
This is not applicable.

How Changes in Future Public–Private Partnership Practices Might Change Responses or Require Different Comparators

PPP is a rapidly evolving area, testing new sectors and new constructs. Therefore, it is almost certain that there could be significant changes even in the near term.

Other Comments
This is not applicable.
Public–Private Partnership Framework of Republic of Korea

Global Comparative Framework—Part 1: Development

Enabling Environment—Introduction 1

*Definition and/or Description of Public–Private Partnership*

A public–private partnership (PPP) project is a means to build and operate infrastructure such as roads, seaports, railways, schools, and environmental facilities that have traditionally been constructed by government funding—with private capital—thus tapping the creativity and efficiency of private sector.

*Government Contracting Entity*

Major players in the PPP program include the Ministry of Strategy and Finance (MOSF) and concerned line ministries.

*Structure of Private Sector Contractor*

Private sector participants that intend to implement a PPP project establish a PPP project company, a legal entity that is designated as the concessionaire upon the PPP contract award. In general, construction companies, financial investors, and professional operators form a special purpose company (SPC) for a PPP project. The SPC cannot engage in businesses other than those acknowledged by the competent authority at the time of designation of the concessionaire except insignificant businesses approved by the competent authority. The fund financed by the SPC (or the concessionaire) consists of equity and debt. To maintain stability for construction work, the minimum equity ratio of 25% or more is required during the construction period. If equity investment by a financial institution exceeds 50% of the total equity, the required minimum level of equity ratio can be lowered to 20%. During the operational period, a minimum equity ratio of 10% is required.

*Forms of Government Subsidy*

The government may grant a construction subsidy to the concessionaire, if it is inevitable, to maintain the user fee at an appropriate level. The timing of the subsidy is determined in the course of the concession agreement, considering the equity investment plan of the concessionaire. The subsidy is distributed appropriately on a yearly or quarterly basis and not concentrated in a certain year. The distribution takes into consideration the completion level of the project and the schedule and scope of equity investment. In addition to the construction subsidy, the government also provides an operation revenue subsidy through a minimum revenue guarantee (MRG) and redemption agreement. Basically, the MRG system is a method for private participants and the government to share the revenue forecast risk. The higher the MRG level (or the narrower the guarantee and redemption band), the more risk...
is transferred to the government from private participants. Whereas the construction subsidy is a one-way subsidy from the government to private participants, the MRG and redemption agreement has a two-way structure. In the MRG agreement, if the operation revenue falls short of the lower bound, the government makes up the difference between the lower bound and the actual revenue. If, on the other hand, the revenue exceeds the upper bound, the government redeems the difference between the upper bound and the actual revenue.

**Most Commonly Adopted Public–Private Partnership Delivery Methods for Economic Infrastructure**

- Build–transfer–operate (BTO) and build–transfer–lease (BTL)

**General Responsibilities of Government under Contract Arrangements**

The government

- supervises and controls PPP projects,
- provides the land required for development and statutory approvals required under legislation,
- remains the ultimate owner of the project site for the duration of the contract, and
- is also responsible for making performance-based payments to the private party and for reviewing performance and service standards as required under the project agreement.

**General Responsibilities of Private Sector under Contract Arrangements**

The private party

- is responsible for other statutory approvals, site conditions, access arrangements, and compliance with construction laws and codes during the construction period; and
- is responsible for monitoring performance and retaining specific records that enable the government to assess the financial capacity, performance, and transparency of costs.

**Most Commonly Adopted Public–Private Partnership Delivery Methods for Social Infrastructure**

- BTL

**General Responsibilities of Government in Contract Arrangements**

The government

- provides the land required for development and any statutory approvals required under legislation,
- remains the owner of the project site for the duration of the contract, and
- is responsible for payment of services based on the agreed payment mechanism and review of performance and service standards as required under the concession agreement.
Level and Type of Government Support Provided for Public–Private Partnerships

There are numerous mechanisms to provide support to a PPP project. These include the following.

- Through land acquisition by the concessionaire and granting land expropriation rights to the concessionaire, national or public property in designated areas may be sold to the concessionaire, and concessionaires are allowed to use national or public property without charge or at a lower price.
- For financial support, the government may grant construction subsidies to the concessionaire if it is necessary to maintain the user fee at a reasonable level, and provide tax incentives with exemption from acquisition and registration taxes on real estate for BTO projects, 0% value-added tax on construction services, and tax reduction for infrastructure bond.
- With the MRG, a certain fraction of projected annual revenues may be guaranteed when the actual operating revenue falls considerably short of the projected revenue prescribed in the contract. Although it was abolished in October 2009, it is still applicable to projects with concession agreements already completed.
- Through a newly introduced risk-sharing structure, the government pays the amount of shortfall when the actual operation revenue is less than the level of risk-sharing revenue. When actual operation revenue exceeds the risk-sharing revenue, government subsidies are redeemed on the basis of realized payments.
- Through the Social Overhead Capital Credit Guarantee Fund, credit guarantees for PPP project financing are provided to enhance the timely payment of debt service.
- Other buyout options are prepared for force majeure and specific events.

Identification Process for Potential Public–Private Partnership Projects in the Budget Planning Framework

PPP projects are categorized into “solicited” and “unsolicited,” depending on who initiates the project. The competent authority, the central or local government, identifies a potential PPP project and solicits proposals from the private sector. In the case of an unsolicited project, the private sector identifies a potential PPP project and requests designation of the PPP project from the competent authority.

Specific Criteria Adopted to Identify Potential Public–Private Partnership Projects

The procurement procedure is designed to secure or enhance the value for money (VFM) of PPP projects. In the planning stage, a VFM assessment of a potential project is carried out to ensure the VFM of PPP procurement in comparison with traditional public procurement. In the bid selection stage, competitive bidding is mandatory both for solicited and unsolicited projects, which leads to improving the VFM of the project concerned by encouraging bidders to propose heightened service qualities and reduced project costs.
Enabling Environment—Introduction 2

Examples of Transport Infrastructure Permitted and/or Delivered under a Public–Private Partnership Arrangement

Transport infrastructure conducted through a PPP arrangement include roads, seaports, railways, and light rails.

Key Delivery Issues Addressed by Public–Private Partnership Procurement

Key delivery issues experienced in conventional procurement of transport infrastructure that are addressed by PPP:

- minimization of delays in completing the design, construction, and commissioning of new or redeveloped infrastructure;
- avoidance in cost overruns in projects caused by inadequate scope definition, poor project management, and changing and/or conflicting government priorities; and
- innovation in design and construction of infrastructure.

Most Commonly Adopted Public–Private Partnership Delivery Method for Transport Infrastructure

- BTO

Examples of Urban Environment Infrastructure Permitted and/or Delivered under a Public–Private Partnership Arrangement

The following are permitted under a PPP arrangement: waste treatment facilities and public livestock wastewater treatment facilities, waste disposal facilities, wastewater treatment facilities, recycling facilities, public wastewater treatment facilities, electric source facilities, gas supply facilities, and collective energy facilities.

Key Delivery Issues Addressed by Public–Private Partnership Procurement

Key delivery issues experienced in conventional procurement of urban environment infrastructure that are addressed by PPP include

- innovation in design and construction, technology risk, delivery, time, and budget; and
- ability to maintain plants efficiently.

Most Commonly Adopted Public–Private Partnership Delivery Method for Urban Environment Infrastructure

- BTL

Examples of Social Infrastructure Permitted and/or Delivered under a Public–Private Partnership Arrangement

The following are permitted under a PPP arrangement: schools, hospitals, prisons, social housing, military housing, public rental housing, culture centers, and youth training facilities.
**Key Delivery Issues Addressed by Public–Private Partnership Procurement**

Key delivery issues experienced in conventional procurement of social infrastructure that are addressed by PPP include

- innovation in design and construction of infrastructure that remains flexible to the changing services delivered from the assets; and
- ability to maintain assets efficiently, including delivery, time, and budget.

**Most Commonly Adopted Public–Private Partnership Delivery Method for Social Infrastructure**

- BTL

**Examples of Natural Resource and Power Infrastructure Permitted and/or Delivered under a Public–Private Partnership Arrangement**

Most utility generation and transmission assets are publicly owned. Some PPP waste projects may generate power for sale to the relevant utility.

**Key Delivery Issues Addressed by Public–Private Partnership Procurement**

This is not applicable.

**Most Commonly Adopted Public–Private Partnership Delivery Method for Natural Resources and Power Infrastructure**

This is not applicable.

**Enabling Environment—Legal**

**Governments Responsible for Policy**

MOSF is responsible for overall PPP policy for the Republic of Korea. The ministry is responsible for managing the PPP Act, enforcement decree, and the basic plan for PPPs as well as for preparing the draft budget for PPPs. Based on the PPP Act, the Public Infrastructure Investment Management Center (PIMAC), as an adviser and government agency, helps formulate the annual PPP plan and conducts policy studies for the improvement of PPP system.

**Governing Policy**

MOSF develops policy and guidelines from time to time. The PPP basic plan and implementation guidelines are annually updated, reflecting relevant changes and market conditions. The implementation guidelines contain guidelines for a VFM test, guidelines for request for proposal preparation, guidelines for standard output specification by facility, guidelines for tender evaluation, guidelines for standard concession agreements, and guidelines for refinancing.

**Governing Laws**

MOSF enacted the PPP Act in 1994 and has revised it since then for the promotion of PPPs. The Law and Regulations of Private Participation in Infrastructure is provided to the public whenever it is updated.
The PPP Act and the enforcement decree are the principal components of the legal framework of PPPs. They define eligible infrastructure types, procurement types and process, roles of the public and private parties, and policy supports. The PPP Act is a special act that precedes other acts; it exempts PPP projects from strict regulation in national property management and allows an SPC to play a role of competent authority.

**Public–Private Partnership Units Location**

MOSF and line ministries have PPP units. The budget ministry is responsible for PPP policy, line ministries are mandated to plan PPP projects, and PIMAC assists in the implementation of PPP policies.

**Role of Public–Private Partnership Unit**

The PPP project-related entities in the public sector assist with a combination of PPP policy development, assessment of PPP proposals, appropriate application of the PPP guidelines, provision of support to procuring agencies on PPP arrangements, and technical issues and project delivery.

**Key Governance Roles**

Generally, all participants in the PPP process are responsible for implementing the governance requirements during the project, with the senior responsible officer (i.e., the senior public official) usually responsible for ensuring that appropriate processes and practices are implemented. Independent reviews and investigations of project implementation at different stages in the project cycle also assess whether governance and best practices were adopted, with recommendations on how to improve future practices and whether the process should proceed to the next stage. The governance requirements are outlined in national PPP guidelines and provide for specific jurisdictional codes of conduct, policies, guidelines, or legislative requirements.

**Role of Agency**

The procuring authority that is normally responsible for the service to be delivered under the PPP is usually responsible for the project development, procurement, and contract monitoring of the PPP.

**Legislation Governing Land Acquisition or Resettlement**

Land acquisition legislation is provided at the national level.

**Process of Land Acquisition and/or Resettlement**

The overall process of land acquisition or expropriation for public works, such as infrastructure facilities and public buildings, is prescribed by the Land Acquisition Act. Unless any special provision is provided in the PPP Act or related laws, the procedure under the Land Acquisition Act applies to the expropriation or use of the land needed for the implementation of a PPP project. Under the act, land acquisition is carried out by the concessionaire or project company of the associated public works. After the plan for public works is settled by the public sector, the concessionaire prepares the list of land compensation or expropriation, which defines objects for acquisition, their conditions, and scope of related parties. Then it announces compensation plans.
and notifies them to landowners, interested parties, and local governments. After consultation with landowners and interested parties, the concessionaire enters into a contract on compensation with related parties.

In the case of land belonging to the national or a local government located in the area designated for a PPP project, a concessionaire conducts a prior consultation with the concerned administrative agency about the use of land. Such land cannot be sold for purposes other than for the PPP project after the date of announcement of the requests for proposals.

**Application of International Standards to Public–Private Partnership Policy**

The United Kingdom’s Public Procurement Regulation 2006, embodying the European Union’s procurement law, has been reviewed in the process of policy making.

**Enabling Environment—Accounting**

**Public Accounting Legislation Governing Balance Sheet Treatment**

For the accounting treatment of PPPs in national budgets and international comparable statistics such as the national accounts, no comprehensive standards exist.

**Requirements for a Project to Be Considered as Off-Balance Sheet**

The government’s fiscal burden depends on the PPP market situation.

**Government Entity Responsible for Determining Balance Sheet Treatment**

- MOSF, National Assembly

**Treatment of Depreciation of Assets**

The modification in calculation method is described as follows. When the agreement is terminated during the operation period, the means of depreciation of invested private funds is revised from the current declining balance method to a straight line method. This is to have the effect of increasing capability of raising senior debt by amplifying security solvency of the project. It should also be noted that depreciation of social overhead capital needs to employ the straight line method based on general accounting and tax transaction principles such as accounting standards of the state. However, in the case where the agreement is terminated due to the concessionaire, subordinated debt and capital is excluded from the estimation of the amount payable to ensure intensified responsibility of the private operator. The above is only applicable for new projects for 2009–2010 but can be applied to projects for which financing agreements are not yet sealed, according to the judgment of the competent authorities.

**Key Financial and Tax Incentives Offered**

To vitalize infrastructure markets for PPP projects, the government initiates various kinds of policies that can facilitate infrastructure financing. The government provides construction subsidies, compensation for base (i.e., raw) costs, infrastructure credit guarantees via the Infrastructure Credit Guarantee Fund, tax incentives, and guidelines for early termination payment.
**Key Fiscal Management Tools Employed**

Recently, there has been growing demand in the Republic of Korea to set up a sound fiscal management system for PPP projects. PPP investment has long been treated separately from publicly financed investment and was not under direct accounting and regulation of government expenditure. In terms of settling government subsidies between the competent authorities and private concessionaire, contracting future payment obligations for 20–30 years, determining whether the PPP assets are recognized as assets on the government’s balance sheet, and forecasting future expected or contingent government revenues, there is a need to develop a fiscal guideline to define a proper level of private sector participation, as well as the investment portion against the budget and suggested criteria for project selection. Under review is the method of linking the implementation and investment plan of PPPs to the government budget plan in the medium-term expenditure framework.

**Accounting Approach to Future Public–Private Partnership Obligations**

There is a movement toward considering future PPP obligations as public debt.

**Treatment of Public–Private Partnership Projects in the Fiscal Planning and Budget Process**

It is agreed that MOSF sets the investment ceiling for BTL projects of the fiscal year and reports it to the National Assembly in advance of the annual budget.

**Enabling Environment—Leaders and Champions**

**Role of Leadership and Championing Change in Public–Private Partnership Policy and Guidelines**

Generally, ministers and senior officials, particularly from MOSF and line departments, are key leaders of change and implementation of PPPs. Industry groups are also keen to champion recommendations to the government on the appropriate use of PPPs and for improving PPP implementation. Based on the PPP Act, PIMAC, as an adviser and government agency, helps formulate the annual PPP plan and conducts policy studies for the improvement of PPP system.

**Government Entity Responsible for Fostering Leadership in Public–Private Partnership**

MOSF, PPP units in the budget ministry and line ministries, and local authorities are the principal government entities responsible for demonstrating and developing leadership in PPP delivery. Based on the PPP Act, PIMAC, as a PPP market promoter, develops and provides training programs for procuring agency government officials in PPP system and delivery.

**Involvement of Other Government Entities, Institutions, or International Agencies in Fostering Public–Private Partnership Leadership**

PIMAC, as established by the PPP Act, supports procuring authorities in the development and management of PPP projects through training programs and service contracts, as well as policy makers in developing PPP policy and plans. Various tertiary and training institutions (e.g., EDUMAC at the Korea Education Development Institute) also provide courses and training to foster PPP leadership through professional development programs.
Priority Issues Facing Governments in Leading and Championing Public–Private Partnership Development and Implementation

The deteriorated economic climate, like the high funding costs due to global financial crisis, and the shortage of skills to respond appropriately, are major issues along with negative societal views on the general role of the private sector in public service delivery.

Strategies Implemented to Address These Issues

The government has created measures for revitalizing PPP projects by helping PPP projects that are experiencing difficulties in financing and reducing project risks resulting from external factors, including abrupt changes in interest rates. It also has improved related procedures for smoother implementation of PPP projects now underway. The first revitalization initiative was announced in February 2009, revising the PPP basic plan accordingly. In August 2009, a second initiative provided three measures to create an enabling environment for active private investment on PPPs while minimizing financial burdens, which are improvement in project structure, improvement of conditions for funding, and enhanced reliability.

Enabling Environment—Regulation

Key Regulatory Authorities

There is no specific regulatory authority for PPP transactions. Each procuring authority regulates the projects and pricing of the private party under the terms of the concession agreement. The authority grants permits or licenses to the private party. Sector-specific regulation applies to the delivery of utility services (e.g., roads, railways, seaports, and environment facilities).

Location of Regulatory Unit within the Government

This is not applicable.

Roles and Responsibilities for Economic Infrastructure Public–Private Partnerships

The budget ministry develops PPP plans and allocates budgets for projects that are conducted either by the central government or by local governments. The procuring authority is responsible for each project and for pricing regulation under the terms of the concession agreement.

Roles and Responsibilities for Social Infrastructure Public–Private Partnerships

The budget ministry develops PPP plans and allocates budgets for projects that are conducted either by the central government or by local governments. The procuring authority is responsible for each project and for pricing regulation under the terms of the concession agreement.

Role of the Regulator in Contract Performance Monitoring

The procuring authority is normally responsible for assessing contract performance. The performance evaluation team, organized by the procuring authority with specialists in the private sector, end-users in the facility, and government officials in the authority, monitors the performance and reports the result to the procuring authority.
Level and Type of Interaction between the Regulator and the Private Contractor

The procuring authority’s relationship with the private party is ultimately governed by the provisions of the relevant concession agreement.

Advisers

Policy for Adviser Procurement Process and Engagement

No specific rule is available for adviser procurement and engagement.

Government Entity Responsible for Implementing Policies

This is not applicable.

Requirement for Local Office and/or Employees

This is not applicable.

Main Types of Engagement Contracts

This is not applicable.

Key Stages in the Procurement Process

This is not applicable.

Key Evaluation Criteria to Determine Engagement

This is not applicable.

Engagement Conduct Policy, Including Policy for Managing Conflicts of Interest

This is not applicable.

Key Stages in the Conflict Management Process

This is not applicable.

Stakeholders

Stakeholder Participation Policy and/or Guidelines

This is not applicable.

Government Entity Responsible for Conducting the Stakeholder Interaction Process

This is not applicable.

Procedures for Stakeholder Participation

This is not applicable.

Key Role of Government in Facilitating Stakeholder Participation

This is not applicable.
Key Approach of Private Sector Contractor in Facilitating Stakeholder Participation

This is not applicable.

Key Issues that Stakeholder Participation Seeks to Identify and Address

This is not applicable.

Risk Assessment

Risk Analysis Policy and/or Guidelines

- VFM test guideline

Roles and Responsibilities in Conducting Risk Analysis

PIMAC is organizing and managing the VFM test team in conducting risk analyses.

Key Steps in the Risk Analysis Process

- Demand forecast, calculation of internal rate of return, sensitivity test

Independent Standards Governing Risk Analysis Process

- VFM test guideline, engagement of independent expertise in VFM analysis team

Treatment of Systematic Risks

This is not applicable.

Approach to Risk Assessment

- Analyze the project’s bankability and profitability.

Level and Type of Risk Register Employed

This is not applicable.

Approach to Risk Quantification

This is not applicable.

Risk Allocation

Risk Allocation Policy and/or Guidelines

The PPP basic plan provides the risk allocation mechanism.

Approach to Site Risk Allocation

Terms and conditions in the concession agreement can be renegotiated when the project site changes. The government and competent authorities are supposed to pursue renegotiation for the interest of the public and users.

Approach to Design, Construction, and Commissioning Risk Allocation

Design, construction, and commissioning risk is borne by the private sector once the concession agreement is reached.
**Approach to Operating and Maintenance Risk Allocation**
The concessionaire is responsible for the operation and maintenance (O&M) of the PPP project.

**Approach to Network or Services Interface Risk Allocation**
The concessionaire can request the competent authority not to implement substitute facilities near the relevant project.

**Approach to Change in Law or Government Policy Risk Allocation**
Terms and conditions in the concession agreement can be renegotiated when the policy or law changes.

**Approach to Residual Asset Ownership Risk Allocation**
In the Republic of Korea, the PPP facilities are usually owned by the government.

**Approach to Market or Demand Risk Allocation**
Market risk is supposed to be on the concessionaire.

**Approach to Sponsor and Financial Risk Allocation**
Concessionaires have shouldered all risks resulting from interest rate changes, but the government has introduced a measure to share some of the interest rate risks in case there are abrupt changes in interest rates due to market situations.

**Cost Estimation**

**Public Cost Estimate and/or Public Sector Comparator Policy or Guidance**
- VFM test guideline

**General Purpose and Use of the Cost Estimate**
This is an estimate of the hypothetical whole-of-life cost of a public sector project, if delivered by government through conventional procurement, to determine whether the conventionally procured option or the PPP option represents better VFM. This is presented in net present value terms.

**Government Entity Responsible for Determining Appropriateness and Developing the Cost Estimate**
The Public Procurement Service reviews the cost estimate for the project upon request.

**Resources Required to Develop the Cost Estimate**
- Accumulated database and experts

**Key Assumptions**
This is not applicable.

**Discount Rate Policy and/or Guidance**
- VFM test guideline
Government Entity Responsible for Determining the Discount Rate

PIMAC is responsible for managing the VFM test guideline and has changed the discount rate a couple of times in consideration of market situations.

Factors Considered in the Discount Rate Determination

The market situation and the interest rate are considered in determining the discount rate.

Discount Rate Approach for Economic Infrastructure

- 5.5% per year

Discount Rate Approach for Social Infrastructure

- 5.5% per year

Value for Money

Description of Value Assessment

The value assessment is known as VFM and is defined as the optimum combination of whole-of-life costs and quality (or fitness for purpose) of the good or service to meet the user’s requirement. VFM is a relative concept that requires comparison of the potential or actual outcomes of alternative procurement options.

Applicable Policy and/or Guidance for Value Assessment

The guidelines for the VFM test developed by PIMAC set out implementation guidelines and the approach to VFM assessment. The guidance covers both the quantitative and qualitative assessment required with a standard Excel spreadsheet model for the quantitative assessment.

Purpose and Use of Assessment Outcomes

The VFM test is conducted to determine the preferred delivery option of a project with emphasis on the importance of early assessment. At the planning stage, a VFM assessment of a potential project is carried out to ensure the VFM of PPP procurement in comparison with traditional public procurement. At the bid selection stage, competitive bidding is mandatory, both for solicited and unsolicited projects, which leads to improving the VFM of the project by encouraging bidders to propose heightened service qualities and reduced project costs.

Approach to Conducting the Assessment (2/2)

The VFM analysis consists of three phases

- **Phase 1 (feasibility assessment).** Economic feasibility (mainly a cost–benefit analysis) is examined, and a policy analysis is conducted.
- **Phase 2 (VFM assessment).** A comparative analysis is conducted between a public sector comparator and a PPP proposal to examine the VFM of the PPP option.
- **Phase 3 (development of an alternative option using the PPP approach).** Additional financial analysis is conducted to calculate an appropriate level
of project cost, user fees, and government subsidy if applicable on the public sector perspectives, and an alternative option using PPP approach is developed.

**Additional Resources Employed**

- Professors, accountants, and engineers from the private sector

**Role of Assessment Outcomes in the Bid Tender and Selection Stage**

The VFM test result functions as the basis for the bid tender and selection stage.

**Importance of Lowest Cost in the Assessment**

The price factor occupies around half of the total evaluation score.

**Market Factors that Assist in Achieving Value**

Competition among bidders can help achieve and enhance value.

**Investment Decision**

**Project Development Policy and/or Guidelines**

The project proposed should correspond with the government investment plans and priorities and deliver benefits to the public.

**Key Roles and Responsibilities in Project Development and Investment Decision**

The line ministry is responsible for making investment plans and setting the priorities.

**Key Stages in Project Development and Investment Decision**

- VFM analysis
- Tendering process

**Additional Resources in Project Development and Investment Decision**

Various resources may be utilized, including

- geotechnical site investigations,
- engineering investigations,
- legal title assessments and planning reports and assessments,
- economic development reports and forecasts,
- public interest assessments,
- market interest or testing,
- industry surveys,
- demand forecasts,
- willingness to pay surveys (if relevant),
- financial models,
- VFM assessments, and
- benefit management plans.
Key Considerations in Investment Decision

An investment decision most commonly considers qualitative and quantitative factors including

- an economic analysis that considers the costs and benefits of the project;
- where appropriate, an environmental analysis that considers the environmental impacts and effects of delivering the project;
- a social analysis that considers the issues of equity and opportunities and/or impact for the community;
- an affordability analysis that considers the budgetary impact of the project and its fit with other competing priorities;
- a VFM analysis that considers the preferred procurement route; and
- a market analysis that will assess the potential capacity and interest of the market to meet the project’s supply side requirements.

Tools Adopted to Support Investment Decision

The most common tools adopted are

- the cost–benefit analysis for the quantitative economic, social, and environmental analysis to determine which projects to proceed with;
- VFM analysis to determine the preferred procurement route; and
- affordability analysis to determine the affordability of the PPP option.

Delivery Options Analysis Process

- Data gathering to determine the risk, objectives, and project characteristics
- Short list delivery options to determine the suitability of different delivery structures
- Validation to assess any precedent and market view of the appropriateness of these structures
- Delivery options analysis, where evaluation criteria are applied to the models to assess how effectively the models meet project requirements and reduce risk
- Preferred delivery model that concludes with the preferred structure and model being identified based on the options analysis outcomes and consideration of the approach to the VFM, risk allocation, and potential market appetite for the model

Tools Adopted to Support Delivery Options Assessment

Tools adopted in the assessment may include

- a short list of delivery options based on scale, scope, risk, and whole-of-life service opportunities;
- project risk analysis;
- market analysis and research, as well as benchmarks of similar projects;
- assessment of project characteristics; and
- an options evaluation matrix.
Major Issues Encountered in the Investment Decision Process

The major issues that delay the investment decision process may include

- lack of clarity by the public authority of what it wants from the project and/or ambiguous specifications,
- insufficient development of the project scope to enable a thorough risk analysis to be conducted,
- lack of project ownership and leadership,
- underresourced project teams and poor project governance,
- selecting advisers on the basis of cost rather than quality and experience,
- lack of effective engagement with stakeholders,
- lack of understanding of and contact with the private sector at senior levels and poorly conducted market sounding, and
- unrealistic expectations within the public sector on the final cost of service delivery.

Global Comparative Framework—Part 2: Tender

Introduction

Key Governance Roles

The key governance roles include

- an evaluation team, which evaluates proposal bids according to the criteria specified in the request for proposal and is normally formed by the competent authority;
- the competent authority, which develops a PPP project plan by considering its investment priority and characteristics of the project; and
- a negotiation team, which leads negotiations with a private sector partner. The team includes external legal, financial, and engineering experts.

The PPP Review Committee (PRC) has the following responsibilities.

- Under the PPP Act, the PRC is organized and managed by MOSF. The PRC deliberates matters concerning the establishment of major PPP policies and key decisions in the process of implementing large-scale PPP projects. The committee members are composed of the minister of Finance and Strategy (chairperson), vice ministers of line ministries in charge of implementing PPP projects, and private sector experts with knowledge and experience in PPPs.
- Main responsibilities of the PRC are
  - establishment of major PPP policies,
  - establishment and modification of the PPP basic plans,
  - designation and cancellation of a large PPP project (total project cost i.e., those with a cost of W200 billion or above),
  - formulation and modification of the request for proposals for a large PPP project,
  - designation of a concessionaire of a large PPP project, and
  - other matters for the active promotion of the PPPs.
**Entity Administering the Procurement Process**

The competent authority, usually a line ministry, is in charge of the procurement process in PPPs. It initiates the process by proposing plans to the budget ministry, and forms an evaluation team and a negotiation team for the process.

**Role of the Public–Private Partnership Unit**

PIMAC, as the PPP unit, reviews request for proposal documents before their announcement. Also, by the request of the competent authority, PIMAC can act as a negotiation team leader or adviser in negotiation. At the bid evaluation stage, PIMAC may lead an evaluation team with external experts to evaluate proposal bids.

**Arrangements for Establishing the Team or Unit to Manage the Procurement**

The competent authority is responsible for forming the evaluation team and negotiation team to manage the procurement. The PPP unit may help the competent authority in charge during the whole process.

**Relationship between the Team Managing the Procurement and the Public–Private Partnership Unit**

By the request of the competent authority, PIMAC can act as a negotiation team leader or adviser in negotiation. At the bid evaluation stage, PIMAC may lead an evaluation team with external experts to evaluate proposal bids.

**Process for the Ministry of Strategy and Finance to Agree to Participate in the Tender Process**

The competent authority must apply in advance to MOSF for a preliminary feasibility study for large projects. Also, the competent authority should request from MOSF that PRC deliberate on project designation.

**Minister(s) Responsible for the Tender Process**

The line ministry is generally responsible for the tender process, so the corresponding minister is in charge of it.

**External Resources Utilized during the Tender Process**

External resources may include

- legal experts,
- financial experts,
- engineering experts, and
- professors.

**Use of Benchmarking in the Tender Stage**

The public sector comparator is an estimate of the hypothetical whole-of-life cost of a public sector project if delivered by government and is used as a benchmark to assess the quantitative value offered by bids.
**Approach to Assessing the Value of Public–Private Partnership Procurement during the Tender Stage**

A comparative analysis is conducted between a private sector comparator and a PPP proposal to examine the VFM of a PPP option. Additional financial analysis is conducted to calculate an appropriate level of project cost, user fees, and government subsidy if applicable on the public sector perspectives, and an alternative option using PPP approach is developed.

**Major Issues Encountered during Implementation of the Tender Process**

Major issues experienced in the tender process may include

- consistency between the project and government investment plans;
- delays in the negotiation stage; and
- formulation of evaluation criteria, which should be objective, mutually exclusive, and stimulating competition.

**Process Cycle**

**Stages in the Tender Process**

The key stages include

- designation of the PPP project,
- announcement of request for proposal,
- submission of project proposals,
- bid evaluation and selection of preferred bidder,
- negotiation and contract award,
- approval of detailed engineering and design plan for implementation, and
- construction and operation.

**Average time for the Tender Process (from Issue of Tender Documents to Contract Award and/or Financial Close)**

The average time varies depending on the type and size of the project. For example, an unsolicited PPP road project takes around 3 years from the feasibility study to the start of construction.

**Degree of Financing Security Sought in Bids**

Bidders usually form a consortium, which includes financial institutions. Also, bidders are requested to submit proposals that should contain details of the total project cost and financing plan.

**Degree of Technical Specification Sought in Bids**

The bids are expected to include the basic design documents, which will be the base of the detailed engineering and design plan for implementation after the contract award.

**Degree of Direct Negotiation during the Tender Stage**

The competent authority negotiates with a preferred bidder on the details of the contract terms. Generally, it forms a negotiation team including external legal,
financial, and engineering experts to negotiate with a private sector partner. The competent authority may request PIMAC to act as a team leader or adviser in the negotiation. For efficient management of negotiation, a negotiation period may be specified in the request for proposals in advance. It may be extended once, but both parties should strive to complete the negotiation in a timely manner.

**Private Sector Bid Costs and Approach to Expenses**

It has become mandatory for the competent authority to compensate part of bid preparation costs of unsuccessful bidders to encourage competition among bidders, thus maximizing private sector efficiency and innovation. For example, 25% of the basic design cost is compensated for the unsuccessful bidder when there is only one losing bid. If there are more than two, 30% and 20% of the basic design costs are compensated for the second- and third-ranked bidders, respectively.

**Key Advantages of the Tender Process**

- By stimulating competition among bidders, the government has increased the probability of choosing the best way to deliver the needed facilities.

**Key Disadvantages of the Tender Process**

- Delays in the negotiation stage due to various reasons.

**Preparation**

**Commencement of Planning and Preparation for the Tender Process**

The planning and preparation for the tender process begins with the designation of a potential project. In designating a potential project, the government needs to tap its promise as a PPP project, and conduct a study on the level of a financial burden of the government as well as barriers before it goes ahead with the project. Line ministries in charge of facilities have been doing feasibility studies well in advance to designate potential PPP projects.

**Key Planning Tools Adopted to Plan for the Tender Process**

The key tools that may be adopted include

- type of procurement,
- evaluation method, and
- negotiation and contract plan.

**Key Resources Utilized in Planning for the Tender Process**

The key resources utilized in the planning process include

- results of the feasibility study,
- basic design documents,
- supporting advice from PIMAC as the PPP unit, and
- deliberation by the PRC.

**Prequalification Document Contents**

The prequalification is intended to evaluate the basic capacities of bidders to design, build, finance, and operate the project. Hence, bidders are expected to submit documents that will prove those capacities.
**Detailed Tender Documents and Contents**

The key contents in the detailed tender documents include

- general information;
- estimated project costs, duration, location, and the scale of the project;
- estimated profits of the concessionaire such as user fees and supplementary projects;
- procurement method;
- government subsidies, if applicable;
- management and operation of the facilities; and
- qualification for the concessionaire.

**Approach to Developing the Output Specification**

The output specification is basic and tends to be specified in detail during the negotiation period. Also, the bidders are encouraged to modify the output specification with solid grounds, if any.

**Additional Tools and/or Procedures Important in the Tender Process**

This is not applicable.

**Major Issues Encountered during the Tender Stage Preparations**

The major issues that are encountered during the tender preparation include

- a biased feasibility study result,
- insufficient planning by a competent authority, and
- a lack of consistency due to separate procurement tracks between a PPP and the traditional public procurement.

**Selection**

**Prequalification**

**Average Time of Prequalification (Release of Document to Short List Announcement)**

Usually, the prequalification step is taken along with detailed tender evaluation.

**Bid Criteria and Response Requirements**

The prequalification mainly evaluates experience and capability in doing a PPP project. In general, basic capacities of bidders to design, build, finance, and operate the project are evaluated.

**Approach to Prequalification Bid Evaluation**

The elements for prequalification are a minimum level of qualification and capability. Only bidders who satisfy the prequalification requirement can proceed to the second stage for technical and price evaluations.

**Level and Type of Interaction with Bidders**

Once the documents for the bidding are submitted, there is virtually no interaction with bidders until the second stage of evaluation. This is due to an objective and independent evaluation process.
Process of Short List Approval and Release of Tender Documents
By the criteria of prequalification, the evaluation team can choose eligible bidders for the second stage of evaluation. This is to screen the qualifications of bidders prior to the second stage for technical and price evaluations.

Governance Requirements for the Prequalification Process
This is not applicable.

Detailed Tender

Average Time Taken from the Release of the Detailed Tender Documents to Contract Award
The average time varies depending on the size and complexity of the project. For instance, a road project usually takes around 2 years from designation to contract award.

Key Stages in Tender Evaluation and Selection
The key stages in the detailed tender process include

- review of evaluation criteria,
- initial evaluation,
- review of proposal contents,
- creation of questionnaires for evaluation purposes,
- review of points at issues and discussion,
- evaluation and drawing up of a statement of opinion, and
- selection of preferred bidder.

Bid Criteria and Response Requirements
The detailed tender evaluation criteria tend to be about technical and price evaluation. Total evaluation scores are adequately distributed between technical and price elements. The categories to be evaluated and weights of particular categories are adjusted by the competent authorities considering the characteristics of the project.

Approach to Evaluating Technical Solutions and Service Delivery Aspects of Bids
The detailed tender evaluation methodology may evaluate the technical solutions based on

- details of the financing plan,
- composition of the concessionaire,
- management and operation plan for the facilities, and
- degree of originality and social welfare improvement.

Approach to Evaluating Financial and Commercial Aspects of Bids
The detailed tender evaluation methodology may evaluate the financial and commercial aspects of the bids based on

- details of the total project cost and financing plan;
- grounds for estimated free-use periods or ownership and profit-making period of the constructed facilities;
- expenditure plans and revenue estimation, including user fees;
• contents of and grounds for subsidy request, if any; and
• contents of and grounds for implementing supplementary projects, if any.

Role of Value Assessment in Tender Evaluation
Upon the designation of a PPP project, the VFM test result is revealed, and, based on the result, the competent authority formulates and announces a request for proposals. Based on this request, bidders are expected to compete to deliver a higher level of VFM. Hence, during the evaluation, a bid with high VFM is more likely to be selected.

Level and Type of Interaction with Bidders
During the evaluation period, team members work on questionnaires for evaluation, and bidders are expected to complete those questionnaires. The investor relations may take place at this stage with the unanimous consent of the members so that the results of evaluation will not be controversial later. It is much more judicious not to hold an investor relations if the project is sensitive, for fairer evaluation.

Process for Approval of Preferred Bidder
The competent authority selects a preferred bidder based on the result of the evaluation. It should select at least two potential concessionaires in case the negotiation with a preferred bidder fails.

Governance Requirements for the Detailed Tender and Selection Stage
This is not applicable.

Major Issues Encountered during the Tender and Selection Process
The main issues that are encountered during the tender and selection process may include

• clarifying evaluation criteria, which should be objective, independent, and stimulating competition;
• reducing the cost required for making proposals, which is estimated to be up to 2.8% of the total project cost; and
• convening competent evaluation team members.

Finalization
Requirements and Process to Achieve Contract Award and/or Execution
The competent authority negotiates with a preferred bidder on the details of the contract terms. Generally, it forms a negotiation team, including external legal, financial, and engineering experts, to negotiate with a private sector partner. The competent authority may request PIMAC to act as a team leader or adviser in the negotiation. For efficient management of negotiation, a negotiation period may be specified in the request for proposals in advance. It may be extended once, but both parties should strive to complete the negotiation in a timely manner. Any delay between appointment of a preferred bidder and the contract award almost inevitably leads to increased project costs, thus, more user fees or government subsidies. To prevent the delay, it is critical for the competent authority to prepare project plans and a detailed request for proposals accurately before initiating the bidding process. If the negotiation fails to be completed within the specified time period, necessary
countermeasures should be taken, such as initiating a negotiation with the next preferred bidder, re-announcing the request for proposals, or nullifying the designation of a PPP project. The competent authority designates a preferred bidder as a concessionaire while finalizing the negotiation for the PPP contract.

**Level of Contract Negotiation Prior to Contract Award and/or Execution**

The scope of negotiations covers all matters in a proposal. Negotiations are divided into main negotiations and working-level negotiations. The working-level negotiation team is concerned with on-the-ground, detailed matters and reports the results to a main negotiation team that reviews or confirms matters discussed and agreed by a working-level negotiation team, or discusses and coordinates points at issue during the working-level negotiation. Here, negotiating parties review and analyze all situations expected as well as related administrative acts.

**Planning and Preparation Activities Conducted for the Financial Closure Process**

This is not applicable.

**Summary of the Financial Closure Process**

The financial closure may include

- the reference rates,
- period and timing of the financial transaction,
- financial structure, and
- specific issues about the financial structure.

**Government Approach to Managing Prefinancial Closure Risks**

There is no specific government approach to manage prefinancial closure risks. Concessionaires have shouldered all risks resulting from interest rate changes, but the government has introduced a measure to share certain part of the interest rate risks in case there are abrupt changes in interest rates due to market situations.

**Legal Framework**

**Presence of Any Public–Private Partnership Specific Laws**

The Act on Private Participation in Infrastructure (PPP Act) and the PPP Enforcement Decree exist in the Republic of Korea.

**Other Applicable Laws**

The PPP Act is a special act that precedes other acts. It clearly defines eligible infrastructure types, procurement types, procurement process, the roles of public and private parties, and policy supports.

**Approach to Gaining Required Authorizations to Deliver Infrastructure Public–Private Partnerships**

If the competent authority has followed the necessary process as stipulated in the PPP Act, the authorizations and permissions have been granted.
Overview of Legal Process to Grant Public–Private Partnership Concession

Under the PPP Act, the PRC is organized and managed by MOSF. The PRC deliberates matters concerning the establishment of major PPP policies and key decisions in the process of implementing large-scale PPP projects.

Requirements to Grant Asset Transfer and/or Ownership

In build–transfer–operate (BTO) and build–transfer–lease (BTL) methods, ownership of the facilities in infrastructure is transferred to the government upon completion of construction, and the concessionaire is granted the right to operate them. In the build–operate–transfer (BOT) method, the concessionaire assumes ownership of the facilities in infrastructure for a specified period of time after completion of construction, and the ownership is transferred to the government upon termination of the concession period. In the build–own–operate (BOO) method, the concessionaire owns and operates the infrastructure facilities upon completion of construction.

Requirements to Deliver Service (e.g., Licenses and Permits)

Generally, the concession agreement stipulates the service delivery.

Security Arrangements for Private Sector Contractors

In many cases, private sector participants establish a PPP project company, which forms an SPC. The fund financed by the SPC consists of equity and debt. To maintain stability for construction work, the minimum ratio of 25% or more is required during the construction period. During the operation period, a minimum equity ratio of 10% is required. Infrastructure bond and infrastructure funds can be used to finance PPP projects. While an infrastructure bond is not widely used, the asset size of infrastructure funds has increased rapidly in recent years.

Contracts

Key Contracts Legally Establishing the Project

The PPP contract is the key contract that establishes a PPP project.

Key Roles and Responsibilities Governed by These Contracts

The contract may include:

- basic information regarding the PPP project designation of the concessionaire, determination of the O&M period as well as facility use and relationship of the rights and obligations of the parties to the concession agreements;
- matters regarding construction, including the commencement date and duration, supervision, and levy of liquidated damages;
- matters regarding determination and adjustment of total project cost and user fees, internal rate of return, and operating revenue and costs;
- matters regarding government support, including guarantee of operating revenue, and assistance in applying for authorization and permission;
- matters regarding maintenance, repair, and O&M of the facilities;
- matters regarding classification of risk types and principles of risk allocation; and
- matters regarding conditions and procedures for nullifying the concession agreement, and termination payment criteria and procedures.
**Party Preparing Public–Private Partnership Contracts**

The competent authority and the preferred bidder negotiate the details of contract terms. Deliberation by the PRC and prior review on the draft contract by PIMAC are formally required for large projects.

**Jurisdiction of Public–Private Partnership Contracts**

The jurisdiction of the PPP contract is determined by the competent authority.

**Key Technical Contracts**

In BTO, the concessionaire formulates the detailed engineering and design plan for implementation based on the PPP contract and applies to the competent authority for the approval of the plan within 1 year from its designation as concessionaire.

Required documents for the approval of the detailed engineering and design plan for implementation include

- location and total area of the project site;
- construction method and technical details of the project;
- construction plan by section or stage;
- plan for land acquisition and use; and
- detailed plan of supplementary projects, if any.

In BTL, the competent authority formulates the request for proposal documents with detailed output specifications and service requirements, and those specifications can be modified during negotiation.

**Key Roles and Responsibilities Governed by These Contracts**

In BTO, the competent authority monitors the progress of construction to make sure that qualities of facilities and equipment provided by the concessionaire are appropriate. Normally, the competent authority appoints an independent superintendent to supervise the progress of construction. On a regular basis, the concessionaire submits to the competent authority reports on the progress reviewed by the superintendent. In BTL, it is important for the competent authority to formulate request for proposal documents with detailed output specifications and service requirements so that private companies can adequately prepare project proposals. Otherwise, negotiations that follow can be long as a result of adjusting to different expectations and interests.

PIMAC provides general and sector guidelines on the preparation of requests for proposal of BTL projects with model output specifications, although detailed design should be adjusted and developed according to individual projects.

**Provisions for Monitoring and/or Auditing Performance of the Contractor**

The competent authority monitors the progress of construction to make sure that qualities of facilities and equipment provided by the concessionaire are appropriate.
**Key Financial Contracts**

Generally, financial contracts are entered into between the financiers and private sector. The private sector is in charge of the financial agreement in accordance with the agreed schedule.

**Key Roles and Responsibilities Governed by These Contracts**

This is not applicable.

**Provisions for Payment of Subsidy or Service Payment**

The amount of subsidy is determined differently in each individual concession agreement. That is, when publicly notifying a project, the government first discloses an approximate ratio of the construction cost that it is willing to take on. The exact ratio of fiscal commitment to a project’s construction cost is determined through consultation and is stipulated in the concession agreement. The government payment for a BTL project depends on the availability and the level of service quality.

**Level and Type of Guidance Provided on Commercial Principles**

PIMAC has developed PPP implementation guidelines to improve transparency and objectivity in PPP implementation. Some examples of guidelines are (i) a guideline for the VFM test, (ii) guideline for request for proposal preparation, (iii) guideline for standard output specification by facility, (iv) guideline for tender evaluation, (v) guideline for a standard concession agreement, (vi) guidelines for refinancing.

**Financial Instruments**

**General Insurance Requirements of Contractor**

The Infrastructure Credit Guarantee Fund has been established and operated since 1994 to provide credit guarantees to a concessionaire that wants to obtain a loan from financial institutions for PPP projects.

**Level and Type of Guarantees**

Up until the revision of the PPP basic plan in October 2009, the government has provided an operation revenue subsidy through a minimum revenue guarantee (MRG) and redemption agreement.

**Flexibility in Insurance and Guarantee Limits**

For projects initiated from 1995 to 2003, the government guaranteed 90% for a period of 20 years; for projects initiated from 2004 to 2005, 70%–90% was guaranteed for 15 years. After the system was revised in 2006, the government now guarantees only 65%–75% for 10 years only for solicited projects.

**Private Contractor Approach to Hedging**

Concessionaires are to shoulder all financial risks.

**Main Hedging Instruments Employed**

This is not applicable.
**Government’s Approach to Hedging**
The government has introduced a measure to share some of the interest rate risks in case there are abrupt changes in interest rates due to market situations.

**Main Hedging Instruments Employed**
This is not applicable.

**Level and Type of Third-Party Indemnities**
This is not applicable.

**Financing**

**General Range of Gearing for Economic Infrastructure**
- 70%–75% debt

**General Range of Gearing for Social Infrastructure**
- 85%–95% debt

**Key Sources of Debt**
The key sources of debt are, typically, bank loans.

**Major Debt Participants**
The major debt participants include
- local banks and institutions,
- the infrastructure fund, and
- international banks.

**Key Sources of Equity**
The main financing comes from the consortium.

**Major Equity Participants**
The major equity participants include
- the concessionaire,
- infrastructure fund, and
- financial institutions.

**Approach to Refinancing the Bid**
The competent authority has the right to request refinancing where, in the absence of an equity-led refinancing request, the authority believes that terms available in the market are more favorable than those within the existing agreement. The competent authority is entitled to receive 50% of any other refinancing gain.
**Capital Drawdown Profile**

Given the high project risks at the commencement of the project, equity is generally provided as the first stream of finance (often in the form of a subordinated sponsor loan for tax purposes). Equity may be contributed as a lump sum or via installments depending on the construction profile of the project. Debt is gradually drawn down during the construction period and refinanced as the project commences service delivery. The debt is usually provided as an interest-only loan for specific periods to reduce the repayments required in the early years of the project.

**Special Issues**

**Unsolicited Proposals**

**Prevalence and/or Role in the Procurement of Public Infrastructure**

Unsolicited projects have been actively implemented because the private sector assumes associated costs and risks for them.

**Sectors Where Unsolicited Proposals Are Commonly Received and Considered**

- Profit-making facilities, such as roads and tunnels.

**Relevant Policy Framework or Guidance Material for Process and Evaluation**

Proposals for unsolicited projects are thoroughly examined by the public sector on various aspects such as whether the project proposed corresponds with the government investment plans and priorities and delivers benefits to the public. PIMAC is entitled to conduct VFM analyses for unsolicited projects requested by the competent authority.

**How Policy and/or Guidance Differs from Solicited Proposals**

As merits to the initial proponent, extra points within 10% of the total evaluation points can be awarded upon review of the VFM assessment of the initial proposal. If the initial proponent modifies its original proposal, however, the maximum level of bonus points to the initial proponent is reduced to 5% of the total evaluation points. Bonus points given to the initial proponent are disclosed in the request for alternate proposals.

**Responsible Government Entities for Policy Development and Implementation**

MOSF is responsible for policy development and implementation. PIMAC is entitled to conduct VFM analyses for unsolicited projects requested by the competent authority.

**Purpose and Desired Outcomes of the Approach**

The private sector identifies a potential PPP project and requests designation of the PPP project from the competent authority. Thus, it is expected that the private sector’s creativity and efficiency are introduced into the facilities via unsolicited proposals.

**Potential Limitations of the Approach**

The government is making efforts to promote more solicited projects since these can be implemented in line with the overall government infrastructure investment plan and priorities.
**Single Bids Received from Tender**

**Occurrence in the Procurement of Public Infrastructure**
Single bids were common in the past, but recently, fierce competition has been observed.

**Sectors with Mostly Single Bids Being Received**
- Environmental facilities

**Relevant Policy Framework or Guidance Material for Process and Evaluation**
There is no specific process in the case of a single bid.

**Responsible Government Entities for Policy Development and Implementation**
MOSF, with the advice of PIMAC, is responsible for policy development and implementation.

**Purpose and Desired Outcomes of the Approach**
It has become mandatory for the competent authority to compensate part of bid preparation costs of unsuccessful bidders to encourage competition among bidders, thus maximizing private sector efficiency and innovation.

**Potential Limitations of the Approach**
Too much competition hurts the profitability of PPP projects for the private sector, which could add further risk to the project.

**Approach to Contract Negotiation**

**Stage in Procurement Where Contract Negotiation Mostly Occurs**
The competent authority negotiates with a preferred bidder on details of contract terms after bid evaluation.

**Relevant Policy Framework or Guidance Material for Process**
- PPP guidelines

**Responsible Government Entities for Policy Development and Implementation**
MOSF, with advice of PIMAC, is responsible for policy development and implementation.

**Purpose and Desired Outcomes of the Approach**
For efficient management of negotiations, a negotiation period may be specified in the request for proposals in advance. It may be extended once, but both parties should strive to complete the negotiations in a timely manner.

**Potential Limitations of the Approach**
This is not applicable.

**Conflict Management**

**Areas of Procurement Where Conflict Issues Arise**
Conflicts may arise from refinancing.
Main Reasons for Conflict
The main reason for conflict is measuring the size of gains to share from refinancing.

Relevant Policy Framework or Guidance Material for Conflict Management Process
In 2007, PIMAC formulated refinancing guidelines to clarify the details of refinancing.

Responsible Government Entities for Policy Development and Implementation
MOSF, with the advice of PIMAC, is responsible for policy development and implementation.

Purpose and Desired Outcomes of the Approach
The refinancing guidelines need to provide clear criteria on many issues to mitigate conflicts.

Potential Limitations of the Approach
A solid sharing rule could deter the initiation of refinancing by the private sector.

Global Comparative Framework—Part 3: Service Delivery

Implementation

Key Stages in Implementation
Implementation includes (i) designation of a potential PPP project, (ii) formulation and announcement of a request for proposal, (iii) submission of a proposal, (iv) evaluation of a proposal, (v) negotiations and designation of a concessionaire, (vi) introduction and approval of a detailed engineering and design plan for implementation, and (vii) completion and operation.

Key Tools Utilized to Plan for Implementation
The annual basic plan for PPPs lays out general principles for selecting PPP projects. First, a candidate project should fall under one of the 44 facility types regulated in the PPP Act. In addition, user affordability, profitability, benefit to the public, and efficiency gain in using PPP procurement should be carefully examined. It is important for the competent authority to consider whether the candidate project is in line with national medium- to long-term infrastructure investment plans.

Government Entity Responsible for Contract Monitoring
The competent authority is responsible for contract monitoring. The competent authority monitors the progress of construction to make sure that qualities of facilities and equipment provided by the concessionaire are appropriate.

Approach to Managing the Relationship with the Contractor
The approach is, in general, based on the concession agreement, which is reached after the negotiation.
**Process to Monitor Performance**

Ex-post management and monitoring during operation is conducted by the public sector, usually the competent authority. PPP projects in the Republic of Korea are managed by each competent authority (e.g., the Ministry of Land, Transport and Maritime Affairs; Ministry of Environment; Seoul metropolitan government; or Busan metropolitan city government), and the management structure is stipulated in each concession agreement. Each competent authority manages projects by controlling guidelines for concession agreements and receiving project progress reports.

**Approach to Contractor Refinancing during Implementation**

Refinancing is the process of changing the project consortium’s equity structure, investment share, and debt financing conditions. Refinancing clauses were formulated in the 2004 basic plan in Section 4-4. Then, in 2007, PIMAC formulated refinancing guidelines to clarify the details.

**Approach to Revenue Upside or Gain Sharing with the Contractor**

According to the PPP Act, the competent authority is supposed to share the refinancing gains equally with the project company.

**Major Issues Encountered during Implementation**

To secure accountability and conformity with national infrastructure investment plans and policies in implementing PPP projects, the PPP Act makes it mandatory for MOSF and the PRC to deliberate on large PPP projects at major gateways to the next procurement step.

**Key Skills Required during Implementation**

The procurement procedure is designed to secure or enhance VFM of PPP projects. In the planning stage, VFM assessment of a potential project is carried out to ensure the VFM of PPP procurement in comparison with traditional public procurement. In the bid selection stage, competitive bidding is mandatory, both for solicited and unsolicited projects, which leads to further improving the VFM of a project by encouraging bidders to propose heightened service qualities and reduced project costs.

**Process to Review Project Outcomes at Post-Implementation**

It is mandatory for MOSF to review and evaluate PPP projects and to report the result to the National Assembly according to the PPP Act.

**Measurements of Public–Private Partnership Success and Incentives to Ensure Success**

It is reported that PPP projects in the Republic of Korea have become more efficient from the perspectives of users, concessionaires, and the government. The key results include (i) user fees of PPP facilities approaching those of public facilities over time, (ii) the return to private participants relative to the risks that they bear becoming tighter thanks to increased competition in the bidding process, and (iii) the MRG level provided by the government decreasing over time.
**Risk**

*Level and Type of Guidance for Government to Mitigate and Manage Risks during the Contract*

The government has introduced a measure to share some of the interest rate risks in case there are abrupt changes in interest rates due to market situations.

*Government Entities Responsible for Mitigating and/or Managing Risk during the Contract*

The competent authority and MOSF are responsible for risk mitigation in PPP implementation, if any.

*Approach to Dispute Resolution and Key Mechanisms Adopted*

The PPP basic plan states that PIMAC should provide advice or act as an intermediary in case of refinancing disputes.

*Treatment of Refinancing Risk*

Refinancing is a change in financial structure, which is part of a concession agreement; thus, it is followed by a modification of the concession agreement.

*Process and Approach to Manage Renegotiation Risk*

The basic plan and the concession agreement describe detailed situations where renegotiation is possible and how renegotiation proceeds.

*Process and Approach to Manage Termination Risk*

The PPP project company or SPC can ask the central or local government to buy the project if the construction or management and/or operation of the facility become impossible due to, for example, default by a concessionaire or by the government, political force majeure, or nonpolitical force majeure.

**Special Issues**

*Public Disclosure Requirements (Post-Financial Closure)*

*Type of Public Disclosure Required or Provided*

For BTO projects, the fiscal costs and risks associated with them are assessed and disclosed. This disclosure rule is consistent with the recommendation from the International Monetary Fund (2004) that, if a government continues to carry the majority of risk in a project, the government is the economic owner of the asset even in cases where the private partner is the legal owner of the asset.

*Relevant Policy Framework or Guidance Material for the Conflict Management Process*

This is not applicable.

*Government Entities Responsible for Public Disclosure Policy Development and Implementation*

This is not applicable.
Purpose and Desired Outcomes of the Public Disclosure Policy
Public disclosure encourages the process to be transparent and enables feedback and/or consultation about the project and its implementation methodology.

Potential Limitations of the Public Disclosure Policy Approach
This is not applicable.

Renegotiation of Concessions

Prevalence in the Procurement of Public Infrastructure
Renegotiation means an adjustment or changes to the concession agreement. Terms and conditions in the concession agreement can be renegotiated when the PPP policy changes or the project scope changes. Renegotiation is also possible when the government wants to rebalance the use of facilities among government facilities and PPP facilities.

Key Reasons for Renegotiation by the Public Sector
Reasons for renegotiation include changes in system or project scope and rebalancing with government projects and PPP projects.

Key Reasons for Renegotiation by the Private Sector
The concessionaire can also request changes in the concession agreement for the same reasons.

Sector Most Affected by Renegotiation
This is not applicable.

Relevant Policy or Guidance for the Renegotiation Process
The basic plan specifies a renegotiation clause.

Government Entities Responsible for Renegotiation Policy Development and Implementation
The government and competent authorities are supposed to pursue renegotiation for the interest of the public and users. Furthermore, the request for renegotiation is not restricted to competent authorities. The concessionaire can also request changes to the concession agreement.

Purpose and Desired Outcomes of the Renegotiation Approach
The renegotiation should result in the improvement in the welfare of users.

Potential Limitations of the Renegotiation Policy Approach
It presents the possibility of a changed agreement.

Global Comparative Framework—Part 4: Completion

Completion Arrangements
Recognition of Buyout Rights in the Contract
The concessionaire of facilities revertible to the government may request that the central or local government buy out the project (including supplementary projects)
in the event that construction or O&M of the infrastructure facilities is impossible due to inevitable circumstances, such as a natural disaster.

**Grounds for Recognition of Buyout Right**

- When construction is suspended for 6 months or longer, or total project cost increases by 50% or more due to natural disasters, war, and other cases of force majeure
- When operation of the facility is suspended for 6 months or longer, or where the repair cost or reconstruction cost exceeds 50% of the initial total projects cost due to natural disasters, war, and other cases of force majeure
- When the government does not perform its duties in the absence of justifiable cause as determined in the concession agreement for 1 year or longer from the date of receipt of notification, or when the construction or operation of the facility is delayed or suspended for 6 months or longer as a result
- When a cause, as determined by the concession agreement, occurs, and the competent authority determines that it is reasonable to recognize the buyout right of the concessionaire

**Early Termination Payment Calculation**

The termination payment system was established in 2000. According to the standards established in 2000, depending on the cause of termination, the termination payment would be 85%–100% of the project facility value if the project was in the construction phase. If the project was in the operation phase, it would be 80%–100% of future project net cash flow. In 2004, the calculation method was revised to take into account the present value of future expected revenue and the amount of private investment already made for the project. This new calculation method enables the project company to attract senior debts without senior debt guarantee. In other words, while deleting the senior debt guarantee condition, the government set the level of early termination payment high enough so that all unpaid borrowings can be repaid.

**Early Termination Payment Calculation for Build-Transfer-Operate**

- In the case of a BTO project, the calculation of an early termination payment during the construction period is based on the already incorporated private investment amount and the opportunity cost if applicable. During the operation period, the termination payment is based on the weighted average of depreciated value of the already incorporated private investment amount and the present value of the project (the weight varies depending upon the cause of default).

**Early Termination Payment Calculation for Build-Transfer-Lease**

- In the case of a BTL project, the calculation of an early termination payment during the construction period is based on net private investment (i.e., private investment cost minus the construction period interest) already invested, provided that the compensation amounts are calculated separately depending on the reason of default. The termination payment during the operation period is calculated based on the present value of the lease fee over the remaining period of the lease term and calculated separately depending on the reason of default.
Contract Termination Arrangements
The method of calculating the amount of payment and reasons for termination are stipulated in the concession agreement. The PPP project company or SPC can ask the central or local government to buy the project if the construction or management and/or operation of the facility becomes impossible due to, for example, default by a concessionaire or by the government, political force majeure, or nonpolitical force majeure.

- **Default by a concessionaire.** Reasons considered as the project company's liabilities include faulty construction, bankruptcy, and breach of contract.
- **Default by government.** Reasons considered as the government's liabilities include government demand or policy changes, or actions that are against the interest of the project company.
- **Default by force majeure.** This include any circumstance or event or any combination of circumstances and events that are out of the parties’ control, which naturally and adversely affect a party's ability to perform its obligation under the agreement, and which cannot be reasonably foreseen and overcome by the party claiming force majeure.

End-of-Contract Arrangements
When the facility is impossible to maintain for various reasons, the concessionaire may request that the government terminate the concession agreement and pay the predefined early termination payment. When this happens, the government takes on the right to operate the infrastructure facilities. The method of calculating the amount of payment and reasons for termination are stipulated in the concession agreement.

Explanatory Note

Stage of Public–Private Partnership Development and Implementation
PPPs were first introduced in the Republic of Korea with the enactment of the Act on Promotion of Private Capital Investment in Social Overhead Capital in 1994. The act was amended to the Act on Private Participation in Infrastructure at the end of 1998, further activating private investment in many social overhead capital projects. In the 2005 amendment, the BTL type was introduced in addition to the BTO type. The scope and opportunities for participants in PPP projects have been diversified and expanded ever since.

Reference Documents and Other Relevant Materials
- PPP Act
- PPP enforcement decree
- PPP basic plan
- PPP implementation guidelines
- The PIMAC website provides supporting information, including various guidelines and request for proposal announcements (http://www.pimac.org).
Public–Private Partnership
Framework of United Kingdom

Global Comparative Framework—Part 1: Development

Enabling Environment—Introduction 1

Definition and/or Description of Public–Private Partnership

There are many types of public–private partnership (PPP) arrangements, typified by some form of joint work between the public and private sectors. One of the most common forms of PPPs used in the United Kingdom is the Private Finance Initiative (PFI). This is a government scheme put in place in 1992 where qualified projects receive government funding. This is also an arrangement where the public sector contracts to purchase services from the private sector on a long-term basis, often between 15–30 years. Its typical arrangements are described below:

- Under the contract, the private sector constructs and maintains infrastructure to deliver the services required; hence, there is a development or construction phase followed by an operational phase.
- The private sector party contracting with the public sector is usually a special purpose company (SPC).
- The SPC uses private finance, usually a mix of equity and limited recourse debt, to fund the upfront construction works.
- The SPC is paid a fee—often referred to as the “unitary payment”—that includes principal and interest payments on the debt and a return to the private sector shareholders (which together largely repay the upfront borrowing used to fund the initial construction work) plus an amount for the services delivered. The unitary payment normally commences at post-completion of the construction work, once services start being delivered, and continues over the rest of the contract life.
- The unitary payment is at risk to the contractor’s performance during the life of the contract so that payment is reduced if performance falls below the required standard, thus harnessing private sector management skills and incentivizing the private sector to deliver services on time, on budget, and to the required standard.
- The risk allocation between the public and private sector is well understood and involves the private sector bearing cost overrun, delay, and service standard risks. The government has developed the Standardisation of PFI Contracts (SOPC), which sets out a standard approach to the risk allocation between the public and private sectors and includes mandatory principles and drafting for certain key contractual clauses.
**Government Contracting Entity**

The procuring authority is the public sector body (e.g., department, agency, statutory body, or National Health Service trust\(^5\)) that is responsible for delivering the project on behalf of the government.

**Structure of Private Sector Contractor**

The private party is typically structured as a special purpose vehicle (SPV), with no preexisting assets or liabilities, that enters into a project agreement with the public (referred to also as the “procuring” or “contracting”) authority. The private party typically enters into contracts with a constructor for the design and construction of the project, as well as an operator and a facilities manager for the operation and maintenance (O&M) of the project (as required). The government enters into direct agreements with the SPV contractors only to ensure it has step-in rights if a default occurs that is capable of being remedied. Other forms of PPPs may involve a contractor without the use of an SPV, where corporate rather than project finance is used. In other cases, the PPP may involve a joint venture arrangement with a private sector entity.

**Forms of Government Subsidy**

For social infrastructure projects, government payments (i.e., unitary payments) are usually provided as an availability or service payment throughout the operating phase of the contract, and payments are linked to the achievement of performance standards. These are not usually considered subsidies as they represent costs that government would normally incur in the provision of public services (e.g., the costs of providing prison accommodation). Government payments may occasionally be provided during the construction period if this represents value for money (VFM).

**Most Commonly Adopted Public–Private Partnership Delivery Methods for Economic Infrastructure**

Most economic infrastructure (e.g., power, water, seaports, and airports) in the United Kingdom is provided by privatized, regulated utilities and corporations that fall outside of the scope of PPPs. However, the PFI has been used to procure infrastructure services in the transport sector (e.g., highways and street lighting).

**General Responsibilities of the Government under Contract Arrangements**

The government

- provides the land for development and statutory approvals required under legislation;
- generally remains the ultimate owner of the project site; and
- is also responsible for making performance-based payments to the private party as agreed in the project agreement, prescribing parameters for products and services and, if applicable, for regulating pricing and provision of products and services.

---

5 A National Health Service trust provides services on behalf of the National Health Service in England and Wales. The trusts are not trusts in the legal sense but are, in effect, public sector corporations. Each trust is headed by a board consisting of executive and nonexecutive directors, and is chaired by a nonexecutive director. This committee is entrusted not only with supervision of financial audits, but of systems of corporate governance within the trust.
General Responsibilities of the Private Sector under Contract Arrangements

The private party

- is responsible for other statutory approvals, site conditions, access arrangements, and compliance with construction laws and codes during the construction period; and
- is also responsible for monitoring performance and retaining specific records that enable the government to assess the financial capacity, performance, and transparency of costs.

Most Commonly Adopted Public–Private Partnership Delivery Methods for Social Infrastructure

- PFI

General Responsibilities of the Government in Contract Arrangements

The government

- provides the land for development and any statutory approvals required under legislation;
- remains the owner of the project site for the duration of the contract; and
- is responsible for payment of services based on the agreed payment mechanism and review of performance and service standards as required under the project agreement.

General Responsibilities of the Private Sector in Contract Arrangements

The private party

- is responsible for the delivery of the service as described in the project agreement, usually expressed in availability and performance terms, other statutory approvals, site conditions, access arrangements, and compliance with construction laws and codes during the construction period; and
- is responsible for monitoring performance and retention of specific records that enable the government to assess the financial capacity, performance, and transparency of costs.

Level and Type of Government Support Provided for Public–Private Partnerships

Procurement policies consider PPPs as one delivery option to be considered during the development of the procurement strategy for the project. Various forms of support are available to the procuring authority depending on the sector and location within the government. These include support from the relevant private finance unit in a line ministry, the local authority PPP support body such as 4Ps.

---

6 4Ps is now Local Partnerships, a joint venture between the Local Government Association and Partnerships UK, incorporating 4Ps and all its current services. The mission of Local Partnerships is to enhance the quality of people’s lives by giving trusted, professional support to local public bodies to improve their ability to source and deliver high-quality, cost-effective public services and infrastructure.
(where the procuring body is a local multi-entry and not a government department), Partnerships UK (which can provide in-depth, project-specific support or support via the help desk or the operations task force for support to contract managers for operational projects), the HM Treasury, Office of Government Commerce (on wider procurement issues), specific program delivery bodies (such as Partnerships for Schools, which was established by the Department for Education that was previously the Department for Children Schools and Families), and agencies located in devolved government (that is, in the governments of Northern Ireland, Scotland, and Wales), as well as a wide range of guidance material. Training is also provided by public sector bodies or outsourced to private sector firms.

**Identification Process for Potential Public–Private Partnership Projects in the Budget Planning Framework**

The identification process is undertaken by the sponsoring department (or ministry) during the budgeting cycle, to develop asset strategies and investment plans. VFM guidance requires potential VFM benefits to be identified at the strategic program-level assessment stage.

**Criteria Adopted to Identify Potential Public–Private Partnership Projects**

VFM guidance (i.e., from the HM Treasury) sets out the criteria for identifying the benefits or otherwise of PFI as a procurement route for projects. There is a specific methodology for assessing both quantitative and qualitative VFM. Procuring authorities are likely to consider the following project characteristics in assessing potential delivery options:

- the ability to contract for and measure the service outputs of the project;
- the key project risks, who is best able to manage these risks, and if this risk allocation improves the VFM;
- the existing market, market interest, or genuine market opportunity for the project;
- the scope for innovation to improve the VFM;
- who is best able to take a long-term view of the infrastructure and service requirements and size (generally, PFI-procured projects involving capital investment below $32 million are not considered VFM). Guidance is also available for assessing and developing other forms of PPP such as joint ventures. Guidance on the economic costs and benefits of projects is also available.⁷

**Enabling Environment—Introduction 2**

**Key Delivery Issues Addressed by Public–Private Partnership Procurement**

Key delivery issues experienced in conventional procurement for transport infrastructure that is addressed by PPP include

---

⁷ The Green Book is HM Treasury’s guidance for the central government, setting out a framework for the appraisal and evaluation of all policies, programs, and projects. It sets out the key stages in the development of a proposal, from the articulation of the rationale for intervention and the setting of objectives, to the options appraisal and, eventually, implementation and evaluation. It describes how the economic, financial, social, and environmental assessments of a proposal should be combined and aims to ensure consistency and transparency in the appraisal process throughout government.
significant delays in completing the design, construction, and commissioning of new or redeveloped infrastructure;
• cost overruns in projects caused by inadequate scope definition, poor project management, and changing and/or conflicting government priorities; and
• lack of innovation required to deliver infrastructure.

**Most Commonly Adopted Public–Private Partnership Delivery Method for Transport Infrastructure**

• Design–build–finance–operate and/or maintain

**Examples of Urban Environment Infrastructure Permitted and/or Delivered under a Public–Private Partnership Arrangement**

• Solid waste treatment plants
• Light rail
• Street lighting and street maintenance

**Key Delivery Issues Addressed by Public–Private Partnership Procurement**

Key delivery issues experienced in conventional procurement of urban environment infrastructure that is addressed by PPPs:

• innovation in design and construction, technology risk, delivery, time, and budget; and
• ability to maintain plants efficiently.

**Most Commonly Adopted Public–Private Partnership Delivery Method for Urban Environment Infrastructure**

• Design–build–finance–operate and/or maintain

**Examples of Social Infrastructure Permitted and/or Delivered under a Public–Private Partnership Arrangement**

• Schools
• Hospitals
• Prisons
• Social housing
• Government accommodation

**Key Delivery Issues Addressed by Public–Private Partnership Procurement**

Key delivery issues experienced in conventional procurement of social infrastructure that is addressed by PPPs include

• innovation in design and construction of infrastructure that remains flexible to the changing services, delivered from the assets; and
• ability to maintain assets efficiently and to deliver in terms of time and budget.

**Most Commonly Adopted Public–Private Partnership Delivery Method for Social Infrastructure**

• Design–build–finance–operate and/or maintain
Examples of Natural Resources and/or Power Infrastructure Permitted under a Public–Private Partnership Arrangement

Most utility generation and transmission assets are privately owned. Some PPP waste disposal projects may generate power to sell to the relevant utility.

Key Delivery Issues Addressed by Public–Private Partnership Procurement

This is not applicable.

Most Commonly Adopted Public–Private Partnership Delivery Method for Natural Resources and/or Power Infrastructure

This is not applicable.

Enabling Environment—Legal

Government(s) Responsible for Policy

The HM Treasury is responsible for overall PPP policy for England. The devolved governments have responsibility for PPP policy in their jurisdictions.

Governing Policy

HM Treasury policy and guidelines are developed from time to time (or as per devolved governments, usually based on HM Treasury policy).

Governing Laws

There are no specific PPP laws; however, there are a number of legislative instruments to address specific issues, such as the Residual Liabilities Act (for PFI hospitals), and the Local Authority Act.

Public–Private Partnership Unit Location

The Corporate and Private Finance Unit of the HM Treasury is responsible for PPP policy in the HM Treasury; Partnerships UK (a PPP established by the HM Treasury) exists to assist in the implementation of PPP policy, programs, and projects; and 4Ps, established and owned by local governments, assist local authorities. The others are the Strategic Investment Board of the Northern Ireland Executive, Scottish Futures Trust of the Scotland Government, and various line ministries’ private finance units.

Role of Public–Private Partnership Units

The various public sector PPP support entities assist through a combination of PPP policy development, assessment of PPP proposals, ensuring the appropriate application of the PPP guidelines, provision of support to procuring agencies on PPP arrangements and in technical issues, and project delivery.

Key Governance Roles

Generally, all participants in the PPP process are responsible for implementing the governance requirements during the project, with the senior responsible officer (i.e., the senior public official) usually ensuring that appropriate processes and practices are implemented.
Independent reviews of project implementation, reporting to the senior reporting official at different stages in the project cycle, also assess whether governance and best practices are adopted, with recommendations on how to improve future practices and whether the process should proceed to the next stage. The National Audit Office and/or Audit Commission may carry out ex post facto program, project, or theme audit reviews on performance from time to time, and their findings are made public.

**Role of the Government Agency**

The procuring authority that is normally responsible for service delivery under the PPP is usually responsible for the project development, procurement, and contract monitoring of the PPP.

**Minister(s) Responsible**

- The minister of the procuring authority

**Legislation Governing Land Acquisition or Resettlement**

Land acquisition legislation is provided at the national level.

**Process of Land Acquisition and/or Resettlement**

The land is typically already owned by the procuring authority, but planning permission is required just as in any private financial property development.

**Application of International Standards to Public–Private Partnership Policy**

PPP procurement must comply with the European Union procurement law now embodied in the UK Public Procurement Regulation 2006 (Statutory Inxx 1/2006).

**Enabling Environment—Accounting**

**Public Accounting Legislation Governing Balance Sheet Treatment**

Departmental resource account financial statements follow International Financial Reporting Interpretations Committee8 12 guidelines in accordance with the adoption of International Financial Reporting Standards for public sector accounting. For the purposes of departmental budgets, these must follow National Accounting Standards as determined by the European System of Accounts 1995.

**Requirements for a Project to be Considered as Off-Balance Sheet**

For the purposes of International Financial Reporting Interpretations Committee 12 guidelines, the principal determination is control of the asset. For European System of Accounts 1995 purposes, the project is considered off-balance sheet if the

---

8 The International Financial Reporting Standards Foundation is an independent, nonprofit private sector organization working in the public interest. Its principal objectives are to develop a single set of high-quality, understandable, enforceable, and globally accepted international financial reporting standards; to promote the use and rigorous application of those standards; to take account of the financial reporting needs of emerging economies and small and medium-size enterprises; and to bring about convergence of national accounting standards and international financial reporting standards to high-quality solutions.
construction risk is transferred to the private party and either availability or demand risk is also transferred.

**Government Entity Responsible for Determining Balance Sheet Treatment**

The procuring authority is responsible for determining the treatment of the balance sheet. Specialist advisers may prepare advice for the procuring authority to consider in determining the approach.

**Treatment of Depreciation of Assets**

Existing lease provisions determine depreciation rates for specific assets if relevant to the public sector.

**Key Financial and Tax Incentives Offered**

No other financial or specific tax incentives are generally offered. Value-added tax treatment was clarified early on to ensure that PFI contracts did not create an additional burden for procuring authorities. The HM Treasury has recently established a fund to support, on commercial terms, projects in the event that a part of the funding is not made available from the market. European Union state aids rules ensure that government subsidies to the private sector are strictly controlled.

**Key Fiscal Management Tools Employed**

Forward estimates for capital investment are provided by each department and incorporated in the budget planning process (i.e., a comprehensive spending review).

The capital investment plan may include a cost estimate or range that assists in the budget process and is refined as the project develops. Local government projects usually benefit from central government support of a substantial part of the availability payment (usually based on the capital element) known as the PFI credit.

**Accounting Approach to Future Public–Private Partnership Obligations**

For on-balance sheet transactions, payments associated with the capital element are recorded as liabilities. For off-balance sheet projects, performance-based availability payments fall under the revenue account.

**Treatment of Public–Private Partnership Projects in the Fiscal Planning and Budget Process**

All projects that are listed in the capital investment plans compete for funding during the budget process. The business case and procurement strategy prepared for a project outlines the project priority, outcomes, benefits, VFM, and affordability that are considered in allocating funding to projects and expected procurement route. If a PFI delivery method is chosen for a project, then the project estimate reflects the unitary payment obligations required.

**Enabling Environment—Leaders and Champions**

**Role of Leadership and Championing Change in Public–Private Partnership Policy and Guidelines**

Generally, ministers and senior officials, particularly from the HM Treasury and line departments, are key leaders of change and implementation of PPPs. Industry groups
may also champion discussion and recommendations to the government to improve PPP implementation. Reviews from independent auditing bodies, such as the National Audit Office, may recommend changes as well.

**Government Entity Responsible for Fostering Leadership in PPP**

The HM Treasury, line department private finance units, devolved government PPP units, and local authority bodies are the principal government entities (assisted from time to time by Partnerships UK) responsible for demonstrating and developing leadership in PPP delivery.

**Involvement of Other Government Entities, Institutions, or International Agencies in Fostering Public–Private Partnership Leadership**

Partnerships UK, established by the HM Treasury, assists in procuring authorities in the development and management of PPP projects and supports policy makers in the development of policy. Various tertiary and training institutions provide courses and training to foster PPP leadership as professional development programs (e.g., the 4Ps Project Director Training Program and the operational task force contract management training course based in Partnerships UK). The recently established European PPP Expertise Centre, based in the European Investment Bank, facilitates exchange of knowledge and best practices between European Union PPP units. The National Audit Office and/or Audit Commission provide feedback on PPP performance to inform policy development.

**Priority Issues Facing Governments in Leading and Championing Public–Private Partnership Development and Implementation**

The reduced availability of long-term debt funding, shortage of appropriate skills to respond to current issues, along with views in some parts of society on the general role of the private sector in public service delivery are some priority issues.

**Strategies Implemented to Address These Issues**

The HM Treasury Infrastructure Fund was established to provide “lender of last resort” funding support to projects on commercial terms. Partnerships UK also runs a help desk and operational task force to provide fast-access support on project issues. The HM Treasury publishes reports from time to time to show the development of policy and its response to issues raised by stakeholders. The HM Treasury also undertakes transparency and continual review of policy effectiveness.

**Enabling Environment—Regulation**

**Key Regulatory Authorities**

There is no specific regulatory authority for PPP transactions. The procuring authority regulates the products and pricing of the private party under the terms of the project agreement. Sector-specific regulation applies in the delivery of utility services (e.g., airports, water, gas, and electricity) by private sector companies, but these are not considered PPPs as they are privatized, regulated utilities.

**Location of Regulatory Unit within the Government**

This is not applicable.
Roles and Responsibilities for Economic Infrastructure Public–Private Partnerships

The procuring authority is responsible for product and pricing regulation under the terms of the project agreement.

Roles and Responsibilities for Social Infrastructure Public–Private Partnership

The procuring authority is responsible for product and pricing regulation under the terms of the project agreement.

Role of the Regulator in Contract Performance Monitoring

The procuring authority is normally responsible for assessing the contract performance.

Level and Type of Interaction between the Regulator and the Private Contractor

The procuring authority’s relationship with the private party is ultimately governed by the provisions of the relevant project agreement.

Advisers

Policy for Adviser Procurement Process and Engagement

Advisers are procured in line with European Union procurement rules—on a competitive tender basis above minimum thresholds on most economically advantageous terms (i.e., price is not the sole determinant). This usually involves a prequalification process, followed by submission of written proposals, and interviews with evaluations based on a mix of price and qualitative criteria, including experience and understanding of the authority’s requirements. A number of advisers may be prequalified under a wider government procurement framework process. Procuring authorities are encouraged to use financial, legal, technical, and other advisers if they require specialist skills to assist with the project preparation and procurement phases. HM Treasury guidance on appointing and managing advisers is available.

Government Entity Responsible for Implementing Policies

The relevant project’s procuring authority is responsible for procuring advisers in line with European Union procurement rules. The Office of Government Commerce, an independent office of the HM Treasury, develops general procurement policy and guidance.

Requirement for Local Office and/or Employees

This is not usually specified in the policies relating to engaging advisers; however, the evaluation criteria for advisers may require staff members to be available as required for the project, which could provide an advantage for advisers with local staff members and/or offices.

Main Types of Engagement Contracts

The consultancy agreement may include a price cap and/or payment for discrete work packages (as opposed to success fees, which are generally not recommended) and include processes to address out-of-scope activities. Obligations for advisers to
share knowledge with the procuring authority client and to sign off at key stages of
the project’s development are recommended practices.

**Key Stages in the Procurement Process**

The most common statutory public procurement required process is as follows.

- The procuring authority issues a notice in the Official Journal of the European Union (OJEU) and a prequalification questionnaire.
- Qualifying bidders are notified.
- A request for proposal is issued to the qualifying bidders. Advisers respond to the evaluation criteria and requirements under the prequalification questionnaire.
- Presentations and interviews may be included in the evaluation process.
- The procuring authority evaluates the proposals based on the criteria outlined in the request for proposal.
- With a successful adviser appointed, unsuccessful advisers may request a meeting to discuss the proposal and the tender decision.

**Key Evaluation Criteria to Determine Engagement**

The evaluation criteria may include

- demonstrated understanding of the nature and complexity of the project;
- development of an acceptable delivery methodology;
- proven experience, strength, and availability of the engagement team;
- ability and approach to work with stakeholders;
- appreciation of the government project’s objectives and time frames;
- no evident conflicts of interest; and
- proposal fee.

**Engagement Conduct Policy, Including Policy for Managing Conflicts of Interest**

The consultancy agreement sets out the process for managing such issues. The standard policy is that advisers cannot act for the procuring authority and for the bidder on the same project. Bidders are required to give assurance that they are not connected with other bidders.

**Key Stages in the Conflict Management Process**

The following stages apply to conflicts relating to the advisory company and staff:

- disclosing business relationships, financial interests, and personal affiliations;
- assessing if a conflict of interest exists, which may be actual, potential, or perceived as well as a conflict of duty, the potential to compromise confidential project information, or to compromise the outcomes of the project;
- undertaking a risk assessment to determine if the conflict risk is manageable; and
- determining required actions and plans to manage or mitigate the risk, which may include suspending the adviser from the project.
Stakeholders

Stakeholder Participation Policy and/or Guidelines

The guideline addresses stakeholder participation requirements, which is considered an important part of the project preparation process. Through the process, the gateway and project review group will examine the stakeholder management activities of the procuring authority.

Government Entity Responsible for Conducting Stakeholder Interaction Process

The procuring authority is responsible for conducting the interaction process.

Procedures for Stakeholder Participation

The general process adopted includes:

• identifying the key stakeholders to the project;
• analyzing their relationship to the project, the impact of their feedback, any consultation already conducted, and any synergies or benefits with the project outcomes;
• developing the required actions with responsibilities, time frames, and governance structure;
• defining the objectives of the stakeholder participation strategy, key issues to be addressed, key messages to be provided, resources required, and spokespeople; and
• determining the success measurements of the strategy.

Key Role of the Government in Facilitating Stakeholder Participation

The procuring authority is responsible for developing and conducting the participation strategy. The authority may receive assistance from specialist advisers, service providers, or other government agencies to implement the strategy.

Key Approach of the Private Sector Contractor in Facilitating Stakeholder Participation

The private party may seek to gain community support and buy-in for the project and may develop its own participation strategy to implement once the contract is awarded. Bidders may be asked to prepare a stakeholder management strategy as part of the tender process when the project requires them to deliver products and services directly to consumers.

Key Issues that Stakeholder Participation Seeks to Identify and Address

The key issues that stakeholder participation seeks to address include

• achieving a balance between stakeholder interests and concerns, with the desire to deliver the project scope;
• creating a common view among government agencies on how to proceed with the project;
• dealing with concerns and issues raised by stakeholders inside and outside of the public sector; and
ensuring that there is a high level of support for the project, especially by users (e.g., teachers or clinical staff) to ensure the long-term viability of the project and that the service requirements are well defined and appropriate.

**Risk Assessment**

**Risk Analysis Policy and/or Guidelines**

PPP project preparation guidelines make reference to risk allocation in preparing cost estimates, options analysis, and contractual issues. The HM Treasury’s Green and Orange books provide guidance on risk issues.

**Roles and Responsibilities in Conducting the Risk Analysis**

The procuring authority, assisted where necessary by the advisers, is responsible for the risk analysis.

**Key Steps in Risk Analysis Process**

The process for risk analysis involves developing a project risk register and typically includes the following steps:

- risk identification,
- risk assessment,
- risk allocation,
- risk mitigation, and
- monitoring and review.

It should be remembered that the procuring authority is also required to identify and manage the risks of the PPP project preparation and delivery process as part of good project management discipline.

**Independent Standards Governing Risk Analysis Process**

Other sources of reference on risk issues can be found in Risk Analysis and Management for Projects.9

**Treatment of Systematic Risks**

This is not applicable.

**Approach to Risk Assessment**

Risk assessment usually considers

- the probability that the risk will occur, and
- the consequences if the risk will materialize.

A risk assessment matrix that is normally prepared combines a scale of probability (e.g., very low and low) and a scale of consequences (e.g., high and catastrophic) to determine an overall risk assessment and to identify the risk owner.

---

Level and Type of Risk Register Employed

A risk register normally includes the following sections:

- risk category,
- risk name and description,
- assessment of probability of occurrence,
- assessment of the consequences,
- overall risk assessment,
- potential mitigation options,
- risk allocation and/or sharing between the public and private sector.

Approach to Risk Quantification

Probabilities or cost estimates may be provided for each scale level to assist in quantifying risks. These values may then be incorporated to prepare a risk value known as the risk adjustment, which may be included in the project cost estimate. VFM guidance requires optimism bias factors for time and cost overrun risk assessment (i.e., based on statistical evidence of cost and time overruns for past projects in similar sectors), although the procuring authority can select its own factor if this factor can be justified.

Risk Allocation

Risk Allocation Policy and/or Guidelines

Guidance will often set out the preferred approach to risk allocation for PPP. The standard contract (SOPC), also provides guidance on risk allocation for many common risk categories as well as required allocation of certain risks through mandatory contractual provisions. Design, finance, construction, and O&M are usually the core risks transferred to the private partner.

Approach to Site Risk Allocation

Generally, site risk lies with the private party as they assume responsibility for the design, construction, and commissioning of assets and are usually in a better position to manage this risk. However, the government may share part of that risk if there are particular site characteristics.

Approach to Design, Construction, and Commissioning Risk Allocation

These risks are implicitly allocated to the private party by the structure of a PPP. It is the government’s preferred position that these remain with the private party. The government should not take back or in any way share design, construction, and commissioning risk with the private party, unless it is a risk associated with a government-initiated design or construction change or some other government interference (whether an act or omission) in the design and construction process. In these circumstances, it may be appropriate, using optimal risk allocation principles, for the government to bear the cost of such changes.

Approach to Operating and Maintenance Risk Allocation

Operating risk is one of the key risks allocated to the private party by the structure of a PPP under which the delivery of the contracted services to specification lies with the
private party. The government transfers the operating risk if it is going to operate the facility. However, operational failure is a risk to the government in that, ultimately, it may be left without the services for which it has contracted if an alternative provider cannot be contracted.

The government should seek to retain as little operational control as possible over the delivery and/or responsibility for the contracted services to ensure that the operational risk remains with the private party and is not inadvertently taken back by the government. Complete removal of direct government involvement in operational matters may not always be possible. The government may be bound, as a matter of policy, statutory obligation, or practical necessity, to ensure that certain operational criteria are met. It may also have obligations to inspect and enforce conditions of operation.

**Approach to Network or Services Interface Risk Allocation**

If the government controls and manages the network from which the network risk may materialize, and is in the best position to manage the risk, the government bears this element of the risk. Consideration of the government’s responsibility to manage public networks in the interests of all citizens is also required. This requires the allocation of risks to balance the need for the private party to deliver the services and the government’s responsibility to manage public services or networks.

**Approach to Change in Law or Government Policy Risk Allocation**

Change in law risk generally falls to the private party unless the change in law is one that specifically affects the project or the service, and whether the consequences are material.

**Approach to Residual Asset Ownership Risk Allocation**

The costs of maintenance and any refurbishment needed during the life of the contract are borne by the private party. If the asset is to be transferred back to the government at contract end or termination, then the government may accept technical obsolescence risk and the risk of the value of the residual asset.

**Approach to Market or Demand Risk Allocation**

The government considers the opportunity for allocating market risk to the private party if it improves the VFM. This depends on the nature of the project. In many social infrastructure sectors, it is better VFM if the demand risk is retained by the government. In some cases, demand risk may be shared.

**Approach to Sponsor and Financial Risk Allocation**

A special purpose vehicle (SPV) structure is often used, under which risks are allocated among the private sector consortium partners, including insurance parties with residual risk remaining for the SPV and the equity investors. In the event of SPV default, step-in rights provide lenders the option to identify alternative contracting parties. In the event that the SPV continues to default, the procuring authority has the right to terminate and rebid the remaining contract. The government retains the risk that, ultimately, no alternative service provider is identified. With regard to financial risk, this is retained by the government until financial closure.
Level and Type of Guidance for the Government to Mitigate and Manage Risks during the Contract

Contract management guidance provides guidance in managing and mitigating risks occurring during the construction and service delivery stages. This is supported by an operational task force operated by Partnerships UK on behalf of the HM Treasury to provide training and support to PPP contract managers.

Cost Estimation

Public Cost Estimate and/or Public Sector Comparator Policy or Guideline

The HM Treasury VFM guidance provides a guideline for the development cost estimates for conventional procurement of the project. There is also guidance on the levels of optimism bias to be applied, depending on the sector, as part of the quantitative VFM assessment. A standard Excel model is used to derive the quantitative VFM estimate.

General Purpose and Use of the Cost Estimate

This is an estimate of the hypothetical whole-of-life cost of a public sector project if delivered by the government through conventional procurement to determine whether the conventionally procured option or the PPP option represents better VFM. This is presented in net present value terms. The analysis occurs at both the initial program level, project-level stages, and procurement stage if there are material changes in cost.

Government Entity Responsible for Determining Appropriateness and Developing the Cost Estimate

The departmental private finance unit and/or sponsoring department and the project team are responsible for ensuring the appropriate implementation of the PPP VFM guidelines at the program- and project-level stages, respectively. Reviews done by the gateway and project review group check the application of the VFM assessment as appropriate.

Resources Required to Develop the Cost Estimate

Key resources include

- a defined scope of the project that can be costed;
- the application of optimism bias factors to the costs estimated as set out in the VFM guidance or as justified by the procuring authority based on evidence from previous comparable projects;
- any adjustment, such as tax treatment, that may be required to account for any advantages that accrue to a government business, which are not equally available to the PPP option to ensure a true comparison; and
- a quantitative assessment model (i.e., a standard model, with some hardwired assumptions, is available as part of the VFM guidance with instructions on its use). For more complex projects, a cash flow financial model may be developed. Specialist advisers may be engaged to provide some of the input assumptions or to develop a specialist model.
**Key Assumptions**

Some key assumptions required to prepare the cost estimate of the conventional procurement option include

- whole-of-life costs of the project (e.g., capital expenditure, O&M costs, contract period, third-party income if any, and transaction and residual costs);
- optimism bias factors;
- adjustment for tax and indirect VFM factors, as necessary, and the costs of any assumed change in scope;
- escalation assumptions using indices relevant to each input; and
- application of the social time preference discount rate adjusted by the gross domestic product deflator to provide the cash flow in net present terms (assuming inputs are in nominal terms).

**Discount Rate Policy and/or Guidance**

Guidance (i.e., the Green Book) sets out the use of and defines the social time preference rate at 3.5% in real terms and explains its derivation. Adjustments for inflation are made for nominal estimates. Adjustments for risk are made at the underlying costs level, not on the discount rate applied.

**Government Entity Responsible for Determining the Discount Rate**

The Green Book is developed by the HM Treasury.

**Factors Considered in Determining the Discount Rate**

The discount rate will be adjusted by the gross domestic product deflator for calculations in nominal terms.

**Discount Rate Approach for Economic Infrastructure**

The discount rate is not adjusted for the sector, only the underlying costs.

**Discount Rate Approach for Social Infrastructure**

The discount rate is not adjusted for the sector, only the underlying costs.

**Value for Money**

**Description of Value Assessment**

The value assessment is known as VFM and is defined as the optimum combination of whole-of-life costs and quality (or fitness for purpose) of the good or service to meet the user’s requirement. VFM is a relative concept that requires comparison of the potential or actual outcomes of alternative procurement options.

**Applicable Policy and/or Guidance for the Value Assessment**

The HM Treasury VFM guidance sets out the policy and approaches to VFM assessment. The guidance covers both the quantitative and the qualitative assessment required, with a standard Excel spreadsheet model for the quantitative assessment.
**Purpose and Use of Assessment Outcomes**

The VFM assessment is conducted to determine the preferred delivery option of a project with emphasis on the importance of early assessment.

**Approach to Conducting the Assessment**

The key factors to capture in the quantitative assessment include:

**Viability.** This involves assessing whether there are any efficiency, accountability, or equity issues that demand that services are provided by the government directly rather than through the PFI. It also considers the extent to which the service requirements can be adequately captured in a contract-based approach, with a clear specification in output terms for the PFI to transfer risk effectively to appropriate parties.

**Desirability.** This involves assessing the relative benefits provided through different procurement routes, such as incentives and risk transfer in the PFI versus the government’s lower cost of borrowing in conventional procurement. It requires upfront consideration of the relative advantages and disadvantages associated with a long-term contractual relationship between the public and private sector, and the strength of the mechanisms that could be used to ensure that different benefits are realized.

**Achievability.** This involves gauging the level of likely market interest, the skills and capacity of the private sector, their appetite for risk, any lender constraints, and whether the procuring authority has sufficient capability to manage the complex processes involved.

The assessment involves both a quantitative and a qualitative assessment, replacing previous approaches that relied more heavily on quantitative assessment. The assessment is carried out at three stages:

- **Stage 1.** Program-level assessment to ensure that a PPP is only considered for use in those programs where it is appropriate and is likely to represent good VFM.
- **Stage 2.** Project-level assessment requiring an upfront procurement appraisal at the pretender stage. This replaced the previous public sector comparator (PSC) and identifies the aspects that are key to VFM.
- **Stage 3.** Procurement-level assessment, which is an ongoing assessment during the tender phase of a project to ensure that the desired project can be delivered in view of, for example, the competitive interest and market capacity.

**Additional Resources Employed**

The quantitative assessment utilizes costs based on a “like for like” project scope and risk allocation. Qualitative measures are also utilized, and these are commonly identified during the evaluation of the appropriateness of the preferred delivery option.

**Role of Assessment Outcomes in the Bid Tender and Selection Stage**

The aim of the tender stage assessment, which runs as a continuous assessment from the issue of the Official Journal of the European Union (OJEU) notice (or request for qualification) to contract award, is to ensure that both procuring authorities...
and sponsoring departments are fully appraised of market conditions and can identify any market problems early on in the procurement process, to evaluate whether there is any erosion of the VFM.

The objectives at this stage are to:

- ensure that a robust competitive procurement process takes place, and there is a healthy level of competition;
- ensure that the financial viability and capability of bidders are sufficient to achieve VFM;
- provide feedback market intelligence to projects in earlier stages of planning and procurement;
- confirm that the proposed risk sharing is appropriate and deliverable;
- ensure that the procurement process is efficient and equitable so that the costs emerging from competition are reasonable and stable;
- determine if there is market abuse or failure; and
- determine the appropriate project structure and level of financial flexibility.

**Importance of Lowest Cost in the Assessment**

The qualitative assessment balances out other important factors, so that the assessment is not purely focused on the lowest cost bid. A comparison of actual bids with the stage 2 quantitatively derived, conventionally procured option might raise issues as to whether there are legitimate external reasons that could not be foreseen at the stage 2 assessment, and, if not, why this escalation was not captured by the optimism bias estimates. This analysis should then be incorporated into the optimism bias estimates for forthcoming projects. This is not, however, a reason at this stage to halt or revisit the procurement decision. This information is instead used to inform future procurements.

**Market Factors that Assist in Achieving Value**

Key market factors include

- an active, competitive market where tension between bidders is maintained during the tender process; and
- innovative design, construction, and operating technologies that can be applied to government infrastructure service delivery projects.

**Investment Decision**

**Project Development Policy and/or Guidelines**

The HM Treasury guidance sets out the process for determining the investment option (i.e., the Green Book) and delivery option for the project (i.e., VFM guidance).

**Key Roles and Responsibilities in Project Development and Investment Decision**

The sponsoring department (or ministry) and, if available, the department private finance unit, supports the project’s development during the departmental capital strategy planning and budget process. Usually, at the strategic business case stage, a project team is established that reports to a project board chaired by a senior
public officer and with a full-time project director and/or manager appointed to manage the day-to-day project development, including the outline business base case and procurement stages of the project. Typically, the procuring authority follows the departmental project development framework, which is consistent with the approach recommended by the HM Treasury guidance.

Specialist advisers may be engaged by the procuring authority to assist in investigations to develop the project and to prepare the documentation even as early as that required for the project to be considered for funding in the budget process.

**Key Stages in Project Development and the Investment Decision**

The key stages involve

- a strategic business case assessment to identify the service need and potential solutions, which involves a preliminary assessment and options analysis to analyze the solutions and potential benefits;
- business case assessment to evaluate and determine the preferred solution and procurement route; explain how the preferred option delivers VFM; outline resourcing requirements; describe the impacts on stakeholders; and analyze the cost, benefits, risks, and other important qualitative information required to evaluate the investment; and
- final business case assessment to assess the project prior to contract signature.

**Additional Resources in Project Development and Investment Decision**

The various resources that may be utilized include

- geotechnical site investigations,
- engineering investigations,
- legal title assessments and planning reports and assessments,
- economic development reports and forecasts,
- public interest assessments and assessment of European Union procurement rules,
- market interest or testing,
- industry surveys,
- demand forecasts,
- willingness to pay surveys (if relevant),
- financial models,
- VFM assessments, and
- benefit management plans.

**Key Considerations in Investment Decision**

An investment decision most commonly considers qualitative and quantitative factors including

- an economic analysis that considers the costs and benefits of the project;
- where appropriate, an environmental analysis that considers the environmental impacts and effects of delivering the project;
• a social analysis that considers the issues of equity and opportunities and/or impact on the community;
• an affordability analysis that considers budgetary impact of the project and its fit with other competing priorities;
• a VFM analysis that considers the preferred procurement route; and
• a market analysis that assesses the potential capacity and interest of the market to meet the project’s supply-side requirements.

**Tools Adopted to Support Investment Decision**

- The cost–benefit analysis for the quantitative economic, social, and environmental analysis, determines with which projects to proceed.
- The VFM analysis determines the preferred procurement route.
- The affordability analysis determines the affordability of the PPP option.

**Delivery Options Analysis Process**

- Data gathering to determine the risk, objectives, and project characteristics
- Short list delivery options to determine the suitability of different delivery structures
- Validation to assess any precedent and market view of the appropriateness of these structures
- Delivery options analysis, where evaluation criteria are applied to the models to assess how effectively the models meet project requirements and reduce risk
- Preferred delivery model that concludes with the preferred structure and model being identified based on the options analysis outcomes and consideration of the approach to VFM, risk allocation, and the potential market appetite for the model

**Tools Adopted to Support Delivery Options Assessment**

Tools adopted in the assessment may include

- a short list of delivery options based on scale, scope, risk, and whole-of-life service opportunities;
- project risk analysis;
- market analysis and research, as well as benchmarks of similar projects;
- assessment of project characteristics; and
- an options evaluation matrix.

**Major Issues Encountered in Investment Decision Process**

Major issues that delay the investment decision process may include

- lack of clarity by the procuring authority of what it wants from the project, or ambiguous specifications;
- insufficient development of the project scope to enable a thorough risk analysis to be conducted;
- lack of project ownership and leadership;
- underresourced project teams and poor project governance;
- selecting advisers on the basis of cost rather than on quality and experience;
- lack of effective engagement with stakeholders;
lack of understanding of and contact with the private sector at senior levels, and poorly conducted market sounding; and
• unrealistic expectations within the public sector on the final cost of service delivery.

Global Comparative Framework—Part 2: Tender

Introduction

Key Governance Roles
The key governance roles include:

• the project board, which is responsible for key decisions in the project’s development and provides direction on strategic issues, and is chaired by a senior public officer from the procuring authority who is ultimately responsible for the project outcomes;
• the project director and/or manager who is responsible for the day-to-day management of the project delivery; and
• a dedicated project team that is responsible for developing the project under guidance from the steering committee and the project director and/or manager.

Entity Administering the Procurement Process
The procuring authority is the government body (i.e., department, agency, or statutory body) that is responsible for delivering the project on behalf of the public sector.

Role of Public–Private Partnership Unit
The PPP units (e.g., departmental private finance unit or devolved government unit), Partnerships UK, and 4Ps assist in the assessment of PPP proposals, ensure the appropriate application of the PPP guidelines, and provide advice to procuring agencies on PPP arrangements and technical issues.

Arrangements for Establishing the Team or Unit to Manage the Procurement
The procuring authority determines the resource requirements based on its experience with public procurement project delivery. The relevant PPP unit may assist the authority in identifying and in procuring the specific resources needed.

Relationship between the Team Managing the Procurement and the Public–Private Partnership Unit
The PPP unit may be represented at the project board, and may also be a member of the project team as a technical resource.

Process for the Ministry of Finance to Agree to Participate in the Tender Process
During the project development process, a project may be identified as potential PPP. The procuring authority is required to develop the feasibility study (i.e., an outline business case). Subject to certain limits and gateway reviews, central government
departments may proceed with procurement. Local government procuring authorities, which are recipients of central government funding via a PFI credit, require approval from the project review group (chaired by the HM Treasury) prior to launching the procurement process.

**Minister(s) Responsible for the Tender Process**

The department minister of the procuring authority may ultimately be responsible for the tender process.

**External Resources Utilized during the Tender Process**

External resources may include

- legal adviser,
- technical adviser,
- financial adviser,
- project management, and/or
- insurance adviser.

**Use of Benchmarking in the Tender Stage**

A comparison of actual bids with the stage 2 quantitatively derived and conventionally procured option might raise issues as to whether there are legitimate external reasons that could not be foreseen at the stage 2 assessment, and, if not, why this escalation was not captured by the optimism bias estimates. This analysis should then be incorporated into the optimism bias estimates for forthcoming projects. This is not, however, a reason at this stage to halt or revisit the procurement decision. This information is instead used to inform future procurements.

**Approach to Assessing the Value of Public–Private Partnership Procurement during the Tender Stage**

A series of ongoing checks are undertaken at the tender stage to ensure the VFM. The key objectives are

- to ensure that a robust competitive procurement process takes place and there is a healthy level and quality of competition,
- to ensure that the financial viability and capability of bidders are sufficient to achieve the VFM,
- to provide feedback market intelligence to projects in the earlier stages of planning and procurement,
- to confirm that the proposed risk sharing is appropriate and deliverable,
- to ensure that the procurement process is efficient and equitable so that the costs emerging from the competition are reasonable and stable,
- to determine if there is market abuse or failure, and
- to determine the appropriate project structure and level of financial flexibility.

**Major Issues Encountered during Implementation of the Tender Process**

Major issues that are experienced in the tender process may include

- delays in the government approval processes,
- ambiguous requirements or evaluation criteria in the tender documents,
- lack of coordination of the tender process activities,
• unrealistic time frames in the project plan, and
• bidders submitting inadequate or incomplete bids and incur delays in long-term financing commitments.

Process Cycle

Stages in the Tender Process

A competitive dialogue procedure is the preferred European Union procurement procedure for the PFI in the United Kingdom. The following comments are based on the use of this procedure.

Key stages include:

- **Phase 1. Predialogue**
  - **Stage 1.** Planning and initial preparation (pre-OJEU notice)
  - **Stage 2.** OJEU contract notice to short-listing of bidders via prequalification questionnaire
  - **Stage 3.** Selection of bidders and preparation for the dialogue stage
- **Phase 2. Dialogue**
  - **Stage 4.** The dialogue
- **Phase 3. Post-Dialogue**
  - **Stage 5.** Submission of final tenders and bid evaluation
  - **Stage 6.** Bid clarification
  - **Stage 7.** Preferred bidder to contract close.

Average Time for the Tender Process (from Issue of Tender Documents to Contract Award and/or Financial Closure)

The average time for the tender process generally ranges from 1 to 1.5 years depending on the scale and complexity of the project. Some may take longer.

Degree of Financing Security Sought in Bids

It is not possible to confirm the whole pricing package, as swap, for example, can only be priced at the time of financial close. However, PPP guidelines and template documents require bids to provide a high degree of detail and certainty regarding the proposed finance structure so that the financing for the preferred bid can be quickly executed once selected.

Degree of Technical Specification Sought in Bids

Generally, the PPP guidelines and template documents require bids to provide a high degree of detail in the technical solution offered during the detailed tender stage so that the bid of the preferred bidder can be quickly executed once the contract is awarded.

Degree of Direct Negotiation during the Tender Stage

The competitive dialogue procedure allows for a structured dialogue to take place with prequalified bidders. At the conclusion of the dialogue phase, there should be no further negotiation, and any dialogue with the preferred bidder is limited to clarifying aspects of the tender or confirming commitments provided that this does not have the effect of modifying aspects of the tender, distorting competition, or causing discrimination.
Private Sector Bid Costs and Approach to Expenses

Due to the high degree of technical and financial certainty sought, and, therefore, the need for bidders to develop their final bids, the bid costs for bidders may be significant. HM Treasury policy remains that there should be a strong presumption against contributing to bid costs—although it can be justified where there are legitimate concerns about competitive tension that cannot otherwise be addressed—and needs to be judged on a case-by-case basis.

Key Advantages of the Tender Process

When compared to the negotiated procedure, the process avoids protracted negotiations with preferred bidders when the contracting authority is usually in a weak negotiating position. The process enables the authority to refine its requirements through a process of dialogue with engaged bidders and enables a better understanding of the requirements of the project and of the capability of the bidders, which is important when a long-term contractual relationship covering the delivery of a complex set of services is required, as under a typical PFI.

Key Disadvantages of the Tender Process

The key disadvantages of the tender process are:

- It is a highly complex process that requires significant resources and time to complete.
- It results in high bid costs for the bidders to meet the detailed tender requirements and also high costs for the government in conducting the tender process.

Preparation

Commencement of Planning and Preparation for the Tender Process

The planning and preparation for the tender process typically begins during the feasibility study (i.e., outline business case) stage of a project's development. A procurement strategy may be completed at the same time as the outline business case and can be considered as part of the decision to invest in the project. The procurement strategy may include discussion on the activities, resources, and process for the tender process. Preparation of tender documentation, data and/or data rooms, approvals, governance, assessment of the likely market interest, and specific participants may also commence during the outline business case development stage.

Key Planning Tools Adopted to Plan for the Tender Process

The key tools that may be adopted include

- a procurement strategy that guides the overall activities during the tender stage and documents that are clearly the choice of procurement procedure;
- a project plan that outlines the time lines and key tasks for the project;
- a governance structure and plan that outlines how the tender process will be conducted fairly and in a transparent manner;
- agreed evaluation criteria for prequalification and preferred bidder selection, and a clear indication of the process and how it will be run; and
• a contract management plan to consider the resources and requirements once the contract is implemented.

**Key Resources Utilized in Planning for the Tender Process**

The key resources utilized in the planning process are

• administrative support to the project team and preparation of the project team, which may be divided into a team to handle dialogue meetings and a team to handle the authority’s response and development of the authority’s requirements;
• bid documents, project information memoranda, planning, statutory approvals, and policy issues dealt with in advance, such as how intellectual property will be handled;
• draft contractual documents prepared with support, as necessary, from the legal adviser;
• technical specifications and engineering assessments from the technical adviser;
• bid strategy and market sounding (e.g., through market assessment, public of a prior information notice, and industry days) with support from the legal, technical, or financial advisers;
• supporting advice from the PPP unit;
• affordability analysis, VFM, and governance structures in place.

**Prequalification Document Contents**

A contract notice is placed in the OJEU stating that the procurement will take place under the competitive dialogue procedure with the award criteria

• if there is an intention to limit the number of participants invited to the dialogue,
• if there is an intention to use stages in the dialogue to reduce the number of bidders or solutions, and
• if variant bids are allowed.

A descriptive document sets out background information on the project.

**Detailed Tender Documents and Contents**

The project sponsor

• details the public sector parties involved in the project,
• how the public sector team is organized to manage the procurement process, and
• the public sector advisers.

Project information includes

• project rationale and strategic objectives;
• outline of project requirements such as scope, services, size, location, potential capital investment, and potential risks expected to be borne by the private sector;
anticipated payment mechanisms (e.g., user fees, availability fees, or a combination of these);
status of all project approvals, planning consents, and environmental assessments;
status of public consultation;
possibly an outline of model designs and design requirements;
information on enabling works, status, and availability of infrastructure services on which the project may depend; and
potential funding sources.

The proposed procurement process includes

stages and anticipated timetable (which might be dictated by legislation),
details of any proposed bidders’ conference,
outline of what will be required of bidders at each stage,
outline of information that will be released at each stage, and
outline of the evaluation at each stage.

Approach to Developing the Output Specification

The output specification in the detailed tender document clearly sets out the outputs that the procuring authority is seeking. The requirements are expressed in output terms and not in prescriptive input terms to encourage viable alternative solutions, potential risk allocation, and innovative service delivery solutions to be developed by the bidders. The output specification may also define the outputs for construction and services for the project, and outlines the procuring authority’s minimum design, functional, technical and furniture, fittings, and equipment requirements for the project. A number of specialist advisers, including technical, engineering, and planning advisers may be engaged to develop the output specification.

Additional Tools and/or Procedures Important in the Tender Process

Key tools and/or approaches include the following.

The dialogue process provides an opportunity for an appropriate amount of direct interaction between the project team and short-listed bidders prior to bid submission. It is an opportunity for the project team to explain and clarify its expectations and for short-listed bidders to seek relevant feedback for their bid development. It is a two-way communication process that takes the form of presentations, meetings, and/or workshops involving individual bidders and the government project team.

A data room may also be established (either physically or online) that provides short-listed bidders all relevant information that the procuring authority has that may aid in the preparation of their bid. This may include any analysis of legislative and regulatory impacts, feasibility studies, land-use considerations, geological information, and demand estimates, which are provided with appropriate disclaimers.

The procuring authority should decide upfront if it wants all bidders to concentrate on a common proposition or to come up with technical and commercial approaches reflected in different contract terms while ensuring equal treatment, nondiscrimination, and protection of relevant bidder information.
**Major Issues Encountered during the Tender Stage Preparations**

Major issues that are experienced in the tender preparation may include

- the procuring authority approaching the PPP documentation process as if undertaking a conventional public procurement process, resulting in key documents, such as the output specification, being ill-prepared;
- insufficient planning in the project timetable for the document approvals process and re-drafting of documentation; and
- the scope of engagements for specialist advisers not reflecting all tasks required to complete the tender process.

**Selection**

**Prequalification**

**Average Time of Prequalification (from Release of Document to Short List Announcement)**

The average time for the prequalification process depends on the scale and complexity of the project; however, it is usually completed within 1–4 months of releasing the prequalification tender document.

**Bid Criteria and Response Requirements**

The purpose of using the prequalification questionnaire is to enable the authority to create a short list of potential providers by obtaining sufficient information to evaluate the suitability of potential suppliers in terms of

- technical knowledge and experience,
- capability and/or capacity, and
- organizational and financial standing.

The prequalification questionnaire typically covers the following areas:

- background corporate information,
- financial history and current position,
- contractual performance and renewal history,
- statements of compliance,
- customer reference details, and
- particular questions relating to the specific product and/or service required.

In addition, there will be a list of documents and supporting material to be submitted with the prequalification response, such as quality certification, annual accounts, health and safety, and environmental policies.

**Approach to Prequalification Bid Evaluation**

The approach is usually based on a weighted scoring approach in which the authority scores responses to the prequalification questionnaire questions according to a pre-agreed scoring system—typically being scored 0–5 or 0–10. The scores for questions within each section are then multiplied by a weighting factor assigned to each section on the basis of its importance relative to other sections. The weighted scores for the sections are then added together to give a total weighted score for the prequalification questionnaire response.
It may not be considered appropriate to score each part of the prequalification questionnaire response. For example, an assessment of company financial information does not lend itself to scoring. In these cases, it may be considered more appropriate to evaluate the responses on the basis of risk (e.g., low financial risk to contract performance, medium risk, and high risk) and to consider these ratings along with the total weighted score awarded to that response before deciding whether to invite that supplier to tender.

**Level and Type of Interaction with Bidders**

The nature of interaction at this stage with bidders is limited, as bidders are not expected to invest significant time and resources in developing solutions at this stage. Formal processes are established for any interaction with bidders and must be conducted in accordance with the process. Deselected bidders may be briefed.

**Process of Short List Approval and Release of Tender Documents**

Following a preliminary compliance review of the responses, an evaluation panel assesses the evaluation outcomes and recommends a short list of bidders to the project board after which the short list is announced and detailed tender documents are released. The procuring authority may limit the number of bidders (minimum and maximum) invited to participate in the dialogue phase.

**Governance Requirements for the Prequalification Process**

Normally, there should be at least two evaluators assessing each of the submissions independently. Evaluators attend a consensus meeting during which every evaluator’s score is compared with the scores of the other evaluators, and a consensus view is taken. This meeting also includes the incorporation of the financial assessment and any scores secured through references. Following completion of the scoring exercise, consensus needs be reached and the formal scores recorded. It is very important that all scores and decisions are clearly articulated, as this will form the basis of any debriefing process. Bidders are asked to provide a noncollusion certificate.

**Detailed Tender**

**Average Time Taken from the Release of the Detailed Tender Documents to the Contract Award**

The average time for the detailed tender process varies greatly depending on the scale and complexity of the project. The contract award has been achieved in 6–10 months for some projects and longer (commonly up to 2 years) for more complex projects.

**Key Stages in Tender Evaluation and Selection**

Prior to the tender evaluation process is the competitive dialogue stage. The procuring authority sends, to the short-listed candidates, an invitation to participate in dialogue. This restates the procuring authority’s needs and how it will conduct the dialogue, defining the number of phases, submissions, award subcriteria, and, topics subject to detailed dialogue. The dialogue phase may take place in successive stages until the procuring authority can identify one or more solutions capable of satisfying its needs. An invitation to submit an outline solution may be used as a basis for submission at the end of the first phase, and may include indicative costs for the purpose of tracking affordability. A more detailed technical and price solution
may then follow based upon a draft contract (i.e., invitation to submit a detailed solution). Several stages may be used, but the last stage should request a fully developed and priced draft bid based on an agreed contractual position, which allows some derogations from the standard contract, and the bidder’s strong commitments to funding the proposed solution on the agreed contractual basis. Except when communicating matters of relevance to all bidders, when a forum including all bidders is used, dialogue sessions are conducted on a one-on-one, confidential basis with individual bidders ensuring that bidders are dealt with on an equal and consistent basis. Once the dialogue is closed, bidders are requested to submit final tenders, and the scope for any further changes is very limited. The tender must contain all elements required and necessary for the performance of the project. Tenders are then evaluated by technical work streams, and the evaluation team reviews the evaluation outcomes and recommends a preferred bidder to the project board.

**Bid Criteria and Response Requirements**

The detailed tender evaluation criteria may include

- the engineering solution and design plans;
- management structure, approach to operations, and operating practices;
- a project management plan;
- intraconsortium risk allocation, ownership structure, contract variations, and third-party revenue opportunities;
- the financing structure and level of commitment;
- the approach to stakeholder management and management of existing services; and
- an audited financial model to estimate the required subsidy.

**Approach to Evaluating Technical Solutions and Service Delivery Aspects of Bids**

The detailed tender evaluation methodology may evaluate the technical solutions based on

- how services are to be implemented, and the impact of this approach on service delivery;
- management structure during the operating phase;
- functionality of design;
- how the solution meets performance specifications; and
- flexibility to enable future changes in design or use.

**Approach to Evaluating Financial and Commercial Aspects of Bids**

The detailed tender evaluation methodology may evaluate the financial and commercial aspects of the bids based on

- certainty of financing,
- level of equity contribution from consortium members,
- impact to the government of changes to the payment mechanism and abatement regime,
- insolvency issues linked to project cash flows,
- debt profile and amortization,
- taxation implications of bid, and
- consortium structure.
Role of Value Assessment in Tender Evaluation

A comparison of actual bids with the stage 2 quantitatively derived, conventionally procured option might raise issues as to whether there are legitimate external reasons that could not be foreseen at the stage 2 assessment, and, if not, why this escalation was not captured by the optimism bias estimates. This analysis should then be incorporated into the optimism bias estimates for forthcoming projects. This is not, however, a reason at this stage to halt or revisit the procurement decision. This information is instead to inform future procurements.

Level and Type of Interaction with Bidders

After closure of competitive dialogue, further discussion is limited to requesting a participant to clarify, specify, or fine-tune a tender but in a way that does not involve changes to the basic features of the tender or call for tender. A bidder can use the period after the closure of the dialogue phase but before submission of the final tender to clarify points of information to ensure that its final bid will be compliant but not to negotiate or seek to amend the requirements or terms.

Process for Approval of Preferred Bidder

The evaluation team assesses the evaluation outcomes from the different work streams and recommends the preferred bid to the project board.

Governance Requirements for the Detailed Tender and Selection Stage

The governance requirements for the detailed tender stage are similar to those for prequalification; however, there is an increased focus on conducting a fair, impartial, and competitive dialogue process and subsequent evaluation of final tenders. A clear and well-documented process is essential.

Major Issues Encountered during the Tender and Selection Process

Issues that are experienced in the dialogue and tender selection process may include

- maintaining the confidentiality of the bid solutions to ensure that competitive tension and confidence in the process is retained until a preferred bidder is announced;
- assessing “like for like” bids as part of the quantitative VFM assessment, as each bid is based on different solutions;
- the project team not having adequate resources or experience to undertake the competitive dialogue and subsequent bid evaluation process effectively, leading to delays in the project timetable and bidders to lose confidence in the tender process;
- bidders not providing adequate or complete bids and responses to clarification questions, requiring several rounds of clarification before the bid evaluation can be completed or where only a single (or no) bidder offers a credible solution;
- bidders initially taking a risk-adverse approach in revising the draft terms and conditions of the project agreement, which results in a risk allocation not acceptable for government; and
- ensuring the right balance between maintaining strong competitive tension and costs in deciding on the right number of bidders to retain in the later stages of the bid process. This will vary from project to project and the maturity of the market.
Finalization

Requirements and Process to Achieve Contract Award and/or Execution

A letter is issued to the preferred bidder confirming the intention to proceed with that bidder and identifying any outstanding issues. Such issues may include detailed information on subcontractors, complete design detail (e.g., for school projects or Royal Institute of British Architects Stage E-level design), detailed planning applications, and the lenders’ financial swap rates.

Regulations require a mandatory 10-day period between the contract award and contract conclusion to encourage transparency and to enable any potential challenge to be addressed before contract execution.

Level of Contract Negotiation Prior to Contract Award and/or Execution

Under the competitive dialogue process, this should be limited to requesting a participant to clarify, specify, or fine-tune a tender but in a way that does not involve changes to the basic features of the tender or call for tender.

Planning and Preparation Activities Conducted for the Financial Closure Process

Practice runs of the financial closure protocols, which are attached to the project agreement, may be conducted to ensure that all parties are aware of their responsibilities to achieve a smooth process. The project team may also monitor specific movements in swap rates during this period.

Summary of the Financial Closure Process

The financial closure process may include

- agreeing on the swap rates on the day of financial closure,
- recalculating the unitary charge by inputting the agreed rates in the bidder’s financial model,
- updating the project agreement schedules with the final unitary charge, and
- executing the project agreement.

Government Approach to Managing Prefinancial Closure Risks

The key challenge during this period is managing change that may be within or outside of the control of the procuring authority and in the light of the requirement not to modify substantial aspects of the tender. For expected changes, a transparent mechanism to handle these in a pre-agreed manner may be developed in advance. In the current environment, one of the key challenges is dealing with changes in the financial markets and the increased complexities around confirming all financial commitments.

Legal Framework

Presence of Any Public–Private Partnership Specific Laws

It was not considered necessary law to pass special laws under which to enter into a PPPs. There are very few statutes that specifically address aspects of PPP. One is the Enterprise Act 2002, which contains a general prohibition against secured creditors
appointing administrative services, but this prohibition expressly does not apply in the case of PFI funding (Section 72C).

**Other Applicable Laws**

Procurement is governed by legislation from the European Union. The key Treaty of Rome principles that apply are (i) equal treatment, (ii) nondiscrimination, and (iii) transparency. The Classical Directive (2004/18/EC) is the specific European Union directive that covers, inter alia, the competitive dialogue procedure that was transposed into domestic law through the Public Contracts Regulations 2006 (Statutory Instrument 2006 No. 5 as amended). There is a range of other European Union and domestic legislation and requirements that are relevant to public procurement, including competition law, state aids, freedom of information, tax, environmental, and planning.

**Approach to Gaining Required Authorizations to Deliver Infrastructure Public–Private Partnerships**

Each procuring authority is responsible for gaining approval to proceed with a PPP project within the procedures relevant to the authority and to public investment. This approval is generally provided during the assessment of the feasibility study (i.e., outline business case) that includes a decision on whether to invest in the project, and the preferred procurement strategy for delivery and at the point of contract signature.

**Legal Process to Grant Public–Private Partnership Concession**

- Compliance with procurement law and planning law

**Requirements to Grant Asset Transfer and/or Ownership**

Generally, the public sector retains ownership of the land for development of the asset; however, it may license or lease the asset to the contractor to develop, operate, and/or maintain for the duration of the contract.

**Requirements to Deliver Service (e.g., Required Licenses and Permits)**

Generally, the project agreement sets out the service delivery requirement standards and industry regulations that the contractor may be required to meet. Licenses, permits, and registrations (e.g., maintenance services, cleaning, and security) that are required for specific services delivered by the contractor are regulated at the sector level, and the contractor must obtain these licenses or permits to become an eligible service provider.

**Security Arrangements for the Private Sector Contractor**

Financiers often have significant, complex security arrangements in place. They will generally take financial security over the revenue streams of the project. The charge is generally fixed to the project agreement and the subcontracts so that it covers the rights to claim under guarantees provided by the subcontractors. Financiers may also require reserve accounts for debt service, insurance, and life-cycle maintenance to be established, and repayments sculpted so that all debt is fully paid at least 12 months before the end of the contract. If leasehold rights over the facility are provided, they may also take a mortgage over the lease.
Contracts

Key Contracts Legally Establishing the Project

The project agreement is the key contract that establishes the PPP project. The project agreement is signed by the procuring authority (i.e., the government) and the private party.

Key Roles and Responsibilities Governed by These Contracts

The project agreement may include

- monitoring or compliance rights for the government during development, construction, and operation;
- agreed performance standards;
- an obligation for the government to obtain and transfer any land rights to the private party;
- undertakings by the government to carry out any works that are necessary, on the government side, for the project;
- step-in rights entitling the government to intervene and run the project without terminating the project agreement in the event of risk to health or safety or to discharge a statutory duty;
- termination and compensation provisions;
- provisions dealing with the transfer of assets and personnel at the end of the concession period or earlier termination;
- provisions for variations, increased costs and refinancing, and change of control; and
- a payment mechanism that reduces the service payments if the output specifications are not satisfied.

Party Preparing the Public–Private Partnership Contracts

The project agreement is prepared by the procuring authority with assistance from specialist advisers and is based on the standarized PFI contract (SOPC) or sector-specific contract. There is a process for examining (and, if the HM Treasury is satisfied, allowing) derogations from the mandatory terms of the standard contract.

Jurisdiction of the Public–Private Partnership Contracts

The jurisdiction of the project agreement is determined by where the procuring authority is established—England and Wales, Northern Ireland, Scotland.

Key Technical Contracts

The private party typically enters into a design and construction contract with a builder (i.e., constructor) for the design and construction of the project, and an O&M contract with at least one facilities manager for the operation phase of the project. The government also enters into direct agreements with these contractors and with the funders to govern step-in rights. Several further agreements may be needed to address the technical delivery of the project (e.g., site access and independent verifiers).
Key Roles and Responsibilities Governed by These Contracts

Under the design and construction contract, the private party seeks to pass to the construction contractor all design and construction obligations and risks, usually by way of a fixed price design and construct contract. The private party subcontracts, by one or more O&M agreements, the provision of all ongoing services, imposed on the private party under the project agreement, during the operating phase of the concession. The private party may also enter into a contract with a facilities management contractor to coordinate the provision of the operating services during the operation phase. Under the direct contracts with the subcontractors, the government is provided with step-in rights if a default occurs under these contracts.

Provisions for Monitoring and/or Auditing the Performance of the Contractor

The provisions for monitoring performance are contained in the project agreement, and may be replicated in the contracts between the private party and the subcontractors responsible for construction and O&M.

Key Financial Contracts

Usually, tripartite agreements are entered into between the financiers, government, and private party. These agreements ensure that financiers have the right to step in and rectify defaults prior to termination. The private party also enters into a senior loan agreement, subordinated debt agreements and/or equity agreements, and security agreements to secure private finance for the project.

Key Roles and Responsibilities Governed by These Contracts

The tripartite agreements are designed to regulate cure rights and step-in rights of the lenders and the government. The private finance agreements specify the conditions by which the project finance has been provided and the restrictions on the private party project operations (e.g., debt ratios, maintenance of reserve accounts, and maximum gearing levels).

Provisions for Payment of Subsidy or Service Payment

Provisions for subsidy payments are contained in the project agreement. For availability payments, the payment process is clearly defined and includes the assessment process of penalties for nonperformance. For up-front capital contribution payments, the process of verifying completed works, and approval to operate the asset are usually required before payment is provided.

Level and Type of Guidance Provided on Commercial Principles

The national PPP guidelines provide guidance on the commercial principles to be adopted for social infrastructure projects and draft commercial principles for economic infrastructure projects. Jurisdictional flexibility is maintained under these principles to allow for specific issues or circumstances (e.g., land approval processes) to be considered at the jurisdictional level.
Financial Instruments

General Insurance Requirements of Contractor

The SOPC indicates that the private party is expected, at its own cost, to maintain such insurance throughout the contract term as a prudent owner or service provider would obtain and maintain for the facility, including insurance specified in the project agreement (a standard required insurance schedule is set out in the SOPC). The procuring authority is named as a co-insured. There are mechanisms, inter alia, to share the risk of increases in insurance premiums, deal with uninsurable risks, and handle the application of insurance proceeds.

Level and Type of Guarantees

If the construction subcontractor is a joint venture, the SOPC suggests considering joint and several guarantees and counter-indemnities. There is usually no guarantee to the procuring authority (except of collateral warranties on the basis that these do not increase levels of liability and take into account the rights of senior lenders). Guarantees are assigned as a security to the lenders.

Flexibility in Insurance and Guarantee Limits

There are provisions where it may not be VFM for the private sector to bear all risks associated with giving an insurance program incentives to ensure that the contractor manages risks effectively and avoids seeking protection from the procuring authority unless in exceptional circumstances.

Figure 2: Overview of Contractual Arrangements for Consortium Members: United Kingdom

PPP = public–private partnership.

Source: Internal Data of IUK, United Kingdom.
**Private Contractor’s Approach to Hedging**

Generally, the private party seeks to hedge inflation and interest rate risk exposure during construction, which provides greater certainty to the private financing structure of the bid.

**Main Hedging Instruments Employed**

There are a number of hedging instruments adopted by private parties; however, the most common are interest rate swaps that exchange floating interest rates to fixed interest rates (and inflation-linked bonds). Soft facility management costs may be revisited every 5–7 years through a process of market testing (or benchmarking), reducing the exposure to long-term labor cost changes during the service delivery phase.

**Government’s Approach to Hedging Contracts**

There is a guideline to help ensure that hedging represents long-term VFM taking into account, for example, the costs that can arise from the limitations on flexibility from hedging arrangements.

**Main Hedging Instruments Employed**

This is not applicable.

**Level and Type of Third-Party Indemnities**

The procuring authority is to be indemnified against four types of liability:

- death and personal injury,
- property damage,
- breach of statutory duty, and
- third-party claims.

The SOPC requires the procuring authority to consider VFM in deciding whether a cap is appropriate for third-party claims and/or property damage only, such as probability of claims, the procuring authority's equipment on site, environmental issues, and VFM implications of a cap for third-party claims or damage to property.

The procuring authority should not, generally, give reciprocal indemnities.

**Financing**

**General Range of Gearing for Economic Infrastructure**

- 65%–75% debt

**General Range of Gearing for Social Infrastructure**

- 85%–95% debt

**Key Sources of Debt**

The key sources of debt are typically bank loans and bonds.
**Major Debt Participants**  
The major debt participants include  
- local banks and institutions,  
- international banks such as the European Investment Bank, and  
- capital markets.  

The latter two have largely ceased to participate since the credit crunch.

**Key Sources of Equity**  
The common, main sources of equity are  
- contractors, and  
- specialist institutional investors.

**Major Equity Participants**  
The major equity participants include  
- sponsors, contractors, and operators;  
- infrastructure funds; and  
- financial institutions.

**Approach to Refinancing in Bid**  
The procuring authority has the right to request refinancing if, in the absence of an equity-led refinancing request, the authority believes that the terms available in the market are more favorable than those within the existing agreement. The procuring authority is entitled to receive (i) 50% of any refinancing gain up to $1.6 million, (ii) 60% of any further refinancing gain in the amount of $4.8 million, and (iii) 70% of any other refinancing gain.

**Capital Drawdown Profile**  
Given the high project risks at the commencement of the project, equity is generally provided as the first stream of finance (often in the form of a subordinated sponsor loan for tax purposes). Equity may be contributed as a lump sum or via installments depending on the construction profile of the project. Debt is gradually drawn down during the construction period and refinanced as the project commences service delivery. The debt is usually provided as an interest-only loan for specific periods to reduce the repayments required in the early years of the project.

**Special Issues**  
**Unsolicited Proposals**  
**Prevalence and/or Role in the Procurement of Public Infrastructure**  
Unsolicited proposals are not a common form of procurement in the United Kingdom. Unsolicited proposals (i.e., innovative proposals) need to be distinguished from innovative bids, which may be imaginative or novel solutions made in response to an invitation to a competitive tender but not necessarily in a way envisaged in the tender documents and which are considered under the formal tender evaluation process.
**Sectors Where Unsolicited Proposals Are Commonly Received and Considered**
Some may be received in the defense sector.

**Relevant Policy Framework or Guidance Material for Process and Evaluation**
- Ministry of Defence (MOD) code of practice

**How Policy and/or Guidance Differs from Solicited Proposals**
Innovative proposals are unsolicited suggestions or ideas (not necessarily in PPP form) made before MOD has launched a feasibility or scoping study; or, it is outside a competition or other acquisition process. Under the code of practice, MOD further considers—by asking for further information to allow proper consideration—or rejects the proposal. Innovative proposals are given full and fair consideration at an appropriate level within MOD and by staff members who possess the appropriate technical skills. They then provide a full response, with a procurement plan, within 3 months of the innovative proposal being provided. MOD consults with the proponent before it discloses general concepts of the innovative proposal for contracting purposes, and MOD is responsible for its representations and the relevant obligations of confidentiality. MOD publishes an annual performance report, which is a statement of how these procedures are working, the numbers of innovative proposals received, and how these have been dealt with.

**Responsible Government Entities for Policy Development and Implementation**
MOD has developed its own code of practice.

**Purpose and Desired Outcomes of the Approach**
The aim is to help encourage innovative ideas that could lead to more cost-effective ways of meeting defense requirements.

**Potential Limitations of the Approach**
Unsolicited or innovative proposals may not always ensure that the proposals represent VFM.

**Single Bids Received from Tender**
**Occurrence in the Procurement of Public Infrastructure**
For PPP projects, single bids are not a common result from the tender process, and under the United Kingdom procurement regulations, there is a general requirement that the procuring authority ensures that there are sufficient bidders for there to be genuine competition.

**Sectors Most Susceptible to Single Bids Being Received**
Potentially large and technologically and highly complex projects where market supply is limited are usually susceptible to single bids being received. This also usually prompts an examination of the project structure and procurement strategy. Defense is probably the only sector to which this applies.

**Relevant Policy Framework or Guidance Material for Process and Evaluation**
The Public Contract Regulations 2006, which apply to all public procurements, allow negotiation with a single bidder where for technical or artistic reasons or for reasons
connected with the protection of exclusive rights, the contract can only be awarded to one entity.

Responsible Government Entities for Policy Development and Implementation
The procuring authority is responsible for assessing the potential level of market interest in the project prior to proceeding with the tender process, as well as the likely level of competitive tension if the invitation to tender results in a lower number of bids than anticipated. The HM Treasury requires reviews at certain stages in this procurement process. These will help identify potential problems in this area.

Purpose and Desired Outcomes of the Approach
The process of preparing the outline business case and the VFM guidance specifically highlights the importance of understanding the market and the importance of designing the project to avoid single bidder or market failure outcomes. Nevertheless, should this occur, procurement should not automatically be stopped. The procuring authority should carry out a thorough review before deciding on the way forward, taking into consideration the option that best secures the VFM. Generally, (i) if the market failure occurs early on, then procurement should be halted; (ii) if it occurs later on in the process, then the procuring authority should consider the strength and quality of the remaining or only credible bid and/or bidder, and consider the extent to which the competition up to that stage has been able to drive out and demonstrate VFM; (iii) if the process continues with a single bidder, then the procuring authority should ensure that there is transparent competition in the bidder’s supply chain with market testing of subcontracts.

Potential Limitations of the Approach
One potential limitation of the approach recommended is that the procuring authority may not have sufficient capacity and guidance to deal adequately with the situation when an insufficient number of responses are received. A degree of good judgement is involved.

Approach to Contract Negotiation
Stage in Procurement where Contract Negotiation Mostly Occurs
Contract negotiation mainly takes place during the competitive dialogue phase after selecting the prequalified bidders and prior to requests for the final tender. The competitive dialogue process is specifically designed to limit single-party negotiations after appointment of the referred bidder.

Relevant Policy Framework or Guidance Material for the Process

Responsible Government Entities for Policy Development and Implementation
• HM Treasury (or relevant devolved government policy unit)

Purpose and Desired Outcomes of the Approach
The purpose of the approach is to select a bidder offering economically the most advantageous tender through a competitive process that ensures transparency, equal treatment, and nondiscrimination. It also seeks to balance the cost and time
of the process with one where VFM is achieved through a structured dialogue with bidders to ensure discovery of the best VFM solution, a clear understanding by the bidders of the procuring authority’s requirements, and for the procuring authority to find out the capability and capacity of the supplier.

**Potential Limitations of the Approach**

The approach generally extends the tender evaluation stage and requires specific resources and skills from the procuring authority to implement. Delay and cost of procurement are the major limitations, and the cost is of particular concern to any unsuccessful bidders that have continued dialogue all the way to submissions of final bids. The competitive dialogue process requires strict conduct of the guidelines to ensure that the process is conducted fairly and that no bidder is given additional information that could provide them with a competitive advantage in preparing their final bid.

**Areas of Procurement where Conflict Issues Arise**

Conflicts may arise from the public and private parties in a PPP project from

- professional or personal relationships;
- financial interests of the advisory firm, advisers, or the project team members;
- consortium members involved in confidential market transactions and across different bids; or
- one bank funding more than one bid.

**Main Reasons for Conflict**

- It is a highly specialized procurement and delivery market, and in some sectors, there may only be limited private sector players.
- The level of specialist advisory skills required for the public and private parties is significant; therefore, most advisory firms and advisers are likely to have existing relationships with potential bidders.

**Relevant Policy Framework or Guidance Material for Conflict Management Process**

Developed frameworks on conflict management processes. There is a standard requirement for anticollusion letters to be issued by tenders in the bidding process. There are provisions in the project agreement to handle information, confidentiality, corruption, and fraud.

**Responsible Government Entities for Policy Development and Implementation**

The procuring authority is responsible for implementing the conflict management process.

**Purpose and Desired Outcomes of the Approach**

The approach provides for high levels of disclosure, consistency, transparency, and accountability in process and the people involved in the process.

**Potential Limitations of the Approach**

The approach does not address all conflict issues; therefore, the implementation of the conflict management approach may vary across jurisdictions and projects.
Global Comparative Framework—Part 3: Service Delivery

Implementation

Key Stages in Implementation
Implementation generally covers the construction and service delivery stages of the project.

Key Tools Utilized to Plan for Implementation
Planning for the implementation stage begins during the tender stage. Contract management guidance recommends the use of the following tools:

- a contract management strategy that sets out the agreed contract management process;
- a contract management manual that reflects the key performance and contract management issues from the project agreement;
- established relationship management, issues management, and dispute resolution structures;
- a governance framework to guide the government’s implementation of the project agreement;
- a knowledge and information management strategy to guide the management of information provided to the government by the private party and other sources;
- change control procedures to guide the process of initiating and responding to change requests;
- contingency planning, such as business continuity and disaster recovery planning; and
- an ongoing review process for existing plans, processes, and tools.

Government Entity Responsible for Contract Monitoring
The contracting authority is responsible for contract monitoring.

Approach to Managing the Relationship with the Contractor
The practitioner guide states that effective relationship management should enable both parties to anticipate risk events before they occur and deal with any risks, issues, and disputes that do materialize. The relationship between the parties is seen as a key factor in achieving success in the project.

Process to Monitor Performance
Most PFI contracts are self-monitoring. However, the contracting authority may undertake various processes to monitor the performance of the private party, including

- specific reporting from the private party to assess the business operations and ongoing creditworthiness,
- conducting spot checks or audits of performance monitoring systems and processes,
- gaining direct user feedback (many project agreements require the private sector party to carry out regular user surveys), and
undertaking a benchmark and review process of the performance standards at regular intervals during the implementation stage.

**Approach to Contractor Refinancing during Implementation**

Authority consent is required for refinancing. The contracting authority also has the right to request refinancing where, in the absence of an equity-led refinancing request, the authority believes that terms available in the market are more favorable than those within the existing agreement.

The contracting authority is entitled to receive (i) 50% of any refinancing gain up to $1.6 million, (ii) 60% of any further refinancing gain in the amount of $4.8 million, and (iii) 70% of any other refinancing gain.

**Approach to Revenue Upside or Gain Sharing with the Contractor**

The project agreement may permit the government to share, in some way, a windfall or unexpected gain by the private sector (excluding refinancing gains for which the process is set out above) most commonly related to demand or revenue forecasts exceeding estimates in the financial model at financial closure.

**Major Issues Encountered during Implementation**

The following major issues are often encountered during the implementation stage:

- The contracting authority does not fully understand the specific terms of the project agreement.
- The contractual arrangements are complex or ambiguous, and conflicts may appear on the treatment of certain issues.
- Knowledgeable and experienced government and private party staff members are lost transitioning from the completion of the tender stage to commencement of the implementation stage.

**Key Skills Required during Implementation**

The following key skills are generally required by the contract manager to manage the implementation stage:

- communication and relationship management,
- proactive risk management,
- strong planning and contract management capabilities, and
- ability to respond and to manage change.

**Process to Review Project Outcomes at Post-Implementation**

The contracting authority is generally responsible for setting the requirements and processes for review during the implementation stage. A review by an independent group of certified procurement specialists (known as a gateway review process) may be carried out to assess benefits realistically (e.g., a gate 5 review), as well as auditor investigations and VFM assessments carried out by the relevant independent auditing body. Key lessons learned for the government to consider in future PPP projects may also be an important stage of the review process.
Measurements of Public–Private Partnership Success and Incentives to Ensure Success

The measurement of success for a PPP project is difficult to define. Generally, if a project delivers the outputs contracted for with minimal community concerns and negative media coverage, the private party remains financially viable, there is strong management of the procurement process by the government that follows the policy and guidance materials, and if measurable benefits are being delivered during the implementation stage, then the project is likely to be considered successful. Key drivers or incentives for success are good competition (following a good project preparation and a well-managed procurement process), sensible risk allocation and clear project agreement and payment mechanism, private party capital at risk to performance, good contract management, and a good partnership will drive success.

Risk

Level and Type of Guidance for Government to Mitigate and Manage Risks during the Contract

The contract management guidance provides a general approach to risk management during the implementation stage that includes consideration of mitigation strategies for risks retained by the government. A risk register is normally used to identify and track the management of risks and to ensure that there is clearly identified risk ownership.

Government Entities and Key Responsibilities for Mitigating and/or Managing Risk during the Contract

The contracting authority is responsible for ensuring that the risk mitigation and management strategies developed as part of the risk analysis and the contract management process are appropriately implemented.

Approach to Dispute Resolution and Key Mechanisms Adopted

A common form of dispute resolution involves a three-stage process:

- The contracting authority and contractor consult with each other for a fixed time period (possibly involving different levels of internal consultation) in an attempt to come to a mutually satisfactory agreement.
- If consultation fails, the parties may then (except in the case of certain types of dispute) put their case before an expert to decide. The expert is appointed from a panel (e.g., of construction or operation experts) whose appointment is regulated by the contract. It may be appropriate in certain circumstances to substitute other forms of alternative dispute resolution for this type of expert determination. Disputes relating to the mechanics of price variations may go to a financial expert agreed between the parties at the time.
- If either party is dissatisfied with the expert’s decision, it may refer the matter either to arbitration or to the courts for a final and binding decision. The method of appointing the arbitrator is set out in the project agreements. It is sometimes proposed that a fast-track dispute resolution process is included in the contract to deal with certain pressing issues.
**Treatment of Refinancing Risk**

Generally, any refinancing risk included in the financial model is borne by the private party.

**Process and Approach to Manage Renegotiation Risk**

The SOPC recommends that a comprehensive change protocol is developed and agreed during the procurement process. Detailed guidance is provided in developing this. Different processes can be agreed on depending on the scale of the change. The change protocols should cover, at a minimum, the following elements of the change management process for all types of changes:

- notification and specification,
- contractor’s estimate,
- authority approval,
- change implementation,
- funding and payment,
- due diligence, and
- documentation and monitoring.

At each stage, the change protocol should clearly define the roles and responsibilities of each party and the timescales within which they are expected to perform, while recognizing the different requirements (in terms of process and timing) of different types of changes.

**Process and Approach to Manage Termination Risk**

The SOPC sets out a comprehensive mechanism to govern contract termination in the event of

- authority default (i.e., a breach),
- authority voluntary termination,
- contractor default (i.e., a breach),
- force majeure,
- corrupt gifts and fraud, and
- breach of refinancing provisions.

On contractor default, the underlying principle is that, on termination, the market determines the remaining value of the contract (and, hence, any recovery of value for the funders) to ensure that capital is at risk to performance in a fair and effective way.

As termination is a last resort, various mechanisms exist to enable remedial measures to be taken and to create incentives for the private party to remedy the situation, including

- step-in rights, where the government assumes all or some or the service delivery obligations of the private party under specific situations (such as serious health and safety risks) until the situation is resolved;
- events of default by the private party and the opportunity for the private party to cure the default before the government terminates the contract;
• dispute resolution mechanisms designed to resolve disputes fairly and efficiently to reduce the chances of disputes giving rise to a termination event; and
• limited rights for private party to terminate.

Special Issues

Public Disclosure Requirements (Post-Financial Closure)

Type of Public Disclosure Required or Provided
The recommended approach is to place as much information in the contract as possible in the public domain, and only information that is specifically identified as commercially sensitive by the contractor, or identified and justified by the contracting authority as sensitive for public interest (including national security) should be excluded. For transparency, the parties should aim to achieve a pragmatic balance between the public sector’s interest and the need for commercial confidentiality.

After the short-listing, the contracting authority should negotiate with bidders as early as possible to define the scope of the information to be treated as commercially sensitive. The contracting authority should also agree with bidders when commercially sensitive matters will become nonsensitive to ensure maximum disclosure. Contracts should be structured to facilitate easy removal of commercially sensitive elements. If an information is agreed upon to be commercially sensitive, the disclosure should not result in causing real prejudice to the interests (legal and/or commercial) of the parties.

Relevant Policy Framework or Guidance Material for Conflict Management Process
The policy framework is based on the relevant provisions of the Freedom of Information Act 2000, which came into force on 1 January 2005, and the Environmental Information Regulations. Scotland has its own Freedom of Information Act, which is very similar to the England, Northern Ireland and Wales Act. Only commercially sensitive information, where dissemination is contrary to public interest, or information is personally private, should be withheld. In the PFI context, the key concern relates generally to commercially sensitive information, and for defense-related projects, particularly issues of national security.

Government Entities Responsible for Public Disclosure Policy Development and Implementation
The Department of Constitutional Affairs and the Office of Government Commerce (in the HM Treasury) are responsible for the development of guidance on freedom of information. The contracting authority is responsible for handling responses to requests for information, with support from the relevant PPP unit as necessary.

Purpose and Desired Outcomes of the Public Disclosure Policy
The underlying premise is based on the assumption that information should be released and that PFI contracts should be placed in the public domain as much as possible to improve the openness and transparency of PPP transactions.
Potential Limitations of the Public Disclosure Policy Approach

- Determining the nature of what is commercially sensitive information
- Respecting the propriety of such information, which may be sought by competitors to obtain commercial advantages
- The costs of handling freedom of information requests

Renegotiation of Concessions

Prevalence in the Procurement of Public Infrastructure

Major renegotiations of contractual arrangements have not been a common experience to date. However, minor renegotiations are more frequent and to be expected, and mechanisms, described previously, exist in the contract documents to manage such changes.

Key Reasons for Renegotiation by the Public Sector

The government may seek to renegotiate the terms of the project agreement in an effort to resolve a dispute or to update the performance standards, which may result from policy changes in public service delivery.

Key Reasons for Renegotiation by the Private Sector

The private party may seek to renegotiate the terms of the project agreement in an effort to resolve a dispute or to reflect a change in their operations service delivery approach or financing structure.

Sector(s) Most Affected by Renegotiation

This is not applicable.

Relevant Policy or Guidance for Renegotiation Process

The SOPC recommends that change control procedures be developed to initiate and manage change requests.

Government Entities Responsible for Renegotiation Policy Development and Implementation

The HM Treasury is responsible for policy development in this area. The Partnerships UK, on behalf of the HM Treasury, supports the development of the standard contracts, which, inter alia, cover the policy approach in this area. The relevant contracting authority is responsible for the implementation of the provisions of the contract.

Purpose and Desired Outcomes of the Renegotiation Approach

The renegotiation approach emphasizes

- the contractual rights of each party under the project agreement,
- a structured process to change procedures to improve the transparency in the decision-making process to amend the contractual arrangements,
- consideration of the impact of proposed contractual amendments on the initial risk allocation and VFM,
- the relationship between the parties to create a conducive environment for negotiation and resolution of issues, and
- formal documentation of contractual amendments as a result of renegotiations.
Potential Limitations of the Renegotiation Policy Approach

The approach relies heavily on the contracting authority’s ability to manage actively the change control procedures and negotiate effectively with the private party. However, if the relationship has not been sufficiently developed or the contracting authority lacks specific skills to implement effectively the approach, then the approach may not be as effective in addressing renegotiations sought by the private party. Also, care needs to be taken to ensure that the change to the negotiated contract is not so material; otherwise, it would not be permitted under the initial procurement, which was governed by the Public Contract Regulations 2006. If that is the case, a further procurement process is needed.

Global Comparative Framework—Part 4: Completion

Completion Arrangements

Recognition of Buy-Out Rights in Contract

• The government can effectively buy out the private party by exercising the right to a voluntary termination.
• Ownership of the private party is usually locked in until 1 year after the completion of the construction phase.

Early Termination Payment Calculation

The early termination payment calculation is dependent on the cause of termination.

Authority Default and/or Voluntary Termination

• The compensation is the same for authority default and voluntary termination.
• The objective is to ensure that the contractor and financiers are fully compensated.
• The compensation is calculated based on
  – senior debt,
  – equity return (three options),
  – redundancy costs, and
  – subcontractors’ breakage costs.

Compensation for Termination through Contractor Default

• The market value approach is used.
• The compensation is based on the market value of the unexpired term of the contract.
• Lenders are incentivized to step in and rescue projects rather than relying on termination payment.
• There is no windfall gain for the contracting authority.
• If the contracting authority retenders these, the authority pays the outgoing contractor an amount equal to the adjusted highest tender price as defined in the SOPC.
• If the contracting authority chooses not to retender or cannot because of no liquid market, it pays the estimated fair value based on a mechanism set out in the SOPC.
**Termination due to Force Majeure**
- Compensation is based on the principles that neither party is at fault and that financial consequences should be shared.
- Senior debt, redundancy payment, and subcontractor losses are paid.
- Shareholders are paid with
  - equity less distributions, and
  - subordinated debt less interest paid.

**Termination Due to Corrupt Gifts and/or Breach of Refinancing**
- Senior debt only

**Contract Termination Arrangements**
The SOPC details the termination arrangements, depending on the nature of the event.

- Authority default (i.e., a breach)
  - Expropriation
  - Material breach
  - Failure to pay
  - Breach of assignment clause
- Authority voluntary termination
- Contractor default (i.e., a breach)
- Force majeure
- Corrupt gifts and fraud
- Breach of refinancing provisions

**End of Contract Arrangements**
The SOPC recommends that the following provisions relating to the end-of-contract arrangements are included in the project agreement:

- The project agreement ensures that the project assets meet the government’s return conditions at contract expiry.
- The project assets and site are generally vested with the government at the end of the contract term.
- Where the government is to retender the contracted services, the private party is generally required to take all reasonable steps to ensure that the contracted services continue with minimum disruption and risk to government employees and public users.
- Independent survey and any required rectification may be provided at the private party’s expense or the government may undertake the required rectifications and seek payment from the private party (a retention fund or performance bond is usually required).
- Depending on the nature of the project, no residual value is generally assumed for the assets transferred to the government.
Explanatory Note

Stage of Public–Private Partnership Development and Implementation

The PFI policy (the most commonly used form of PPPs in the United Kingdom) was established in 1992 and is now the most widely used form of PPP procurement at both the central and local government levels, representing 10%–15% of public capital investment. Over 900 PFI projects have been signed, worth about $96 billion in capital investment terms and of which over 700 are now operational (as of September 2009).

Reference Documents and other Relevant Materials

http://www.hm-treasury.gov.uk (central PFI guidance is available at the HM Treasury website)
http://www.partnershipsuk.org.uk (general guidance and data on projects)
http://www.4ps.gov.uk (local government guidance and information)
http://www.ogc.gov.uk (for procurement and gateway guidance)
http://www.doh.gov.uk (for health)
http://www.partnershipsforforschools.org.uk (for the PFI schools program),
http://www.defra.gov.uk (for environmental projects like the Waste Infrastructure Delivery Program)
http://www.highways.gov.uk (for roads)
http://www.nao.gov.uk (for reports on PPP projects)

Approach to Completing Framework Responses

PPP guidance has been used to complete the responses where possible. In most instances, a high-level summary of the guidance has been provided, and readers are strongly recommended to refer directly to the guidance material.

NOTE: The responses are based on the approach taken to PPP projects developed under the PFI implemented in England and Wales. Similar approaches are used in the other devolved governments (Northern Ireland and Scotland) although there may be some differences of policy. There are also other forms of PPP used in the United Kingdom, although the PFI is the most widely used in infrastructure and public service delivery. The framework responses coming from PPP guidance do not necessarily cover these other forms of PPP (e.g., joint venture PPPs and investment management partnerships), although many of the approaches and principles are similar.

Sector-Specific Issues

The websites listed above provide sector-specific guidance. In some sectors, a standard form contract for the sector—based on HM Treasury guidance and required drafting for PFI contracts contained in the SOPC—has been developed.

Definitions of Comparators

This is not applicable.

Other Suggested Comparators

This is not applicable.
How Changes in Future Public–Private Partnership Practices Might Change Responses or Require Different Comparators

Guidance is reviewed and revised from time to time in response to changes in policy and the market. New guidance is developed as new sectors and approaches are developed.

Other Comments

This is not applicable.
Public–Private Partnership Framework of Australia

Global Comparative Framework—Part 1: Development

Enabling Environment—Introduction 1

Definition and/or Description of Public–Private Partnerships

The national public–private partnership (PPP) guidelines define a PPP as a long-term contract between the public and private sectors where the government pays the private sector to deliver infrastructure and related services on the behalf, or in support, of the government’s broader service responsibilities. PPPs typically make the private sector parties that build infrastructure responsible for its condition and performance on a whole-of-life basis. PPP projects cover economic and social infrastructure and typically include both a capital component and an ongoing service delivery component of noncore services.

Government Contracting Entity

The procuring agency is the government body (i.e., department, agency, statutory body, or government business enterprise) that is responsible for delivering the project on behalf of the government.

Structure of Private Sector Contractor

The private party is typically structured as a special project vehicle (SPV), with no preexisting assets or liabilities, that enters into a project.

Forms of Government Subsidy

For social infrastructure projects, government subsidies are usually provided as an availability or service payment throughout the operating phase of the contract, and payments are linked to achievement of performance standards. For economic infrastructure projects, government subsidies are usually provided as a lump sum payment once construction of the asset has been completed, and services are ready to commence.

Most Commonly Adopted Public–Private Partnership Delivery Methods for Economic Infrastructure

• Build–own–operate–transfer

General Responsibilities of the Government under Contract Arrangements

The government

• provides the land required for development and any environmental approvals required under national legislation;
generally remains the owner of the project site for the duration of the contract; and
• is also responsible for any subsidy payments if agreed in the project agreement, prescribing parameters for products and services and for regulating pricing and provision of products and services.

**General Responsibilities of the Private Sector under Contract Arrangements**

The private party

• is responsible for other environmental approvals, site conditions, access arrangements, and compliance to construction laws and codes during the construction period;
• is responsible for monitoring performance and retaining specific records that enable the government to assess the financial capacity, performance, and transparency of costs.

**Most Commonly Adopted Public–Private Partnership Delivery Methods for Social Infrastructure**

• Design–build–finance–maintain

**General Responsibilities of the Government in Contract Arrangements**

The government

• provides the land required for development and any environmental approvals required under national legislation,
• remains the owner of the project site for the duration of the contract, and
• is responsible for payment for services based on the agreed payment mechanism and review of performance and service standards as required under the project agreement.

**General Responsibilities of the Private Sector in Contract Arrangements**

The private party

• is responsible for other environmental approvals, site conditions, access arrangements, and compliance to construction laws and codes during the construction period; and
• is responsible for monitoring performance and retaining specific records that enable the government to assess the financial capacity, performance, and transparency of costs.

**Level and Type of Government Support Provided for Public–Private Partnerships**

Support is generally provided from the ministers and senior officials of the treasury, transport, and infrastructure portfolios. The procurement policies for most jurisdictions include PPPs as one delivery option to be considered during the development of the procurement strategy. Each jurisdiction has a government unit that is responsible for developing PPP guidance and ensuring that PPP policies are implemented appropriately. PPP units may also coordinate or promote training for procuring agencies to improve skills in PPP delivery. Industry groups also provide support for the appropriate use of PPPs in infrastructure service delivery. Support is also provided at the national level through the introduction of national PPP guidelines.
Identification Process for Potential Public–Private Partnership Projects in the Budget Planning Framework

The identification process is undertaken by the procuring agencies in each jurisdiction during the development cycle to develop asset strategies and investment plans. The treasury or infrastructure department may assist the procuring agency in this analysis.

Specific Criteria Adopted to Identify Potential Public–Private Partnership Projects

There is no specific criteria for identifying PPPs; however, the national PPP guidelines state that projects with a capital value in excess of $50 million have the potential to result in value for money (VFM) through PPP delivery. Procuring agencies are likely to consider the following project characteristics in assessing potential delivery options:

- the ability to measure the service outputs of the project;
- the key project risks, who is best able to manage these risks, and could this risk allocation improve VFM;
- the existing market, market interest, or genuine market opportunity for the project;
- scope for innovation to improve VFM; and
- who is best able to take a long-term view of the infrastructure and service requirements.

The treasury or infrastructure department may assist the procuring agency in this analysis.

Enabling Environment—Introduction 2

Key Delivery Issues Addressed by Public–Private Partnership Procurement

Key delivery issues experienced in conventional procurement of transport infrastructure include

- significant delays in completing the design, construction, and commissioning of new or redeveloped transport infrastructure;
- cost overruns in projects caused by inadequate scope definition and changing and/or conflicting government priorities; and
- innovation required to deliver the infrastructure constrained by the availability of land or community concerns over noise or local congestion levels.

Most Commonly Adopted Public–Private Partnerships for Transport Infrastructure

- Build–own–operate–transfer for economic transport infrastructure
- Design–build–finance–maintain for social transport infrastructure

Examples of Urban Environment Infrastructure Permitted and/or Delivered under a Public–Private Partnership Arrangement

- Wastewater treatment plants
- Desalination
- Gas transmission pipelines
Key Delivery Issues Addressed by Public–Private Partnership Procurement

Key delivery issues experienced in conventional procurement of urban environment infrastructure include

- innovation in design and construction, and
- the ability to maintain plants efficiently.

Most Commonly Adopted Public–Private Partnership Delivery Method for Urban Environment Infrastructure

- Design–build–finance–maintain
- Design–build–finance–operate

Examples of Social Infrastructure Permitted and/or Delivered under a Public–Private Partnership Arrangement

- Justice facilities (e.g., prisons, courthouses, and police stations)
- Schools
- Hospitals
- Community centers
- Accommodation centers

Key Delivery Issues Addressed by Public–Private Partnership Procurement

Key delivery issues experienced in conventional procurement of social infrastructure addressed by PPP include

- innovation in design and construction of infrastructure that remains flexible to the changing services delivered from the assets, and
- ability to maintain assets efficiently.

Most Commonly Adopted Public–Private Partnership Delivery Method for Social Infrastructure

- Design–build–finance–maintain
- Design–build–finance–operate

Examples of Natural Resources and Power Infrastructure Permitted and/or Delivered under a Public–Private Partnership Arrangement

Natural resources companies may enter into project finance-style arrangements for specific operations, such as mines; however, PPPs involving public infrastructure delivery mainly occur for transport infrastructure (e.g., rail lines and terminals) or access infrastructure (e.g., gas pipelines). Most utility generation and transmission assets are privately owned or owned by the jurisdictional government.

Key Delivery Issues Addressed by Public–Private Partnership Procurement

This is not applicable.

Most Commonly Adopted Public–Private Partnership Delivery Method for Natural Resources and Power Infrastructure

This is not applicable.
Enabling Environment—Legal

Government(s) Responsible for Policy
The national PPP guidelines are developed by Infrastructure Australia, a national body that incorporates private and public sector representatives. Infrastructure Australia was established under the Infrastructure Australia Act and is supported by the Office of the Infrastructure Coordinator in the National Department of Infrastructure, Transport, Regional Development and Local Government.

Most major infrastructure projects are the responsibility of state and territory governments, and these governments have traditionally played a greater role in relation to PPPs than the central government. All jurisdictions have developed PPP policy or guidance material, which is usually the responsibility of the treasury and finance, transport or infrastructure portfolios.

Governing Policy
The national PPP policy and guidelines, as implemented by individual state and territory jurisdictions, serves as the governing policy.

Governing Laws
There are no specific PPP laws; however, jurisdictions may introduce project-specific legislation to assist in project implementation.

Public–Private Partnership Unit Location
- **National.** The Department of Finance and Deregulation has a specialized PPP unit, as well as in Infrastructure Australia.
- **State and territory jurisdictions.** Treasury and Finance, Transport, or Infrastructure

Role of Public–Private Partnership Units
Most PPP units assist in the assessment of PPP proposals, ensure the appropriate application of the PPP guidelines, and provide advice to procuring agencies on PPP arrangements and technical issues. In the jurisdictions, the PPP unit is also responsible for the PPP policy and guideline development.

Key Governance Roles
The governance requirements are outlined in the national PPP guidelines and provide for specific jurisdictional codes of conduct, policies, guidelines, or legislative requirements.

Generally, all participants in the PPP process are responsible for implementing the governance requirements during the project, with senior officials responsible for ensuring that appropriate processes and practices are implemented.

Independent reviews and investigations of project implementation at different stages in the project cycle serve to assess whether governance and probity best practices
have been adopted, with recommendations on how to improve future practices. The results of investigations and reviews are often public documents.

**Role of Procuring Agency**

The procuring agency that is normally responsible for service delivery under the PPP is usually responsible for the project development, procurement, and contract monitoring of the PPP. If services from several agencies are being delivered under the PPP, then a lead agency is appointed, and the other agencies provide support to the lead agency.

**Minister Responsible**

The minister responsible for the procuring agency is responsible for project delivery, assisted by the ministers responsible for the supporting agencies. The jurisdiction’s treasurer or infrastructure minister is responsible for PPP policy matters.

**Legislation Governing Land Acquisition or Resettlement**

Land acquisition legislation is provided at the national and jurisdictional level.

**Process of Land Acquisition and/or Resettlement**

The national process for compulsory land acquisition is as follows:

- Provide affected persons with a pre-acquisition declaration.
- Gazette acquisition.
- Affected persons may have opportunity to request the government to reconsider.
- The government has 28 days from completion of the acquisitions process to provide an acquisition declaration and to gazette that the acquisition has been completed.
- The declaration provides the affected persons notification of the right to claim compensation.
- The compensation claim process commences, with compensation generally based on an assessment of the market value, special value of the land to the owner, portion of land acquired, disturbance costs, and legal and professional fees incurred.
- The compensation claim is assessed, and if approved, then paid in full to the affected persons.

**Application of International Standards to Public–Private Partnership Policy**

There are no specific international standards that apply to the national or jurisdictional PPP policies; however, standards that apply to general government business or processes, such as accounting standards or health standards, also apply to PPP projects.

**Enabling Environment—Accounting**

**Public Accounting Legislation Governing Balance Sheet Treatment**

There are no accounting policies that specifically apply to PPP; therefore, existing legislation and standards are commonly adopted, as follows:
• Financial Management Act in jurisdictions
• Australian Accounting Standards Board Framework for the preparation of financial reports (not PPP-specific)
• Additional PPP accounting guidance has been provided jointly by the heads of Treasury from each jurisdiction.

**Overview of Requirements for Project to Be Considered as Off-Balance Sheet**

If the private party bears the majority of the risks and rewards under the contract, then the private party recognizes the asset—this is generally the case only for economic infrastructure where there is direct user charging (e.g., tolls). The government’s formal accounts do not recognize the infrastructure asset, and corresponding liability and disclosure are made by way of notes to the accounts. Balance sheet treatment can also be determined if the private party is considered to control the property.

Social infrastructure projects are usually on the government’s balance sheet.

**Government Entity Responsible for Determining Balance Sheet Treatment**

The procuring agency is responsible for this, usually with assistance and approval from the Department of Treasury and Finance. Specialist advisers may prepare advice for the procuring agency and Treasury to consider the approach.

**Treatment of Depreciation of Assets**

Existing lease provisions determine the depreciation rates for specific assets.

**Key Financial and Tax Incentives Offered**

Apart from subsidies offered as part of the project agreement, no other financial or tax incentives are generally offered. However, governments are considering financial incentives that they may provide to assist in securing finance for PPPs in the current market, such as financial guarantees or the provision of debt directly to the project.

**Key Fiscal Management Tools Employed**

Forward estimates (usually 4–5 years) for capital investment are provided by each agency and incorporated in the budget planning process for each jurisdiction.

The capital investment plan may include a cost estimate or range that assists in the budget process and is refined as the project develops.

**Accounting Approach to Future Public–Private Partnership Obligations**

For on-balance sheet transactions, payments are recorded as liabilities.

**Treatment of Public–Private Partnership Projects in the Fiscal Planning and Budget Process**

All projects that are listed in the capital investment plans compete for funding during the budget process. The business case and procurement strategy prepared for a project outlines the project priority, outcomes and benefits, and budgetary impacts
that are considered in allocating funding to projects. If a PPP delivery method is chosen for a project, then the project estimate reflects the subsidy required and the government costs to deliver the project distributed across the procurement time line.

**Enabling Environment—Leaders and Champions**

**Role of Leadership and Championing Change in Public–Private Partnership Policy and Guidelines**

Generally, ministers and senior officials, particularly from the treasury, finance, and infrastructure departments, are key leaders of change and implementation of PPPs. Industry groups are also key in championing the discussion and appropriate use of PPPs and recommending actions to the government to improve PPP implementation.

**Government Entity Responsible for Fostering Leadership in Public–Private Partnership**

Most PPP units are responsible for demonstrating and developing leadership in PPP delivery. Many provide or promote training for procuring agency managers in PPP delivery.

**Involvement of Other Government Entities, Institutions, or International Agencies in Fostering Public–Private Partnership Leadership**

Various tertiary and training institutions provide courses and training to foster PPP leadership as professional development programs. Business advisory groups are also encouraging leadership in PPPs to act responsively in the current economic climate.

**Priority Issues Facing Governments in Leading and Championing Public–Private Partnership Development and Implementation**

The changing economic climate and the skills to respond are critical issues, along with diverging issues within the government on the general role of the private sector in service delivery.

**Strategies Implemented to Address These Issues**

- Improved consultation and assessment of the benefits and challenges in implementing PPPs.
- Specialist advice on potential actions that the government could employ to provide confidence to the market given the current economic climate.

**Enabling Environment—Regulation**

**Key Regulatory Authorities**

There is no specific regulatory authority for PPP transactions. Sector-specific regulation applies for the delivery of services (e.g., roads and security services) and may grant permits or licenses to the private party. The procuring agency regulates the products and pricing of the private party under the project agreement.

**Location of Regulatory Unit within the Government**

This is not applicable.
Roles and Responsibilities for Economic Infrastructure
Public–Private Partnerships
The procuring agency is responsible for product and pricing regulation. Sector regulation addresses permits, licenses, and industry codes of practice relevant to deliver the services. An industry ombudsman may be established to deal with consumer complaints or concerns.

Roles and Responsibilities for Social Infrastructure
Public–Private Partnerships
Sector regulation addresses permits, licenses, and industry codes of practice relevant to deliver the services.

Role of the Regulator in Contract Performance Monitoring
The procuring agency is normally responsible for assessing the contract performance. Independent certifiers may be employed to assess performance and collect market feedback or records from sector regulators (e.g., disputes registered against the contractor or recorded health and safety breaches) and can assist the procuring agency in monitoring contract performance.

Level and Type of Interaction between the Regulator and the Private Contractor
Sector regulators interact with the private party in the same way that they react with other service providers. The procuring agency’s relationship with the private party is governed by implementing the project agreement.

Advisers
Policy for Adviser Procurement Process and Engagement
Government procurement policies in each jurisdiction usually include the process for engaging advisers. Some jurisdictions provide panel arrangements where advisers have been prequalified to provide specific services that may be used for PPP projects.

Government Entity Responsible for Implementing Policies
Government procurement policies are usually developed by the Department of Treasury and Finance, and each department may then prepare policies that are consistent with these policies for their specific procurement purposes.

Requirement for Local Office and/or Employees
This is not usually specified in the policies relating to engaging advisers; however, the evaluation criteria for advisers may require staff members to be available as required for the project, which could provide an advantage for advisers with local staff members and/or offices.

Main Types of Engagement Contracts
A consultancy agreement may include a price cap for the completion of the terms of reference and include a process to address out-of-scope activities. Where an adviser is contracted under a panel arrangement, a purchase order is prepared.
**Key Stages in the Procurement Process**

The government’s public procurement process is typically adopted by jurisdictions.

- The government issues a request for tender.
- Advisers respond to evaluation criteria and requirements under the tender (this may include a group of advisers, depending on the scope of the terms of reference).
- Presentations and interviews may be included in the evaluation process.
- The government evaluates the proposals based on the criteria outlined in the request for tender.
- With a successful adviser appointed, unsuccessful advisers may request a meeting to discuss the proposal and the tender decision.

If a panel arrangement is chosen, the procuring agency may sign an agreement with the department responsible for the panel and then issue the request for tender to selected panel members.

**Key Evaluation Criteria to Determine Engagement**

The evaluation criteria may include:

- demonstrated understanding of the nature and complexity of the project;
- development of an acceptable delivery methodology;
- proven experience, strength, and availability of the engagement team;
- ability and approach to working with stakeholders;
- appreciation of the government’s project objectives and time frames;
- no evident conflicts of interest; and
- proposal fee.

**Engagement Conduct Policy, Including Policy for Managing Conflicts of Interest**

The national PPP guidelines provide guidance on managing conflicts of interest with advisers.

**Key Stages in the Conflict Management Process**

The following stages apply to conflicts relating to the adviser company and staff members:

- Disclose business relationships, financial interests, and personal affiliations.
- Assess if a conflict of interest exists, may be actual, potential, or perceived. This may include assessment of whether there is a conflict of duty, the potential to compromise confidential project information, or to compromise the outcomes of the project.
- Undertake a risk assessment to determine if the conflict risk is manageable.
- Determine required actions and plan to manage or mitigate the risk, which may include suspending the adviser from the project.
Stakeholders

Stakeholder Participation Policy and/or Guidelines

General government procurement guidelines in each jurisdiction may address stakeholder participation requirements. The national PPP guidelines incorporate stakeholder participation in the communication plan. Stakeholders are considered internal to the government and external to the community and industry.

Government Entity Responsible for Conducting Stakeholder Interaction Process

The procuring authority is responsible for conducting the participation process.

Procedures for Stakeholder Participation

The general process adopted in preparing the communication plan for government procurement include

- identifying the key stakeholders of the project;
- analyzing their relationship to the project, the impact of their feedback, any consultation already conducted, and any synergies or benefits with the project outcomes;
- developing required actions with responsibilities and time frames;
- defining the objectives of the stakeholder participation strategy, key issues to be addressed, key messages to be provided, resources required, and spokespeople;
- determining the success measurements of the strategy; and
- possibly requiring an assessment of the public interest that may be incorporated into the requirements of the stakeholder participation strategy.

Key Role of Government in Facilitating Stakeholder Participation

The procuring agency is responsible for developing and conducting the participation strategy. The agency may receive assistance from specialist advisers, service providers, or other governments or agencies to implement the strategy.

Key Approach of Private Sector Contractor in Facilitating Stakeholder Participation

The private party may seek to gain community support and buy-in for the project and may develop its own participation strategy to implement once the contract is awarded. Generally, bidders are asked to prepare a marketing and communications strategy as part of the tender process when the project requires them to deliver products and services directly to consumers.

Key Issues that Stakeholder Participation Seeks to Identify and Address

The key issues that stakeholder participation seeks to address are

- achieve a balance between community interests and concerns with the desire to deliver the project scope,
- create a common view among government agencies on how to proceed with the project,
- overcome community and local government opposition for the project being developed in their area, and
• Lack of support for the project leading to low demand for the services (e.g., toll roads) affecting the project’s viability and also resulting in criticism of the government for proceeding with the project.

Risk Assessment

Risk Analysis Policy and/or Guidelines

The national PPP guidelines make reference to risk allocation in preparing cost estimates, options analysis, and contractual issues. Specific guidance on risk analysis is provided in the public sector comparator guidance. Most jurisdictions have developed policies and guidance regarding the risk analysis process for PPPs.

Roles and Responsibilities in Conducting Risk Analysis

The procuring agency is responsible for conducting the risk analysis and may receive assistance from specialized advisers to implement parts of the analysis process.

Key Steps in the Risk Analysis Process

The process for risk analysis typically includes the following steps:

• risk identification,
• risk assessment,
• risk allocation,
• risk mitigation, and
• monitoring and review.

Independent Standards Governing Risk Analysis Process

Australian standards relating to risk management procedures may also be applied to guide the risk analysis process for a PPP.

Treatment of Systematic Risks

Systematic risk is not considered a project risk and therefore is not considered in the risk analysis process outlined above. Systematic risk is generally considered in determining the appropriate discount rate for the project cost estimate (public sector comparator [PSC] discount rate or PPP discount rate).

Approach to Risk Assessment

Risk assessment usually considers

• the probability that the risk will occur, and
• the consequences of the risk materializing.

An assessment matrix, such as a $5 \times 5$ matrix, is normally prepared that combines a scale of probability (e.g., very low and low) and a scale of consequences (e.g., high and catastrophic) to determine an overall risk assessment.

Level and Type of Risk Register Employed

A risk register normally includes the following sections:

• risk category,
• risk name and description,
• assessment of probability of occurrence,
• assessment of the consequences,
• overall risk assessment,
• potential mitigation options (may include cost of mitigation), and
• risk allocation between the government and the contractor.

**Approach to Risk Quantification**

Probabilities or cost estimates may be provided for each scale level to assist in quantifying risks. These values are then incorporated into a Monte Carlo simulation to prepare a risk value, known as the “risk adjustment,” which is included in the project cost estimate (for a PSC). The risk adjustment is usually provided at different confidence intervals (e.g., P10, P50, and P90), and the range of these intervals indicates potential variability in the project cost estimate.

**Risk Allocation**

**Risk Allocation Policy and/or Guidelines**

In the national PPP guidelines, references are made to risk allocation in preparing cost estimates, options analysis, and contractual issues. The commercial principles for social infrastructure and the draft commercial principles for economic infrastructure provide the government’s preferred risk allocation positions. Most jurisdictions have developed policies and guidance regarding the preferred approach to risk allocation for PPPs.

**Approach to Site Risk Allocation**

Generally, site risk lies with the private party as it assumes responsibility for the design, construction, and commissioning of assets. However, the government may share part of that risk if the site is an existing government site or if the government retains ownership of the site during the contract or at the end of the contract. If the environmental approval process is complex and requires an environmental impact statement and national approval, then the government may assume risks for completing these processes as well as risks regarding native title issues on the site.

**Approach to Design, Construction, and Commissioning Risk Allocation**

These risks are implicitly allocated to the private party by the structure of a PPP. It is the government’s preferred position that they remain with the private party. The government should not take back or in any way share design, construction, and commissioning risk with the private party, unless it is a risk associated with a government-initiated design or construction change or some other government interference (whether an act or omission) in the design and construction process. In these circumstances, it may be appropriate, using optimal risk allocation principles, for the government to bear the cost of such changes.

**Approach to Operation and Maintenance Risk Allocation**

Operating risk is one of the key risks allocated to the private party by the structure of a PPP where the delivery of the contracted services down to specification lies with the private party. The government transfers the operating risk to itself if it were to own and operate the facility. However, operational failure is a risk to government as it may be left without the services for which it has contracted.
The government should seek to retain as little of operational control and responsibility for the delivery of the contracted services as possible, to ensure that the operational risk remains with the private party and is not inadvertently taken back by the government. Complete removal of direct government involvement in operational matters may not always be possible. The government may be bound, as a matter of policy, with statutory obligation or practical necessity, to ensure that certain operational criteria are met. It may also have obligations to inspect and enforce conditions of operation.

Approach to Network or Services Interface Risk Allocation

If the government controls and manages the network from which the network risk may materialize, the government bears this element of the risk. Conversely, the private party bears that risk of the delivery of the contracted services that adversely affected other parts of the network or associated services provided by the government. Consideration of the government’s responsibility to manage public networks in the interests of all citizens is also required. This requires the allocation of risks to balance the need for the private party to deliver the services and the government’s responsibility to manage public services or networks.

Approach to Change in Law or Government Policy Risk Allocation

Generally, change in law risk inherently falls to the private party, unless the government agrees to take back some part of the risk. Allocation policy may consider it if there is a more cost-effective way for the government to take back all or some part (and if so, which part) of the change in law risk. Allocation depends on the methods available for mitigating the consequences of the risk, the source of the risk, whether it is a general change in law or one that specifically affects the project or the service sector, and whether the consequences are significant.

Approach to Residual Asset Ownership Risk Allocation

The costs of maintenance and any refurbishment needed during the life of the contract are borne by the private party. If the asset is to be transferred back to the government at the contract’s end or termination, then the government may accept technical obsolescence risk and the risk of the value of the residual asset (if a capital charge is paid).

Approach to Market or Demand Risk Allocation

The policy position is to consider the opportunity for allocating market risk to the private party in a way that improves the VFM, even if the government itself is the service consumer and is delivering core services from privately provided and serviced accommodation. The payment structure of a PPP should be used to maximize the allocation of demand risk to the private party where this can improve the VFM. For most social infrastructure projects and some economic infrastructure projects, there is little demand risk transferred to the private party as there is no improvement in value by transferring the risk to the private party.

Approach to Sponsor and Financial Risk Allocation

Under Australian PPPs, the SPV is the main contractor and an entity created to act as the legal manifestation of a project consortium. The SPV has no historical financial or
operating record that the government can assess. The government, therefore, relies on the historical performance of the consortium members to fulfill the project obligations. The government assumes the risk of the financial viability and performance capacity of the SPV by entering into the PPP contract.

**Level and Type of Guidance for Government to Mitigate and Manage Risks during Contract**

Jurisdictional guidelines on risk allocation may also include guidance on mitigation and management strategies for specific risks. Contract management guidance, developed at the national and jurisdictional level, may also provide guidance on management and mitigation or risks occurring during the construction and service delivery stages.

**Cost Estimation**

**Public Cost Estimate and/or Public Sector Comparator Policy or Guidance**

The national PPP guidelines provide PSC guidance material. The PPP policy in each jurisdiction recommends the development of a PSC as part of the project development process.

**General Purpose and Use of the Cost Estimate**

The PSC is an estimate of the hypothetical whole-of-life cost of a public sector project if delivered by the government and is a model of costs and potential revenues. The PSC is utilized in determining the VFM of private sector proposals as a reference. The PSC is presented in net present terms at the intended date of financial closure.

**Government Entity Responsible for Determining Appropriateness and Developing the Cost Estimate**

The national PPP guidelines recommend that a PSC be adopted when considering the VFM assessment in delivering a project under a PPP arrangement. The PPP unit in each jurisdiction is responsible for ensuring the appropriate implementation of the PPP guidelines.

**Resources Required to Develop the Cost Estimate**

The key resources are

- a reference project that clearly defines the technical scope of the project and can be costed,
- the outcomes of the risk analysis and allocation process that have been quantified,
- the outcomes of a competitive neutrality assessment to determine if an adjustment is required for the PSC to account for any advantages that accrue to a government business, which are not equally available to a bidder, and
- a cash flow financial model that may require specialist advisers to be engaged to develop and operate.
**Key Assumptions**

The PSC is a cash flow model and excludes noncash items. Some key assumptions required to prepare a PSC are

- the raw, nominal cost of the most efficient, whole-of-life delivery of the reference project;
- risk adjustment divided in transferable and retained risk;
- competitive neutrality adjustment;
- economic assumptions (e.g., general inflation, construction price, and wage price); and
- a discount rate to provide the cash flow in net present terms.

**Discount Rate Policy and/or Guidance**

The national PPP guidelines provide a discount rate methodology for determining the discount rate for a PSC and a PPP model. Several jurisdictions also have supplementary guidance on discount rate approaches.

**Government Entity Responsible for Determining the Discount Rate**

The procuring agency is responsible for implementing the PPP guidelines, and the PPP unit may provide specific advice on determining the discount rate. The Treasury may also provide advice on the appropriate discount rate for the PSC.

**Factors Considered in Discount Rate Determination**

The key determinants in the discount rate are

- the nominal risk-free rate, which is the return on capital that investors demand on riskless investments (i.e., those that yield a constant return regardless of what is happening in the economy), and the accepted estimate for this is the long-term public sector bond rate; and
- the risk premium that reflects the amount required to compensate an investor for assuming particular systematic risk attached to a project.

**Discount Rate Approach for Economic Infrastructure**

The cash flows in the PSC of an economic infrastructure project are subject to a degree of systematic risk. In most jurisdictions, the discount rate for the PSC reflects the project rate calculated under the capital asset pricing model and is based on the risk-free rate and a risk premium reflecting the level of systematic risk in the project cash flows.

**Discount Rate Approach for Social Infrastructure**

The cash flows in the PSC of a social infrastructure project do not usually include a degree of systematic risk. The discount rate for the PSC is, therefore, the nominal risk-free rate. The cash flows for the PPP bids usually include a degree of systematic risk and, therefore, are discounted at the nominal risk-free rate plus a risk premium reflecting the degree of transferred systematic risk.
Value for Money

Description of Value Assessment

The value assessment is known as VFM and is described as a balanced benefit measure covering quality levels, performance standards, risk exposure, other policy or special interest measures, as well as price. The assessment process encompasses all aspects of the project—both qualitative and quantitative—and is conducted to establish whether the service delivery is structured to meet the service output while continuing to ensure sensible management of financial resources.

Applicable Policy and/or Guidance for the Value Assessment

The national PPP guidelines consider the VFM assessment in the PSC guidance and delivery options analysis guidance. Most jurisdictions also include supporting material on the VFM assessment process in their PPP policies and guidelines.

Purpose and Use of Assessment Outcomes

The VFM assessment is initially conducted to determine the preferred delivery option of a project. The VFM assessment is revisited during the tender stage as part of the bid evaluation and selection process.

Approach to Conducting the Assessment

In determining the preferred delivery option, the VFM is one criteria for assessing the appropriateness of options for a specific project. Several drivers are indentified in evaluating the VFM offered by each option, including

- the complexity of the project risk profile and the appropriateness of transferring risks to the private sector,
- innovation,
- integration of different services,
- measurable outputs,
- asset utilization,
- whole-of-life costing, and
- competitive process.

During the tender and selection phase, the VFM is assessed by comparing the cost of bids to the PSC and also considering qualitative benefits of the bids, such as design functionality, pricing certainty, or reduced risk exposure.

Additional Resources Employed

The quantitative assessment utilizes the PSC and the bid prices based on a “like-for-like” project scope and risk allocation. Qualitative measures are also utilized, and these are commonly identified during the evaluation of the appropriateness of the preferred delivery option and are reassessed for each bid during the tender evaluation process. The assessment requires the bids to be standardized for comparison. The bids are also compared to the PSC as part of the assessment, and the PSC and/or the bids may be adjusted so that a like-for-like comparison is conducted.
Importance of Lowest Cost in Assessment

The quantitative assessment focuses the assessment on a single figure estimate to compare the cost among the bids and to the cost of the government’s reference project. The qualitative assessment is balanced to consider other important factors so that the assessment is not purely focused on the lowest cost bid.

Market Factors that Assist in Achieving Value

The key market factors include:

- an active, competitive market where tension between bidders is maintained during the tender process; and
- innovative design, construction, and operating technologies that can be applied to government infrastructure service delivery projects.

Investment Decision

Project Development Policy and/or Guidelines

Each jurisdiction has established policies and guidance relating to the investment process, with most policies distinguishing between the decision to invest in a project and the preferred delivery option. The national PPP guidelines address the process for determining the delivery option for the project once the decision to invest has been confirmed.

Key Roles and Responsibilities in Project Development and the Investment Decision

The procuring agency is generally responsible for the project’s development. Typically, the procuring agency follows the departmental project development framework, which is consistent with the approach recommended at the government level.

The portfolio minister supports the project’s development during the departmental capital strategy planning and budget process. In some cases, other ministers that represent supporting agencies, as well as the treasurer, may also support the project’s development.

Specialist advisers may be engaged by the procuring agency to assist in investigations to develop the project and to prepare the documentation required—for the project to be considered for funding in the budget process.

Key Stages in Project Development and the Investment Decision

The stages vary among jurisdictions; however, the key stages could be described as

- the strategic assessment to identify the service need and potential solutions;
- preliminary assessment and options analysis to analyze the need and assess the solutions and potential benefits in further detail; and
- the business case to evaluate and determine the desired solution; explain how the solution delivers the VFM; outline resourcing requirements; describe the impacts on stakeholders; and analyze the cost, benefits, risks, and other important qualitative information required to evaluate the investment.
Additional Resources in Project Development and the Investment Decision

Various resources may be utilized, including

- geotechnical site investigations,
- engineering investigations,
- environmental planning reports and assessments,
- economic development reports and forecasts,
- public interest assessments,
- market interest or testing,
- industry surveys,
- demand forecasts,
- willingness to pay surveys,
- financial models,
- VFM assessments, and
- benefit management plans.

Key Considerations in the Investment Decision

The investment decision generally considers the qualitative and quantitative outcomes from

- an economic analysis that considers the costs and benefits of the project,
- financial analysis that provide various cost estimates for different solutions and economic assumptions,
- environmental analysis that considers the environmental impacts and effects of delivering the project;
- social analysis that considers the issues and opportunities for the community, and
- affordability analysis that considers budgetary impact of the project and its fit with other competing priorities.

Tools Adopted to Support Investment Decision

The most common tools adopted are

- the PSC to assist the quantitative financial analysis and affordability analysis; and
- the cost-benefit analysis for the quantitative economic, social, and environmental analysis.

Delivery Options Analysis Process

The national PPP guidelines outline the following process:

- data gathering to determine the risk, objectives, and project characteristics;
- short list delivery options to determine the suitability of different delivery structures (e.g., PPPs and alliance);
- validation to assess any precedent and market view of the appropriateness of these structures;
- a delivery options analysis, where evaluation criteria are applied to the models to assess how effectively the models meet project requirements and reduce risk; and
a preferred delivery model that concludes with the preferred structure and model being identified based on the options analysis outcomes, a consideration of the approach to risk allocation, and the potential market appetite for the model.

**Tools Adopted to Support Delivery Options Assessment**

Tools adopted in the assessment may include

- a short list of delivery options based on scale, scope, risk, and whole-of-life service opportunities;
- project risk analysis;
- market analysis and research, as well as benchmarks of similar projects;
- assessment of project characteristics; and
- an options evaluation matrix.

**Major Issues Encountered in the Investment Decision Process**

The major issues that delay the investment decision process may include

- existing expectations within the public sector as to the final cost and delivery model for a project,
- insufficient development of the project scope to enable a thorough risk analysis to be conducted,
- lack of certainty in cost assumptions due to the early stage of project development,
- difficult in measuring or defining project benefits; and
- the capability of the procuring agency and other government agencies to develop the project within the planned time frames.

**Global Comparative Framework—Part 2: Tender**

**Introduction**

**Key Governance Roles**

The key governance roles include

- the Project Steering Committee, responsible for key decisions in the project’s development and providing direction on strategic issues, is chaired by the secretary (i.e., head) of the procuring agency who is ultimately responsible for the project outcome;
- the project director who is responsible for the overall project delivery; and
- a dedicated project team that is responsible for developing the project under guidance from the Project Steering Committee and the project director.

**Entity Administering the Procurement Process**

The procuring agency determines the resource requirements based on its experience with public procurement project delivery and the jurisdictional PPP guidelines. The PPP unit may assist in identifying specific resource needs as well.
Role of Public–Private Partnership Unit
Most PPP units assist in the assessment of PPP proposals, ensure the appropriate application of PPP guidelines, and provide advice to procuring agencies on PPP arrangements and technical issues.

Arrangements for Establishing the Team or Unit to Manage the Procurement
The procuring agency determines the resource requirements based on its experience with public procurement project delivery and the jurisdictional PPP guidelines. The PPP unit may assist in identifying specific resource needs as well.

Relationship between the Team Managing the Procurement and the Public–Private Partnership Unit
The PPP unit is normally represented at the Project Steering Committee, and may also be a member of the project team as a technical resource.

Process for the Department of Finance and Deregulation to Agree to Participate in the Tender Process
During the project development process, a project may be identified as a potential PPP. The PPP unit is generally involved in the development of the feasibility study (i.e., business case), then at the procurement stage of the project if it proceeds as a PPP.

Minister Responsible for the Tender Process
The portfolio minister of the procuring agency is generally responsible for the tender process. Ministers representing supporting agencies and the treasurer may also be responsible if the project delivers services that covers several portfolios.

External Resources Utilized during the Tender Process
External resources may include

- a legal adviser,
- technical adviser,
- financial adviser,
- project management,
- insurance broker, and
- probity adviser.

Use of Benchmarking at the Tender Stage
The PSC is an estimate of the hypothetical whole-of-life cost of a public sector project if delivered by the government and is used as a benchmark to assess the quantitative value offered by bids. The PSC and/or the bids may be adjusted so that a like-for-like comparison can be conducted.

Approach to Assessing the Value of Public–Private Partnership Procurement during the Tender Stage
A quantitative assessment is conducted against the PSC. A qualitative assessment is also conducted and may consider the value offered by bidders relating to improved
service delivery, operational requirements, project management approach, design considerations, infrastructure and services solution, cost certainty, and approach to managing unquantifiable risks.

Major Issues Encountered during Implementation of the Tender Process

Major issues experienced during the tender process may include:

- delays in the government approval process,
- ambiguous requirements or evaluation criteria in the tender documents,
- lack of coordination of the tender process activities,
- a project plan based on unrealistic time frames, and
- bidders submitting inadequate or incomplete bids.

Process Cycle

Stages in the Tender Process

The key stages include:

- an expression of interest to prequalify bidders that are invited to tender for the project;
- request for proposal where prequalified bidders prepare detailed technical and financial solutions based on the tender documents issued by the government, which may include a best and final offer stage that provides bidders with the opportunity to revise their initial bids after discussions with the government to clarify aspects of the tender;
- contract award and financial closure where the final contract is signed and the financial arrangements are executed;
- contract management where the procuring agency monitors the service performance of the contractor; and
- post-implementation review where the benefits of the project and the tender process are reviewed.

Average Time for the Tender Process (from the Issue of Tender Documents to Contract Award and/or Financial Closure)

The average time for the tender process generally ranges from 1.0 to 1.5 years depending on the scale and complexity of the project.

Degree of Financing Security Sought in Bids

Generally, the PPP guidelines and template documents require bids to provide a high degree of detail and certainty regarding the proposed finance structure so that the financing for the preferred bid can be quickly executed once selected. A general preference of procuring agencies is for bids to be fully underwritten at the detailed tender stage.

Degree of Technical Specification Sought in Bids

Generally, the PPP guidelines and template documents require bids to provide a high degree of detail in the technical solution offered during the detailed tender stage so that the bid of the preferred bidder can be quickly executed once the contract is awarded.
**Degree of Direct Negotiation during the Tender Stage**

Direct negotiation is generally conducted with the preferred bidder only; however, the detailed tender process often includes a structured negotiation process or a best and final offer stage that provides bidders with the opportunity to revise their bids and submit their best bid based on clarification discussions they have held with the procuring agency since the initial bids were submitted. The structured negotiation or best and final offer stage then allows the procuring agency to assess the VFM offered by the best bids to determine the preferred bid.

**Private Sector Bid Costs and Approach to Expenses**

Due to the high degree of technical and financial certainty sought, the bid costs for bidders are significant.

Reimbursement for unsuccessful bidders is offered in limited circumstances for some costs incurred during the tender stage in recognition of the high cost of preparing a detailed bid. The procuring agency is also encouraged to implement an efficient procurement process to limit the procurement costs on bidders and the government.

**Key Advantages of the Tender Process**

The key advantages of the tender process include:

- The process of contract award, financial closure, and implementation of the contract progresses quite quickly once the preferred bidder is selected.
- The government is provided with a high degree of certainty that the contract can deliver the VFM and meet the service requirements.

**Key Disadvantages of the Tender Process**

The key disadvantages of the tender process include:

- It is a highly complex process that requires significant resources and time to complete.
- It results in high bid costs for the bidders to meet the detailed tender requirements and also high costs for the government in conducting the tender process.

**Preparation**

**Commencement of Planning and Preparation for the Tender Process**

The planning and preparation for the tender process typically begins during the feasibility study (i.e., business case) stage. A procurement strategy may be completed at the same time as the business case and can be considered as part of the decision to invest in the project. The procurement strategy may include discussion on the activities, resources, and process for the tender process. Preparation of tender documentation, and assessment of the likely market interest and specific participants may also commence during the business case development stage.
Key Planning Tools Adopted to Plan for the Tender Process

The key tools that may be adopted include:

- a procurement strategy that guides the overall activities during the tender stage,
- project plan that outlines the time lines and key tasks for the project,
- probity plan that outlines how the tender process will be conducted fairly and in a transparent manner,
- evaluation methodology plan for prequalification and detailed tender, and
- contract management plan to consider the resources and requirements once the contract is implemented.

Key Resources Utilized in Planning for the Tender Process

The key resources utilized in the planning process include

- administrative support from the procuring agency;
- bid documents and public interest, land, regulatory and policy considerations from the project team;
- draft contractual documents from the legal adviser;
- technical specifications and engineering assessments from the technical adviser;
- bid strategy and market analysis from the legal, commercial, or financial adviser;
- supporting advice from the PPP unit; and
- documentation regarding the approach to probity and managing conflicts of interest from the probity adviser.

Prequalification Document Contents

The prequalification documents may be structured as

- project background, scope, and timetable;
- high-level commercial principles and risk allocation;
- evaluation criteria; and
- general terms and conditions.

Detailed Tender Documents and Contents

The detailed tender documents may be structured as follows:

- General information
- Commercial framework (e.g., terms and payment mechanism)
- Evaluation criteria and proposal schedules
- Output specification
  – Design brief
  – Functional brief
  – Architectural principles and specifications
  – Technical specification
  – Equipment list
• Draft contractual documents
  – Project agreement
  – Service specifications
  – Schedules (i.e., payment mechanism)
  – Annexure
• Other information

Approach to Developing the Output Specification

The output specification in the detailed tender document clearly sets out the outputs that the procuring agency is seeking. The requirements are expressed in output terms and not in prescriptive input terms to encourage viable alternative solutions, potential risk allocation, and innovative service delivery solution to be developed by the bidders. The output specification may also define the outputs for construction and services for the project, and outlines the procuring agency’s minimum design, functional, technical and furniture, fittings, and equipment requirements for the project.

A number of specialist advisers, including technical, engineering, and planning, may be engaged to develop the output specification.

Additional Tools and/or Procedures Important in the Tender Process

Additional tools may include the following:

• An interactive tender process which provides an opportunity for an appropriate amount of direct interaction between the project team and short-listed bidders prior to bid submission, is an opportunity for the project team to explain and clarify its expectations and for short-listed bidders to seek relevant feedback for their bid development. It is a two-way communication process that takes the form of presentations, meetings, and/or workshops involving individual bidders and the government project team. The national PPP guidelines recommend an interactive tender process for PPP procurement.

• A data room (either physically or online) that provides short-listed bidders all relevant information from the procuring agency may also be established to aid in the preparation of their bid. This may include any analysis of legislative and regulatory impacts, feasibility studies, land-use considerations, geological information, and demand estimates, which are provided with appropriate disclaimers.

Selection

Prequalification

Average Time of Prequalification (from Release of Documents to Short List Announcement)

The average time for the prequalification process depends on the scale and complexity of the project; however, it is usually completed within 1–4 months of releasing the prequalification tender document.
Bid Criteria and Response Requirements
The prequalification evaluation criteria may include

- understanding of project objectives and the government’s requirements, including demonstrated understanding of the key project issues and challenges, and identification of proposed solutions and key issues;
- experience and capability in managing project interfaces, including a proposed approach to managing interfaces between existing services and/or stages of delivery;
- experience and capability in PPPs, including experience of key consortium members in delivering a previous PPP project, a review of the success of previous project, and company references; and
- commercial and financial structure, such as an outline of proposed consortium structure, contracting arrangements, financing arrangements, and financial positions of consortium members.

Approach to Prequalification Bid Evaluation
The prequalification evaluation methodology seeks to evaluate the bids based on

- project understanding, that is, the ability to define the project scope and degree of innovation in the approach to developing the project;
- experience showing that previous performance was within time frames and client requirements and that the projects were delivered under long-term relationships;
- commercial structure, including demonstrated previous successful relationships and a clear contractual structure; and
- financial structure, comprising financial ratios, agency ratings, and financing approach consistent with project cash flows.

Level and Type of Interaction with Bidders
A moderate level of interaction is conducted, which may include presentations by the government to bidders and by bidders to the evaluation team, as well as a clarifications process.

Process of Short List Approval and Release of Tender Documents
An evaluation panel assesses the evaluation outcomes and recommends a short list of bidders to the Project Steering Committee. The short list may be approved by the Cabinet before this is announced and detailed tender documents are released.

Governance Requirements for the Prequalification Process
The evaluation methodology typically includes the following activities to be conducted during the tender process:

- conflict of interest declaration and management,
- related party disclosure,
- signed confidentiality of documentation agreement, and
- intellectual property agreement
A probity auditor also monitors the evaluation process and the interactive bidder process for large tender processes to ensure that a fair and transparent tender process is being conducted.

**Detailed Tender**

**Average Time Taken from the Release of the Detailed Tender Documents to Contract Award**

The average time for the detailed tender process varies greatly depending on the scale and complexity of the project. Contract awards have been achieved in 6–10 months for some social infrastructure projects, and in 10–18 months for more complex social and economic infrastructure projects.

**Key Stages in Tender Evaluation and Selection**

The key stages in the detailed tender process are as follows:

- Documents are issued to the prequalified bidders.
- The interactive tender process is conducted.
- Bids are submitted.
- A bid clarification process is undertaken.
- A structured negotiation process is conducted with some or all bidders (optional).
- Best and final offer is requested from all or select bidders (optional).
- Bid evaluation is completed by technical work streams.
- The evaluation panel reviews evaluation outcomes and recommends a preferred bidder.
- The preferred bidder is announced.

**Bid Criteria and Response Requirements**

The detailed tender evaluation criteria may include the following:

- **Design.** The engineering solution and design plans;
- **Operational and/or services.** Management structure, approach to operations, operating and practices;
- **Project management.** A project management plan;
- **Commercial.** Intraconsortium risk allocation, ownership structure, contract variations, and third-party revenue opportunities;
- **Financial.** Financing structure and level of commitment;
- **Interface management.** Approach to stakeholder management and management of existing services; and
- **Risk-adjusted cost.** An audited financial model to estimate the required availability payment, tolls, or subsidy.

**Approach to Evaluating Technical Solutions and Service Delivery Aspects of Bids**

The detailed tender evaluation methodology may evaluate the technical solutions based on the following:

- how services are to be implemented and the impact of this approach on service delivery,
- management structure during the operating phase,
• functionality of design,
• how the solution meets the performance specifications, and
• flexibility to enable future changes in design or use.

**Approach to Evaluating Financial and Commercial Aspects of Bids**
The detailed tender evaluation methodology may evaluate the financial and commercial aspects of the bids based on

• the certainty of financing,
• level of equity contribution from consortium members,
• impact to the government of changes to payment mechanism and abatement regime,
• insolvency issues linked to project cash flows,
• debt profile and amortization, and
• taxation implications of bid and consortium structure.

**Role of Value Assessment in Tender Evaluation**
Demonstrating VFM is one of the most critical determinants in selecting the preferred bidder. The national PPP guidelines provide for the situation where a bid may provide little or no VFM on a quantitative basis, but may still be preferred if the qualitative assessment demonstrates additional value (which may be demonstrated in service delivery, operating requirements, treatment of unquantifiable risks, and design considerations).

**Level and Type of Interaction with Bidders**
An interactive tender process is recommended under the National PPP Guidelines. This involves presentations, meetings, or workshops with individual bidders and the government project team prior to bids being submitted.

**Process for Approval of Preferred Bidder**
The evaluation panel assesses the evaluation outcomes from the different work streams and recommends the preferred bid to the Project Steering Committee. Cabinet approval may be required to enter into negotiations with the preferred bidder, to undertake a best and final offer, or a structured negotiation phase where it is decided to further short-list to select a preferred bidder.

**Governance Requirements for the Detailed Tender and Selection Stage**
The governance requirements for the detailed tender stage are similar to those for prequalification; however, there is increased focus on conducting a fair, impartial, and competitive process as the bids are assessed and discussions with bidders occur, which heightens the focus on the probity practices of the procuring agency and all participants involved in the detailed tender process.

**Major Issues Encountered during the Tender and Selection Process**
The major issues experienced during the tender and selection process may include

• maintaining the confidentiality of the bid price and contents to ensure that competitive tension is retained until a preferred bidder is announced;
• assessing like-for-like bids as part of the quantitative VFM assessment as each bid is based on different solutions;
• the project team not having adequate resources or experience to effectively undertake the bid evaluation process effectively, leading to delays in the project timetable and bidders losing confidence in the tender process;
• bidders not providing adequate or complete bids and responses to clarification questions, requiring several rounds of clarification before the bid evaluation can be completed; and
• bidders initially taking a risk-averse approach in revising the draft terms and conditions of the project agreement, which results in a risk allocation that is not acceptable for government.

**Finalization**

*Requirements and Process to Achieve Contract Award and/or Execution*

The national PPP guidelines provide a summary of the key conditions precedent for financial closure as part of the commercial principles guidance. These include

• delivery of executed contract copies, finance documents, and evidence of authorizations from consortium members;
• any approvals that the jurisdiction is required to provide;
• any conditions precedent for bond from the contractor;
• organizing the negotiation team and implementing framework to conduct negotiations with the preferred bidder;
• a report to the government on the outcomes of negotiation process for approval or endorsement;
• contract execution;
• public announcement of contract award; and
• meetings with unsuccessful bidders.

**Level of Contract Negotiation Prior to Contract Award and/or Execution**

The negotiation team is formed and sets the terms for the negotiation process.

An appropriate level of negotiation is conducted to finalize the project agreement, with minimal remaining issues that require resolution between contract execution and financial closure.

**Planning and Preparation Activities for the Financial Closure Process**

The national PPP guidelines do not specify any specific planning or preparation arrangements; however, it is acknowledged that financiers may need to resolve a number of matters before financial closure can be conducted. It is also recommended that matters left outstanding at contract execution be kept to an absolute minimum to prevent an unacceptable delay between contract execution and financial closure.

For the procuring agency, practice runs of the financial closure protocols, which are attached to the project agreement, may be conducted to ensure that all parties are aware of their responsibilities to achieve a smooth process. The project team may also monitor specific movements in proxy reference rates during this period to provide an indication of any likely movements in the final subsidy for the project.
Summary of the Financial Closure Process

The financial closure process may include the following stages:

- agreeing on the reference rates on the day of financial closure;
- recalculating the availability payments, toll, or subsidy by inputting the agreed rates in the bidder’s financial model;
- updating the project agreement schedules with the final availability payment, toll, or subsidy;
- finalizing the accounting treatment and reporting requirements; and
- preparing the public disclosure requirements based on jurisdictional requirements.

Government Approach to Managing Prefinancial Closure Risks

The national PPP guidelines do not specify an approach to managing the government’s prefinancial closure risk, except to emphasize the importance of achieving financial closure in a time-efficient process. Jurisdictional guidelines indicate that an assessment of the need to implement a risk management strategy for prefinancial closure risks may be considered on a project-by-project basis.

Legal Framework

Presence of Any Public–Private Partnership-Specific Laws

There are no specific PPP law at the national or state jurisdictional level in Australia.

Other Applicable Laws

Each jurisdiction has public procurement policies and guidelines that apply to the PPP tendering processes. All other laws and regulations that apply to public procurement also apply to PPPs, such as laws and regulations that govern corporations, freedom of information, financial management, foreign investment, taxation, industry and employment, land use, environmental approvals, and native titles.

Approach to Gaining Required Authorizations to Deliver Infrastructure Public–Private Partnerships

Each jurisdiction is responsible for gaining approval to proceed with a PPP project. This approval is generally provided during the assessment of the feasibility study (i.e., the business case) that includes a decision on whether to invest in the project and the preferred procurement strategy for delivery.

Overview of Legal Process to Grant Public–Private Partnership Concession

Generally, the authority to enter into the project agreement is delegated to the minister representing the department or the procuring agency, and which grants the contractor the right to operate the asset and collect tariffs, subject to specific conditions and regulations. In some cases, project-specific legislation may be enacted at the jurisdictional level to facilitate the granting of a PPP concession.

Requirements to Grant Asset Transfer and/or Ownership

Generally, the jurisdiction retains ownership of the land for development or the asset; however, it may license or lease the asset to the contractor to develop, operate, and/or maintain.
Requirements to Deliver Service (e.g., Required Licenses and Permits)

Generally, the project agreement sets out the service delivery requirement standards and industry regulations that the contractor may be required to meet (e.g., interoperability agreements and systems). Licenses, permits, and registration (e.g., maintenance services, cleaning, and security) that are required for specific services are regulated at a sector level, and the contractor must obtain these licenses or permits to become an eligible service provider.

Security Arrangements for Private Sector Contractor

Financiers often have significant, complex security arrangements in place. They generally take financial security over the revenue streams of the project. The charge is generally fixed to the project agreement and the subcontracts so that it covers the rights to claim under guarantees provided by the subcontractors. Financiers may also require reserve accounts for debt service, insurance, and life-cycle maintenance to be established and may require sculpted repayments so that all debts are paid 18 months to 2 years before the end of the contract. If leasehold rights over the facility are provided, they may also take a mortgage over the lease.

Contracts

Key Contracts Legally Establishing the Project

The project agreement or the project deed is the key contract that establishes the PPP project. The project agreement is signed by the state jurisdiction (i.e., government) and the private party.

Key Roles and Responsibilities Governed by These Contracts

The project agreement may include:

- the private party’s obligations to design, build, finance, and operate or maintain the facility;
- monitoring or compliance rights for the government during development, construction, and operations;
- the agreed performance standards;
- an obligation by the government to obtain and transfer any land rights to the private party;
- undertakings by the government to carry out any necessary works on its part for the project;
- step-in rights entitling the government to intervene and run the project without terminating the project agreement if the performance standards are not met;
- termination and compensation provisions;
- provisions dealing with the transfer of assets and personnel at the end of the concession period or earlier termination;
- provisions for variations, increased costs, and refinancing; and
- a payment mechanism that reduces the service payments if the output specifications are not satisfied.
Party Preparing the Public–Private Partnership Contracts
The project agreement is prepared by the state jurisdiction with assistance from specialist advisers.

Jurisdiction of the Public–Private Partnership Contracts
The jurisdiction of the project agreement is determined by where the procuring agency is established, which is usually the state jurisdiction.

Key Technical Contracts
The private party typically enters into a design and construction contract with a builder (i.e., constructor) for the design and construction of the project and an operation and maintenance (O&M) contract with at least one facility manager for the operation phase of the project. The government also enters into direct agreements with these contractors. The project agreement contains also several side deeds that address the technical delivery of the project (e.g., site access and independent verifiers).

Key Roles and Responsibilities Governed by These Contracts
Under the design and construction contract, the private party seeks to pass to the construction contractor all design and construction obligations and risks, usually by way of a fixed-price design and construct contract. The private party subcontracts, by one or more O&M agreements, the provision of all ongoing services during the operating phase of the concession imposed on the private party under the project agreement. The private party may also enter into a contract with a facility management contractor to coordinate the provision of the operating services during the operation phase life of the concession. Under the direct contracts with the subcontractors, the government is provided with step-in rights if a default occurs under these contracts.

Provisions for Monitoring and/or Auditing Performance of the Contractor
The provisions for monitoring performance are contained in the project agreement, and may be replicated in the contracts between the private party and the subcontractors responsible for construction and O&M.

Key Financial Contracts
Usually, tripartite agreements are entered into among the financiers, government, and private party. These agreements ensure that financiers have the right to rectify defaults prior to termination. The private party also enter into a senior loan agreement, subordinated debt agreements and/or equity agreements, and security agreements to secure private finance for the project. Underwriting agreements are also usually executed.

Key Roles and Responsibilities Governed by These Contracts
The tripartite agreements are designed to regulate cure rights and step-in rights of the lenders and the government. The private finance agreements outline the conditions by which the project finance has been provided and the restrictions on the private party project operations (e.g., debt ratios, maintenance of reserve accounts,
The underwriting agreement establishes parties that agree to take up the remaining debt or equity interests in the project if insufficient subscriptions are received from external investors.

**Provisions for Payment of Subsidy or Service Payment**

Provisions for subsidy payment are contained in the project agreement. For availability payments, the payment process is clearly defined and includes the assessment process of penalties for nonperformance. For upfront payment, the process of verifying completed works and approval to operate the asset are usually defined before payment is provided.

**Level and Type of Guidance Provided on Commercial Principles**

The national PPP guidelines provide guidance on the commercial principles to be adopted for social infrastructure projects and draft commercial principles for economic infrastructure projects. Jurisdictional flexibility is maintained under these principles to allow for specific issues or circumstances (e.g., land approval processes) to be considered at the jurisdictional level.

**Financial Instruments**

**General Insurance Requirements of Contractor**

The commercial principles national PPP guidelines indicate that the private party must, at its own cost, effect and maintain such insurance throughout the contract.
term as a prudent owner or service provider would obtain and maintain for the facility, including insurance specified in the project agreement.

**Level and Type of Guarantees**

The commercial principle national PPP guidelines recommend that the government consider requiring protections from the private party, such as liquidated damages, performance bonds, and parent company guarantees, to compensate the government for costs and losses incurred as a result of late or insufficient completion of the facility or performance of the operating activities. The private party often requires performance guarantees from parent companies of the subcontractors as it passes through most liabilities from the project agreement to its subcontractors.

**Flexibility in Insurance and Guarantee Limits**

The commercial principles national PPP guidelines indicate that the level of insurance should reflect the degree of risk transfer and ability of the contractor to pay premiums. In some cases, the private party also takes out insurance, and requires that its subcontractors take out insurance that go above and beyond those required under the project agreement.

**Private Contractor Approach to Hedging**

Generally, the private party seeks to hedge inflation and interest rate risk exposure during construction, which provides greater certainty to the private financing structure of the bid. For economic infrastructure projects with direct user charges (e.g., toll roads), the private party may fully hedge all of the construction and part of the operations period and then reduce the percentage of debt hedged as the project revenues stabilize during the operation period. For projects with government availability payments, the government generally requires the private party to hedge interest rate risk exposure for the entire contract term.

**Main Hedging Instruments Employed**

There are a number of hedging instruments adopted by private parties; however, the most common are inflation-linked bonds and interest rate swaps that exchange floating interest rates to fixed interest rates.

**Government Approach to Hedging Contracts**

The key government financial risk is prior to financial closure, and no specific approach to hedging this risk is provided in the national PPP guidelines. Jurisdictional guidance indicates that the hedging of this risk may be considered on a case-by-case basis.

**Main Hedging Instruments Employed**

This is not applicable.

**Level and Type of Third-Party Indemnities**

The commercial principles national PPP guidelines recommend that the private party releases and indemnifies the government and its associates in respect to any action, claim, demand, cost, charge, liability, loss, damage, and expense incurred by the government (including any third-party claims or liabilities) that may arise out of
• design, construction, or O&M;
• information documents prepared by the government;
• acts or omissions by the private party or subcontractors;
• any site contamination that is not associated with a government core service;
• breach of contract by the private party or subcontractors; and
• negligence or unlawful misconduct.

In some cases where it represents VFM, the government may cap or otherwise limit the private party’s liability under the indemnity for all third-party claims other than death and personal injury claims.

In availability payment projects in some jurisdictions, government limits its ability to make a damages claim against, or seek indemnity from the private party for breach of the performance requirements and relies on the abatement regime as its exclusive remedy, except in limited circumstances.

Financing

General Range of Gearing for Economic Infrastructure
• 85%–95% debt

Key Sources of Debt
The key sources of debt are typically bank loans and bonds.

Major Debt Participants
The major debt participants include
• local banks and institutions,
• international banks such as the European Investment Bank, and
• capital markets.

Key Sources of Equity
The main sources of equity are commonly
• private equity,
• mezzanine finance, and
• public equity markets.

Major Equity Participants
The major equity participants include:
• sponsors, contractors, and operators;
• infrastructure funds; and
• financial institutions.

Approach to Refinancing in a Bid
The commercial principle national PPP guidelines recommend that the government be entitled to a 50% share of any refinancing gain where the projected equity return
at the time of the refinancing is above that reflected in the financial model at financial close. Refinancing may be assumed in the financial model provided at financial close, at the contractor’s risk.

**Capital Drawdown Profile**

The capital drawdown profile reflects the risks of the project. Equity may be contributed as a lump sum at the end of the construction period or via installments during the construction period depending on the construction profile of the project. Debt is gradually drawn down during the construction period and is generally provided on an interest-only basis. Debt may be refinanced as the project commences service delivery and may continue on an interest-only basis or commence repayments.

**Special Issues**

**Unsolicited Proposals**

*Prevalence and/or Role in the Procurement of Public Infrastructure*

Unsolicited proposals are generally not a common source of PPP projects in Australia. The national PPP guidelines recommend that such proposals need to demonstrate unique VFM benefits that allow the government to demonstrate with confidence the reasons for entering into an exclusive arrangement rather than a competitive tender process.

*Sectors where Unsolicited Proposals Are Commonly Received and Considered*

The Department of Defence provides for a process to receive and consider unsolicited proposals. If the proposals are accepted under this process, then they become the responsibility of the agency to develop, and the project competes for budget funding along with all other capital defense projects.

*Relevant Policy Framework or Guidance Material for Process and Evaluation*

The Department of Defence has developed guidelines for the unsolicited innovative proposals process. The national PPP guidelines allow for each jurisdiction to determine the policies and procedures for dealing with unsolicited proposals or exclusive mandates. The jurisdiction guidelines generally indicate to where the proposals should be referred to assess the strategic priority, VFM, public interest, and justification for direct negotiations.

*How Policy and/or Guidance Differs from Solicited Proposals*

Some jurisdictions provide for direct negotiations or exclusive mandates to be awarded, which gives the private party the right to fully develop its proposal without competition. Generally, however, most unsolicited proposals that are considered a priority are treated in the same manner as solicited proposals.

*Responsible Government Entities for Policy Development and Implementation*

The PPP unit in each jurisdiction develops the PPP guidelines that relate to the treatment of unsolicited proposals. Departments, such as the Department of Defence, may also develop their own programs to consider unsolicited proposals as part of developing their capital investment strategies.
Purpose and Desired Outcomes of the Approach
The approach adopted by the Department of Defence seeks to capture innovative solutions generated by the private sector that are outside the existing government procurement or research activities. The jurisdictional PPP guidelines ensure that unsolicited proposals are considered within the project development and evaluation procedures and that intellectual property issues are addressed.

Potential Limitations of the Approach
As the approach does not provide any incentives to generate unsolicited proposals, it potentially limits the level of innovation in the application of PPPs and in the generation of potential solutions from the market.

Single Bids Received from Tender
Occurrence in the Procurement of Public Infrastructure
For PPP projects, single bids are not a common result from the tender process.

Sectors Most Susceptible to Single Bids Being Received
This is not applicable.

Relevant Policy Framework or Guidance Material for Process and Evaluation
There is no specific process for addressing the situation of a single bid being received; however, the national PPP guidelines consider the situation when the number of bids received is deemed insufficient to proceed and the tender is canceled.

Responsible Government Entities for Policy Development and Implementation
The PPP unit in each jurisdiction ensures that the PPP policy is appropriately implemented. The procuring agency is responsible for assessing the potential level of market interest in the project prior to proceeding with the tender process as well as the likely level of competitive tension if the tender proceeds with a lower number of bids than anticipated.

Purpose and Desired Outcomes of the Approach
The national PPP guidelines provide for the level of required responses to proceed with the tender on a project basis so that issues specifically related to project development and delivery options analysis can be addressed.

Potential Limitations of the Approach
One potential limitation of the approach recommended in the national PPP guidelines is that the procuring agency and the PPP unit may not have sufficient capacity and guidance to deal with the situation when an insufficient number of responses are received.

Approach to Contract Negotiation
Stage in Procurement where Contract Negotiation Mostly Occurs
Generally, negotiation occurs immediately after selection of preferred bidder. However, the national PPP guidelines provide for direct negotiations to occur with one or more bidders prior to the selection of the preferred bidder if a single,
preferred bidder cannot be identified at the end of the tender evaluation. A greater level of interaction provided under a best and final offer process is then required with bidders to develop their proposals to a standard contract, which justifies their appointment as preferred bidder.

**Relevant Policy Framework or Guidance Material for Process**
The practitioners’ guide in the national PPP guidelines provides guidance on the negotiation stage of the tender process.

**Responsible Government Entities for Policy Development and Implementation**
The procuring agency is responsible for conducting the negotiations. The PPP unit in each jurisdiction ensures that the PPP policy is appropriately implemented.

**Purpose and Desired Outcomes of the Approach**
The national PPP guidelines recommend that an interactive tender process be implemented prior to bids being received. During such direct interaction, the project team can explain and clarify its expectations while short-listed bidders can have relevant feedback to aid them in their bid development.

This process is designed to enable the tender evaluation to be based on the best bid and provides confidence that the government will achieve VFM from the preferred bid, as most major contractual issues have been resolved. Following the initial evaluation of bids but prior to the appointment of a preferred bidder, a structured negotiation or best and final offer process may be used to resolve issues while a competitive environment still exists. This results in limiting the issues to be addressed in the negotiation process that may prolong the contract award, following the appointment of a preferred bidder, particularly since the bidder is no longer competing for the contract.

**Potential Limitations of the Approach**
The approach generally extends the tender evaluation stage and requires specific resources and skills from the procuring agency. Depending on the level of discussions conducted prior to bids being submitted, the interactive tender process requires strict conduct of guidelines to ensure that the process is conducted fairly and that no bidders are provided with additional information that could provide them with a competitive advantage in preparing their bids.

**Conflict Management**

**Areas of Procurement where Conflict Issues Arise**
Conflicts may arise from the public and private parties in a PPP project from the

- professional or personal relationships;
- financial interests of the advisory firm, advisers, or project team members; and
- consortium members involved in confidential market transactions and across different bids.
Main Reasons for Conflict
Conflicts generally arise because of the nature of the PPP market in Australia.

- It is a highly specialized procurement and delivery market with only a few, large, multinational private sector players.
- The specialist advisory skills required for the public and private parties are in short supply; therefore, most advisory firms and advisers are likely to have existing relationships with potential bidders.
- Often, there are publicly listed entities involved in procurement process.

Relevant Policy Framework or Guidance Material for Conflict Management Process
The practitioners’ guide of the national PPP guidelines provides guidance on the process to manage conflicts of interest. Several jurisdictions have also developed frameworks on conflict management processes.

Responsible Government Entities for Policy Development and Implementation
The procuring agency is responsible for implementing the conflict management process. The PPP unit in each jurisdiction ensures that the PPP policy is appropriately implemented.

Purpose and Desired Outcomes of the Approach
The approach recommended under the national guidelines provides for high levels of disclosure, consistency, transparency, and accountability in the process and the people involved in the process.

Potential Limitations of the Approach
The approach does not address all conflict issues; therefore the implementation of the conflict management approach may vary across jurisdictions and projects.

Global Comparative Framework—Part 3: Service Delivery

Implementation

Key Stages in Implementation
Implementation generally covers the construction and service delivery stages of the project.

Key Tools Utilized to Plan for Implementation
The practitioners’ guide in the national PPP guidelines recommends that planning for the implementation stage begins during the tender stage. It also recommends the use of the following tools:

- a contract management strategy that provides an overview to the contract management process;
- a contract administration manual that details the contract management process and key tools to be adopted;
- performance reporting requirements as included in the project agreement;
established relationship management, issues management, and dispute resolution structures;
• a governance, probity, and compliance framework to guide the government’s implementation of the project agreement;
• a knowledge and information management strategy to guide the management of information provided to the government by the private party and other sources;
• change control procedures to guide the process of initiating and responding to change requests;
• contingency planning, such as business continuity and disaster recovery planning; and
• an ongoing review process for existing plans, processes, and tools.

**Government Entity Responsible for Contract Monitoring**
The procuring agency is generally responsible for contract monitoring.

**Approach to Managing the Relationship with the Contractor**
The practitioners’ guide in the national PPP guidelines states that effective relationship management enables both parties to anticipate risk events before they occur and deal with any risks, issues, and disputes that do materialize. The relationship between the parties is seen as a key factor in achieving success in the project.

**Process to Monitor Performance**
The procuring agency may undertake various processes to monitor the performance of the private party, including

• specific reporting from the private party to assess the business operations and ongoing creditworthiness,
• spot checks or audits of performance monitoring systems and processes,
• gaining direct user feedback, and
• undertaking a benchmark and review process of the performance standards at regular intervals during the implementation stage.

**Approach to Contractor Refinancing during Implementation**
The commercial principles of the national PPP guidelines recommend that the project agreement requires government approval of potential refinancing during the implementation stage. The guidelines also recommend that the government be entitled to a 50% share of any refinancing gain where the projected equity return at the time of the refinancing is above that reflected in the financial model at financial closure.

**Approach to Revenue Upside or Gain-Sharing with the Contractor**
The national PPP guidelines do not specify the treatment or any revenue upside that the private party may receive during the implementation stage of an economic infrastructure project. However, jurisdictional guidance and practice has commonly included an arrangement where the government shares in some way in a windfall or unexpected gain by the private sector (excluding refinancing gains). These gains are most commonly related to demand or revenue forecasts exceeding estimates in the financial model at financial closure.
**Major Issues Encountered during Implementation**

The following major issues can be encountered during the implementation stage:

- The procuring agency does not fully understand the specific terms of the project agreement.
- The contractual arrangements are complex or ambiguous and appear to be in conflict with the treatment of certain issues.
- Knowledgeable and experienced government and private party staff members transitioning from the completion of the tender stage to commencement of the implementation stage are lost.
- The private party is not adequately performing its role as an intermediary between its subcontractors and the government.

**Key Skills and Required during Implementation**

The following key skills are generally required by the procuring agency to complete the implementation stage:

- communication and relationship management,
- proactive risk management,
- strong planning and contract management capabilities, and
- ability to respond and manage change.

**Process to Review Project Outcomes at Post-Implementation**

Each jurisdiction is generally responsible for setting the requirements and processes for the post-implementation review. Across the jurisdictions, it is common that a review by an independent group of certified procurement specialists is conducted (known as a gateway review process), as well as auditor investigations and benefit assessments. Key lessons learned for the government to consider in future PPP projects may also be an important stage of the review process.

**Measurements of a Public–Private Partnership Success and Incentives**

The measurement of success for a PPP project is difficult to define. Generally, if a project is implemented with minimal community concerns and negative media coverage, the private party remains financially viable, the procurement process is strongly managed by the government and follows the policy and guidance materials, and the measurable benefits are delivered during the implementation stage (e.g., employment or productivity growth during construction), then the project is likely to be considered successful. Audit reports and other independent reports (from industry groups or research) may also assess the relative success of a project.

**Risks**

**Level and Type of Guidance for Government to Mitigate and Manage Risks during the Contract**

The practitioners’ guide in the national PPP guidelines provides a general approach to risk management during the implementation stage. Most jurisdictions have developed policies and guidance on the risk analysis process that includes consideration of mitigation strategies for risks retained by government.
Government Entities and Key Responsibilities for Mitigating and/or Managing Risk during the Contract

The procuring agency is responsible for ensuring that the risk mitigation and management strategies—developed as part of the risk analysis—and the contract management process are appropriately implemented.

Approach to Dispute Resolution and Key Mechanisms Adopted

The commercial principles of the national PPP guidelines recommend that the dispute resolution process provide resolution in a speedy, nonlitigious, fair, and independent manner. The process recommends that

- a panel be established under the contract to act as an initial forum for dispute resolution, which includes representation by the public and private parties;
- any panel decision be unanimous and binding;
- if the panel cannot resolve the dispute, then it should be referred to either an independent expert or an arbitrator;
- all decisions be final and binding; and
- a fast-track process may also be adopted if the resolution is urgently required, thus the time frames for deliberations are reduced.

Treatment of Refinancing Risk

Generally, the risks associated with any refinancing assumed in the private party’s financial model are borne by the private party. Under the project agreement, the government may require refinancing to be approved, and a direct agreement is entered into with a new financier. Refinancing gains from refinancing that were not assumed in the financial model are generally shared on a 50:50 basis with the government.

Process and Approach to Manage Renegotiation Risk

The practitioners’ guide in the national PPP guidelines recommends that change control procedures be developed to initiate and manage change requests. The process provides a series of questions to assess whether the change should proceed, and includes consideration of whether

- the party requesting the change has the power to initiate it under the project agreement,
- the other party is able and willing to initiate the change,
- the parties are willing to negotiate a contractual amendment, and
- the contractual amendment is rejected or agreed during the negotiation process.

The process also recommends a consultation with stakeholders if they agree with the change. The commercial principles of the national PPP guidelines provide the contractual process for initiating and managing change requests.

Process and Approach to Manage Termination Risk

The commercial principles of the national PPP guidelines provide for various mechanisms to be adopted in the project agreement to reduce the potential for contractual termination. These include
• step-in rights where the government assumes all or some of the service delivery obligations of the private party under specific situations (e.g., serious health and safety risks) until the situation is resolved,
• events of default by the private party and the opportunity for the private party to cure the default before the government may terminate the project agreement,
• dispute resolution mechanisms designed to resolve disputes fairly and efficiently to reduce the chances of disputes giving rise to a termination event, and
• limited rights for the private party to terminate.

Special Issues
Public Disclosure Requirements (Post-Financial Close)

Type of Public Disclosure Required or Provided
The disclosure requirements are determined by each jurisdiction (either in the PPP guidance or public procurement policies) and generally include

• a summary of the key commercial features of the project agreement and other key contracts,
• the rationale for the project and time lines for implementation,
• the project value and subsidy provided,
• details of the public and private parties involved in delivering the project,
• an overview of the tender process, and
• the PSC to demonstrate the quantitative VFM offered by the bid.

Relevant Policy Framework or Guidance Material for the Conflict Management Process
Jurisdictional PPP guidelines may define the public disclosure requirements as well as jurisdictional legislation and policies relating to all the disclosure requirements for government tenders and contracts.

Government Entities Responsible for Public Disclosure Policy Development and Implementation
The procuring agency is generally responsible for preparing the public disclosure documents with assistance from the PPP unit, as required. The public disclosure requirements are outlined in the national PPP guidelines.

Purpose and Desired Outcomes of the Public Disclosure Policy
The public disclosure policies in each jurisdiction are designed to improve the openness and transparency of PPP transactions and to improve community awareness of the nature and outcomes of the project.

Potential Limitations of the Public Disclosure Policy Approach
As the public disclosure requirements are determined at the jurisdictional level, the details disclosed to the public and the presentation of material varies across all jurisdictions.

As PPPs are large and complex projects, it can be difficult to provide information that is both comprehensive and brief, and accessible.
**Renegotiation of Concessions**

**Prevalence in the Procurement of Public Infrastructure**
Major renegotiations of contractual arrangements have not been a common experience in Australian PPPs to date; however, minor renegotiations are frequent.

**Key Reasons for Renegotiation by the Public Sector**
The government may seek to renegotiate the terms of the project agreement in an effort to

- resolve a dispute,
- update the performance standards based on a benchmark and review process, and
- secure additional services or functionality from the private party.

**Key Reasons for Renegotiation by the Private Sector**
The private party may seek to renegotiate the terms of the project agreement in an effort to resolve a dispute, or to reflect a change in its operations, service delivery approach, or financing structure.

**Sector Most Affected by Renegotiation**
This is not applicable.

**Relevant Policy or Guidance for Renegotiation Process**
The practitioners’ guide of the national PPP guidelines recommends that change control procedures are developed to initiate and manage change requests.

**Government Entities Responsible for Renegotiation Policy Development and Implementation**
The PPP units in each jurisdiction are responsible for ensuring that the PPP guidelines are appropriately implemented. The procuring agency, possibly with support from the PPP unit, is responsible for developing and implementing the change control procedures.

**Purpose and Desired Outcomes of the Renegotiation Approach**
The renegotiation approach emphasizes

- the contractual rights of each party under the project agreement,
- a structured process to change procedures to improve the transparency in the decision-making process to amend the contractual arrangements,
- consideration of the impact of proposed contractual amendments on the initial risk allocation,
- the relationship between the parties to create a conducive environment for negotiation and resolution of issues, and
- formal documentation of contractual amendments as a result of renegotiations.

**Potential Limitations of the Renegotiation Policy Approach**
The approach relies heavily on the procuring agency’s ability to manage the change control procedures and negotiate effectively with the private party. However, if
the relationship has not been sufficiently developed or the procuring agency lacks specific skills to implement the approach, then the approach may not be as effective in addressing renegotiations sought by the private party.

Global Comparative Framework—Part 4: Completion

Completion Arrangements

Recognition of Buy-Out Rights in Contract

The commercial principles of the national PPP guidelines provide provisions that enable the government to step in and assume the service delivery role of the private party, terminate and re-tender the contract, or to allow changes in the control or ownership of the private party with the government’s approval.

Early Termination Payment Calculation

The commercial principles of the national PPP guidelines recommend that the early termination payment calculation depend on the cause of termination that entitles the government to terminate the contract.

- The termination payment may be based on the fair market value or estimated fair value of the remaining contract term. The government may sell the remaining contract and pay the contractor with the sale proceeds. The estimation of fair value varies across jurisdictions and can be based on the forecast design and construction costs, service payments, or net present project cash flows. Deductions in payment for government costs and any outstanding amounts owed to the government are also applied.
- The termination payment may also be based on the level of senior bank debt owed to financiers at the termination date and any break costs incurred as a result of early termination. Deductions are provided for amounts that provide for an equity return, credit balances, insurance proceeds, or any outstanding amounts that the private party owes to the government.

Contract Termination Arrangements

The commercial principles of the national PPP guidelines provide for the following termination events:

- **Default termination.** Subject to the financiers’ rights under the direct funding agreements, if a default termination event occurs, the government has the right to terminate the project agreement without any cure period being given to the private party. Less significant events may become default termination events if they are not cured within applicable cure periods.
- **Force majeure.** Either party may terminate the project agreement for a force majeure event that has endured for a specified period.
- **Voluntary termination.** The government may, at any time, in its sole discretion and without giving any reasons, terminate the project agreement by giving a specified period of notice.
- **Government default.** In some jurisdictions, the private party can terminate the project agreement if it provides a specified period of notice and the government does not cure the default during the notice period.
End of Contract Arrangements

The commercial principles of the national PPP guidelines recommend that the following provisions relating to end-of-contract arrangements are included in the project agreement:

- The project agreement ensures that the project assets meet the government’s return conditions at contract expiry.
- The project assets and site are generally vested on the government at the end of the contract term.
- Where government is to re-tender the contracted services, the private party is generally required to take all reasonable steps to ensure that the contracted services continue with minimum disruption and risk to government employees and public users.
- Independent inspection and any required rectification may be provided at the private party’s expense, or the government may undertake the required rectifications and seek payment from the private party.
- Generally, no residual value is assumed for the assets transferred to the government.

Explanatory Note

Stage of Public–Private Partnership Development and Implementation

PPPs have been delivered in Australia since the 1990s. All state jurisdictions have developed and implemented their own PPP policies, and most states have successfully implemented PPP projects. The national PPP guidelines were released in December 2008 and have been adopted by all state jurisdictions implementing PPP projects. The national PPP policy and guidelines draw on existing best practice PPP material (primarily from New South Wales and Victoria). In some areas, however, jurisdictions have retained the flexibility to apply their own requirements and principles (e.g., where there are unique legislative requirements).

Reference Documents and Other Relevant Materials

The Infrastructure Australia website provides the national PPP guidelines developed to date: http://www.infrastructureaustralia.gov.au/public_private_partnership_policy_guidelines.aspx

Approach to Completing Framework Responses

The national PPP guidelines have been used to complete the framework responses.

Sector-Specific Issues

The national PPP guidelines provide commercial principles for economic and social infrastructure projects that can be applied to a variety of sectors. While the development of a project requires consideration of sector-specific issues, the high-level summaries provided in the framework responses for economic and social infrastructure are applicable to all sectors.

Definitions of Comparators

This is not applicable.
Other Suggested Comparators
This is not applicable.

How Changes in Future Public–Private Partnership Practices Might Change Responses or Require Different Comparators
The continued harmonization process of preparing the national PPP guidance may result in new guidance being released that may require some responses based on jurisdictional approaches to be revised.

Other Comments
This is not applicable.
Part 2: Country Case Studies of Public–Private Partnership Projects
Port Project of India

Projects Summary

Background

India has an extensive coastline of 7,500 kilometers (km). The port industry in India has been experiencing significant growth in the last decade owing to growth in foreign trade on account of India’s rapid economic growth and business transactions with the rest of the world. India’s ports handle about 95% of the country’s trade by volume and about 70% by value.

India’s ports are divided into two categories—12 major ports and about 200 non-major (also called minor) ports. The distinction between major and nonmajor ports is not because of port capacity or traffic but based on the controlling authority. While major ports are administered by the Government of India, by the Ministry and/or the Department of Shipping, the nonmajor ports are governed by the respective provincial and/or state governments where these ports are located. Major ports are large ports with dedicated cargo terminals (public and some private) and endowed with good connectivity. Many of the nonmajor ports are relatively new and many of them are private ports or captive jetties.

Private sector participation has been on an increasing trend for the last 2 decades, especially in the last decade. This has been possible because of proactive policies of the Government of India and more particularly in the maritime states such as Andhra Pradesh, Gujarat, and Orissa. The Port of Pipavav, the case study port and the first private port of India, is located on the west coast of India in Gujarat, a state known for its entrepreneurship, dynamism, and business-friendly environment and government.

Total cargo traffic handled by major and nonmajor ports of India during fiscal year 2008 (April 2007–March 2008) was 720 million tons of which 519 million tons (72%) passed through major ports and the rest (28%) went through nonmajor ports. Over the last decade, cargo traffic at major ports has grown at a compounded annual growth rate of 8%; nonmajor ports have grown at 20%. As a result, the share of nonmajor ports in all of India’s total traffic has increased from 13% in 1999 to 28% in 2008.

Of India’s coastline of 7,500 km, Gujarat has the longest at 1,600 km. Within Gujarat, there is one major port (the federal port of Kandla) and 40 nonmajor ports under the control of the Gujarat Maritime Board (GMB), a statutory entity established by the government of Gujarat. Traffic at nonmajor ports of Gujarat has grown at 13.5% per annum over the last 5 years, and Gujarat has been able to maintain a market share of 20% in all of India’s total traffic and about 70% of the traffic of nonmajor ports.
Issues to Be Addressed

The state of Gujarat was formed in 1960 when it was split from the former state of Bombay (which later became Maharashtra). In the 1980s, it was growing at 5.2% per annum (below the national average of 5.47%). In its quest to attract industries to set base in Gujarat, it realized its competitive advantage of long coastlines and focused on port-led industrial development policy.1 As early as 1982, the state passed its own law to create an autonomous GMB. While major ports (federal) had the financial support from the relatively cash-rich central government, nonmajor ports had to look to the modestly resourced state governments for support. Due to budget constraints and the state’s business-friendly culture, the GMB, from its inception engaged in a dialogue with the local businesspersons. Over the next 2 decades, the partnership with the private sector led to different degrees of private sector participation ranging from privatization of services (such as pilotage), captive jetties set by industrial units, and privately managed jetties within GMB terminals. With the advent of liberal economic reforms in the 1990s initiated by the Government of India, and the consequent dismantling of industrial licensing policy and the increased freedom, the business climate of Gujarat attracted many large industries with huge investment plans. Noticing that most investments converged around port location, the government of Gujarat initiated dialogue with the industries. The industry sector wanted to import industrial raw materials and wanted access to the international export markets through the competitive sea routes. Also the industry sector saw potential in using Gujarat ports as the gateway for the landlocked but prosperous states in the northern and central India including Delhi, Haryana, Madhya Pradesh, Punjab, Rajasthan, and the like. Economic development in those states had a positive bearing on the potential of Gujarat ports.

The user industries favored the creation of new “greenfield,” world-class port facilities and service levels that are free from restrictive labor practices to stay competitive in global markets and in domestic markets (making better road and rail transport). In contrast, most ports of Gujarat were fair weather ports and lacked direct berthing facility. Draft was hardly 8 meters and there were inherent limitations in expanding the existing ports to cater to the demands of modern trade. Container handling facilities were nonexistent.

Large, new ports clearly had to be built with private sector investments and efficiencies to international standards to deliver world-class service levels. The existing policy of private captive jetties was inadequate.

Project Objectives

Pipavav was identified as the first of the series of “greenfield” private ports by the GMB to cater to bulk and general cargo and as potential location for a world-class port with the following objectives:

- To support the new port-based industrial investments flowing into Gujarat.
- To cater to the increasing demands of the northern and central India in terms of raw materials to support the industries in the state, such as huge cement plants coming up in the Saurashtra region (in terms of coal and cement

1 Studies estimate that about 70% of imports into Gujarat were used within the state, hence, the Gujarat ports were gateways to Gujarat’s own industries.
movements), and also the oil industries coming up in Gujarat because of its proximity to the lucrative oil reserves of the Middle East.

- To leverage on the efficiency of private sector management and capital and deliver world-class service.
- To promote regional economic development in the less prosperous Saurashtra through port investments.

Why a Public–Private Partnership

The state government was encouraged by the satisfactory experience of the initial public–private partnership (PPP) experience in the port sector in Gujarat in terms of rapid increase of private investments in captive jetties and the surge in traffic volume at these jetties.

Also it was felt difficult to accommodate the emerging demands for world-class port facilities arising from the rapid interest shown by investors in Gujarat as a result of economic liberalization in early 1990s by public sector agencies. While the GMB had experience in operating port facilities, it lacked financial and managerial bandwidth for the scale envisaged.

Public–Private Partnership Contract Type

Among the key objectives of the new PPP program in the port sector was to encourage the formation of new, large ports with significant degree of private sector management and capital. Given the nascent stage of private port development in India, the GMB saw its role as incubator of private ports. The GMB favored joint venture with the private sector through PPP, infusing equity (about 26% with ability to influence major corporate decisions) and facilitating the process of obtaining bureaucratic clearances. Once the joint venture had started operations and makes profits, the GMB would disinvest and use the proceeds to invest in other ports. While the arrangement of PPP was initially conceived as joint venture, over a time, the process was refined to bestow a fixed life concession on the concessionaire upon divestment. In effect, the PPP arrangement was to play an incubator role with the GMB as a joint venture partner until the project reaches the level of commercial operations and then transform the PPP into a regular build-operate-own-transfer (BOOT) concession. As part of the process, a Concession Agreement was entered into in September 1998 among the GMB, the government of Gujarat, and GPPL (the private sector concessionaire) under which GPPL has exclusive rights to develop and operate the port and its related facilities for 30 years.

Key Deliverables

Phase 1 (September 2005)

The key activities in this phase included the following:

- Widening and strengthening of existing Berth 2 from 26 meters (m) to 33 m to provide a continuous 393 m length (including Berth 3 of 187 m) for Rail Mounted Quayside Crane operations;
- Dredging the 4.5 km channel from 250 m wide to 300 m wide, to a minimum draft of 11.5 m;
- Acquisition and installation of quay cranes;
• Development of container and rail yard; and
• Completing Phase 1 to allow GPPL to handle 390,000 twenty-foot equivalent units (TEU) per annum of container cargo.

Phase 2 (September 2006)
The key activities in this phase included the following:

• Modifying and/or demolishing the existing liquefied petroleum gas berth as required so as to have a new container berth that is 350 m long and 57.5 m wide to the northeast of Berth 3,
• Constructing a new coal berth that is 250 m long and 33 m wide beyond the new container berth,
• Dredging channel alongside a new container berth to 14.5 m,
• Acquiring and installing three contemporary cranes and support equipment,
• Providing desalination plant and power distribution system,
• Expanding the container and rail yard, and
• Completing Phase 2 to allow GPPL to handle 780,000 TEUs per annum of container cargo.

Phase 3 (2009)
• Widening Berths 2 and 3 handling containers (total of 394 m) to a width of 59 m,
• Acquiring and installing contemporary cranes and support equipment,
• Providing additional utilities (water and power) and miscellaneous works, and
• Completing Phase 3 to allow GPPL to handle 1,040,000 TEUs per annum of container cargo.

Legal, Regulatory, and Institutional Framework

Legislation, Policy, and Regulatory Framework
Pipavav, being a nonmajor port, is governed by the Indian Ports Act 1908, which among other things defines the port limits, rules for safety of shipping and conservation of ports, movement of vessels within the ports, and public health. Under India’s Constitution, nonmajor ports are in the Concurrent List (meaning, they can be under the concurrent control of the federal and the respective state governments, namely, Gujarat in this context). Traditionally, nonmajor ports are governed by the state government concerned. Gujarat Maritime Board Act 1981 provides for the constitution of a maritime board for nonmajor ports in Gujarat and vests their administration, management, and control in such board. Port Policy 1995 of the government of Gujarat is the government’s integrated approach covering port development, industrial and infrastructure development, and power generation. Under the policy, the GMB is the co-coordinating agency for procuring infrastructure for rail, road, and power facilities and clearances from the federal or state government. Port Policy 1995 provides that ports under the GMB can be subject to different models of PPP, including equipment and jetties and outlines possible port locations. The BOOT policy
of 1997 of the government of Gujarat serves as a framework for the involvement of the private sector in the construction and operation of ports as announced in the Port Policy. The BOOT policy provides for the grant of licenses and/or concessions to private developers for a period of 30 years after which the assets revert to the government of Gujarat. The ownership of land and waterfront shall always vest with the government of Gujarat. The BOOT concession to the GPPL has been issued under the above-discussed framework. The GMB would be the licensor and GPPL would be the concessionaire and/or licensee. While the BOOT policy spells out the mechanics, the Gujarat Infrastructure Development Act 1999 provides a statutory framework for the participation of persons other than state government and government agencies in financing, construction, and operation and maintenance of infrastructure projects.

### The Procurement Process

**Process**

The GMB encouraged the formation of new large ports and saw its role as incubator of private ports. The GMB favored joint venture through PPP with the private sector—an equity of 26%, which can influence major corporate decisions—and facilitated the process of obtaining bureaucratic clearances. Once the joint venture started operations and made profits, the GMB would disinvest and use the proceeds to invest in other ports. The port of Pipavav was initiated as a joint venture in 1992 with Sea King Engineers Limited (which later became SKIL Infrastructure Limited) to build, construct, operate, and maintain the port of Pipavav in the district of Amreli in Gujarat. In accordance with its BOOT policy, the GMB divested its stake in favor of SKIL Infrastructure Limited in June 1998 and awarded a 30-year BOOT concession to GPPL in September 2008.

Concession Agreement is the key project contract. The key features of this agreement entered into with the GMB are enumerated below:

- GPPL shall create all contracted assets.
- GPPL shall be entitled to fix and collect fees for all services rendered or performed at the port.
- GPPL has the freedom to structure the tariff and the currency of denomination of its tariff.
- GPPL has been granted a concession on the royalty payable to the GMB until such time the approved capital cost of the project is set off against the cumulative concession in royalty granted or until the end of the term, whichever is earlier.
- GPPL is entitled to sublease the Leased Premises in accordance with the terms of this Agreement under intimation to the GMB.
- Disputes between the parties to the extent practicable shall be resolved by discussion or arbitration under the statutory provisions of Arbitration and Conciliation Act 1996.

The Licensor (GMB) shall apply to the Customs Department for declaration of the port as a landing and shipping place, and obtain such declaration from the Customs Department.
The GMB and/or government of Gujarat shall acquire land for subsequent phases of the project, as identified in the Approved Layout Plan and as detailed in the Approved Detailed Project Report for that phase within a reasonable period of time, of the demand for the same being made by the Licensee, and the Licensor being satisfied of such demand for the requirement of the same, and shall transfer leasehold interest and possession of such land at the time and manner required by the Licensee. In the event the Licensor grants any additional benefits to other licensees and/or developers in the port sector, the Licensor shall consider it in good faith to extend the same to the Licensee on a case-to-case basis based on site-specific considerations and the Confirming Party shall use its best endeavors for the same.

Protection from competition arising from arbitrary governmental action

- GMB shall, for the period up to 2013, offer a right of first refusal to GPPL for the development of new captive jetties within 150 km of the port.
- GMB shall not develop any new, common user port site other than sites identified in the Ports Policy 1995 of the government of Gujarat, until 2008. In the event that the sites identified in the Ports Policy 1995 are found to be unviable, then GMB shall be within its rights to develop other sites that are located not less than 150 km away from the port, subject however, to the maximum number of sites identified in the Ports Policy 1995.
- The government of Gujarat will extend any additional concession extended in the future to any other entrants in the port sector in good faith.
- Transfer of assets at the end of the concession period will be valued based on depreciated replacement value.

GPPL (the Licensee) shall pay GMB (the Licensor) a monthly Waterfront Royalty per ton of cargo handled at the Leased Premises. Such Waterfront Royalty payment shall be based on the actual cargo throughputs achieved, which shall be determined based on customs and other statutory declarations. The Licensee shall submit for verification to the Licensor every month, the cargo-wise throughput achieved for that month.

Contractual Arrangements

Sponsor Support Arrangements

The key sponsors, APMM Terminals, have supported the investment of GPPL in rail connectivity, namely, in Pipavav Railway Corporation Limited (PRCL), the first public–private railway project in India. Indian Railways and GPPL are the main promoters of the company. GPPL has 38% equity stake in the project. The project aimed to connect Pipavav port to its hinterland through broad gauge rail connectivity between Pipavav and Surendranagar covering a distance of 287 km—of which 269 km was converted from meter gauge to broad gauge—and a new line of 18 km was laid. The principal traffic for the rail line will be to and from the port, in addition to traffic for the Saurashtra region.

PRCL has entered into an agreement with the Ministry of Railways to operate container trains on the Indian Railway network. PRCL has already paid Rs100 million as license fees for container operations. The trains are being run by Container Corporation of India. PRCL is planning to commence operations from Pipavav port in
2009. The sponsors and other existing shareholders have also pumped in additional equity of Rs4.2 billion. In addition, APMM Terminals has provided sponsor loans of Rs314 million.

**Regulation of Tariff and Performance Measures**

Private ports had to compete with federal major port locations that had established rail and road connectivity and enjoyed demonstrated traffic history. The GMB recognized the lack of level playing field for aspiring private investors and conceived of an investor-friendly policy that included the tariff freedom. In terms of regulating performance, the GMB has put in place maintenance standards. In addition, the GMB has the right to measure performance at the terminals and publish the same. Regulation is by yardstick competition.

**Outcomes, Issues, and Key Lessons Learned**

**Realized Benefits**

The volume of container traffic at Pipavav has quadrupled over the last 3 years from about 62,000 TEU to over 240,000 TEU in 2008. The draft alongside and at the channel are proposed to be deepened to 14.5 m, enabling larger container vessels to call at the port. With the traffic at Mumbai region overflowing, the port of Pipavav has begun to serve the interests of burgeoning trade.

**Issues in Implementation**

In 1998, the BOOT concession of the GMB offered freedom to the lead promoters to develop a detailed project report (DPR) of their choice. While the initial promoter had development credentials, it lacked experience and expertise in port business. The DPR and the subsequent investments in the port focused on bulk and liquefied natural gas cargo. The commercial potential of the cargo was not commensurate, resulting in lesser traffic volume and difficulty in raising debt leading to serious problems in servicing debt. The business plan had to be changed to focus on the emerging container business. New international port operators were brought in in 1998 in the consortium, but they did not see merit in proceeding as significant investments had to be made in connectivity. All these led to delays in project implementation. The debt had to be restructured. APM Terminals entered the consortium in 2001 and in 2006 bought over the old promoters and became the majority investors in 2006 with the support of financial investors—IDFC Private Equity—that brought in further equity. A new concession agreement was signed with the GMB and a new DPR (including development of full-fledged one million TEU terminals) was prepared. Due to a change in plan, there were delays in obtaining approvals, in project management, and in handling of environmental issues. These have been resolved successfully. The sponsors have devised a new business plan and a robust project-financing plan has been evolved by IDFC2 to address these issues with equitable sharing of risks by sponsors. Meanwhile, traffic volume of containers has gone up significantly.

---

2 Infrastructure Development Finance Company Limited, the premier financing institution of India, has the mandate to finance private infrastructure.
Lessons Learned

Summaries of the key lessons learned from the case study and potential recommendations to approach the issues are presented below:

For the Government

- In selecting private investors in ports, a balance has to be achieved between development and operational credentials. While the early key promoter lacked operational credentials, the later key promoter was a terminal operator who also took up project management since the concession entailed it. Failure to control project time lines in Pipavav enabled nearby terminals such as Mundhra in Gujarat to attract traffic volume. In specifying project scope, a balance has to be achieved between being too prescriptive and being too flexible. Open-ended specifications might encourage unscrupulous bidders whose principal business objective is only winning a bid rather than operating port business.
- It is important to appreciate that concession agreements are, in fact, commercial and not sovereign. The government of Gujarat demonstrated its understanding capably.

For the Financiers

- Maturity and sophistication of the financial investors and lenders is important in arriving at financing packages that are customized, quick, and equitable in risk-return allocation between stakeholders and the financiers.

For the Private Port Operators and/or Investors

- While it is prudent to focus on core competence, it is important to form strong equity and/or co-investor relationship with project developers and engineering contractors while bidding for mega port projects. Slippages can be costly, not only in terms of cost and time lines but also in terms of lost opportunities and lost goodwill as rival operators could home in fast to fill the void. BOOT should be viewed through a life cycle approach rather than through the narrow perspective of terminal operations.

Key Words and Metadata

List of Key Words and Metadata for Searching the Document

- Build–Own–Operate–Transfer (BOOT)
- Detailed Project Report (DPR)
- Twenty-Foot Equivalent Units (TEUs)

List of Phrases and Key Points

- The Port of Pipavav, the case study port, is the first private port of India that is located in the west coast of India in Gujarat, a state known for its entrepreneurship, dynamism, and business-friendly environment and government.
It is important for the government to appreciate that concession agreements are, in fact, commercial and not sovereign. Gujarat demonstrated it well. In selecting private investors in ports, the government has to strike a balance between development and operational credentials. BOOT should be viewed by port operators through a life cycle approach rather than through the narrow perspective of terminal operations. Maturity and sophistication of the financial investors and lenders are important in arriving at financing packages that are customized, quick, and equitable. With the traffic at Mumbai region of India overflowing, the port of Pipavav has begun to serve the interests of burgeoning trade.

Project Reference and Sources

- Gujarat Maritime Board’s website and the presentation by the GMB officials at seminars.
- Articles on Gujarat Port Policy and GPL in public domain.
Road Project of India

Project Summary

Background

Geographic Location

The Indian peninsula is separated from mainland Asia by the Himalayas. The country is surrounded by the Bay of Bengal in the east, the Arabian Sea in the west, and the Indian Ocean to the south. India is a vast subcontinent in Asia, the world’s largest democracy with a population of over 1,028 million or nearly 15% of the world’s population. It is entirely in the northern hemisphere, extending between latitudes 8° 4’ and 37° 6’ north, longitudes 68° 7’ and 97° 25’ east. It measures about 3,214 kilometers (km) from north to south between the extreme latitudes and about 2,933 km from east to west between the extreme longitudes. It has a land frontier of about 15,200 km and a coastline of 7,516.6 km.

It covers an area of 3,287,263 square kilometers (km²) extending from the snow-covered Himalayan heights to the tropical rain forests of the south. As the seventh largest country in the world, India stands apart from the rest of Asia, marked off as it is by mountains and the sea, which give the country a distinct geographical entity. It has the second largest railway system and the third largest road network, at 3.3 million km consisting of national highways, expressways, state highways, major district roads, other district roads, and village roads.

The road project is at National Highway No. 8, connecting the capital of India, New Delhi, with the commercial capital of the country, Mumbai. The project corridor is entirely in the state of Rajasthan between 273/500 km and 363/885 km with 0 km in Delhi.

Political and Economic Environment

India is the world’s largest democracy and has a stable government. It is a Sovereign Socialist Democratic Republic with a parliamentary system of government. A Prime Minister heads the Union government. India comprises 28 states and 7 union territories. It has an impressive research and development and human resource base and has well-established legal framework.

The Indian economy is the fourth largest in the world based on purchasing power parity. It is one of the most attractive destinations for business and investment opportunities due to its huge manpower base, diversified natural resources, and strong macroeconomic fundamentals. In addition, the process of economic reforms initiated since 1991 has been providing an investor-friendly environment through a liberalized policy framework spanning the whole economy.
The road project is part of the national highway, entirely controlled by the Union government with the support of the state government of Rajasthan. With the opening up of the economy by Prime Minister P.V. Narasimha Rao in 1991, priority has been given to infrastructure development. Subsequent government regimes at the central government have also given utmost priorities to road development. The road project commenced during Prime Minister Atal Bihari Vajpayee’s regime and commercial operations commenced during Prime Minister Manmohan Singh’s tenure.

**Commercial Summary**

Although national highways constitute only about 2% of the road network, it carries 40% of the total road traffic. The share of road in total traffic has grown from 13.8% of freight traffic and 15.4% of passenger traffic in 1950–1951 to an estimated 65% of freight traffic and 86.7% of passenger traffic by the end of 2004–2005. The quality of road network in India was not so good. This is acting as a huge constraint to the economic growth of the country. Hence, it has been accorded top priority to improve the economy.

To take up the improvement and development of national highways, the National Highways Development Project (NHDP), the largest highway project ever undertaken by the country, was initiated in a phased manner. The implementing agency for the NHDP is the National Highways Authority of India (NHAI). However, the severe financial crunch and increasing population have threatened to push it off the track. It is at this time that the privatization of road infrastructure gained momentum. To encourage investments in infrastructure, the Government of India has taken many policy measures, including providing incentives to developers.

Until 1997, the policy of the central government has been that only the government can collect fees for services rendered by the national highways. In 1997, a new National Highway policy has been formulated allowing any person to collect fee from the users of the national highways and toll fee for various class of vehicles specified.

The Jaipur Kishangarh project has been declared as the model highway development project on public–private partnership (PPP) format.

**Issues to Be Addressed**

Development of roads has failed to keep pace with the economic development in India. Historically, road development has been implemented only by the government mainly because of the large volume of resources required, long gestation period, and others. The ever-increasing resource requirements, concern for managerial efficiency, and hostility from the users were seen as major problems. With the resource crunch, the government believed that the privatization of the road construction was the only answer.

In India, about 65% of freight and 86.7% passenger traffic is carried by the roads. The national highways, although constituting just 2% of the total road network, carried 40% of the traffic load. The quality of the roads has been poor with major safety issues. Most of the road networks have been two-lane roads leading to high accident rates and slow throughput in terms of capacity. In terms of movement, the speed was low. The government understood these huge bottlenecks and inefficiencies and worked to find a solution to improve the road infrastructure.
The successive government regimes have taken continued measures to encourage private sector participation in the road sector, through the build–own–operate–transfer (BOOT) and build–operate–transfer (BOT) approaches. The revenue stream has been made open for the private sector through user fee rights, advertisement rights, lease for roadside amenities, and commercial exploitation of lands adjacent to highways, on a case-to-case basis. In addition, incentive schemes, such as tax holidays and import duty benefits, have been announced.

**Project Objectives**

The Jaipur Kishangarh road project has been implemented in India as a model road project in PPP. This is the first road project above originally Rs5 billion built on BOT format.

The key objectives were

- to implement the concept of PPP in India’s road sector and/or the “user pays” concept,
- to develop a model road project on a BOT basis,
- to bring in quality and technology in road building in India,
- to improve efficiency in toll operations and road maintenance,
- to provide better services to the users of the road,
- to improve safety and provide help during periods of road emergency,
- to bring in investment into India,
- to develop better infrastructure in India, and
- to reduce travel time and lessen road accidents.

**Timetable Overview**

- 1991–1992: A major step was taken in India’s infrastructure industry by liberalizing the policies and globalizing the economy.
- February 1995: NHAI was operationalized to develop, maintain, and manage the national highways.
- April 1997: National Highway rules were formulated that allowed the collection of fee by persons other than the government.
- August 1999: Expression of interest for the prequalification of the Jaipur Kishangarh project was announced.
- August 2000: Technical and financial bids were received from prequalified bidders.
- December 2001: Modified bids were received from prequalified bidders.
- May 2002: Concession Agreement signed for 20 years on a BOT basis.

For the Financial Closure of this project, 240 days time frame has been given, which will become the date for making the Concession Agreement. A 30-month construction period was included in the 20-year concession period commencing from the appointed date.

**Why a Public–Private Partnership**

During the 1990s, India has been facing huge infrastructure bottlenecks and could not achieve economic growth due to lack of required infrastructure. For India,
providing all the infrastructure needs is very expensive and the public sector alone could not meet all these needs. Hence, the Government of India decided to fill the gap by using private financing, partially and sometimes completely, through complex financial schemes.

The Government of India took a giant step in 1992 by deciding to privatize infrastructure projects. A few projects were declared but the response was lukewarm. However, the government continued its efforts and during 1997, it announced five major projects in India in the road (highway) sector on PPP format. The state governments were keen to see some form of cooperation with the private sector for the following reasons:

- To reduce government borrowing.
- To allow specific projects to be paid for by their users rather than by every taxpayer.
- To allow the government to channel public funds into other priority sectors such as education, health care, social security, and others.
- To transfer some of the project risks to the private sector.
- To improve the efficiency of the public sector by including private sector managerial and technical procedures in its infrastructure projects.
- To obtain technology transfers from the private sector.
- To some extent, to bring in foreign investment into India.

These bold, new approaches promised improved efficiency and service quality. The decision to privatize the road sector is a giant step toward bridging the gap between demand and supply.

**Public-Private Partnership Contract Type**

The PPP contract implemented for this project was in the concession format (BOT basis), for a period of 20 years (including construction period of 30 months), after which the entire facility constructed will be transferred back to the government (subject to possible extensions as per the contract’s provisions) at zero cost. The Concessionaire is to finance, design, procure, construct, and operate and maintain the facility. They are allowed to collect revenues from the users and appropriate the same during the concession period. The entire debt service obligations are with the Concessionaire. The responsibility of maintaining the road in good condition was the prime responsibility of the Concessionaire.

**Assets to Be Delivered**

The Concessionaire is obligated to construct the project facility—pavement, grade separators, toll facility, user-oriented facilities, highway traffic management system, and others—as per the scope matrix, and specification standards, and are to be maintained as per the performance requirements. The government will retain the ownership of the land on which the facility has been developed. The performance levels for the riding quality, availability of lanes, and queue length at the toll plaza have been specified in the Concession Agreement. Divestment criteria are also specified for the asset’s quality on the date of transfer.
Services to Be Delivered

The Concessionaire is responsible for the various service levels of the facility in terms of congestion, riding quality, lane availability, and queue length at the toll plaza. This is in addition to providing a Highway Traffic Management system, emergency services like ambulance, tow trucks, and layby for the trucks and/or buses, and others.

Legal, Regulatory, and Institutional Framework

Legislation, Policy, and Regulatory Framework

Legal Framework

In India, the national highways have been entirely managed by the central government. In 1956, the government enacted the National Highway Act 1956 to provide for the declaration of certain highways to become national highways.

In 1988, an act was enacted by the Parliament to provide for the establishment of an authority for the development, maintenance, and management of national highways. The NHAI was constituted with statutory powers and a chair was nominated in 1995. In 2000, NHAI has been mandated to develop the NHDP, the largest ever highway development project.

Until 1997, the government alone was allowed to collect fees for services rendered by the national highways. Then, in 1997, the central government made rules for the “Collection of Fees by any Person for the Use of Section of any National Highways/Permanent Bridges/Temporary Bridges on National Highways,” enabling private participation in the management of national highways.

Policy for Private Investment

The Government of India has issued a series of policies to invite private investment in India and given the following incentives for the developers:

- Government will carry out all preparatory work, including land acquisition and utility removal. Right-of-way to be made available to concessionaires free from all encumbrances.
- The NHAI and/or the Government of India to provide a capital grant of up to 40% of project cost to enhance viability, on a case-to-case basis.
- A 100% tax exemption for 5 years and 30% tax relief for the next 5 years is offered, which may be availed of in 20 years. However, the Minimum Alternate Tax is to be paid.
- The concession period is allowed up to 30 years.
- In BOT arrangements, project entrepreneurs are allowed to collect and retain tolls.
- Duty-free imports of specified modern, high-capacity equipment for highway construction are provided by the government.
Regulatory Framework

Unlike the power, telecom, and port sectors, there is no specific regulator for the road sector in India. The Department of Road, Transport and Highways, under a ministry of the Government of India, and the NHAI have been implementing the projects and act as the regulators. All the national highway projects are regulated in India through Contracts only.

Institutional Framework

The Government of India has been constructing highways through the Ministry of Surface Transport that sometimes collected tolls from the users (mainly for bridges) of the facility to recover costs.

In 1988, the Indian Parliament passed an act creating the National Highways Authority of India—an authority responsible for the development, maintenance, and management of national highways, and for matters connected therewith. The NHAI board is comprised by a chairperson, a member in charge of finance, another member in charge of technical, and another member in charge of administration, all of which were directly involved in the finalization of the bid. Bid approvals are given by the NHAI board. The NHAI has a department to take care of private investment headed by a member of the board.

The initial project approval was to be given by the Cabinet Committee of Economic Affairs in which secretaries from the Ministry of Finance, Road Transport, and Legal were the members.

An approved Model Concession Agreement was used for the bid purpose. However, the same was modified to incorporate the viewpoints of the only bidder (L&T-J&P Consortium) through various negotiation meetings held between the bidder and the NHAI and/or its financial and legal advisors.

Government Leadership Roles in the Project

The central government—through the Prime Minister and the Minister for the Surface Transport—was pushing this project at the highest level to bring in investment from the private sector in the development of infrastructure. The government announced various policy initiatives to encourage private participation.

The Cabinet Committee of Economic Affairs was entrusted with the responsibility of approving the project. During the initial bid stages, Chairman Deepak Dasgupta and members Hardeepak Singh (Finance), R. L. Kaul (Private Investment), General Manager A. P. Bahadur (Private Investment), and others have participated directly in the negotiations with the bidders to improve the bankability of the document and played leadership role in the successful closing of the bid. The Government of India, the Ministry of Surface Transport, and the NHAI, through various industry associations, created awareness for the PPP concept.

The technical, legal, and financial advisors have played crucial role, along with the NHAI, to bring about the changes in the concession agreement and in the implementation of the project.
The local state government provided all-out support in clearing all bottlenecks in issues related to land, environment, and forest for the successful implementation of the project.

**Stakeholder Consultation Involving the General Public**

Since the project involves the widening and strengthening of existing two-lane roads, the major issues during stakeholder consultations were for the acquisition of the land’s right-of-way, issue of tree-cutting, and provision of structures along the project alignment.

The general public, as the user of the facility, was consulted by the government through the consultants, on issues such as finalizing the alignment, land procurement, and to a larger extent, for the public’s willingness to pay the user fee. The local public was to be given discounts for frequent use of the facility.

Media was used extensively to propagate the concept of PPP while various industry and social organizations were used to explain the advantages and/or disadvantages of privatization in this road project. The user fee notification is advertised through local newspapers and a copy is kept at the project office and/or toll plaza.

The state government is included as a party in the state support agreements for close coordination and support during the concession period, especially during the preconstruction stages when the land procurement is undertaken and when deciding the project’s scope.

Local people’s views were considered in the provision of flyovers, cattle crossings, pipe culverts, emergency callbox, and others.

**The Procurement Process**

**Project Development and Selection of Public–Private Partnership**

In April 1997, after the government decided to open up the economy, the Ministry of Surface Transport of India issued an invitation for a global tender for the development of National Highway 8 (273.5 km to 366.2 km for a total of 92.7 km), along with four more projects in various parts of India, on a BOT basis, under PPP arrangement.

The National Highway Rules 1997 was introduced, allowing private players to collect toll from users of the national highways. The government selected this project as a model BOT project and invited tenders from global players for the development of this road project.

The NHAI signed the concession agreement with the lowest bidder and the project was successfully implemented. The consortium of GVK International NV and BSCPL were the promoters while Larsen & Toubro Limited joined this consortium as a non-promoter–developer. L&T and BSCPL were the engineering, procurement,
Road Project of India

and construction (EPC) contractors for this project. Lea Associates has worked as Owner’s Engineer and L&T Ramboll was the EPC design and engineering consultant for both the EPC contractors while BCEOM was engaged as the independent engineer for the project to resolve disputes during the construction stage.

**Stages in Procurement**

The bid process comprised of two stages: (i) Prequalification (PQ) and (ii) Request for Proposal (RFP). On receipt of PQ documents, the bidders will be qualified and prequalified bidders will be given RFP documents for their participation in the selection of the bidder.

At the RFP stage, technical and financial bids were accepted. The evaluation of technical bids will result in the selection of bidders for the next stage, which is the financial evaluation. Technical proposals were evaluated on a “pass/fail” basis. Financial bids were opened only for those bidders that got 60% and above scores in the technical evaluation. Pre-negotiations were done to satisfy the technical parameters as required by the bid. Since there was only one conditional bid during the first stage, exhaustive negotiations were held on various concession and price issues. Finally, during the second stage of bidding from all prequalified bidders, the lowest bidder was selected and Concession Agreements were signed.

**Procurement Timetable**

- April 1997: Global notice for an Expression of Interest for Prequalification was issued by the Ministry of Surface Transport (MoST).
- July 1998: MoST authorized the NHAI to bid out the project on a BOT basis.
- August 1999: Expression of Interest for Prequalification received from invited global players.
- 3 May 2000: The NHAI forwarded the final RFP document with clarifications on the queries raised by all the prequalified bidders. It also requested confirmation of participation by submitting proposals for implementation of the project from the prequalified bidders.
- 30 August 2000: Technical and financial bids with conditions received, but only from the L&T–J&P consortium.
- 2000–2001: Negotiations undertaken with the single bidder on technical and/or concession-related issues.
- 19 September 2001: An NHAI board meeting considered the single bid but deferred to the MoST for the final decision.
- 7 December 2001: The NHAI invited modified bid from all the prequalified bidders.
- 1 March 2002: The NHAI accepted the bid from the lowest bidder and issued a Letter of Acceptance to this bidder.
- 8 May 2002: A Concession Agreement was signed for 20 years, on a BOT basis.
- 9 April 2005: Commercial operations commenced, started well ahead of schedule.
Bid Process

Request for Qualification—Prequalification

In April 1997, the MoST issued a global tender notice for the short listing of bidders for the development of National Highway 8 (273.500 km to 366.200 km or a total of 92.7 km); along with four more projects in various parts of India, on a BOT basis. The scope was to develop a four-lane divided carriageway from the existing two-lane project road, with option to widen it into a six-lane facility with a capacity of 60,000 PCU. Only three companies, namely L&T, Reliance Industries, and IJM–Gayatri showed interest.

In July 1999, the NHAI issued another global tender notice inviting prequalification for the development of the project with submission date as August 1999. Some 15 companies participated, submitting Expressions of Interest with the following six bidders having been short-listed:

- Larsen & Toubro Limited, India
- Joannou & Paraskevadas, Cyprus
- Reliance Industries Limited, India
- Group Five Limited, South Africa
- GVK International NV + Leighton, India
- Bin Hafeez, United Arab Emirates

All these bidders were apprehensive of the viability of a six-lane facility in the midst of concession period, with no possibility of extending the Concession. Accordingly, the NHAI has decided to change the project scope and structure.

Later, the scope has been modified into a full-fledged, six-lane facility (Dual 3 Lane) with service roads and grade separators at major junctions with 15 years concession period.

During the bid stage, J&P, Cyprus showed interest to join L&T, India in this project, and accordingly, two qualified bidders received approval from the NHAI, for joint bidding. Hence, the number of prequalified bidders has been reduced to five. The bid submission date was fixed on 30 August 2000—for both technical and financial bids.

Request for Proposal—Technical and Financial Bid

Stage I: August 2000–November 2001

After due diligence, the project was seen to be unviable. Accordingly, there were no bids from the above prequalified bidders except from L&T–J&P consortium, which is a single, conditional bid. The major conditions were

- reduction in scope of work,
- increase in concession period (18 years instead of 15 years),
- changes in Concession Agreement to make it bankable, and
- inclusion of a multi-axle vehicle in the heavy construction equipment category.
The NHAI decided to continue with the bid process with this single bid and several rounds of discussions were held for more than 1 year between NHAI, its technical and/or financial advisors, and this bidder. This process went on until November 2001.

**Stage II: Beyond November 2001**

In November 2001, after the issue for finalization was referred to the MoST and the NHAI board, NHAI decided to call for proposals from the original five prequalified bidders for the same conditions that were submitted by the L&T–J&P Consortium. This is to avoid litigation from the other prequalified bidders who may claim that they did not know the new conditions.

Accordingly, the NHAI voided its letter dated 8 November 2001, and modified the bid with new conditions (in addition to the conditions prescribed by L&T-J&P Consortium). The major conditions were

- the concession period was extended to 20 years,
- project length was reduced to 90.385 km (from 273.500 km to 363.885 km),
- scope for service roads and few flyovers to be reduced, and
- Up-front grant disbursements allowed.

At this stage, the NHAI allowed the consortiums to change their members with the condition that the lead member cannot be changed. Based on this relaxation, the GVK changed its partner by replacing Leighton India with BSCPL, an Indian road contractor based outside of Hyderabad. The bid due date was kept as 7 December 2001. Subsequently, the final bids were submitted by L&T-J&P Consortium and GVK International-BSCPL Consortium.

**Evaluation Criteria**

**Prequalification Criteria**

This project is one of the model projects in India’s road sector and the first road project of more than Rs5 billion to be developed in India on a PPP format. The project has been categorized as a global tender with the following qualification criteria (with weights shown in parentheses):

**Development and/or Construction Experience in Infrastructure Projects (40%)**

Threshold criteria:

- Bidder should have completed one project of Rs200 million in the infrastructure or construction sectors (or) one highway project of more than Rs100 million.

General criteria:

- Experience in developing and/or constructing projects in infrastructure or construction sectors (such as highways) of more than Rs1.5 billion.
- Experience in developing and/or constructing highway projects in the last 5 years of more than Rs750 million.
- Experience in project development in India in the last 5 years.
Financial Capability and Legal Status (50%)
Threshold criteria:

- Current net worth of more than Rs2 billion, or
- Latest year revenue shall be more than Rs1.5 billion.

General criteria:

- Financial status, experience in raising finance, financial defaults, and litigation status.

Qualitative Factors (10%)
The quality of management, project development, and operations and maintenance (O&M) of toll road and/or bridge projects should be assessed.

Bidder should score a minimum of 60% marks for the above.
At this stage, there is no limit on capital grant fixed for the project, in case the project is not viable on its own.

Cost of Documents and/or Guarantees for the Bids

- Bid security : 1% of estimated project cost
- Performance security : 2% of estimated project cost
- Cost of document : $1,000 (or its equivalent in Indian rupees)

Request for Proposal
Methodology and Criteria for Evaluation

Technical. The technical proposal will be evaluated based on meeting the construction and O&M requirements, in addition to the quality management systems and the reasonableness of the design standards, specifications, project scheduling, and deviations. The proposal should cover the following: Understanding of the Project, Key Challenges Expected, Approach to Design, Construction and Procurement, Project Work Schedule including milestones, Details about Contractors, Key Personnel, Project Management, and Quality and Safety. In addition, a proposed approach toward toll collection and maintenance, including lane availability and safety, was to be submitted.

Financial. Ranking will be done based on the net present value of the grant (positive or negative) on the proposal due date, with a discounting rate of 12%. To facilitate evaluation, a detailed financial model with macroeconomic assumptions on the project’s construction cost, debt, equity, interest rates, moratorium, repayment schedule, traffic and/or revenue projection, O&M costs, tax assumptions, and others, was to be submitted.

Stage I: August 2000–November 2001
During the technical and financial bid stage, the “pass/fail” criteria was used for the technical bid. For the financial bid, the evaluation criteria fixed by the NHAI was the lowest net present value of the grant. The bidder was to quote its grant requirements on a quarterly basis for the construction period and for the first 5 years of O&M
period. The NHAI allowed a maximum of 40% of total project cost (Rs 6.1 billion as fixed by the NHAI) as grant of which 25% was allowed during the construction stage and the balance during the O&M stage.

**Stage II: Beyond November 2001**

The technical criterion was maintained as “pass/fail.” The financial bid evaluation criterion was changed as the lowest grant asked for by the bidder during the construction stage itself. There is no O&M grant envisaged. The final bid was won by GVK Consortium with a grant requirement of Rs 2.11 billion as against the requirement of L&T-J&P Consortium of Rs 2.25 billion.

**Approval Process**

The Government of India’s MoST has constituted the National Highways Authority of India as a statutory body through the NHAI Act 1988. The NHAI was authorized to develop this project through a concession on a BOT basis.

The proposal is to be approved by its board in which the secretaries from the Planning Commission, the Department of Expenditure, Ministry of Road Transport & Highways and Director General (Road Development) are ex-officio members. For the project clearances, the Cabinet Committee of Economic Affairs’ approval—through the PPP Approval Committee—is required.

When during Stage I only one bid was received, which was also a conditional bid, the NHAI decided to have negotiations with the single bidder. A series of technical, financial, and commercial discussions were held directly by NHAI with the bidder and with their consultants and/or advisors.

The Concession Agreement clauses were negotiated and modifications were agreed upon. Finally, the NHAI board sent the modified bid to all the prequalified bidders to get their responses to avoid possible litigations.

The entire process of bidding lasted more than 4 years, being the first time a bid of this magnitude and risks were experienced. Negotiations on the Concession Agreement lasted for more than 18 months with the single bidder. The bid was finally awarded to the lowest bidder upon getting approval from the NHAI Board.

**Contractual Arrangements**

**Contractual Arrangements and Obligations**

The development of this project was implemented through a Concession Agreement signed between the NHAI and the Concessionaire.

The major obligations of the Concessionaire are as follows:

- To develop, design, engineer, finance, procure, construct, operate, and maintain the project during the concession period;
- Upon completion of the project and during the operations period, the Concessionaire shall manage, operate, and maintain the project and regulate the use thereof;
- To levy, demand, collect, and appropriate the fees from vehicles and persons liable to pay the fees for using the highway or any part thereof, and to refuse entry of any vehicle to the highway if the fee is not paid;
- To perform and fulfill all of the Concessionaire’s obligations;
- The Concessionaire shall submit to the NHAI the drafts of the Project Agreements, including the EPC contract, financing documents, O&M contract, and tolling contract for its review and/or comments, and the Concessionaire shall consider all such comments and/or observations;
- To bear and pay all expenses, costs, and charges incurred in the fulfillment of all the Concessionaire’s obligations;
- Not to assign or create any lien or encumbrance on the Concession granted, on the whole or any part of the project, nor transfer, lease, or part possession therewith except when expressly permitted by the Concession or the Substitution Agreement;
- To obtain and maintain in force, from the Appointed Date, all insurance in accordance with the provisions of this agreement and in accordance with good industry practice;
- To undertake debt service payments in accordance with the financing documents;
- To appoint, supervise, monitor, and control the activities of contractors under their respective project agreements as may be necessary;
- To make reasonable efforts to maintain harmony and good industrial relations among the personnel employed in connection with the performance of the Concessionaire’s obligations;
- To comply with all applicable permits and applicable laws under this Agreement in the performance of the Concessionaire’s obligations, including those being performed by any of the contractors;
- To provide a performance security of Rs1 billion; and
- To pay a yearly concession fee.

The NHAI is obligated to provide the Concessionaire with the following:

- To allow access to the site, free from encumbrances;
- To permit the Concessionaire, as the licensee, peaceful use of the site without any hindrance from the NHAI or by persons claiming to represent it;
- To assist and provide all reasonable support to the Concessionaire in obtaining the applicable permits;
- To assist the Concessionaire, upon receiving a written request, in obtaining access to all necessary infrastructure facilities and utilities—including water, electricity, and telecommunication—at rates and on terms no less favorable to the Concessionaire than those generally available to commercial customers receiving substantially equivalent services;
- To ensure that no barriers are erected or placed by the government of Rajasthan or any government agency on the road project, except on account of any law and order situation or upon national security considerations;
- To enter into a state support agreement with the Concessionaire and the government of Rajasthan;
- To assist the Concessionaire in obtaining necessary assistance to regulate traffic on the road project, subject to and in accordance with the applicable laws;
• To assist the Concessionaire in obtaining police assistance from the
government of Rajasthan against payment of prescribed costs and charges,
if any, for traffic regulation, patrolling, and provision of security on the
project’s site;
• To operate and maintain the road project during the development period
(up to the Appointed Date), at its own cost and expense, in a manner that
the level of service does not become inferior to the level of service prevailing
on the date when bids were received for this Concession; and
• To observe and comply with the obligations set forth in the Concession
Agreement.

Dispute Resolution
In the event of any dispute, either party may call upon the independent consultant
to mediate and assist the parties in arriving at an amicable settlement.

If mediation by the independent consultant fails, or if without the intervention of
the independent consultant, either party may require such dispute to be referred
to the chairman of the NHAI and to the chairman of the Board of Directors of the
Concessionaire, for amicable settlement.

If the dispute is not settled amicably within 15 days of such meeting, it may be
referred to the Board of Arbitrators (three members—one each from both parties,
and the third to be filled in in accordance with the Rules of Arbitration of the Indian
Council of Arbitration).

Financing Arrangements
The consortium members of the Concessionaire have brought in the equity in the
following ratio:

• GVK International—41%
• BSCPL—19%
• Larsen & Toubro Limited—40%

The Concessionaire is to maintain 51% of the equity up to 3 years after Cash On
Delivery (COD) and 26% during the entire concession period. The project was funded
by Rs2,110 million of equity support (grant) and the balance amount was funded
through a combination of debt and sub-debt (Rs20 million).

Government Support Arrangements
As part of the bid, the NHAI provided Rs2,110 million of equity support (grant). In
addition, the Government of India has given various tax incentives and concessions.

The following are some of the policy initiatives:

• National Highways Act to levy tolls.
• Duty-free import of sophisticated road building equipment and machinery.
• Government provides land free of charge and encumbrances for highway
development.
• Widening of highways is exempted from environmental clearance.
• Capital grant provided up to 40% of the estimated cost of the project.
• A 5-year tax holiday (100%) and 30% tax concession for the next 5 years in a 20-year period (Minimum Alternative Tax to be paid by the Concessionaire).
• The NHAI has signed state support agreement with the state government of Rajasthan for providing all necessary help at the state level including land, clearances, and others.
• A commitment that there will be NO competing facility connecting Jaipur and Ajmer within the first 8 years of operation and even after these 8 years, the additional facility will be a tolled facility with 33% more toll for each class of vehicle.
• Revenue shortfall loan facility is to be provided in case the revenue goes below the subsistence level (i.e., revenue levels below a level that prevents the Concessionaire from meeting its O&M costs and debt service obligations).

**Sponsor Support Arrangements**

The entire responsibility of debt service obligations are with the Concessionaire and are non-recourse in nature.

• Concessionaire has given a performance security for Rs1 billion, which will be encashed if facility condition is not achieved or performance goes below the prescribed specifications level.
• In case of default to the lenders, the lenders have step-in rights to take over the project.
• Concessionaire agreed to give the NHAI 40% of excess revenue that it has collected over and above the projected revenues.
• A weekly damage of 0.01% of total project cost per week is provided for the delay in the achievement of COD.

**Performance Measures and Regulation**

During the construction period, various tests were carried out by the independent consultant as per the design requirements. During the operations period, the following major performance parameters were to be maintained by the Concessionaire that include:

• lane availability shall be 99%,
• surface roughness on completion shall be maintained at 2,500 mm/km, and
• road performance shall be monitored as per the O&M requirements specified in the Concession Agreement.

**Regulation of Tariff**

The user fee for various classes of vehicles was specified up-front with base rates effective as of 1 July 1997, as per the National Highways Act rules.

The base user fee was defined as the rate per vehicle per one-way trip per km

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>Rate per km</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car/passenger van/jeep</td>
<td>Rs0.40</td>
</tr>
<tr>
<td>Light goods vehicle</td>
<td>Rs0.70</td>
</tr>
<tr>
<td>Truck</td>
<td>Rs1.40</td>
</tr>
<tr>
<td>Bus</td>
<td>Rs1.40</td>
</tr>
</tbody>
</table>
Multi-axle vehicles (>2 axle) : Rs2.25 per km
Heavy construction equipment and oversized vehicles : Rs3.00 per km

The above user fee rates will be multiplied by the length of the project road (i.e., 90.385 km) and then rounded off to the nearest five rupees. The user fee will be revised every 1 July annually and will be computed as:

\[
\text{Revised user fee for each category of vehicle} = \text{Base user fee} \times \text{Length of project Road} \times \frac{\text{WPI1}}{\text{WPI0}}
\]

where:

WPI1 = is the wholesale price index on 31 March preceding the fee revision date
WPI0 = is the wholesale price index on 31 March 1997

The Concessionaire shall not collect any fees from the local personal traffic and the local commercial traffic in excess of the following discounted rates:

- Local personal vehicle = 25% of applicable fees for the specific category
- Local commercial vehicle = 50% of applicable fees for the specific category

The above rates shall be displayed on boards erected in the vicinity of the toll booth and shall issue a receipt on every occasion of fee recovery.

**Outcomes, Issues, and Key Lessons Learned**

**Realized Benefits or Outcomes**

**Realized Benefits and/or Achievements of Project Objectives**

Although the project has taken a tremendous time due to the initial problems in the finalization of the Concession Agreement and other concerns, it has become the model BOT project for India’s road sector. This project has been successful technically and financially.

The project did bring in private sector investments into the country, which was a new phenomenon at that time. Being the first project of its kind and size, it has become the model project in several aspects:

- The Concession became the benchmark for subsequent similar projects and this agreement was used as a base for projects that were announced and implemented by the NHAI in the road sector in India. The lessons learned during the project have also been used for modifying the conditions of contract—both on the positive and negative side.
- This has been the first six-lane BOT project on a national highway with a size and cost of more than Rs5 billion.
- The economic boom happened during the period of project implementation and due to improved traffic growth from the first year of operations, the revenues reached beyond the projected revenues. This had a positive impact on the PPP concept and in subsequent road projects leading to higher acceptability of the BOT format.
**Benefits and/or Cost to Users, Government, and Private Sector**

- The overall vehicle operating costs to the users have gone down significantly due to the improvement of the project corridor—from the existing two-lane to a six-lane facility.
- The government has seen excellent safety improvements in the project corridor. Road safety improved significantly due to divided carriageway facility leading to excellent economic savings.
- The time taken to cross the 90 km stretch highway had gone down drastically (by more than 1 hour), which resulted in good savings and given good economic returns to the government and users.
- The investment from the private sector enabled the government to use its funds for other social sectors.
- This project has been a morale booster and became a model project for the private sector. The positive sentiments this project brought into the minds of the private developers helped India’s government to change the policy on BOT in the road sector.
- Due to toll and route operations and maintenance, there has been an increased job opportunity for the local people.
- Being in the private sector, the salary levels of employees in this project have gone up, benefiting the economic status of the local people.
- The overall quality of the road project improved tremendously, and being a BOT project, the revenues were flowed back into the project for better maintenance and standard improvement.

**Issues in Implementation**

**Project Preparation and Analysis**

During the bid preparation, the bidder faced difficulties in the assessment of traffic as not much information on the existing traffic was known. This resulted in lots of assumptions in traffic growth. Earlier experience on traffic in various smaller road sector projects in different parts of India has given very negative impact on the revenue projections. Along with high interest rates, this has resulted in providing a grant for this project.

**Risk Allocation and Due diligence**

The single bid scenario helped both the government and the private sector in understanding each other’s viewpoints and in finding solutions. The major issues on the bankability of the Concession Agreement have been sorted out and the risk allocation has been done in the best interests of all the stakeholders. The various risks have been thoroughly discussed and an amicable solution was found. This resulted in a better contract structure.

The government has prepared the detailed project report (DPR) based on optimistic traffic scenarios. However, the earlier experience in India regarding the traffic pushed the bidders to go in for cautious projections. Accordingly, there has been continued discussions on the traffic projections and thereby the financial viability. However, a new clause on the sharing of excess revenue was included in the agreement (20% to be retained by the Concessionaire toward O&M, 40% each of excess revenue to be shared between the government and the Concessionaire). However, when the traffic revenue goes up beyond the projected revenues, this removes the misunderstanding in this issue.
**Tree-Cutting and Other Environmental Issues**

The project corridor, especially near the area of Jaipur, faced huge resistance from environmental groups on the issue of cutting the trees. At some point, this could have resulted in the delay in project implementation. Thanks to the local government’s initiatives, the problems were sorted out leading to the early completion of the project.

For a brief period, the contractors faced problems in not getting aggregates from the nearby areas as the local government banned quarrying activities in the Aravalli hill range.

**Design Issues**

The original pavement design envisaged the use of the Standard suggested by American Association of State Highway and Transportation Officials (AASHTO) with minimum thickness for various layers of the road project. This created confusions during the design stage as some of the AASHTO provisions could not be applied to Indian conditions. However, continuous interactions between the Concessionaire, independent consultant, and NHAI executives helped in resolving this issue and finally the design was made based on Indian Roads Congress codal provisions, which are relevant to local conditions.

**Lessons Learned**

The lessons learned from this project have been very useful to the government and other stakeholders including EPC contractors. Some of the lessons are as follows:

- It is very important for the government to analyze the risks and appropriately allocate these to the right stakeholder.
- It is appropriate to study the impacts of having clauses that envisages incurring capital costs during the middle of the concession period. This raises a question on the bankability of the project when there are prevailing negative sentiments on the projected revenues.
- Specifications relevant to the local condition are to be made applicable; flexibilities in the design will help the Concessionaire in completing the project in the interest of the project.

Providing a positive contractual framework will make the project successful and will bring in more investments from the private sector.

**Key Words and Metadata**

**List of Key Words and Metadata for Searching the Document**

- Concession period
- COD
- Force majeure
- Equity support
- Completion certificate
- Total project cost
• User fee
• WPI
• Termination payments
• RFQ and RFP
• Risk allocation

List of Phrases and Key Points
• Exclusive right, license, and authority during the subsistence of this agreement.
• Risk shall be allocated to the right person who can handle that risk and penalty shall be in proportion to the risk.
• Project feasibility shall be worked out before inviting proposals from bidders.
• No competing facility to be allowed before specified period and/or before achieving target traffic in order to improve the financial viability of the project.
• Sharing of excess revenue will make project acceptable to the government.
• Both parties agree that the performance of their obligations requires greater support from each other in the true spirit of public–private partnership.
• User will be willing to pay the relevant fee for using the facility if the service levels are maintained.

Project Reference and Sources
• Concession Agreement for the widening of an existing 2-lane facility into 6 lanes, with divided carriageway facility, including the rehabilitation of the existing 2 lanes from 273.500 km to 363.885 km on Jaipur Kishangarh section of National Highway 8 in Rajasthan, to be implemented on a BOT basis.
• Various presentations by the author and others, including news reports.
Project Summary

Background

Scope of the Study

In this study, we introduce lessons we have learned from nearly 10 years of implementing projects.3

There are many types of public–private partnerships (PPPs) and it is crucial to understand the differences for the proper implementation of PPP projects. A Japanese university private finance initiative (PFI) is usually a government-sponsored project; its main revenue comes from service charges paid by the Procuring Authority. In such an arrangement, the public sector, not the private sector, is in charge of the provision of core service; in the case of a university PFI, the service provided is education. The lessons we learned from implementing university PFIs should be helpful for projects in other sectors with similar schemes.

Enactment of the Act on the Promotion of Private Finance Initiative

In the late 1990s, the public and private sectors of Japan actively carried out a study on PFI in the United Kingdom. In 1999, the Act on Promotion of Private Finance Initiative (hereinafter referred to as the “PFI Act”) was enacted in Japan.

Start of Private Finance Initiatives in National Universities

After enactment of the law, each ministry in Japan began its own study on PFI. The Ministry of Education, Science, Sports and Culture (currently known as the Ministry of Education, Culture, Sports, Science and Technology or MEXT) launched a study on national university PFI in 2000. The first university project was launched in 2003 and, to date, there have been about 30 university PFI projects.

Geographic Location

Most of the national university PFI projects were implemented by major universities in large cities such as Fukuoka, Kobe, Kyoto, Osaka, Sapporo, Sendai, and Tokyo. The University of Tokyo Communication Plaza Project was implemented at its Komaba campus, which is located only 1 mile from Shibuya (downtown), Tokyo.

3 We will introduce a university PFI project—the University of Tokyo Communication Plaza Project—but will not limit the subject of this study to the project because more than 20 national university projects were launched in 2003 and 2004; virtually all have adopted similar schemes.
Table 8-1  Overview of University Project Finance Initiatives in Japan

<table>
<thead>
<tr>
<th>Year</th>
<th>National Statute, Guidance, and Others</th>
<th>University Project Finance Initiatives</th>
<th>Number of Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>Enactment of PFI Act</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>Publication of Policy Framework (Basic Policy)</td>
<td>Studies on the introduction of PFI begin</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>Release of • Process Guidelines • Risk Allocation Guidelines • Value for Money (VFM) Guidelines</td>
<td>Feasibility studies on the introduction of PFI to national university facilities begin</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>Release of • Contract Guidelines • Monitoring Guidelines</td>
<td>Implementation of the first national university PFI project</td>
<td>14</td>
</tr>
<tr>
<td>2004</td>
<td>Release of Interim Report of the PFI Promotion Committee</td>
<td>Establishment of national university corporations</td>
<td>10</td>
</tr>
<tr>
<td>2006</td>
<td>Release of a guidance for dialogue (a document by the directors of the relevant ministries and agencies)</td>
<td>Review of PFI projects already implemented; study for future PFI polices</td>
<td>1</td>
</tr>
<tr>
<td>2007</td>
<td>Report of the PFI Promotion Committee</td>
<td>University corporations formulate a new policy on PFI projects</td>
<td>1</td>
</tr>
<tr>
<td>2008</td>
<td></td>
<td>Study on monitoring for PFI by the Ministry of Education, Culture, Sports, Science and Technology (MEXT)</td>
<td>1</td>
</tr>
<tr>
<td>2009</td>
<td>Release of • Basic Approaches to Issues on PFI Contracts • Basic Approaches to Service Specifications relating to PFI Contracts</td>
<td>Start of projects that follow the new policy</td>
<td>(3)</td>
</tr>
</tbody>
</table>

( ) = enclosed figure is the expected number and is not fixed, PFI = project finance initiative.
Source: PFI Promotion Office, Cabinet Office of Japan.

**Issues to Be Addressed**

Reasons for implementing university PFI projects:

- The necessity to improve deteriorated or overcrowded school facilities,
- Fiscal constraints due to increased social benefit expenditure by government, and
- Difficulty in providing new facilities that could respond to academia’s new needs.

In the University of Tokyo Communication Plaza Project, the restaurants and other facilities for students at the campus were in a state of deterioration.
Timetable Overview

University of Tokyo Communication Plaza Project

2004
- 28 May: Publication of the implementation outline
- 12 August: Announcement on the use of PFI method
- 8 September: Tendering announcement
- 21–22 December: Submission of proposals

2005
- 3 February: Determination and announcement of the successful bidder
- 29 March: Execution of the PFI Contract

2006
- 1 April: Start of operation (The North Building) (No delay)
- 1 October: Start of operation (The South Building, The Japanese Style House) (No delay)

2023
- End of operational stage

Why a Public–Private Partnership

The main reason for introducing PFI in the university sector was to fill in the gap between the demand and the budget.

However, under the PFI Act, a project can be implemented only when it is expected to be implemented effectively and efficiently through the use of private funds. That is, projects were implemented only when they were expected to provide value for money.

Public–Private Partnership Contract Type

Government-Sponsored and/or User-Sponsored

Government-sponsored projects refer to those projects where the public sector pays service charges. User-sponsored projects refer to those projects where contractors collect fees directly from users, such as facilities for leisure. In general, university PFIs are sponsored by the public sector. That is, the main revenues of contractors take the form of service charges paid by the Procuring Authority.

Operator: Private or Public

The public sector—not the private sector—operates universities and provides education through professors hired by the public sector. This distinction is important when we consider the contents of service specifications and monitoring.

Examples:

Public : universities, elementary and high schools, hospitals
Private : leisure facilities, waste disposal plants
Build–Transfer–Operate and/or Build–Operate–Transfer

In general, the build–transfer–operate (BTO) is used in university PFIs. In some projects, a mixed scheme of build–operate–transfer (BOT) and BTO is used.

The University of Tokyo Communication Plaza Project is mainly sponsored by the government. The public sector remains responsible for the core service of the university, which is education. However, the contractor operates the restaurants and stores.

A mixed scheme of BOT and BTO was adopted in the following:

- The North Building—BOT
- The South Building, The Japanese Style House—BTO

Assets to Be Delivered

The contractor is responsible for the design and construction of buildings that are consistent with specifications presented by the government and the contractor’s proposal. The University of Tokyo Communication Plaza Project was implemented under this same arrangement.

Services to Be Delivered

In university PFI projects, the contractor is usually responsible for the hard facility management (excluding the major refurbishment), cleaning, and security. As for other services, it depends on the projects agreed upon to be undertaken.

In the University of Tokyo Communication Plaza project, the contractor is responsible for

- hard facility management,
- cleaning,
- security,
- operation of stores,
- operation of bookstores, and
- operation of restaurants.

Under school and/or university PFIs, the core service (education) is not transferred to the contractor. A recent report on university PFIs pointed out that procuring authority must examine whether the inclusion of each service leads to innovation by the private sector (see section on Issues in Implementation).

Legal, Regulatory, and Institutional Framework

Legislation, Policy, and Regulatory Framework

Statutes

The PFI Act was enacted in 1999 and amended in 2001 and 2005. The PFI Act created some exceptions to existing statutes.
(i) Assumption of Obligation Longer Than 5 Years

In government-sponsored PFI projects, the procuring authority is supposed to pay service charges during the term of each contract. However, a statute relating to public finance prohibits the national government from assuming obligations that will last for more than 5 years. The PFI Act extended that term and, in the case of a PFI project, the national government may incur debt for no more than 30 years.4

(ii) Lease of Administrative Assets

The PFI Act created an exception to restriction on leases of administrative assets.

**National Guidelines**

The PFI Promotion Committee of the Cabinet Office published five guidelines: Process, Risk Allocation, Value for Money (VFM), Contract, and Monitoring. In addition, the committee published two documents in April 2009: “Basic Approaches to Issues on PFI Contracts” and “Basic Approaches to Service Specifications Relating to PFI Contracts.”

**Guidelines by the Ministry of Education, Culture, Sports, Science and Technology**

For the university sector, the section in charge of university facilities (the Office for Facilities Planning in National Facilities Division of Department of Facilities Planning in Administration Minister’s Secretariat) in MEXT plays an important role in university PFIs. The Office is currently preparing guidance for the preparation of output specifications and monitoring in university PFI projects. It is expected that the new guidelines will adopt many suggestions in the “Basic Approaches to Service Specifications Relating to PFI Contracts” published by the PFI Promotion Committee (see discussion on this in the section on Issues in Implementation.

**Institutional Framework**

**National**

The PFI Promotion Committee of the Cabinet Office is responsible for providing guidance and the PFI Promotion Office of the Cabinet Office is assisting the committee, among which is the publishing of documents relating to PFI. However, neither has the authority to approve or disapprove projects. There is no institution like the Partnerships UK in the United Kingdom or the Korea Development Institute in the Republic of Korea.

---

4 This exception applied to national university projects. But national universities, which had been unincorporated divisions of the national government, were incorporated in 2004. The exception under the PFI Act became irrelevant because the restriction does not apply to national university corporations. National university corporations are wholly owned by the national government. This study, therefore, treats national university corporations as under the public sector.
University

The MEXT determines the policy on how to use PFI in the university sector. Its approval is necessary for the implementation of each project.

Government Leadership Roles in the Project

The MEXT determines whether or not the PFI method should be used. Each procurement process is managed by officers in each university.

The Procurement Process

Project Development and Selection of PPP

Feasibility Study

Each university conducted a feasibility study through the engagement of a private consultant.

Publication of Outline before Tender Stage

The PFI Act requires the Procuring Authority to publish an outline (“Implementation Outline”) in advance. The outline should include the following:

- Matters on the selection of the project to be implemented by PFI.
- Matters on the invitation and selection of a private business operator (contractor).
- Matters necessary to ensure the appropriate and reliable implementation of the project, such as the clarification of the responsibilities of private business operators.
- Matters on the location, size, and allocation of the facilities to be procured.
- Matters on the measures to be taken when questions arise over the interpretation of the PFI Contract.
- Matters on measures to be taken when difficulties arise in the continuation of the project.
- Matters on necessary legislative and tax measures, and fiscal and financial support.
- Other matters necessary to enable the implementation of the project.

In the case of the University of Tokyo Communication Plaza Project, the Implementation Outline contained 28 pages. A draft output specifications and a draft PFI Contract are often attached to the Implementation Outline to refine it before the tendering announcement.

Critical Delays

In the University of Tokyo Communication Plaza Project, there was no critical delay.

Selection of Public–Private Partnership

The MEXT determines whether PFI should be used according to its internal criteria in university projects.
Unsolicited Project

There is no unsolicited project in university PFIs.

Stages in Procurement

General statutes relating to the tendering process apply to PFIs. In addition, the PFI Act and the Process Guidelines add special processes for PFI projects. A typical process is as follows:

- **Publication of implementation outline.** See section on Project Development and Selection of PPP.
- **Announcement to use PFI method.** This is required by PFI Act. From the result of the VFM analysis, the Procurement Authority determines whether it will use PFI or not, and announces the result.
- **Tendering announcement.** The output specification and draft PFI Contract are attached to the tendering documents.
- **Question and answer (Q&A).** This is conducted before or after prequalification. In the past, the Q&A was done through written documents, but oral dialogue has recently become more common.

The University of Tokyo Communication Plaza Project had written Q&A sessions before and after prequalification. The following process was undertaken:

- **Prequalification**—The applicants’ ability to implement the project is reviewed.
- **Submission of proposals**
- **Evaluation**—An evaluation committee, which includes external specialists, evaluates proposals.
- **Selection of the successful bidder**
- **Negotiation of the contents of the PFI Contract**—Material terms cannot be changed.
- **Execution of the PFI Contract**

Procurement Timetable

The following is the timetable for the University of Tokyo Communication Plaza Project.

**Publication of Outline**

**2004**

- 28 May: Publication of the implementation outline
- 4 June: Meeting or session to explain the implementation outline
- 7–8 June: Submission of written questions and opinions from potential bidders
- 30 June: Publication of submitted questions and their answers, publication of submitted opinions
- 28 July: Publication of submitted questions and their answers (supplement)
**Announcement to Use PFI Method**

- **12 August**: Announcement to use the PFI method

**Tendering**

- **8 September**: Tendering announcement
- **14 September**: On-site explanation session
- **15–16 September**: Submission of written questions by potential bidders (first phase)
- **4–7 October**: Publication of submitted questions and their answers
- **12–15 October**: Submission of application for prequalification
- **22 October**: Notice of the result of prequalification
- **25–26 October**: Submission of written questions by potential bidders (second phase)
- **16 November**: Publication of submitted questions and their answers
- **3 December**: Publication of submitted questions and their answers (supplement)
- **21–22 December**: Submission of proposals

**2005**

- **27 January**: Hearing on proposals
- **3 February**: Determination and announcement of the successful bidder

**Execution of the PFI Contract**

- **29 March**: Execution of the PFI Contract

**Bid Process**

In the European Union, the relevant directive states that “contracting authorities may provide for the procedure to take place in successive stages in order to reduce the number of solutions to be discussed during the dialogue stage by applying the award criteria in the contract notice or the descriptive document.” There is no similar provision under the PFI Act in Japan. Thus, if the Procuring Authority wishes to reduce the number of bidders, it needs to do it as a prequalification.

In the University of Tokyo Communication Plaza Project, seven consortiums submitted applications for prequalification. All passed. Thereafter, one consortium resigned voluntarily and, as a result, six consortiums submitted proposals. Among the six groups, three groups were led by construction companies. The evaluation committee evaluated proposals and selected the successful bidder.

**Evaluation Criteria**

- As discussed earlier, in principle, after the prequalification, the procuring authorities evaluate proposals only once.
- The weight of price differs by projects.
- Detailed evaluation criteria are attached to tendering documents.
The evaluation criteria for the University of Tokyo Communication Plaza Project included 41 items (scenery, functionality, economic efficiency, construction plan, management ability, soundness of the business plan, funding plan, and others). The successful bidder earned the highest score in non-price evaluation, and proposed the second-lowest price.

Approval Process

After the announcement of the successful bidder, the Procuring Authority and members of the consortium enter into a “basic agreement.” After the execution of the agreement, the consortium creates a special purpose company (SPC). At the same time, the terms of the PFI contract are discussed. However, changes to the draft contract must be minor. After the contract terms are fixed, the Procuring Authority and the newly created SPC enter into the PFI contract. In the case of a project by a local government, the effectiveness of the contract is subject to the approval by its council.

In the University of Tokyo Communication Plaza Project, the result of the evaluation was announced on 3 February 2005. Parties entered into a PFI contract at the end of March, 3 or 4 weeks after the scheduled execution date in the tendering announcement.

Contractual Arrangements

Contractual Arrangements and Obligations

Contracts

(i) Basic Agreement—The agreement is entered into by the Procuring Authority and the consortium members and provides, for example, restrictions on the transfer of shares in the SPC.
(ii) PFI Contract—This is the main agreement of a PFI project entered into by the Procuring Authority and the SPC.
(iii) Loan Agreement—This agreement is entered into by the lenders and the SPC.
(iv) Direct Agreement—This agreement is entered into by the Procuring Authority and the lenders.
(v) Security Agreements—These agreements are entered into by the lenders and the relevant parties of the respective agreements.
(vi) Construction Agreements and Other Agreements with Subcontractors—These agreements are entered into by the SPC, consortium members, and other subcontractors.

Dispute Resolution Mechanisms

Special dispute resolution procedure is not typically provided, but the guidance published in April 2009 (Basic Approaches to Issues on PFI Contracts) suggests adoption of mediation procedure involving a third-party expert.
Penalties

(i) Reduction of Service Charge

For the reduction of service charge due to failure to comply with specifications, a “penalty point system” is usually adopted. The SPC gets penalty points if it fails to comply with the specifications depending on the seriousness of the failure, and if the points reach a certain standard, the service charge is decreased.

In the case of the University of Tokyo Communication Plaza Project,

- For a failure that causes clear and serious interference with the use of the facility by students and staff, the service charge decrease is 20 points;
- If students and staff may use the facility, but there is clear inconvenience, the service charge decrease is 2 points.

If the accumulated points for a service in 6 months reach

- 100, no service charge for the service will be paid,
- 60, 0.6% (per one point) of the charge will be reduced,
- 30, 0.3% (per one point) of the charge will be reduced, and
- less than 30, the service charge will not be reduced.

(ii) Penalty for Termination by Contractor’s Default

If an early termination occurs due to contractor’s default, the contractor needs to pay a penalty. In addition, as practiced in many projects, if the damage exceeds the amount of penalty, the contractor must pay the difference.

In the University of Tokyo Communication Plaza Project, in case of early termination due to the contractor’s default, the contractor must pay the following penalty:

- Before completion of construction: 10% of service charge for construction.
- After completion of construction: 20% of annual service charge for maintenance and operation.
- If actual damage exceeds the above amount, the public sector may seek the difference from the contractor.

Financing Arrangements

In general, the consortium members become shareholders and junior lenders of the SPC, and banks extend senior loans to the SPC. The SPC transfers its right, under the PFI Contract as security, to the senior lenders. Consortium members provide no (or limited) guarantee for securing any loan from the bank.

---

5 We understand that in the United Kingdom, in the case of a termination due to the contractor’s default, the PFI contract is tendered. So the amount that the SPC can receive depends on the result of the tendering. As a result, there is a possibility that the SPC will receive nothing. So it is important for lenders to carefully monitor the performance of the contractor. In Japan, the contractor and lenders can know the penalty in advance, though if actual damage exceeds the above amount, the public sector may seek the difference from the contractor.
The creation of an SPC is not obligated under statutes and guidelines. However, the Contract Guideline assumes that an SPC has been created. Further, tendering documents often obligate the creation of an SPC.

In the University of Tokyo Communication Plaza Project, the creation of an SPC was required under the tendering documents. In addition to consortium members, a security company became a shareholder. Insurance companies extended loans to the SPC.

**Government Support Arrangements**

**Guarantee**

In general, governments do not guarantee the debt of the SPC. Also in the University of Tokyo Communication Plaza Project, the Procuring Authority does not guarantee the debt of SPCs.

**Subsidies**

In the case of national university PFIs, in principle, the national government bore the costs for construction, which were paid as a subsidy from the national government to the national university corporations.

**Sponsor Support Arrangements**

In the University of Tokyo Communication Plaza Project, consortium members made contributions to the SPC as equity. However, details of other sponsor support arrangements are unknown.

**Performance Measures and Regulation**

In general, detailed performance standards are not included in the PFI contract or other documents prepared before the execution of the PFI contract. However, the necessity to present performance standards in advance has been pointed out, and the MEXT is preparing guidance to make it part of the requirements.

**Regulation of Tariff**

In university PFI projects, the private sector contractor does not deliver educational services and the purchaser of the service is the Procuring Authority, which pays the service charges set forth in the PFI contract. Thus, the private sector does not collect tuition from students.

**Outcomes, Issues, and Key Lessons Learned**

**Realized Benefits or Outcomes**

**University PFIs**

Through the implementation of university PFIs, the following were achieved:

- Government successfully decreased costs by contracting design, construction, maintenance, and operation to one entity.
- Government could implement urgent projects earlier.
- Maintenance service level was improved.
The University of Tokyo Communication Plaza Project

Reduction of costs
(i) Consideration of life-cycle cost. The successful bidder submitted innovative solutions for substantially reducing the life-cycle cost. For example, for the purpose of reducing air conditioning costs, the bidder suggested the addition of apprentice that prevents sunlight from entering into the building, and the placement of windows that create certain stream of air. The bidder also suggested materials that enable cleaning costs to be reduced.
(ii) Competition. Competition seemed to lower the bidding price.

Improvement of services
(i) The service in restaurants improved and attracted visitors as well as students. As a result, sales increased.
(ii) High operating rate has been achieved.
(iii) More attractive layout for customers was proposed. For example, in the public sector’s original plan, stores were located at the second floor. The bidder proposed to change the location, and these were determined to be built at the ground floor.

How did the public sector and the private sector cooperate?
It is important to realize that the private sector does not always have sufficient information about operation of universities. The university prepared detailed specifications, including layouts. However, as for some portion, specifications were nonbinding and presented only for reference purpose. The private contractor was able to propose a good solution, which was partially inconsistent with the nonbinding specifications, but consistent with users’ convenience.

If the public sector shows nonbinding specifications, the public sector should be aware that it might be very difficult for bidders to submit proposals that do not comply with the nonbinding specifications, because they are afraid that their suggestions will be against public sector’s requirements. Bidders do not always have enough information to understand correctly the public sector’s intention behind the nonbinding specifications, and thus they do not want to take risks.

Issues in Implementation and Lessons Learned
In 2007, the PFI Promotion Committee published a report on various issues to be addressed. It pointed out, for example, that PFI is burdensome and its benefits are not easy to confirm.

In April 2009, the PFI Promotion Committee published two documents as a part of countermeasures against issues mentioned in the report: the Basic Approaches to Issues on PFI Contracts, and the Basic Approaches to Service Specifications relating to PFI Contracts.

Separately, from 2006 to 2008, the MEXT reviewed university PFI projects, and it determined a new policy. It is also currently discussing the lessons learned in order to provide guidance for service specifications and monitoring. The following are some of the discussions mentioned in these documents.
**Project Value Assessment**

Value for money (VFM) is assessed by comparing the discounted public sector comparator (PSC) with the discounted PFI life-cycle cost (PFI-LCC). However, it is difficult to understand the result of the VFM assessment because of the ambiguity of

(i) estimating the PFI-LCC, which is calculated by the assumption that each cost will decrease by a certain percent (called “reduction rate”), say 10%, through adoption of PFI; and
(ii) determining the discount rate.

Then, as for (i), the MEXT discouraged the use of “reduction rate” without reasonable grounds and as for (ii), the MEXT suggested that in principle, a 10-year average interest rate for the Japanese Government Bond (10 years) should be used as a discount rate.

**Construction Monitoring**

Self-monitoring plays an important role in PFI projects. However, in a PFI project (not in school sector), an accident injured several people when an earthquake hit a defective building.

In another project (not in school sector), a defect was revealed just before the delivery of the building; the parties involved faced difficulties in dealing with it.

Thus, the public sector should closely monitor certain important points.

**Scope of Services**

When the Procuring Authority determines the scope of services, it should consider the following:

(i) Is the private sector able to implement the service?
(ii) Will inclusion of the service be welcomed by potential contractors?
(iii) Will inclusion of the service lead to improvement of services in universities?

Hence, the Procuring Authority should consider whether the private sector has the relevant expertise for that certain project.

The private sector must have the expertise and experiences regarding the service so that it may contribute toward efficiency and improvement of the service. Risk allocation regarding the service must be clear.

---

6 VFM is mainly calculated by the comparison between the PSC and the PFI-LCC. However, please note that even if the PFI-LCC is lower than the PSC, it does not mean that the project is necessary and affordable. Necessity and affordability must be examined separately.

7 Commentary to the Revised VFM Guideline (2007) published by the PFI Promotion Committee also discourages the use of reduction rate without reasonable grounds.
**Measurable Performance**

As for service specification and monitoring, the following issues were pointed out:

- Disagreement regarding the interpretation of service specification,
- It is unclear whether some portions of service specifications (and attachments) are binding, and
- Monitoring standards were not sufficiently presented at the procurement stage.

In response, the Procuring Authority and the private sector had the following discussions:

(i) **Proper project management.** Proper project management is the key to success. For example, the MEXT examines the management team before giving a green light. In a university PFI, it is important to collect opinions from the users. In addition, it is also important to adjust to them. If all opinions are adopted, specifications require facilities that may not be able to be built within the budget.\(^8\)

(ii) **Output specification and input specification.** According to PFI theory, service specifications should be described by “output,” not by “input.” However, a study on university PFIs showed some difficulties in using output specification. Fewer users were satisfied with the service in a project in which output specifications were used compared with projects in which input specifications were used.

As for plant projects such as waste disposal facilities, it is relatively easy to measure service through small number of quantified objective standards. On the other hand, as for accommodation projects, it is difficult to set such standards.

However, we are not stuck on “output specification.” According to the “Basic Approaches to Service Specifications relating to PFI Contracts,” input specification can be used in certain circumstances. When “input” is used, the Procurement Authority must clarify whether the input is binding or is presented for reference purposes only; in the latter case, the corresponding output specification should be clear.

Under the discussion draft of guidance for service specifications in university PFI projects, the following form is suggested.

\[
\begin{array}{|c|c|}
\hline
\text{Output} & (1) \text{AAA (output)} \\
 & (2) \text{BBB (output)} \\
 & (3) \text{CCC (output)} \\
\hline
\text{Input} & (1) \text{AAA (output)} \\
 & (\text{Binding input specifications}) \\
 & (\text{XXX (input)}) \\
 & (2) \text{BBB (output)} \\
 & (\text{Input specifications for reference purpose}) \\
 & (\text{YYY (input)}) \\
 & (\text{ZZZ (input)}) \\
\hline
\end{array}
\]

\(^8\) Please note that even if the project team asks users’ opinion, users do not always consider it seriously at the planning stage. They may become serious once they get the design. It is therefore advisable to consider how to urge users to take it seriously.
(iii) **Satisfaction survey.** User satisfaction surveys are useful. However, users might evaluate services subjectively. In addition, something other than quality of services may affect the result. Thus, the result should not cause any reduction in payments; instead, it should be used, for example, (a) to improve future service, (b) as a bonus, and/or (c) as recovery points that can be used to offset penalty points.9

(iv) **Dialogue.** Service specifications should be clarified through dialogue at the tendering stage.

(v) **Clear monitoring standard.** Monitoring items, criteria, and linkage with payment should be clarified.

(vi) **Construction and maintenance data.** For the purpose of proper maintenance after the expiration of the PFI Contract, construction and maintenance data should be maintained and transferred to the public upon the expiration date.

**Competition (in Rehabilitation and Operate Projects)**

In some university PFI projects, a Rehabilitation and Operate scheme was adopted. However, it was difficult to create competition because

- room for innovative solutions is small, and
- such projects are risky for the private sector because of the possibility of hidden defects.

The MEXT then decided to use the Rehabilitation and Operate scheme only in limited circumstances.

**Future Perspective of University PFIs**

So far, there have been about 30 university PFI projects. In 2003, there were 14 projects and 10 in 2004. From 2005, there has been only one project per year. One reason for the decrease is the budget. Because these are mainly sponsored by the public sector, PFI-related expenses are expected to reach about 20% of the budget for university facilities. Then the MEXT changed its policy.

Under the new policy, public sector tries to promote

(i) PFIs with no or limited payment of service charge by government, such as a dormitory, parking, welfare service facilities, and industry–university cooperation facility, that is, projects financed by the operating income of the private sector (rent fees, usage fees); and

(ii) PFIs financed by university corporations’ revenue other than subsidies from MEXT (e.g., charity funds, utilization other than subsidy system, and operating income).

A combination scheme has also been suggested. Under the combination scheme, the space for project research will be funded by rent fees from research funds (BOT), and the space for basic research and education will be funded by government subsidy (BTO).

In 2009, outlines of three national university PFIs—all of which adopted the combination scheme—were published.

---

9 But some insist that payment should be reduced based on the result of a satisfaction survey.
Key Words and Metadata

List of Key Words and Metadata for Searching the Document
• School and/or university
• Government-sponsored project
• Build–transfer–operate (BTO)
• Interface risk
• Flexibility
• Output specification and input specification

List of Phrases and Key Points
In some PPP projects, including university PFIs, the public sector provides core services in the facility provided by the private sector. The PPP theories under plant projects do not always work. The project management team must collect the opinions of users before preparing output specifications, and carefully examines which opinions should be adopted.

The Procurement Authority should carefully consider what kinds of services should be included in the project.

Making measurable specification is the key to success. Service specification should be described by “input” in some circumstances.

In a government-sponsored project, the improvement of service does not lead to the benefit of the contractor, thus, it is desirable to incorporate an incentive. User satisfaction surveys may be useful, but if the result causes the reduction of the service charge, it may become an excessive burden on the contractor.

Project Reference and Sources
Documents Published by the PFI Promotion Committee of the Cabinet Office
• http://www8.cao.go.jp/pfi/guideline.html
  The Process Guideline
  The Risk Allocation Guideline
  VFM Guideline
  Contract Guideline
  Monitoring Guideline
• http://www8.cao.go.jp/pfi/basicapproaches.html
  Basic Approaches to Issues on PFI Contracts
  Basic Approaches to Service Specifications relating to PFI Contracts

University of Tokyo Communication Plaza Project
• www.u-tokyo.ac.jp/fac01/b07_03_01_j.html
  Tendering documents

Other Resources
• http://www8.cao.go.jp/pfi/e/home.html
Project Summary

Background

Gyung-gi Province is one of the largest growing metropolitan areas where, every year, thousands of new students from other places come here to study. It is located in the capital region of the Republic of Korea with about 20 million population. Thus, the demand for new schools has increased drastically over time. In 2005, the Gyung-gi Education Office introduced a build–transfer–lease (BTL) scheme for public schools to resolve budget constraint and to provide high-quality service in a timely manner. Anhwa High School is one of the early BTL school projects that was highly successful.

Issues to Be Addressed

Changes in the education environment in the Republic of Korea led to the introduction of a new type of public service provision system, such as the BTL. The main issues in school facility provision are as follows:

• Demand for diversified school facility models
• Demand for additional school facilities to meet expanding students’ needs
• Increased number of students and class sizes
• Increased number of worn-out school facilities

Project Objectives

The key objectives of the projects were to

• rapidly improve the quality and efficiency of public school service,
• provide school service on time, and
• Encourage the cooperation between the Local Education Office and the private company (Concessionaire).

Timetable Overview

• 2005: Announce the request for proposal (RFP)
• 2006: Select the concessionaire and groundbreaking
• 2007: Complete the construction work and operate the facility

Why a Public–Private Partnership

The annualized payment of small sums of money has the effect of dispersing the government’s fiscal burdens over a long period, which enables the government to provide core services to the public and to cope up flexibly with the occurrence of
abrupt demand for school facilities without having to shoulder excessive burdens. Through a public–private partnership (PPP) scheme, the government can launch projects for the construction of new schools, where demand is growing due to the increasing development of housing complexes and new towns resulting in more population and, hence, increased students. Also, a PPP scheme can sharply improve backward educational conditions by improving worn-out school facilities built a long time ago, and facilitate the construction of additional gymnasiums to meet the increasing demand of students and parents.

By drastically easing the burden on short-term investments in educational facilities, the government is able to make the most of its secured financial resources by utilizing these for other purposes related to educational competitiveness and welfare—including educational support for low-income students, reeducation of teachers, and school health guidance—and helping to enhance the efficiency of the government’s fiscal operation.

The shift in project implementation—from the initiative of public agencies to private companies with various experiences in construction and operations know-how—can help to enhance the value for money (VFM) in the overall construction and operation of school facilities. By promoting BTL projects, government agencies can limit their roles to minimal management, such as overall planning and monitoring, while leaving most of the essential procedures—including raising financial resources, designing, construction supervision, and maintenance management—to the private sector. In the past, the Education Offices had directly managed or entrusted to others the management of school facilities at post-construction stage. Under the BTL system, however, a private firm specializing in facility management either takes part in the project or takes exclusive responsibility of the post-construction management. Such enlarged roles of the private sector concessionaires in the entire project structure help to enhance the overall project efficiency.

**Public–Private Partnership Contract Type**

A BTL project—a form of public–private partnership investment that had not been previously practiced in the Republic of Korea—is a project implementation scheme in which private contractors invest capital to build public facilities, lease them out to the government, and retrieve investment costs by collecting leasing fees. Private concessionaires transfer the facilities’ ownership to the government upon completion, and yet retain the right to use the facilities and realize profits from them for a given period. Private concessionaires not only take the responsibility of designing and building the facilities but also provide the government with operation services for a long period (20 years or more). In other words, the government provides public services to the people in the form of purchasing the facilities from private concessionaires, as well as their operations services.

**Assets to Be Delivered**

- 5-storey school buildings—reinforced concrete-filled steel frame
- 50 classrooms
- Multipurpose auditorium
• Science laboratory, language laboratory, and computer laboratory
• Music room, faculty lounge, art room, faculty and student study room, and others

Services to Be Delivered
• School maintenance and repair
• Security and safety services
• Technology support service
• Building management and others

Legal, Regulatory, and Institutional Framework

Legislation, Policy, and Regulatory Framework
The 44 types of facility, including school and university dormitory, are defined in the Article of the Act of Private Participation in Infrastructure. The facilities are national and public facilities that the central or local government is obligated to provide as basic necessity to the people. The central and local governments are investing in these facilities out of their budgets. The ownership, obtained by the private concessionaire at the time the bid is awarded, is transferred to the central or local government at the completion of construction.

Institutional Framework: The Concession Process
In general, a school BTL project is implemented according to the following framework:

(i) Preparation of the project proposal.
(ii) Conduct of a Feasibility Study and a VFM test.
(iii) Submission of the project proposal, determination of investment ceiling, and National Assembly endorsement.
(iv) Formulation and announcement of the project plan.
(v) Evaluation of the project proposal and designation of potential concessionaire.
(vi) Conclusion of concession agreement, and others.

Government Leadership Roles in the Project

Ministry of Strategy and Finance
• In-charge of the overall system of establishing the basic plan for PPP and BTL projects.
• Conducts preliminary feasibility study and VFM test for PPP projects (for those with a total project cost of K50 billion or more).
• Formulates guidelines in determining the ceiling for lease-type PPP projects in the following year.
• Compiles budgetary requirements from related ministries, fixes BTL project ceiling for the following year, and submits them to the National Assembly.
**Competent Authorities (Education Offices and/or Ministry of Education, Science and Technology)**

The major roles of the competent authorities (Kyung-gi Province Education Offices) in BTL educational facilities are as follows:

- Designate potential PPP projects and conduct feasibility study.
- Formulate the RFP for facility projects and make a public announcement of the same.
- Evaluate project proposals.
- Select potential concessionaire and conduct negotiations for the concession agreement.
- Sign concession agreements and designate the Concessionaire.
- Approve the Detailed Engineering and Design Plan for Implementation (DEDPI), including supervision of the post-construction management, and others.

**Stakeholder Consultation with the General Public**

Specialized institutions (such as the Korea Development Institute's [KDI] Public and Private Infrastructure Investment Management Center [PIMAC] and/or Support Center for PPP Projects for Educational Facility) consult the BTL management and implement the VFM test.

**KDI’s Public and Private Infrastructure Investment Management Center**

The KDI PIMAC is a specialized institution supporting the management roles of the entire range of PPP projects, including build–transfer–operate (BTO) and BTL projects. It prepares and presents implementation guidelines, including VFM tests, the basic plan for facility projects, and standard agreements to help maintain objectivity and transparency in all PPP projects. The major roles of the KDI PIMAC are as follows:

- Identifies the target facilities for PPP projects and conducts feasibility studies;
- Formulates and supports the basic plans for PPP projects;
- Undertakes the process of designating the Concessionaire, including the study and evaluation of PPP project proposals, and signing of agreement;
- Conducts a study to improve PPP project system and other related matters;
- Compiles and announces statistics on the overall operation status of PPP projects; and
- Provides consultancy services for foreign investors, and undertakes supporting activities to draw foreign capital, including press relations activities for PPP projects.

**Support Center for PPP Projects for Educational Facilities of the Korea Educational Development Institute**

This center is under the wing of the Ministry of Education, Science and Technology and its task is to support the various works related to BTL projects for educational facilities conducted by the Ministry of Education, Science and Technology and the Education Offices as competent authorities. It conducts the VFM test of individual projects, supports negotiations and agreement signing, and is also responsible for making and studying RFPs.
The Procurement Process

Stages in a Procurement Process

Selection of a Project and Value For Money Test

Legal appropriateness

The Regional Office of Education must confirm that the school facilities project is a project pursuant to Article 2 of the Act on Public Private Partnerships. It must also confirm that the facilities provide essential services that the government has a general obligation to provide to the people. However, in the case of private elementary, middle schools, and high schools, even if the government does not have ownership of these, the fact that the same functions as public educational institutions are being performed is taken into account. Since 2009, led by the Regional Office of Education, private school facility projects can be pursued in a method similar to BTL, thus expanding the scope of investments possible in educational facilities.

Economic and financial feasibility

For educational facilities, rather than pursue these projects with public funds, implementing them through BTL, in cooperation with the private sector, should lead to net economic advantages. BTL targets projects for which fees cannot be imposed on the final user due to particular financial aspects, or for which cannot obtain sufficient funds for project implementation.

Feasibility study and value for money test

Before designating certain educational facilities as PPP projects, the Regional Office of Education must request an expert agency (i.e., the Educational Facilities Private Investment Support Center) to conduct a feasibility analysis of the particular project, as well as a VFM test.

Evaluation of project proposal

After the project is endorsed as an essential service that must be provided by the government, the government announces the RFP. Once PPP proposals—pursuant to the government’s RFP announcement—are submitted by private concessionaires, the Regional Office of Education shall establish an evaluation plan that encompasses the evaluation schedule, place, security measures, and evaluation criteria. It shall then entrust the evaluation to a professional agency (e.g., EDUMAC), or directly engage in the evaluation by commissioning an evaluator.

Negotiation and selection of concessionaire

If a preferred bidder is selected as a result of evaluation, negotiations shall begin between the Concessionaire and the Competent Authority for the formulation of an implementation agreement. The following criteria shall be considered during the negotiations and in the formation of a negotiation team:

- Overview of project proposal
  - Review RFP, evaluation report, project proposal.
  - Review major expected issues, such as areas that do not reflect required performance standards.
• Formation of a negotiation team
  – Form a negotiation team consisting of domestic and foreign experts for each area.
  – Conduct negotiations in dual form—working level negotiations and main negotiations.
• Establishment of negotiation objectives
  – Prepare draft implementation agreement.
  – Simplify negotiation objectives.
  – Prepare check list to reflect items in negotiations or agreement.
  – Establish general objectives regarding price and technology (quality), taking into account the VFM test, required performance standards, etc.
  – Establish negotiation deadlines.
• Conduct of negotiations
  – Present and discuss areas reviewed.
  – Restate required performance standards (if difficult to state explicitly, reflect in execution design).
  – Implement review of price and technology (quality).
• Conclusion of negotiations and formulation of concession agreement
  – Based on the standard version of the concession agreement, reflect the information disclosed in the RFP and its intent, and revise and supplement with items agreed upon among the agreement parties.
  – Based on the concession agreement (draft), go through the review by the local government’s deliberation committee, to formulate a concession between the competent authority and preferred bidder.
  – After a concession agreement has been formulated, the competent authority designates the preferred bidder as a concessionaire and notifies the concessionaire of that fact.

Approval of project and completion of construction
The Concessionaire shall request for the approval from the Competent Authority and complete the construction of the project.

Project operation phase
During the contract term, the private party shall manage the facility.

Evaluation Criteria

Phase 1: Prequalification Evaluation
• Apply the prequalification (PQ) disqualification system based on the financial and technical capabilities of bidders.
• Select qualified proposals from bidders with capabilities in design, construction, financing, operation, and other requirements.

Phase 2: Evaluation of a Project Proposal
• Technology evaluation and price evaluation are conducted separately. The scores from these two areas are added together to determine the rankings of preferred bidders.
  – Technology Evaluation
    – Apply the disqualification system for technological standards (based on design, construction, maintenance and/or repair performance specifications).
– Assess technological factors such as construction, operation plan, and others.

• Price Evaluation
  – Apply the price disqualification system for project cost.
  – Evaluate government payments consisting of lease fees and operation costs.

**Contractual Arrangements**

**Contractual Arrangements and Obligations**

In general, the Anhwa High School project follows the BTL standard contract form that is provided by PIMAC.

**Performance Measures and Regulation**

The VFM test results were as follows:

(Unit: W1 million)

<table>
<thead>
<tr>
<th></th>
<th>Public Sector Comparator</th>
<th>Private Finance Initiative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction cost</td>
<td>8,744</td>
<td>8,222</td>
</tr>
<tr>
<td>Supervision cost</td>
<td>316</td>
<td>302</td>
</tr>
<tr>
<td>Equipment</td>
<td>431</td>
<td>464</td>
</tr>
<tr>
<td>Financial cost</td>
<td>2,207</td>
<td>566</td>
</tr>
<tr>
<td>Operation cost</td>
<td>6,175</td>
<td>5,983</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17,876</strong></td>
<td><strong>15,536</strong></td>
</tr>
</tbody>
</table>

Source: Internal data of PIMAC, KDI.

**Regulation of Tariff**

A school built through a BTL scheme is a public school. Thus, school tuition decision is not based on market price.

**Outcomes, Issues, and Key Lessons Learned**

**Realized Benefits or Outcomes**

• School service is delivered on time.
• Student and parents have the chance to get better facility and enjoy relatively smaller-sized class.
• Government can get VFM through the BTL scheme.
• A total of 137 BTL projects that will expand or rebuild elementary, middle, and high school facilities were going on as of December 2007 with an aggregate investment of W5.31 trillion. Approximately W1.3 trillion was invested in 38 projects in 2005, the first year the BTL method was introduced. Investment in 58 projects peaked at W2.4 trillion in 2006 before falling a bit back to W1.6 trillion in 41 projects in 2007. This reflects a more or less downward
trend since 2007, compared with 2006 when the government encouraged BTL projects to make up for sluggish investment.

Key Words and Metadata

List of Key Words and Metadata for Searching the Document

- BTL school
- VFM test
- Feasibility test
Port Project of the Republic of Korea

Project Summary

Background

Scope of the Study

This study tries to provide useful information for other Asian countries wanting to expand their port facilities through private capital by sharing the Republic of Korea’s experience in the course of promoting its public–private partnership (PPP) projects to expand port facilities. In addition, it hopes to help Asian neighbor countries promote their own PPP projects for port development by presenting points that deserve special attention—based on the case study of the Busan New Port, a solicited build–transfer–operate (BTO) project.

Geographic Location

The city of Busan plans to establish itself as the international logistics hub of Northeast Asia and as the domestic business center of Southeast Korea. This is achievable as Busan is located strategically in the active and fast-growing Northeast Asia region and will be able to capture the trade from the Eurasian Continent and the Pacific Rim.

Economic Environment

The Republic of Korea has maintained an average annual growth rate of 7.3% from 1971 to 2002. In 2002, the nominal gross domestic product stood at $476.6 billion, the 12th largest in the world, and its gross national income per capita was $10,103, the 26th highest. Though there was a period of contraction during the economic crisis of 1997, the Republic of Korea was soon back on track, sustaining an average growth rate of 6.5% per annum over the last 12 years from 1990 onward. Such a record of growth could only be compared with the People’s Republic of China (10.1%) and Singapore (9.7%). All economic indicators identify the Republic of Korea as a stable country with stable employment and inflation, as risks appear to be low. Most importantly, the country has illustrated solid gross domestic product growth with economists forecasting the growth trend to continue.

Social Environment

Busan, the second largest city in the Republic of Korea, accommodates close to 10 million people within 1 hour of its boundaries. With such a large population base, Busan is an attractive center for container cargo activity, accommodating a larger indigenous market, in addition to the existing transshipment activity.
Political Environment

This project is implemented as one of the three National Policy Projects (Incheon International Airport and Seoul–Busan High Speed Railway are the others) designated in March 1994. As a result, this project has received strong government support, such as construction subsidy, compensation of a portion of excessive foreign exchange loss, and others. The project is driven by the shortage of container-handling capacity in the Republic of Korea and in the region as market projections for Northeast Asia, including the People’s Republic of China, Japan, and the Russian Federation, by the government and independent international consultants indicate that container traffic demand in the region will continue to outstrip the new capacity additions.

Issues to Be Addressed

As the Busan New Port Project was announced as a part of the Basic Plans for PPP of 1996 and implemented when a private investment mechanism was being first introduced, the authorities should have done more sufficient research and reviews in designating the projects. However, as a tool for feasibility studies was not properly in place then, and the need for such studies was not institutionally obligatory, the line ministries did not have to take the trouble of conducting such studies that will incur additional budget. Instead, they designated these two projects, relying mainly on the intent of participation of private companies, and on the judicious judgment of relevant government agencies. Consequently, the projects were subject to trials and errors due to external variables, in the absence of preemptive measures to check potential barriers, and stave them off well in advance in the course of their implementation.

As a result, the project underwent across-the-board renegotiations on reduction of their scales, prior determination of total costs, and guarantee of operational proceeds. Such drastic renegotiations were inescapable due to an economic crisis triggered by a shortage of foreign currency reserves. The specifics of the agreements between the government and the private participants appeared to remain quite vulnerable to the unexpected economic crisis. The scale of building 24 berths was great, and the decision to fix the total cost, the period of using the port as free of charge, and the level of cargo-handling charges after construction completion left the project cost-dependent upon any minor external economic changes, thus creating conflicts between the government and the private sector.

Project Objectives

The objective of the Government of the Republic of Korea is to develop highly productive and efficient, world-class port facilities at Busan to

- alleviate the imminent shortage of container port capacity for handling the growth of import and export containers for the Republic of Korea’s industries and consumers; and
- serve the need for a high-volume transshipment and distribution hub, serving the People’s Republic of China, Japan, the Republic of Korea, and the Russian Federation.
### Timetable Overview

<table>
<thead>
<tr>
<th>Date</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 March 1996</td>
<td>Designated as a public–private partnership project</td>
</tr>
<tr>
<td>25 September 1996</td>
<td>Announcement of Request For Proposal (RFP)</td>
</tr>
<tr>
<td>September–December 1996</td>
<td>Preparation of project proposal</td>
</tr>
<tr>
<td>24 December 1996</td>
<td>Submission of project proposal</td>
</tr>
<tr>
<td>December 1996–January 1997</td>
<td>Evaluation of project proposal</td>
</tr>
<tr>
<td>9 January 1997</td>
<td>Selection of preferred bidder</td>
</tr>
<tr>
<td>30 June 1997</td>
<td>Signing of Concession Agreement</td>
</tr>
<tr>
<td>5 September 1997</td>
<td>Establishment of the Pusan Newport Co.</td>
</tr>
<tr>
<td>May 1999</td>
<td>Conduct of a preliminary feasibility study</td>
</tr>
<tr>
<td>29 June 1999</td>
<td>Submission and request for approval of Detailed Engineering and Design Plan for Implementation (DEDPI)</td>
</tr>
<tr>
<td>December 2000</td>
<td>Signing of Amended Concession Agreement (because of Amendment of PPP Act)</td>
</tr>
<tr>
<td>November 2001</td>
<td>Commencement of construction (Phase 1-1)</td>
</tr>
<tr>
<td>December 2004</td>
<td>Signing of financial agreement</td>
</tr>
<tr>
<td>January 2005</td>
<td>Commencement of construction (Phase 1-2)</td>
</tr>
<tr>
<td>January 2007</td>
<td>Construction completion confirmation and registration of management and operation rights (Phase 1-1)</td>
</tr>
<tr>
<td>May 2009</td>
<td>Construction completion confirmation and registration of management and operation rights (Phase 1-2)</td>
</tr>
</tbody>
</table>

### Why a Public–Private Partnership

The existing port facilities and government-led expansion of port facilities ran into limitations in handling the rapidly increasing cargo volumes. Since the high economic growth in the 1970s, followed by a more stable but steady expansion in the 1980s, the transport volume has surged steeply, forcing the government to establish basic plans for the systematic development and management of ports. Yet, such effort cannot meet the transport volume without the timely expansion of port facilities. The enactment of the Act on PPP in the late 1990s was aimed at expanding infrastructure, including port facilities, by attracting private capital.

As a result, Phase 1 of the Busan New Port Project was announced as a part of the Basic Plans for PPP of 1996. It was implemented as a PPP Project in order to supply port facilities in a timely manner and take advantage of the private sector’s expertise and creativity.

### Public–Private Partnership Contract Type

The Busan New Port Project is a solicited BTO project. The project concessionaire, the Pusan Newport Co., designs, builds, finances, and operates the facility. Upon construction completion of the port facility, the Concessionaire will return the
ownership to the government first and operate it later after obtaining the rights from the government to manage and operate it, for a given period of 50 years.

**Assets to Be Delivered**

The Concessionaire is obliged to design, build, finance, and operate the project facility (consisting of 9 berths with 3,200 meters of contiguous quay and a 600-meter small craft wharf). All requirements necessary to meet and maintain the project during a concession period of 50 years are written in the Concession Agreement. The government develops the support infrastructure and provides the project land rent-free during the period.

**Services to Be Delivered**

The government announced its intentions to increase the Republic of Korea’s container capacity through expansion of existing facilities and construction of new terminals in Busan and Kwangyang. According to the plan, stevedoring capacity is forecast to increase to 32 million twenty-foot equivalent units (TEUs) by 2020. Of the 32 million TEUs, nearly 40% is being built as the Busan New Port Project. Phase 1-1 is expected to reach its handling throughput of 3.375 million TEUs in 2009 while the entire Phase 1 will reach its handling throughput of 5.375 million TEUs by 2011.

**Legal, Regulatory, and Institutional Framework**

**Legislation, Policy, and Regulatory Framework**

**Legal Framework**

The legal framework of the Korean PPP system was first designed in 1994 with the enactment of “The Act on Promotion of Private Capital Investment in Social Overhead Capital.” The overall revision of the act into “Act on Private Participation in Infrastructure (PPP Act)” took place in 1999 after the financial crisis, where the revised act strengthened risk-sharing mechanisms such as minimum revenue guarantee (MRG), buyout right, and sharing of foreign exchange rate risk. Sharing of part of the project risks by the government greatly contributed to encouraging private sector participation in infrastructure development. The PPP Act was amended again in 2005.
The PPP Act and the Enforcement Decree—the principal components of the legal framework for PPPs—clearly define eligible infrastructure types, procurement types, procurement process, the roles of the public and private parties, policy supports, and others. Since the PPP Act is a special act that precedes other acts, it exempts PPP projects from strict government regulation in national property management, and allows a special purpose company (SPC) to play the role of a competent authority. The continuous development of the act and its related regulations demonstrate a strong commitment on the part of the government to strengthen private sector’s confidence in the PPP.

**Basic Plans and Guidelines**

Under the PPP Act, the Basic Plans for PPP and PPP Implementation Guidelines are formulated that address, in detail, policy directions, procurement steps, and government supports. The Basic Plans provides the PPP policy directions, details in PPP project implementation procedure, and others. Some examples of guidelines are the guideline for value for money (VFM) test, guideline for request for proposal (RFP) preparation, and others. The Basic Plans and PPP Implementation Guidelines are annually updated according to other relevant changes and market conditions.

**Port Development by the PPP Act**

The development of ports according to the PPP Act is possible through all methods of projects. Article 4 of the PPP Act classified the implementation scheme of PPP projects into six types—BTO, build–transfer–lease (BTL), build–operate–transfer (BOT), and build–own–operate (BOO) schemes—and other schemes stipulated in the Basic Plans for PPP, which are recognized and approved or proposed by competent authorities. As the Basic Plans enumerates others, there are actually no limitations to the schemes of implementation. The Government of the Republic of Korea implemented all of its port projects on a BTO scheme. There have been no cases of promoting BTL for port development projects because the Republic of Korea has a system very similar to BTL—non-competent authorities’ port construction system based on the Act on Port.

**Institutional Framework: The Concession Process**

**PPP Review Committee**

Under the PPP Act, the PPP Review Committee (PRC) is organized and managed by the Ministry of Strategy and Finance (MOSF). The PRC deliberates on the establishment of major PPP policies and key decisions in the process of implementing large-scale PPP projects. The committee members are composed of the Minister of Finance and Strategy (chairperson), vice ministers of line ministries in charge of implementing PPP projects, and private sector experts with knowledge and experience in PPP.

The main responsibilities of the PRC are to deliberate on the

- establishment of major PPP policies,
- establishment and modification of the Basic Plans for PPP,
- designation and cancellation of large PPP projects (total project cost with W200 billion or above),
- formulation and modification of the RFP for a large PPP project,
- designation of a Concessionaire of a large PPP project, and
- other matters for the active promotion of the PPPs.
Public and Private Infrastructure Investment Management Center

To provide comprehensive and professional support for the implementation of PPP projects, the Public and Private Infrastructure Investment Management Center (PIMAC) was established under the PPP Act. The mission and roles of PIMAC prescribed in the PPP Enforcement Decree include: (i) supporting the MOSF in the formulation of the Basic Plans for PPP, (ii) supporting the competent authorities and ministries in the procurement process, (iii) promoting foreign investment in PPP projects through consultation services and other related activities, and (iv) developing and operating capacity-building programs for public sector practitioners. It also develops implementation guidelines for the efficient and consistent implementation of PPP projects.

Government Leadership Roles in the Project

Ministry of Strategy and Finance

The major government players in the PPP program include the MOSF and the concerned line ministries. The MOSF is responsible for managing the PPP Act, Enforcement Decree, and the Basic Plans for PPP, as well as preparing the draft budget for PPPs. An important issue concerning the interplay among MOSF and the line ministries is that of fiscal discipline. The budget process has generally taken a highly centralized, strategic, dominance-based approach. The MOSF plays a central role in budgeting as well as in preparing and implementing PPP investment plans. Often, the main budgeting decisions are made in bilateral negotiations between the MOSF and the spending ministry. Given that PPPs involve both the government and the private sector, and that the line ministries are the initial contact points, the MOSF often has trouble in managing PPP projects. Therefore, the MOSF exercises tight control on public expenditures in the implementation stage. Ministries are required to spend within the limits set in the quarterly budget implementation plan. When deemed necessary, the MOSF is able to postpone or block part of the PPP expenditures.

Ministry of Maritime Affairs and Fisheries (now Ministry of Land, Transport and Maritime Affairs)

In a PPP project, it is the responsibility of the Ministry of Land, Transportation and Maritime Affairs (MLTM) to carry out a port PPP project as a line ministry. The MLTM is in charge of doing feasibility studies in advance to designate potential PPP projects. According to the result of feasibility studies, the MLTM designates them as potential PPP projects, and then move on to formulate and announces RFPs. After receiving project proposals, the MLTM checks basic items before selecting an evaluation agency and referring them to it. Based upon the report on evaluation results, the MLTM designates the preferred bidder with which to initiate negotiation. The MLTM is expected to approve the Detailed Engineering and Design Plan for Implementation (DEDPI) submitted by the designated concessionaire before the construction and operation period.

The Procurement Process

Project Development and Selection of Public–Private Partnership

The project is driven by the shortage of container handling capacity in the Republic of Korea and the region, and market projections—for Northeast Asia including the
People’s Republic of China, Japan, and the Russian Federation—by the government and independent international consultants indicating that container traffic demand in the region will continue to outstrip the new capacity additions.

In 1996, the Government of the Republic of Korea announced the Busan New Port Project as a solicited BTO project to be developed by the private sector, and eligible for special tax considerations and subsidies. Its objective was to develop Busan as the major national port for the Republic of Korea, and as the primary international hub port for container traffic in the Northeast Asia region. In 1997, through a competitive bidding process, the Pusan Newport Co. (PNC), Ltd. was awarded a 50-year concession to build and operate a container mega-port and transshipment hub at a “greenfield” site at the west side of Busan. The government committed to develop the waterside and landside infrastructure such as access road, etc., to support the new port, and commenced constructing the breakwater and embankment for dredged soil that year.

The PNC conducted an economic, engineering, and operations feasibility study of the project in 1999, and submitted a completed DEDPI to the government for approval. The Concessionaire and the government entered into the stage of Concession Agreement in 14 December 2000.

**Stages in Procurement**

The PPP Act and the Enforcement Decree regulate general procurement procedure for PPP projects. The Basic Plans for PPP formulated under the act provides detailed implementation process by project types and initiation. The procurement procedure below is applied in a BTO Solicited Project.

**Step 1: Designation of PPP Project**

The Competent Authority develops a PPP project plan by considering its investment priority and the characteristics of the project.

**Step 2: Announcement of Request for Proposals (RFP)**

The Competent Authority formulates the RFP with relevant authorities’ opinion, and publicly announces an RFP within 1 year from its project designation.

**Step 3: Submission of Project Proposals**

Private parties submit project proposals to the Competent Authority in accordance with the contents of the RFP, the PPP Act, and related regulations.

**Step 4: Bid Evaluation and Selection of Preferred Bidder**

The Competent Authority forms an evaluation team with external experts to evaluate proposal bids according to the criteria specified in the RFP.

**Step 5: Negotiation and Contract Award**

The Competent Authority negotiates with a preferred bidder on the details of contract terms and designates the bidder as a Concessionaire to finalize the negotiation for a PPP contract.
Step 6: Approval of the Detailed Engineering and Design Plan for Implementation (DEDPI)

The concessionaire formulates the DEDPI based on the PPP contract and applies to the Competent Authority for the approval of the plan within 1 year from its designation as Concessionaire.

Step 7: Construction and Operation

Once the Competent Authority approves the DEDPI, the Concessionaire commences the construction of PPP facilities according to the schedule specified in the DEDPI.

Procurement Timetable

The following is the timetable for the Busan New Port Project:

- March 1996 – Designation and announcement of the project as PPP
- September 1996 – Formulation and announcement of an RFP
- December 1996 – Submission of project proposal
- January 1997 – Selection of the preferred bidder
- June 1997 – Signing of the Concession Agreement
- September 1997 – Establishment of the Pusan Newport Co.
- June 1999 – Submission and approval of DEDPI
- December 2000 – Signing of the Amended Concession Agreement (because of Amendment of PPP Act)
- November 2001 – Commencement of construction (Phase 1-1)
- December 2004 – Signing of the Financial Agreement
- January 2005 – Commencement of construction (Phase 1-2)
- January 2007 – Completion confirmation and registration of management and operation rights (Phase 1-1)
- May 2009 – Completion confirmation and registration of management and operation rights (Phase 1-2)

Bid Process

Since the private investment mechanism was still being introduced, only a few investors from the private sector applied for a PPP project, and the government as well had not yet provided a well-developed bidder selection procedure. For the Busan New Port Project, only one consortium submitted a project proposal and this was selected as the preferred bidder. It took only 2 weeks to process—from the submission of project proposal to the designation of the preferred bidder.

Evaluation Criteria

The Competent Authority forms an evaluation team with external experts to evaluate bid proposals according to the criteria specified in the RFP. The evaluation is conducted in two stages—the prequalification (PQ) evaluation stage and the evaluation of technical and price elements.

1st Stage—Prequalification Evaluation

The basic capacities of bidders to design, build, finance, and operate (DBFO) the project are evaluated. Only bidders who satisfy the PQ requirement can proceed to the second stage for technical and price evaluations.
2nd Stage—Evaluation of Technology and Price

The elements for PQ—minimum level of qualification and capability—are not included for evaluation. Total evaluation scores are adequately distributed between technical and price elements. The categories to be evaluated and weights of particular categories are adjusted by the competent authorities, considering the characteristics of the specific project. For example, for the project that requires relatively low level of technology and management capacity, more weight should be given to price than technical elements. Evaluation criteria should be formulated in a way that they are objective, mutually exclusive, and stimulates competition.

The Competent Authority selects a preferred bidder based on the result of the evaluation. It should select at least two potential concessionaires in case the negotiation with a preferred bidder fails.

Approval Process

Negotiation and Contract Award

After the evaluation, the Competent Authority negotiates with a preferred bidder on details of contract terms. Generally, it forms a negotiation team including external legal, financial, and engineering experts to negotiate with a private sector partner. The government negotiation group is divided into a main negotiation team and a working-level negotiation team, with each being composed of one to two officials for individual sectors: demand, construction planning, project management and operation, and financing. The Competent Authority may request the PIMAC for its support as a team leader or advisor in negotiation. The scope of negotiations covers all matters in a proposal. Negotiations are conducted by issue, and a final draft agreement is sent to the organizer of negotiations—the Ministry of Land, Transport and Maritime Affairs—where it is deliberated by the PPP Review Committee. The agreement is finalized after being signed and sealed by the negotiating parties.

Issues and Delays

Different projects may have different points at issue, which include estimation of construction cost, determination of return on investment, appropriateness of demand estimation, security and restitution of revenues from user fees, and others. The levels of quantity demanded and user fees are matters of vital importance with no reliable general criteria to be applied, however, they constitute points at issue in all PPP projects in port facilities. The reason is that construction subsidies are determined and merits of projects are judged from the levels of quantity demanded or user fees. Negotiations used to last from 1 year to more than 3 or 4 years. Prompt negotiations benefit all the parties of negotiations: concessionaires are able to cut down on their negotiation expenses, and a reduced negotiation period helps the government complete construction at the right time.

For efficient management of negotiation, a negotiation period may be specified in the RFP in advance. It may be extended for one time, but both parties should strive to complete the negotiation in a timely manner. Any delay between appointment of a preferred bidder and contract award almost inevitably leads to increase in project costs, hence, a rise in user fee or government subsidy. To prevent the delay, it is critical for the Competent Authority to adequately prepare project plans and a detailed RFP before initiating the bidding process. When the negotiation fails to be
completed within the specified period, necessary countermeasures should be taken, such as initiating a negotiation with the next preferred bidder, re-announcing the RFP, or nullifying the designation of a PPP project. The Competent Authority designates a preferred bidder as a concessionaire when finalizing the negotiation for the PPP contract.

Phase 1 of the Busan New Port Project was designated as a potential PPP project in March 1996, and a preferred bidder was selected in January 1997. The original Concession Agreement was signed in June of the same year, meaning negotiations were done in 6 months. Since the average negotiation period of PPP projects is from 1 year to more than 3 or 4 years, the project can be said to have executed the contract within a short time.

**Contractual Arrangements**

**Contractual Arrangements and Obligations**

**Rights and Obligations**

The Concession Agreement (CA) gives the Pusan Newport Co. (PNC) the following key rights:

- The right to develop, finance, and construct the project;
- The right of free use of the national or public properties located within the project construction site;
- The right to use the terminal facilities for 50 years and to collect a reasonable tariff from users of the terminal facilities;
- The right to engage in stevedoring and container repairing businesses; and
- The right to sell or lease the Support Area or to carry out the businesses of constructing, managing, operating, selling, or leasing related facilities within the area.

In return, the CA obliges the PNC with the following:

- To implement Phase 1 and develop the Support Area,
- To transfer the ownership of the terminal facilities (excluding operating equipment) to the government upon completion but retain the right to commercially operate them for 50 years, and
- To transfer the Support Area to the central or local government.

**Risk-Sharing and Termination**

Termination of the CA is classified into three categories (as follows) and the risks of increased costs shall be borne by the party upon whom the risks are attributed.

- Termination by reasons attributable to the PNC.
- Termination by reasons attributable to the government.
- Termination by reasons attributable to force majeure events.

The government may terminate the CA if the commencement of construction is delayed for 6 months or longer, or if the construction work or terminal operation is delayed or suspended for 6 months or longer due to reasons attributable to the PNC.
The reverse is also applicable. Other reasons for termination include bankruptcy, voluntary dissolution, failure to pay for construction costs, poor maintenance and management in contravention of laws or failure to make construction contributions, and change in laws and regulations.

**Financing Arrangements**

<table>
<thead>
<tr>
<th>Sources of Funds</th>
<th>Amount ($ million)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity</td>
<td>433</td>
<td>24</td>
</tr>
<tr>
<td>Construction contributions</td>
<td>508</td>
<td>29</td>
</tr>
<tr>
<td>Interest income</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Operational cash flow funding</td>
<td>61</td>
<td>3</td>
</tr>
<tr>
<td>W Debt</td>
<td>304</td>
<td>17</td>
</tr>
<tr>
<td>$ Debt</td>
<td>464</td>
<td>26</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,772</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Internal data from the Pusan New Port Company.

<table>
<thead>
<tr>
<th>Companies</th>
<th>% of Shares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samsung Group (4 companies)</td>
<td>25.00</td>
</tr>
<tr>
<td>CSXWT International</td>
<td>25.00</td>
</tr>
<tr>
<td>Hanjin Group (4 companies)</td>
<td>10.22</td>
</tr>
<tr>
<td>Hyundai Engineering &amp; Construction Co., Ltd.</td>
<td>9.28</td>
</tr>
<tr>
<td>Korea Container Terminal Authority</td>
<td>9.00</td>
</tr>
<tr>
<td>Kumho Industrial Co., Ltd.</td>
<td>6.95</td>
</tr>
<tr>
<td>Daewoo Engineering &amp; Construction Co., Ltd.</td>
<td>5.73</td>
</tr>
<tr>
<td>Doosan Heavy Industries &amp; Construction Co., Ltd.</td>
<td>3.27</td>
</tr>
<tr>
<td>Daelim Industrial Co., Ltd.</td>
<td>1.23</td>
</tr>
<tr>
<td>Lotte Engineering &amp; Construction Co., Ltd.</td>
<td>1.23</td>
</tr>
<tr>
<td>Kukdong Engineering &amp; Construction Co., Ltd.</td>
<td>2.94</td>
</tr>
<tr>
<td>Samhyop Construction Co., Ltd.</td>
<td>0.15</td>
</tr>
<tr>
<td><strong>Total holdings</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

Source: Internal data from the Pusan New Port Company.

The shareholders of PNC have entered into the Shareholders Agreement on 30 August 1997. On 27 December 2002, an amendment agreement was executed among the shareholders and they entered into the second amended and restated Shareholders Agreement on 11 July 2003. The major terms amended are parties to the shareholders agreement, capital stock, project financing, transfer of shares, preemptive rights, and others.
Government Support Arrangements

Government Support

The Government of the Republic of Korea has earmarked this project as one of the government’s top three priority projects, and plans to develop Busan as the primary international hub port in the Northeast Asia region. Therefore, this project has received strong support from the government. Among the incentives and contractual commitments from the government are the following:

- Provide a free subsidy to the Concessionaire as a construction contribution on a quarterly basis during the construction period;
- Develop the support infrastructure, such as dredging of approach channels, berths, and turning basin; development of access roads, railroads, bridges, and others; and provide the project land rent-free for 50 years;
- Compensate the Concessionaire for a portion of excessive foreign exchange loss for the foreign currency credit facility, which is a half of the amount above 20% of foreign exchange fluctuation;
- Indemnify all parties who extend debt financing to the Concessionaire during the construction period to provide cover against the event of early termination, even if it is due to a default of the Concessionaire;
- The government declared Busan New Port and related industrial complexes located in Busan and Jinhae city as Free Economic Zone on 30 October 2003. In addition, MLTM has also planned to designate Pusan North Port and Support Area as a free trade zone, which will be specifically delineated in a bid to activate international trade and logistics business by the end of 2004, in accordance with the newly enacted Free Trade Zone Act; and
- The development of the Port Support Area has been entrusted to the Busan Metropolitan Corporation, owned by the Pusan Metropolitan City, with its own financing and risks.

Guarantees

The Busan New Port Phase 1 has been assessed as a success model with no chance of problems occurring with the minimum revenue guarantee (MRG) by the government. This is because, originally, a concession agreement was established with a provision for MRG. However, the Concessionaire requested the abolition of the MRG system by deciding not to recover excess profits in view of future development possibilities. The government responded by agreeing to abolish the MRG. In this case, there is no need for the government to be involved in issues regarding the profits and costs of the Concessionaire.

Sponsor Support Arrangements

As one of the top-ranking credits in the domestic market, the Samsung Group leads the development of this project as one of the two largest shareholders. CSXWT, a top-notch international container terminal operator, participates as another significant sponsor and the operations and maintenance operator. The shareholders commit up to $70 million worth of Credit Default Swap (CDS) for the financing. The credit risks for some of the shareholders in relation to CDS will be credit-enhanced by Letters of Credit or other forms of collateralization. Other detailed information on sponsor support is not available.
**Performance Measures and Regulation**

As security for the Concession Agreement, the PNC is obligated to submit a performance guarantee equal to 10% of the private project cost. The PNC is also subject to liquidated damages at a rate of 0.1% of the balance of total project cost for each day of delay in completing the project within the stipulated time frame. Once total liquidated damages exceed 10% of the total project cost, the MLTM may withdraw the concession from the PNC. Other detailed information on the key performance standards or measures is not available.

**Regulation of Tariff**

Container terminal rates at Busan are considered among the lowest in the Far East region. The rate for 2000 as stated in the CA is just below the estimated average current rates charged by other privatized terminals at Busan. To make the Busan New Port competitive in the international market, the CA stipulates that the tariff should be determined by a third party (i.e., research institute) at a reasonable amount. Other detailed information on monitoring and regulation are not available.

**Outcomes, Issues, and Key Lessons Learned**

**Realized Benefits or Outcomes**

PPP enables construction and operation earlier than government-financed port. Also, general survey results indicate that stakeholders’ judgment of PPP in port facilities fared well. Specifically, “facility expansion” effect got the highest score while “cost reduction” and “diversifying investors” effects scored fairly well.

- A total of $1,772 million were invested by the private sector and the port facility was successfully implemented via PPP method. The Concessionaire was obliged to design, build, finance, and operate the project facility (consisting of nine berths with 3,200 meters of contiguous quay and a 600-meter small craft wharf).
- The port will alleviate the imminent shortage of container port capacity for handling the growth of import and export containers for Korean industries and consumers.
- The port is also expected to serve the need for a high-volume transshipment and distribution hub, serving the People’s Republic of China, Japan, the Republic of Korea, and the Russian Federation.
- Without MRG, there is no need for the government to be involved in issues regarding the profits and costs of the Concessionaire during the concession period.

**Issues in Implementation**

*Conduct of Value for Money (VFM) Test*

Of the 19 projects implemented until early 2009, only five feasibility studies have been conducted. All solicited projects implemented have had feasibility studies conducted for each and VFM test has been applied to only 1 PPP project implemented since 2003. As to the methods of VFM test, it is desirable to develop a separate methodology applicable to port projects. Although there are guidelines on VFM test, they are mostly about road projects and pose difficulties when applied to port projects.
Consideration of Diverse Implementation Schemes

So far, all PPP projects for port facilities have been implemented through BTO scheme regardless of the facility types. It is necessary to implement even profitable facility projects in ways other than BTO, if necessary. A possible alternative can be the BTL scheme.

Lessons Learned

Close dialogue between the public and private sectors is crucial in building up partnerships. For example, abolishing the MRG had not been possible if there were no active dialogues.

Cargo throughput is highly sensitive to market conditions and it is hard to predict. The problem arises especially when the volume of cargo throughput fluctuates widely so that a private investor or the government is not able to shoulder its risks. This indicates that the port facilities via PPP method should consider the demand risk in a significant way and requires flexibility against severe change in cargo volumes.

The Way Forward and/or Next Steps

To implement PPP in port facilities successfully, the following points are suggested:

Conduct of Feasibility Study and Value for Money Test

A preliminary feasibility study is a must for the successful implementation of private participation in any port project.

Cargo Volume-Linked System (or Trigger Rule)

It seems necessary to allow making changes in the timing and scale of project implementation by linking it to possible changes in cargo throughput. A concessionaire may be allowed to request the application of a Trigger Rule to a project under construction, among other things. Such application of the rule enables the concessionaire to consult the government to adjust the timing and scale of the project, which in turn would improve the profitability.

System Improvement and Project Monitoring

Sustained efforts to reform systems for PPP projects should be made, and phased evaluations of implemented projects are necessary. Construction of a database for issues, which are tracked down in each phase, will serve as guidelines for future projects.

Key Words and Metadata

List of Key Words and Metadata for Searching the Document

- PPP Act
- Public–Private Partnerships (PPP)
- Port facilities
- Busan New Port Project
- Concession Agreement (CA)
• Build–transfer–operate (BTO)
• Government support
• Minimum Revenue Guarantee (MRG)
• Request for Proposal (RFP)
• Detailed Engineering and Design Plan for Implementation (DEDPI)
• Risk-sharing
• Termination
• Korea Development Institute (KDI)
• Public Investment Infrastructure Management Center (PIMAC)

Project Reference and Sources
• Ministry of Strategy and Finance (MOSF): http://english.mosf.go.kr
• Ministry of Land, Transport and Maritime Affairs (MLTM): http://english.mltm.go.kr
• Public Investment Infrastructure Management Center (PIMAC), Korea Development Institute (KDI): www.pimac.org
• The Act on, Enforcement Decree of, and Basic Plans for PPP
• Guidelines on VFM, RFP, Concession Agreement, Tender Evaluation, and others
• Jay-Hyung Kim, PIMAC, KDI, “Case Studies from Korea on Public–Private Partnership Infrastructure Projects,” January 2009
• Korea Maritime Institute (KMI): www.kmi.re.kr, Port Project Data Research and Analysis
• Pusan Newport Co. (PNC) see Busan New Port Project documents and data: www.pncport.com
Health Project of the Philippines

Project Summary

Background
The National Kidney and Transplant Institute (NKTI) Hemodialysis Center was established to provide an affordable and quality outpatient health care service to indigents and to address the increasing incidences of kidney ailments among the young and other work-related degenerative disorders.

The rising demand for hemodialysis treatments proved that substantial investment in expanding the NKTI’s treatment centers was already necessary to give Filipinos optimum health care. While the NKTI had already invested in the new Hemodialysis Center, this center needed to be furnished with new hemodialysis machines and equipment. Based on the study made, the NKTI needed P54 million. This, however, was difficult to achieve in light of the NKTI’s annual budget deficit. With its meager funds, it could only invest on five new machines a year as compared to the pressing need of doubling the treatment capacity of the new Hemodialysis Center.

Issues to Be Addressed
The project involves the engagement of a private sector service provider for NKTI’s newly established Hemodialysis Center.

The existing Hemodialysis Center of the NKTI had been servicing 40 in-house and outpatients everyday. In 2004 alone, the center recorded 15,827 hemodialysis treatments even as the equipment continued to depreciate year in and year out. While the demand for hemodialysis treatments has been soaring since 2000, the NKTI’s 22 machines have not been increasing to accommodate the number of Filipinos needing medical attention, notwithstanding the fact that four of the machines already needed major repairs. The center did not have back-up machines in case of operational problem. There would be an estimate of more than 1,200 short of treatments in 2005 for its in-house and regular outpatients if the machines would not be increased. In addition, the NKTI would not be able to accommodate other patients who would need treatments in the future.

Project Objectives
To meet the growing demand for hemodialysis treatments, the NKTI needs to contract a private sector company that specializes in dialysis products and renal care services from which the Hemodialysis Center could lease hemodialysis machines and also to provide supplies and services for the leased machines.

The project requires the Lease Service Provider (i) to provide equipment and related facilities in the operation of the Hemodialysis Center (hemodialysis machines, hemodialysis chairs, reprocessing machines, water treatment systems, and other furniture and fixtures); (ii) to provide hemodialysis supplies and solutions; (iii) to service and maintain the facility; and (iv) to transfer technology.
### Timetable Overview of NKTI Hemodialysis Center Project

<table>
<thead>
<tr>
<th>NKTI Activity</th>
<th>Date</th>
<th>Proponent Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Release of Request for Proposal (RFP)</td>
<td>17 March 2003</td>
<td></td>
</tr>
<tr>
<td>Site Inspection Certificate; Submission of draft contract to the Board of Trustees and the Office of the Government Corporate Counsel (OGCC)</td>
<td>17 March–21 April 2003</td>
<td>Preparation of bid documents</td>
</tr>
<tr>
<td>Pre-bid conference</td>
<td>21 March 2003</td>
<td>Pre-bid conference</td>
</tr>
<tr>
<td>Submission of technical and financial bids and opening of technical bids</td>
<td>21 April 2003</td>
<td>Submission of technical and financial bids</td>
</tr>
<tr>
<td>Opening and evaluation of technical proposals</td>
<td>22–29 April 2003</td>
<td></td>
</tr>
<tr>
<td>Opening and evaluation of financial proposal</td>
<td>30 April 2003</td>
<td></td>
</tr>
<tr>
<td>Submission of evaluation results by NKTI–HCP–Bids and Awards Committee (BAC)</td>
<td>5 May 2003</td>
<td></td>
</tr>
<tr>
<td>Meeting of the BAC</td>
<td>7 May 2003</td>
<td></td>
</tr>
<tr>
<td>Recommendation of award by BAC to head of agency</td>
<td>8 May 2003</td>
<td></td>
</tr>
<tr>
<td>Approval of the head of agency</td>
<td>13 May 2003</td>
<td></td>
</tr>
<tr>
<td>Issuance of Notice of Award</td>
<td>13 May 2003</td>
<td></td>
</tr>
<tr>
<td>Secure OGCC approval on the contract</td>
<td>13–20 May 2003</td>
<td>Comply with the conditions of the contract</td>
</tr>
<tr>
<td>Contract signing and/or issuance of notice to proceed</td>
<td>21 May 2003</td>
<td></td>
</tr>
<tr>
<td></td>
<td>22 May–22 June 2003</td>
<td>Installation and commissioning</td>
</tr>
<tr>
<td>Inauguration and blessing</td>
<td>25 June 2003</td>
<td></td>
</tr>
<tr>
<td>Full operation and/or issuance of Certificate of Acceptance</td>
<td>June 2003</td>
<td>Start of Lease Contract</td>
</tr>
</tbody>
</table>

HCP = Health Care Projects, NKTI = National Kidney Transplant Institute.

### Why a Public–Private Partnership

Faced with the immediate need to invest in additional machines, the NKTI had to look for partnerships in the private sector to provide state-of-the-art machines and to modernize and improve its capabilities to deliver good health services.

### Public–Private Partnership Contract Type

The project was implemented through a lease contract, which authorized the winning service provider to equip and modernize the new Hemodialysis Center. The Service Provider financed, supplied, and maintained all the necessary equipment and/or facilities and appurtenances and provided the required medical supplies and solutions for the operation of the machines. The NKTI leased and operated the facilities from the Private Sector Company over the lease period. The NKTI paid the Private
Sector Company a lease fee per treatment in accordance with the Schedule of Lease Fee Per Treatment.

**Assets to Be Delivered**

All the necessary hemodialysis machines, chairs, reprocessing machines, standard water treatment systems, and other equipment that may be necessary to meet the minimum technical requirements and performance standards were delivered.

**Services to Be Delivered**

At all times during the Cooperation Period, sufficient and adequate supplies and solutions for the operation of the hemodialysis machines and the treatment of patients were to be delivered. If applicable, the following obligations were covered by a separate supply contract and entered into between the Private Sector Company and the Supplier:

- The minimum required office equipment, tools, and furniture and fixtures as indicated in Other Equipment/Accessories of the Minimum Technical Requirements of the Agreement;
- Any additional space within the NKTI compound beyond what is prescribed is subject to rental fee to be determined upon award of contract;
- Any additions, revisions, or improvements to plumbing, electro-mechanical, and existing civil works that it deems necessary to provide all the required services. Any such additions, revisions, or improvements were subject to the written concurrence of NKTI’s management;
- The required service and maintenance program, including the supply of necessary spare parts and materials for all machines, furniture and fixtures, including the standard water treatment system for hemodialysis, and technology transfer;
- Service technicians and personnel were made available at all times during the center’s operating hours; and
- Technology upgrade, provided that it does not increase the Lease Fee of the Private Sector Company as set forth in the Schedule of Lease Fee Per Treatment, which technology upgrade shall at all times comply with the minimum technical requirements or such requirements as may be mutually agreed upon by both parties.

**Legal, Regulatory, and Institutional Framework**

**Legislation, Policy, and Regulatory Framework**

The project was implemented through a lease contract. The lease contract authorized the private sector to finance, maintain, and charge lease fees for the use of the facilities.

The parties developed and implemented the project in accordance with the terms and requirements of the charter of NKTI and its Implementing Rules and Regulations. The public bidding for the Hemodialysis Center Project was conducted pursuant to Republic Act No. 9184, known as the “Government Procurement Reform Act.”
Institutional Framework: The Concession Process

The institutional set-up for the implementation of the contract shall consist of (i) a NKTI–Health Care Projects (HCP)–Bids and Awards Committee (NKTI–HCP–BAC) for public tendering of the contract, and (ii) a Joint Administrative and Technical Committee (JATC).

Bids and Awards Committee

The responsibility for the bidding and awarding of the lease contract rested with the NKTI–HCP–BAC as mandated under Philippine laws. The BAC refers to the body, or its designated organic office, responsible for the agency’s procurement activities from pre-bidding conference up to the contract award.

Joint Administrative and Technical Committee

After the selection and award to the winning bidder, the NKTI created a JATC for the monitoring of the lease contract. The JATC is composed of representatives from both parties to be created after contract award for the management and coordination functions during the implementation of the contract.

Government Leadership Roles in the Project

The success of the project was made possible through the full support of the NKTI’s executive director, Dr. Enrique Ona, and the efforts of the Technical Working Group composed of medical and technical officers and staff of the BAC. The executive director’s unwavering support has made possible the completion of the project and its successful operation.

The Procurement Process

Project Development and Selection of Public–Private Partnership

The NKTI needed P54 million to meet the increasing demand for hemodialysis treatment. This, however, was difficult to achieve in light of the NKTI’s annual budget deficit. Faced with the immediate need to invest in additional machines, the NKTI resorted to a public–private partnership (PPP) arrangement to provide state-of-the-art machines and to modernize and improve its capabilities to provide the needed services. Thus, NKTI entered into a lease contract with the private sector.

Stages in Procurement

- Advertisement of the Invitation to Prequalify and Bid
- Prequalification conference
- Issuance of Request for Proposals (RFP) to prequalified bidders
- Pre-bid conference
- Deadline for the submission of bids (technical and financial) and opening of technical proposal for completeness check
- Technical bids evaluation
- Opening of financial bids
- Financial evaluation
- Issuance of the notice to the winning proponent
- Contract signing
- Issuance of Notice to Proceed
Procurement Timetable

- **1 and 8 December 2002** – Advertisement of the Invitation to Pre-Qualify and Bid
- **13 December 2002** – Prequalification conference
- **28 February 2003** – Signing of Technical Assistance Agreement between the NKTI and the Build–Operate–Transfer (BOT) Center, Department of Trade and Industry.
- **24 March 2003** – Issuance of RFPs to prequalified bidders.
- **26 March 2003** – Pre-bid conference
- **30 April 2003** – Deadline for the submission of bids (technical and financial) and opening of technical proposal for completeness check
- **1–6 May 2003** – Technical bids evaluation
- **7 May 2003** – Opening of financial bids
- **8–9 May 2003** – Financial evaluation
- **15 May 2003** – Issuance of the Notice of Award to the winning proponent: Fresenius Medical Care Phils., Inc.
- **25 June 2003** – Inauguration of the project
- **29 July 2003** – Contract signing between NKTI and Fresenius Medical Care Phils., Inc.
- **30 July 2003** – General orientation on the operation of the new center
- **01 August 2003** – Issuance of Notice to Proceed to Fresenius Medical Care Phils., Inc.
- **18 August 2003** – Start of operations of the Hemodialysis Project
- **29 August 2003** – Meeting at NKTI to introduce the Project Facilitation and Monitoring Group, for contract monitoring

The Bid Process

Prequalified bidders were issued RFPs document upon payment of P5,000. They were given 30 days to prepare the bid after which they submitted two separate envelopes—Envelope “A” for Technical Proposals and Envelope “B” for Financial Proposals, including the bid security that was inserted in Envelope “A.” Supplemental Notices to all prospective bidders were issued whenever justifiable or necessary. The opening of the envelopes were sequential, that is, Envelope “A” first. Only technically complying bidders were considered in the financial evaluation.

Aside from the two envelopes, the bidders submitted the certified copy of the Memorandum of Agreement (MOA) between the Principal Manufacturer and the Local Representative, duly authenticated by the Philippine Consulate where the Foreign Private Sector Company is registered. The MOA must be included in Envelope “A.”

This requirement, however, was satisfied with the submission of proof that the Private Sector Company is a fully owned subsidiary of the foreign Private Sector Company. In which case, an assurance letter from the foreign Private Sector Company, duly authenticated by the Philippine Consulate where the Foreign Private Sector Company is registered, was submitted in lieu of the MOA.
An Invitation to Pre-Qualify and Bid, signed by the chairman of the Bids and Awards Committee (Jaime G. Tomas, M.D.), was published on 1–8 December 2002, for the Provision of Equipment including Service and Maintenance for the NKTI Hemodialysis Center. Four companies responded to the invitation to prequalify. These multinational companies, represented by a local subsidiary Private Sector Company and/or proponent were Baxter; B. Braun; Fresenius Medical Care Phils., Inc.; and Medtronix. Baxter was disqualified due to failure to submit relevant documents about the private sector company experience in hemodialysis projects. The other three proponents were prequalified to bid.

On 24 March 2003, the NKTI issued the RFP to the three prequalified proponents. The technical proposals were submitted on 30 April 2003. The evaluation by the Technical Evaluation Committee was held on 2 and 5 May 2003. Two proponents were found complying, namely: Fresenius Medical Care Phils., Inc. and B. Braun. Medtronix was found to be noncompliant due to deficiency in the essential requirements, hence, was disqualified.

On 7 May 2003, the Technical Evaluation Committee completed its final rating of the bids based on quality cost–based approach using a predetermined, weighted scoring system as follows:

- technical proposals = 60%,
- financial proposals = 40%, and
- the bid parameters indicated in the RFP.

**Evaluation Criteria**

First Stage: Technical Evaluation

The NKTI–HCP–BAC evaluated each technical proposal according to the following criteria:

**Technical Soundness**

The proposed technical standards and specifications of the project should conform to the minimum technical specifications and performance standards as prescribed in the bid documents. This shall elaborate on the technical requirements, International Organization for Standardization applicability of hemodialysis equipment and fixtures, availability of supplies for the treatment of patients, and schedule of milestone activities proposed for the project. The proposal of the bidder should enable the NKTI to achieve its overall objective for the project and be able to address efficient, safe, affordable, and quality hemodialysis treatments for patients at NKTI.

**Operational Feasibility**

The proposed organization, methods, and procedures for operating and maintaining the equipment and other fixtures in the facility must be well-designed, should conform to the prescribed performance standards, and should be shown to be workable. It should also provide for the transfer of technology.

**Project Financing**

The proposed financing plan should positively show that the same could adequately meet the cost requirements of the project.
Second Stage: Evaluation of Financial Proposals

- Only the financial proposals of those bidders who pass the First Stage evaluation shall be considered in the Second Stage evaluation process.
- Upon opening, the NKTI–HCP–BAC shall evaluate the proposed financial bid.
- The NKTI shall evaluate the bids according to the Lease Fee Per Treatment calculated at its present value (PV) using a 15% discount rate expressed in Philippine peso currency over a 5-year lease period.

Approval Process

Responsibility for the bidding and award of the lease contract rests with the NKTI–HCP–BAC. The decision of the BAC was final and executory. The NKTI–HCP–BAC was responsible for the following:

- Review and/or adoption of bidding and/or tender documents
- Publication of the invitation to prequalify and bid
- The qualification of prospective bidders
- Conduct of pre-bid conference and issuance of supplemental notices
- Conduct of bidding
- Evaluation of bids
- Recommendation for contract award

The bid submitted by Fresenius Medical Care Phils., Inc. emerged as the highest rated bid. The committee recommended to the Pharmaceutical Benefits Advisory Committee the award of the project to Fresenius Medical Care Phils., Inc. based on the evaluation results of the BAC on 8 May 2003. The recommendation was approved by the Pharmaceutical Benefits Advisory Committee on 12 May 2003, and a Notice of Award was issued to Fresenius Medical Care Phils., Inc. on 15 May 2003.

Contractual Arrangements

Contractual Arrangements and Obligations

Obligations

The National Kidney and Transplant Institute shall:

- Provide sufficient space in the newly constructed Hemodialysis Center, approximately 840 square meters at the second floor of the Annex II building;
- Provide the appropriate NKTI staff, such as physicians and/or specialists, nurses, technicians, and other paramedical staff, to use and operate the facilities according to agreed operating procedures;
- Provide, at no cost to the Private Sector Company, utilities limited to electricity, water, air conditioning, waste disposal, and janitorial services;
- Monitor and regulate the performance of the facilities in accordance with the minimum performance standards set in the performance standard, or as may be revised by NKTI, in consultation with the Private Sector Company, by the third year anniversary of in-service date. Any issues or complaints shall be coursed through the JATC;
Health Project of the Philippines

- Ensure compliance with the government’s applicable rules and regulations in the operation and maintenance of the Hemodialysis Center, including but not limited to the Department of Health’s Rules and Regulations, building code, Bureau of Food and Drugs, and others; and
- Pay the Private Sector Company the approved lease rate in terms of payment per treatment according to the lease fee schedule in the Schedule of Lease Fee Per Treatment.

The Private Sector Company shall provide, at its own cost, the following:

- All the necessary hemodialysis machines, chairs, reprocessing machines, standard water treatment systems, and other equipment that may be necessary to meet the minimum technical requirements and performance standards;
- At all times during the cooperation period, provide sufficient and adequate supplies and solutions for the operation of the hemodialysis machines and the treatment of patients. If applicable, this obligation shall be covered by a separate supply contract and entered into between the Private Sector Company and the supplier;
- The minimum required office equipment, tools, and furniture and fixtures as indicated under Other Equipment/Accessories of the Minimum Technical Requirements of the lease agreement;
- Any additional space within the NKTI compound that is beyond what is prescribed shall be subject to rental fee to be determined upon award of contract;
- Any additions, revisions, or improvements to plumbing, electro-mechanical and existing civil works that it deems necessary in order to provide all the required services. Any such additions, revisions, or improvements shall be subject to the written concurrence of NKTI’s management;
- The required service and maintenance program including the supply of necessary spare parts and materials for all machines, furniture and/or fixtures, including the standard water treatment system for hemodialysis and technology transfer;
- Service technicians and personnel shall be available at all times during the center’s operating hours;
- Technology upgrade, provided that it shall not increase the lease fee of the Private Sector Company as set forth in the Schedule of Lease Fee Per Treatment, and such technology upgrade shall at all times comply with the minimum technical requirements or such requirements as may be mutually agreed upon by both parties.

**Dispute Resolution**

**Consultation**
The parties agreed to use reasonable efforts to amicably resolve any disagreements or disputes concerning the interpretation or implementation of the agreement through mutual consultation and negotiation.

**Conciliation**
In the event such dispute or disagreement cannot be resolved through amicable settlement, the matter shall be subjected to conciliation. The appointment of a “Conciliator” shall be mutually agreed by both parties.
**Arbitration**

In the event such dispute or disagreement cannot be resolved under the preceding Article, the matter shall be submitted for arbitration. Consequently, no party shall be entitled to commence or maintain any action in any court of law or administrative body upon any matter in any dispute until such matter shall have been submitted and determined by arbitration and then only for the enforcement of such arbitration, and thereafter until the arbitrators publish their award. The parties shall continue to perform all their obligations under this agreement without prejudice to a final adjustment in accordance to such award.

The parties agree that the arbitration proceedings shall be in English under Republic Act No. 876, otherwise known as the Philippine Arbitration Law. The ruling of the Arbitration Court shall be final and binding. The cost of arbitration shall be funded initially by the claimant, provided that the tribunal may reallocate the liability for such cost to the losing party or apportion such cost among the parties, or may impose the obligation on each party to pay a pro-rated portion thereof as the tribunal may consider reasonable. Without prejudice to the foregoing, each party shall fund its own legal and other expenses relating to such arbitration, including the cost of the arbitrator appointed by each party.

**Lease Fee Per Payment**

The NKTI shall pay the Private Sector Company a lease fee per treatment initially set at P1,690 for the first 12 months of operation starting from the in-service date.

Any subsequent adjustment to the lease fee per treatment shall be in accordance with the section on Lease Fee Per Treatment Adjustment. Remittance of the lease payment to the Private Sector Company shall be made by NKTI on a monthly basis. The Private Sector Company shall submit to NKTI, every first week of the month, a billing statement covering its total lease fee for the previous month. The NKTI shall promptly and diligently validate the billing statement and pay the Private Sector Company the amount billed for within 15 calendar days from receipt thereof.

**Financing Arrangements**

The Lease Service Provider shall provide a minimum equity investment equivalent to 20% of the total project cost (Project cost: P54.1 M).

**Outcomes, Issues, and Key Lessons Learned**

**Realized Benefits or Outcomes**

After 8 months of going through the selection and procurement process, the joint effort of the NKTI and the BOT Center bore fruit. On 22 May 2003, the new Hemodialysis Center was furnished and installed with newly acquired equipment from the Fresenius Medical Care Phils., Inc. The NKTI’s new Hemodialysis Center was inaugurated on 25 June 2003.

Foreseen as the Asia’s model in renal care, the new Hemodialysis Center is now providing the highest level of hemodialysis service in the Philippines. The center started servicing patients in August 2003. The new center alone can serve more than 90 outpatients a day, as compared to the old center that has been serving
40 in-house and outpatients a day. Aside from this improved service, the NKTI has now been relieved of its responsibility of maintaining the new set of equipment. The Fresenius Medical Care Phils., Inc. provides a round-the-clock maintenance crew to ensure the quality of the machines and specialized staffing that guarantees the patients of professional care everyday. There is no price increase for the treatment.

Lessons Learned
The NKTI has constructed the annex building intended for an outpatient dialysis unit and doctors’ clinics. The objective is to expand the outpatient dialysis units to accommodate more patients and concentrate the hospital’s dialysis units to in-patients.

The NKTI Hemodialysis Center Project was developed and structured through a series of discussions between the NKTI Technical Working Group and the BOT Center. A number of options as to the modality for the implementation of the project (i.e., whether under the NKTI mandate, BOT, or direct procurement), and contractual arrangements (such as contract–add–operate [CAO], build–operate–transfer [BOT], lease, and others) were considered and deliberated on.

The Way Forward and/or Next Steps
With the success of the NKTI project as model, the condition for PPP implementation in Philippine Primary Health Care has never been better. Like the other less developed countries, two of the more pernicious health care problem besetting the Philippines is the prevalence of tuberculosis and malaria. Statistics from the Philippine’s Department of Health show that Region IV (comprising the provinces of Aurora, Batangas, Cavite, Laguna, Marinduque, Occidental and Oriental Mindoro, Palawan, Quezon, Rizal, and Romblon) with a population 11,793,655 comprising 15.42% of the total Philippine population, recorded the highest incidence of tuberculosis and malaria. One possible primary health care approach is to design a build–transfer–lease (BTL) scheme with a selected province in Region IV. The plan works this way: A project proponent builds a primary health care facility on a land owned by a selected province. The facility will contain the necessary equipment to diagnose and treat patients with tuberculosis and malaria. After completion of the facility, the proponent would immediately transfer the facility to the provincial government, using government funds to procure the facility. After the successful transfer, the government will lease the facility to a qualified lessee and the latter pays the government a fee for using the facility. The BTL arrangement eliminates the demand risk of the private sector operator, which hampers investment prospect for this type of PPP project in the social sphere. Other advantages of a BTL include (i) the provision of core health service needs of identified areas, (ii) assured revenue stream due to user fees being charged, and (iii) profitability of operation is possible since the facility will be built in an area where the service is in demand. It is estimated that an initial P10 million or $212,389.09 would be needed to build the proposed facility.

Key Words and Metadata

List of Key Words and Metadata for Searching the Document

- Force majeure
- Foreign exchange
- Technical and financial bids
• Risk allocation and management
• Government leadership

List of Phrases and Key Points
• Extensive risk analysis and management by both parties assists in developing an effective and comprehensive concession agreement.
• Due diligence by both parties is essential to provide a thorough understanding of the project and improves the concession outcomes.
• The contractual relationship requires the parties to have an understanding of the capabilities and limitations of the other party.
• A clear and efficient process for resolving disputes and claims may assist in minimizing the impact of a risk event.
• Government leadership throughout the PPP development and implementation process can greatly assist in building political and social support for a PPP.

Project Reference and Sources
• BOT Center internal documents

Persons Consulted and/or Interviewed
• Enrique T. Ona, M.D.
  Executive Director, National Kidney and Transplant Institute, Republic of the Philippines
  ikeona39@yahoo.com
• Corazon M. Ravara
  Deputy Executive Director, Build-Operate-Transfer (BOT) Center, Department of Trade and Industry, Republic of the Philippines
  cmravara@botcenter.gov.ph
• Celso C. Manangan
  Director, Build-Operate-Transfer (BOT) Center, Department of Trade and Industry, Republic of the Philippines
  ccmanangan@botcenter.gov.ph
• Shirly D. Cusay-Yu
  Planning Officer III, Legal Services/Program Coordination Department, Build-Operate-Transfer (BOT) Center, Department of Trade and Industry, Republic of the Philippines
  sdcusayyu@botcenter.gov.ph
Water Supply Project of the Philippines

Project Summary

Background

Focus of the Case Study

The focus of this case study is the reprivatization of Maynilad Water concession covering the West Zone area conducted in 2006 by the Philippine government through the Metropolitan Waterworks and Sewerage System (MWSS). This was after the first privatization in 1997 that ended in a failure of the first concession operator.

Geographic Location

The MWSS was established in the late 1800s to supply water to the city of Manila. Over time, the MWSS coverage area expanded to 14 adjoining cities and municipalities around metropolitan Manila. By 1997, the MWSS operated over 2,000 square kilometers (km²) with a population of approximately 11 million people, mostly in urban areas. In 1997, the social and economic conditions of the MWSS coverage area were

- Average monthly household income for Manila: $260
- Average monthly household income for low-income areas: $133
- Population below the poverty line: 0.8 million
- 80% of low-income households have no legal property rights

In 1997, the MWSS Concession was first privatized through public bidding into two separate concession zones—the East and West concessions. The East Zone was won by Manila Water Company, Inc. (Manila Water), while the West Zone was awarded to Maynilad Water Services, Inc. (Maynilad). The scope of the Concession Agreement (CA) is to operate, develop, manage, maintain, and upgrade water and sewerage services for 25 years commencing on 1 August 1997 and specifies service obligation targets and performance standards.

Maynilad’s West service area covers an area of 540 km² and includes 11 cities in Metropolitan Manila and 1 city and 5 towns in the nearby province of Cavite. In 2008, the population of the West Zone grew to 8.9 million and included the majority of Metro Manila’s poorer areas.

Political Environment

From 1972 to 1986, the Philippines was ruled by former President Ferdinand Marcos under a highly centralized government with government ownership and control of many commercial establishments including banks, hotels, construction,
manufacturing, and telecommunication companies. However, in 1986, People Power installed former President Corazon Aquino as President from 1986 to 1992. In the 1992 democratic elections, former President Fidel Ramos was elected from 1992 to 1998. Both Presidents Aquino and Ramos instituted reforms to decentralize government and promoted private sector participation in many economic activities particularly in developing much-needed infrastructure. A Committee on Privatization was established to privatize government-owned corporations and sequestered companies. A law was enacted to provide a legal basis and structure for the use of build-operate-transfer (BOT) contracts and other private sector financing schemes to execute infrastructure projects. These projects—highways, power generation and distribution, public markets, seaports, airports, telecommunications, and mining, among others—were opened to public-private partnership under the BOT scheme or its variants. During the Ramos administration, the private sector was engaged under a BOT contract to increase the country’s power generation capacity. This public-private sector initiative was considered a success as service reliability was increased significantly and provided strong political support for further partnerships with the private sector. Then President Joseph Estrada was elected in 1998 but was booted out of office by People Power and installed then Vice-President Gloria Macapagal-Arroyo (PGMA) as President in January 2001, held office for 3 years, and was reelected in 2003. As an experienced economist and politician, the country experienced 6 years of consecutive growth in economic expansion (average of 4.7% per year higher than the population growth rate of 2.2% and enough to spike per capita income from $1,000 in 2001 to around $1,500 in mid-2007). PGMA introduced aggressive economic and political reforms and raised taxes to fixed government finances, which made the country regain the respect of investors and bankers. PGMA focused on massive infrastructure spending and improvement of the quality of human capital through education, health, and social welfare—with more spending on roads, bridges, ports, airports, and essential farm-to-market roads that opened up vast frontier lands for agriculture, industry, and services. More public-private sector projects were being undertaken in the energy sector, mining, roads, information technology, seaports, property development, and in agriculture.

**Commercial Summary**

The MWSS is a government-owned corporation and operated a capital-intensive water supply and sewerage system. Its debts, mostly foreign currency-denominated, were from official development assistance (ODA) and multilateral funding agencies and were fully covered by a sovereign guarantee by the Government of the Philippines.

The water supply for Maynilad’s West Zone is sourced from the Angat Dam (98%) and deep wells (2%). The Angat Dam is a multipurpose facility and water use is shared by the MWSS for domestic and commercial uses with the National Irrigation Administration for irrigation and the National Power Corporation for hydropower generation. Drought conditions have increased the emergency needs of metropolitan Manila and the severe El Niño drought in 1998 saw all of the water released from the dam for domestic use of Metro Manila. The water system transfers raw water from the main Angat Dam to a series of dams and separated into treatment plants of the two concessionaires, Manila Water and Maynilad.
MWSS granted Maynilad, under the CA entered into on 21 February 1997, as contractor to perform certain functions and as agent for the exercise of certain rights and powers of MWSS under the MWSS Charter, the sole right to manage, operate, repair, decommission, and refurbish the MWSS facilities in the West service area, including the right to bill and collect for water and sewerage services supplied in the service area. The period of the concession is for 25 years from commencement date.

The regulatory framework allows Maynilad a rate of return referred to as Appropriate Discount Rate on its operating, capital maintenance, and investment expenditures efficiently and prudently incurred, debt service for MWSS and concessionaire loans, subject to review every 5 years.

**Issues to Be Addressed**

The MWSS, as a government utility company, experienced the typical inefficiencies of government enterprises and lacked the necessary funds to operate efficiently and serve customers of the whole concession area. It was considered to be overstaffed, with many political appointees, and experienced extensive delays in the implementation of its projects financed mostly with ODA funds and multilateral funding agencies. Over $900 million was borrowed by the government for MWSS operations and system development. The MWSS was also considered to be heavily dependent on government subsidies to service its debt obligations as the tariff level and collection rate were insufficient to support its operating and maintenance expenditures. Tariff was a political commodity and the MWSS, as an arm of government, could not push for appropriate tariff adjustment. Further, the national government implemented a policy of prioritizing debt servicing, which resulted in the MWSS meeting its debt obligations ahead of other required expenditures on system maintenance, operations, and expansion.

The MWSS labor force, mostly consisted of career professionals and civil servants, while the MWSS administrator and all board members were political appointees. Recruitment was generally influenced by political patronage and once an employee was hired, the Civil Service Commission rules provided significant job protection. As a result, by 1995, the MWSS was overstaffed with 8,000 employees translating to 9.5 staff for every 1,000 customers. Other water companies in the region were operating at a ratio range of 1.1 to 4.7 staff for every 1,000 customers.

Also at that time, the water services in Manila were considered unsafe, unreliable, and most residents were underserved or had no access to the services. The water service coverage in the metropolitan area was one of the lowest among major Asian cities and the MWSS did not have the financial capacity to invest to improve its services. The MWSS was faced with the following:

- Less than 67% of households had piped water that was available for an average of 16 hours per day;
- 7% of the population were connected to the sewage system;
- 99% of the sewage collected was disposed of in Manila Bay, which was untreated;
- Non-revenue water was estimated at 56% of the 3,000 million liters received from the Angat Dam due to leakages, faulty meters, illegal connections,
and an inefficient billing system (other developing countries experienced an average of 20%–30% non-revenue water);

- The MWSS had the highest rate of non-revenue water among the main cities in Asia;
- The MWSS serviced 8% of the coverage area’s population;
- The lack of pressure resulted in many customers installing booster pumps and storage tanks at their own cost; and
- The poor living in squatter communities were excluded from the provision of social services and purchased low-quality water via an unregulated market.

The national government, recognizing its limited capacity to address the long-term problems of the MWSS in providing reliable and safe water to residents of Metro Manila, pushed the decision to privatize the MWSS operations. In August 1997, in a bold move hailed as the biggest water privatization effort at the time, the state-owned MWSS, after a well-publicized competitive public bidding, awarded its operations to two private concessionaires: the Manila Water Company, Inc. (Manila Water) for the East Zone and the Maynilad Water Services, Inc (Maynilad) for the West Zone.

**Maynilad’s Serious Financial Difficulties**

Serious financial difficulties besieged Maynilad almost from day one. The 1997 Asian financial crisis, which saw the Philippine peso depreciates against the United States (US) dollar by more than 100% by the end of 1998, severely affected its ability to service MWSS’ foreign currency-denominated debts and pursue much-needed capital expenditures. Unfortunately, the CA did not have any automatic provision for any peso devaluation to cover the payment of mostly US dollar-denominated loans. Maynilad was responsible for paying 90% of the MWSS debts (approximately $800 million). Aggravating the situation were other factors that further crippled the company’s operations—from critical regulatory issues to the severe El Niño phenomenon in 1997–1998, considered the worst in 150 years of recorded history, that reduced the raw water supply by at least 40%, to alleged financial mismanagement, e.g., unnecessary, expensive foreign procurement and consultancy contracts.

In the first 2 years of operations, Maynilad’s concession fee payments due to MWSS were higher than the generated revenues. By the end of 2000, Maynilad’s revenues rose just enough to equal roughly the concession fee payments, but still nothing was left for operational and capital expenditures.

In an effort to recover from its foreign exchange (forex) losses, the Maynilad petitioned for tariff increases and was granted an extraordinary price adjustment in 2000. However, this increase was not enough to cope with the concessionaire’s losses. The Maynilad again filed a petition to allow for more flexible and immediate currency rate adjustments, given that the existing provision in the CA only covers normal fluctuations (within 2%). The MWSS rejected the petition, saying that this can be construed as changing the bid. From P26 = $1 at the time of the bidding in January 1997, the peso devalued to P50 to $1 by 1998 and continued to increase in the succeeding years. On 8 March 2001, due to heavy financial losses, the Maynilad was forced to suspend its concession fees payment on grounds of “force majeure.” The Maynilad and the MWSS went back to the negotiating table to resolve the conflict and, on 5 October 2001, agreed on Amendment No. 1 to the CA with salient features as follows:
• Recognized the heavy impact of the forex problem and allowed for the recovery of past forex losses through staggered tariff increases;
• Allowed for tariff rate adjustments based on prevailing exchange rates for the remainder of the concession, referred to as the foreign currency differential adjustment (FCDA);
• Allowed for the implementation of the first rate rebasing exercise on 1 January 2003; and
• Called upon the MWSS to address the concerns of Maynilad’s lenders—primarily those of a regulatory nature—to enable the concessionaire to close a $350-million term loan application crucial to its operations.

Despite efforts by parties, Amendment No. 1 was not fully implemented and the Maynilad failed to secure the much-needed $350-million term loan. Many factors affected the loan negotiation. Involved foreign and local banks wanted assurances that the tariffs be increased as necessary, regardless of the political upheavals taking place at the time. Lenders also wanted an assurance that the government will agree that the lenders would have first lien on Maynilad’s cash flows. Unfortunately, no such assurances were forthcoming. However, the bigger barrier was the issue of contract termination, which was a major concern then given Maynilad’s precarious financial position. Ultimately, the Maynilad, the MWSS, and the lenders could not agree on the details under which the consequences of termination would take place (e.g., qualifications and procedures for the appointment of a qualified replacement operator, early termination amount, terms of the dollar debt instrument in payment of the early termination amount, etc.).

By the end of 2002, a nearly bankrupt Maynilad announced that it was returning the concession back to the MWSS, issuing a notice of early termination on 9 December 2002.

Surviving the Legal Battles

The MWSS countered Maynilad’s move, saying that only the MWSS had the right to terminate the concession due to nonpayment of concession fees. Maynilad claimed the same right by invoking MWSS’ alleged failure to cooperate with Maynilad to facilitate the carrying out of its responsibilities under the Concession, as required under the CA, citing several instances. The two went into arbitration to settle disagreements and put forward their claims. Nine months of tough deliberations, the Appeals Panel’s much-awaited decision came on 7 November 2003. It was not, however, the cure that both Maynilad and MWSS sought. The panel decided that neither party was entitled to terminate the CA and asked them to seek win–win solution. To complicate Maynilad’s woes, the panel ordered it to pay the outstanding concession fees, which had already ramped up to P6.77 billion ($120 million) since 2001. If Maynilad fails to pay, the panel granted MWSS the authority to draw on the company’s $120 million performance bond. As can be expected, the panel’s decision drew the ire of privatization watchdogs who felt that it should not have taken a long and tedious arbitration process to compel Maynilad to act in respect to the CA.

Rehabilitation Process

On 13 November 2003, the Maynilad sought court protection from its creditors by filing a petition for corporate rehabilitation. The Maynilad was slightly successful as the Rehabilitation Court appointed a Receiver, issued an order staying all claims
against Maynilad, prohibited the company from disposing its properties, and disallowed the drawing against the performance bond for a few months (Stay Order). However, the MWSS countered this before the Supreme Court and won the right to draw on the performance bond, which was in the form of a $120 million irrevocable standby letter of credit (SBLC) issued by a syndicate of local and foreign banks. The MWSS consequently effected a drawing on the SBLC and received the entire $120 million on 20 January 2005. This prompted the SBLC banks to seek reimbursement from Maynilad. As Maynilad failed to pay and considering the effectivity of the Stay Order, the SBLC banks called on the sponsors’ guarantees. Previously, Maynilad’s lenders under its bridge loan facility likewise called on the sponsors’ guarantees. Benpres Holdings Corporation, which owned 59% of Maynilad’s shares, defaulted.

As an interim solution to move forward and continue operating the critical water and sewerage system for the West Zone, on 29 April 2005, the MWSS, Maynilad, its shareholders, and creditors entered into a Debt and Capital Restructuring Agreement (DCRA) that spelled out the steps for restructuring Maynilad’s financial obligations. The provisions of the DCRA became an integral part of Maynilad’s rehabilitation plan, which was approved by the Rehabilitation Court on 1 June 2005. The DCRA gave the MWSS the option to subscribe to 83.97% of Maynilad’s equity, which later paved the way for the reprivatization and the entry of new private shareholders into the company.

**Continue Maynilad’s Operations**

The customers of Metro Manila’s West Zone have to be served, with or without Maynilad’s financial crunch. Anchored on this premise, the government explored all possible means to relieve Maynilad’s financial problems. Among them was MWSS lending money to Maynilad—in the form of financial assistance and/or deferred concession fee payments—to fund the company’s operations and some capital improvements while its sponsors are entering into a debt-restructuring arrangement with the creditors. The MWSS also agreed to a staggered payment of past due concession fees in excess of the $120-million performance bond, a postponement of the sewerage targets that would entail massive investments, and to buy about 84% of Maynilad’s equity, on the understanding that the equity will later be offered to the private sector through public bidding. All the other stakeholders agreed to find a workable long-term solution for Maynilad’s dwindling finances. The sponsors agreed on substantial write-offs, the lenders agreed to defer payments with reduced interest rates, and the contractors and suppliers agreed to spread payments in 2 years to ensure that Maynilad’s finances are rehabilitated and its obligations paid. The rehabilitation of the Maynilad’s finances hinged on a successful debt and capital restructuring.

**Operational Issues**

Among the key operational issues that had to be addressed in the West Zone were

- very high non-revenue water (water loss) of 67% or about 1,600 million liters per day (mld),
- about P30 billion capital investment for the next 5 years (2007–2011) to significantly improve service levels,
- payment of past due concession fees due to the MWSS and other Maynilad loans due to banks and suppliers,
network operational and organizational inefficiencies, and
- two labor unions—rank-and-file union and a supervisors’ union—resulting in a bloated organization.

The MWSS as a government entity owning the water franchise for Metro Manila was not in a position to address these major issues, which were still the same issues it faced in the first privatization in 1997.

Project Objectives

Primary Objective

The primary objective of the rehabilitation and reprivatization of Maynilad is to ensure the continued and uninterrupted water supply of consumers staying in the West Zone of Metro Manila. To achieve this, the Maynilad will need financial restructuring, substantial investments, and a sound sustainable business plan.

Broader Strategic Objectives

The broader strategic objectives and benefits of the reprivatization of the Maynilad include:

- Continue providing water supply and sewerage services to Metro Manila west concession area,
- Ensure the water quality and efficiency of Maynilad’s operations,
- Expand service coverage to still unserved areas,
- Rationalize water and sewerage rates and adjustments,
- Remove the reliance on investments to improve water services on government subsidies,
- Reduce the non-revenue water lost in the water system,
- Improve access for low-income marginalized communities to affordable and more reliable piped water,
- Repay the existing and inherited debts of Maynilad, and
- Ensure long-term viability of Maynilad’s concession operations until the end of the remaining concession period in 2022.

The long-term financial viability of Maynilad is the key to ensuring the achievement of the broader objectives of providing reliable safe water supply and sewerage service; promoting productivity; and improving hygiene, sanitation, and environmental standards for the Metropolitan Manila region and selected towns and/or city in nearby Cavite province.

Reprivatization Timetable Overview

- 29 April 2005: Maynilad signed the DCRA with the MWSS, its shareholders, and creditor banks, which formed an integral part of its 2005 Rehabilitation Plan.
- 1 June 2005: 2005 Rehabilitation Plan and the DCRA were approved by the Rehabilitation Court for immediate implementation.
- 23 June 2005: The Monetary Board of the Philippines approved the restructured US dollar loans of Maynilad under the DCRA.
- 8 September 2005: Instead of directly subscribing to Maynilad’s 83.97% shares, the MWSS Board of Trustees passed a resolution to assign its subscription rights to a private investor pursuant to Clause 24 of the DCRA.
9 January 2006: MWSS took over the management and control of Maynilad.
26 June 2006: MWSS public bidding for the selection of its assignee under the DCRA and new private operator of Maynilad commenced.
5 December 2006: DMCI–MPIC Water Company, Inc., the joint-venture company (Sponsor) established by DMCI Holdings, Inc., (DMCI) and Metro Pacific Investments Corporation (MPIC) won the bid as MWSS’ assignee of its receivables and subscription rights under the DCRA.
6 December 2006: The Privatization Council of the Philippine government approved the award to the Sponsor.
27 December 2006: Transaction documents on MWSS’ assignment and capital restructuring were executed by all parties concerned.
10 January 2007: Assignment of MWSS’ receivables and subscription rights to the Sponsor took effect.
19 January 2007: Capital restructuring was completed with the issuance by the Philippine Securities and Exchange Commission of its approval of all required corporate transactions of Maynilad.
24 January 2007: All completion conditions of the public bidding for Maynilad’s reprivatization have been satisfied and presented by the MWSS. The Sponsor (DMCI-MPIC Water Company, Inc.) officially became the owner of Maynilad shares representing 83.97% of the outstanding capital stock of Maynilad.

Why a Public–Private Partnership

The Philippine government, recognizing its financial limitations and the heavy investments needed to improve the water services of Metro Manila, encouraged the private sector to invest in much-needed basic infrastructure. The BOT Law defined the rules for the public–private partnership (PPP) in developing, financing, and operating infrastructure project.

The successful operations, under a CA, of the East Zone concessionaire (Manila Water Company, Inc.) since the original 1997 privatization and the ability of the private sector to raise needed funding to expand and operate the water and sewerage system left the Philippine government no choice but to reprivatize the failed West Zone concession as soon as possible to avoid further deterioration of water and sewage services.

Public–Private Partnership Contract Type

The two concessions offered under the MWSS PPP are 25-year concessions that transfer the operational and financial responsibilities of the MWSS, including debt service obligations, to the concessionaires. Under the CA, the MWSS grants to the Concessionaire—as contractor to perform certain functions and as agent for the exercise of certain rights and powers of the MWSS under the MWSS Charter—the sole right to manage, operate, repair, decommission, and refurbish the facilities in the service area, including the right to bill and collect for water and sewerage services supplied in the service area. Although the franchise remained with MWSS, the concessionaires were given full operational responsibility to achieve specific service obligation targets defined in the CA. In the 2007 reprivatization, the new sponsors of Maynilad only had the remaining 15 years of the original 25-year concession period granted in 1997.
Assets to Be Delivered

The CA stipulates that all the assets of the MWSS are to be turned over to the concessionaires. After the designated turnover date, the Concessionaire is responsible for acquiring, installing, upgrading, and maintaining the network assets to meet the contractual performance standards relating to water supply and the expanded water and sewerage coverage. The MWSS retains ownership of all existing turned-over water and wastewater system assets while the ownership of the new assets procured by Maynilad will be transferred to the MWSS at the end of the concession period.

Services to Be Delivered

The service obligations of the Concessionaire are as follows:

- Provide water supply to existing customers and meet specific coverage targets via new service connections by specific dates and areas provided for under the CA,
- Continuity of water supply and water pressure at a minimum of 16 pounds per square inch (psi),
- Meet drinking water quality standards,
- Offer sewerage services to all customers and meet specified coverage targets,
- Offer septic and sanitation cleaning and sludge disposal services,
- Provide wastewater treatment facilities to meet environmental laws and standards, and
- Meet customer service standards.

Legal, Regulatory, and Institutional Framework

Legislation, Policy, and Regulatory Framework

Legal Framework

The Water Code of the Philippines of 1976 provides the legal framework for the water resource use in the Philippines. Under the code, the National Water Resources Board (NWRB) has overall responsibility for water resource management including control, supervision, and regulation of the utilization, exploitation, development, and protection of water resources.

However, the management and regulation of water resources is included in the jurisdictions of several other government agencies and at local government units, creating difficulty in control, overlapping jurisdiction, and effective water resource management. As an example, the MWSS had overall responsibility for water supply and sewerage services in Metropolitan Manila as an attached agency of the Department of Public Works and Highways. Thus, there is some overlapping of jurisdiction between the NWRB and the MWSS as far as water concession in Metropolitan Manila is concerned. While in areas outside the MWSS franchise, conflicts arise among several government agencies (NWRB, Local Water Utilities Administration, and local government units). The lack of clear responsibility and enforcement of laws similarly exists in the control, operations, and enforcement of sewerage and wastewater management policies.
The Philippine Constitution mandates that all public utilities are to be owned and controlled by Filipinos or by corporations of which the outstanding capital stock is owned and controlled by Filipinos. The BOT Law earlier mentioned enabled private sector participation in development, maintenance, and operations of public works activities and infrastructure projects. However, in the case of the MWSS, the privatization of its concessions was granted under the Water Crisis Act that was enacted in 1995.

The Water Crisis Act was enacted in response to severe drought conditions and was similar to the Power Crisis Act that was introduced to resolve the power crisis experienced by the Philippines. The act provided

- the President with the power to enter into contracts with private sector parties who could assist the government in dealing with water issues of the MWSS,
- the President with authority to privatize water utilities and negotiate BOT contracts within 6 months of the law being in effect, and
- for water theft to be a criminal offense.

**Water Regulatory Framework**

The MWSS was split into two separate organizational units after the CAs were signed: The MWSS Corporate Office (CO) remained as owner of the MWSS assets and congressional franchise and to manage the terms of the CAs. MWSS–CO handles the accounting for its MWSS debt, which would still remain in its books although debt repayment through concession fees was the responsibility of the concessionaires.

A new entity called the MWSS Regulatory Office (MWSS–RO) was established under the jurisdiction of the MWSS Board of Trustees to monitor and enforce the concessions; review and recommend rate adjustments; deal with customer complaints; and to supervise technical, financial, quality assurance, customer rights, and related legal matters.

The MWSS Board of Trustees, as the governing body of MWSS, plays an important role in the regulatory framework as it approves any water and sewerage tariff adjustments and policy-related matters based on the recommendations of the MWSS–RO.

Drinking water quality monitoring and regulation is the responsibility of the Department of Health. The Department of Environment and Natural Resources is responsible for monitoring and regulating pollution from sewerage and wastewater discharges and industrial effluents. The Laguna Lake Development Authority is responsible for regulating pollution from wastewater, sewerage discharges, and industrial effluents—directly or indirectly—into Laguna Lake.

**Institutional Framework: The Concession Process**

Other than the interagency Committee on Privatization, there was no special purpose PPP unit established to assist in developing and implementing the concession process. The key institutions directly involved in the concession process are as follows:

- The MWSS chairman and Board of Trustees—In past practice, the chairman was the Secretary of the Department of Public Works and Highways. However,
the Philippine President had the sole authority to appoint the chairman and members of the Board of Trustees. The President exercised the authority provided under the Water Crisis Act to instruct the Secretary of Finance and the MWSS chairman to manage the concession reprivatization process;

- An interagency committee—This was formed to investigate and review the concession process;
- Technical and financial advisors, such as the International Finance Corporation (financial advisor) and Halcrow (technical advisor)—These were engaged to advise and assist the MWSS technical staff in the concession process;
- A Special Advisory Committee to the President—This was established to represent the agencies required to approve the concession documentation in the name of the President (Legal Counsel, Justice, Corporate Counsel, Finance, Public Works and Highways);
- The Committee on Privatization (COP), representing Cabinet secretaries—This committee was involved in the approval of the concession contract award;
- The Secretary of Finance—The secretary was designated by the Philippine President to sign and approve the CA and issue the undertaking for and in behalf of the country.

**Government Leadership Roles in the Project**

The Secretary of the Department of Finance, as chairman of the COP, was influential in driving the concession process. The Philippine President also raised public awareness and built consensus regarding the water crisis and the need for water sector reform, which provided the concession process with strong political and community support.

The Philippine President has given authority to the Secretary of Finance to approve and sign the CA for and in behalf of the country. The Secretary of Finance also signed a sovereign Undertaking Letter for the country.

The MWSS administrator played a key role in implementing the instructions of the MWSS Board of Trustees and the Office of the President and in ensuring that the timetable for implementation is followed.

In the first privatization of 1997, the secretary of the Public Works and Highways as the ex-officio chairman of MWSS, was directly involved in all the decisions relating to the CA. The MWSS Board of Trustees also had representatives with an undersecretary rank from the Department of Finance, National Economic and Development Authority, and Office of the Government Corporate Counsel.

**Stakeholder Consultation Involving the General Public**

Despite any formal public consultation requirement, the MWSS, with the assistance of the Maynilad, felt the need to conduct public information with the general public and the various stakeholders (customers, suppliers, labor unions, employees, lenders, local government) about the bidding arrangements. The public information focused on the need to reprivatize Maynilad to improve and upgrade water services in the West Zone.

Regular media briefings were conducted to keep the general public informed of the bidding process to ensure transparency.
The Maynilad management conducted consultations with the leaders of the Maynilad rank-and-file employees union and the supervisors union to secure their support and agreement on the treatment of employees under the CA and on other employee-related benefits and programs.

The lenders and suppliers were regularly informed of the status of the reprivatization process and the terms and conditions of the bidding process.

The Procurement Process

Project Development and Selection of Public-Private Partnership

The decision to enter into a PPP arrangement was primarily based on the government’s view that it could not resolve the issues that had resulted in inadequate water and wastewater services being provided to the MWSS coverage area. It was also due to the success that the government had with recent BOT PPP contracts in the power sector. A concession type arrangement was considered appropriate as it enabled the transfer of all operational obligations of the MWSS—including infrastructure upgrades, operating inefficiencies, and debt obligations—to the private sector, which was considered appropriate to resolve the problems of the MWSS, while the franchise remained vested in MWSS and the concessionaire acted as agent and contractor of MWSS.

The decision to offer two concessions for the West coverage area was designed to promote competition among prospective bidders and enable benchmarking and comparisons of the service quality offered by each. The concession offered for the West Zone required the Concessionaire to accept 90% of the MWSS foreign currency-denominated debt obligations, which is approximately $800 million.

Stages in Procurement

The key stages in the reprivatization and selection of new sponsors to acquire the 84% stake of MWSS in Maynilad included:

- Preparation of the terms of reference in consultation with all the stakeholders, lenders, and potential private sector bidders;
- A registration and prequalification stage;
- Prequalified bidders are required to submit their comments on the drafts of the transaction documents prior to the deadline for submission of bids;
- Submission of two envelopes—one for the technical and business bid and another for the financial bid by each prequalified bidder;
- The evaluation of the technical and business bid to ensure compliance with minimum requirements;
- Opening of financial bids (only for those who pass the technical and business bid requirements) to determine the winning bidder;
- The winning bid is then approved by the MWSS Board of Trustees and the Privatization Council of the Philippines, and a Notice of Award is issued; and
- The transaction documents covering the MWSS assignment and completion of Maynilad’s capital restructuring are signed subject to the satisfaction of closing and completion conditions.
Bid Process

Selection of Financial Advisor to Prepare Bid Terms of Reference

The Maynilad, with the assistance of the Department of Finance, through a competitive selection, appointed ABN-AMRO as financial advisor to the MWSS. Maynilad’s engagement of ABN-AMRO specifically to assist the MWSS in selecting its assignee pursuant to the DCRA was also approved by the Rehabilitation Court. ABN-AMRO helped the MWSS design the bid terms, which had two main parts.

Part 1 covers the minimum condition for bidders. This sets the minimum financial bid at $56.37 million, comprising the following:

- $22.67 million (value of the actual 84% equity of the company at P1 per share, as set forth in the DCRA);
- Interest of the above subscription amount from the DCRA’s effective date of 20 July 2005, calculated at $2.7 million as of 13 November 2006, to be adjusted as of the Closing Date (finally calculated at $2.9 million as of the Closing Date); and
- $31 million financial assistance that MWSS previously provided Maynilad in the form of deferred concession fees.

Part 2 involves the amount of additional resources that bidders can put in the company. This includes the following:

- A financial supplement of $2.5 million, which represents MWSS arbitration costs to be remitted in cash; and
- Additional resources to fund capital expenditure and/or prepayment of Maynilad’s outstanding obligations, which must be secured by irrevocable standby letters of credit issued only by banks whose senior unsecured obligations are rated at least “BBB” by Standard & Poor’s Investors Service, Inc. or “Baa2” by Moody’s Investors’ Service, Inc.

The bid terms also required the winning bidder to assume all of MWSS’ obligations under the DCRA relating to its subscription rights to 83.97% shares of Maynilad and to post a $30-million performance bond on behalf of Maynilad, which may be partially satisfied by a capital expenditure commitment to the extent of up to $18 million. It took barely 5 months to complete—from the date of publication of invitation to prequalify and to bid (17 June 2006) to the submission of two-envelope bids (21 November 2006).

Technical and Financial Bids

A two-envelope system was used for the tender—one for the technical and business bid and another for the financial bid. The first stage of the evaluation was scrutinizing the technical and business bid on a pass-or-fail basis. The bidder’s financial offer will only be opened if its technical and business qualifications passed the technical requirements of the terms of reference. The MWSS formed a technical committee to evaluate the bids and hired the Thames Group to help evaluate the technical plans. The technical committee also set these minimum qualifications for bidders:

- A competent operator of water supply and/or sewerage services, and owns at least 15% of the equity interest in the consortium; or
Collectively, the bidder and at least one member with at least 20% of the equity interest in the consortium has demonstrable experience and satisfactory track record in at least one of the following areas:

- water supply and sewerage services,
- telecommunications,
- power distribution, and
- construction.

Given Maynilad’s need for substantial capital investment, the foremost consideration was the bidder’s financial capacity. As such, steep requirements were imposed to weed out prospective bidders who have no real financial capability to improve Maynilad’s services. These requirements included

- a minimum of P6 billion ($120 million) capitalization in Maynilad, backed up by an irrevocable standby letter of credit issued by a bank of the highest standing (the bank should have senior unsecured obligations rated at least “BBB” by Standard & Poor’s Investors Service, Inc. or “Baa2” by Moody’s Investors Service, Inc.), or a cash escrow account; and
- a bid guarantee of $2.5 million in the form of an irrevocable standby letter of credit in favor of MWSS issued by a bank(s) having the same rating to ensure that the winning bidder will assume all the obligations of the MWSS, including entering into contracts and other legal documents to implement the necessary transactions.

When the bid was first announced, 11 investor groups expressed interest and procured the bid documents. These were

- Amroc Investments Asia, Ltd.;
- DMCI Holdings, Inc., a Philippine infrastructure company that also owns a majority stake in the joint venture company—Subic Water and Sewerage Company, Inc.;
- Gancayco, Balasbas and Associates, a firm of Philippine lawyers;
- Gil Valera and Associates, a firm of Philippine accountants;
- Infrastructure Leasing and Financial Services, Ltd. (IL & FS), an Indian nonbanking financial company with interest in infrastructure development;
- LILL Investments Services, Ltd./Orix Corp.;
- Manila Water, concessionaire of the East Zone;
- Marubeni Corporation, a Japanese infrastructure company;
- Noonday Asset Management Asia Pte., Ltd., a Singapore-based investment fund;
- The AES Group; and
- YTL Power International Berhad, a Malaysian infrastructure group.

However, only five firms submitted the requirements to qualify for the second phase of the bidding. These were

- the consortium of DMCI Holdings, Inc.–Metro Pacific Investments Corporation (DMCI-MPIC),
- IL & FS,
- Manila Water,
- Marubeni Corporation, and
- Rubia Holdings-Noonday Asset Management Asia, Pte.
Of these five, only these three firms submitted their technical and financial bids on bid submission deadline on 21 November 2006: Manila Water, DMCI-MPIC, and Rubia Holdings-Noonday consortium. The Indian financial firm IL & FS expressed concerns over the 16% shares owned by Suez and did not submit its proposals. Of the three, the Rubia Holdings-Noonday consortium was disqualified after it failed to submit the required standby letter of credit for $2.5 million representing its bid guarantee. The submissions of Rubia were returned unopened, and the firm conceded its disqualification. The technical submissions of both Manila Water and DMCI-MPIC passed the scrutiny of MWSS’ technical committee. The deciding factor, therefore, came down to the financial bid price. It took 2 weeks for the MWSS to evaluate the technical submissions of the two bidders.

**Bid Award**

On 5 December 2006, the financial bids of both companies were opened for the first time. Special Bids and Awards Committee Vice-Chair Agnes Devanadera and Chair Oscar Garcia opened the tightly sealed financial bids.

The minimum bid required was $56.37 million. The MWSS Special Bids and Awards Committee was anticipating bids of no more than $100 million, especially given that the company’s existing debt load is still over $200 million. The final result could not be more surprising or encouraging. With a total bid of $503.9 million, the consortium of DMCI-MPIC won over Manila Water and emerged as the new owners of Maynilad’s 83.97% shares. Its bid comprised the minimum bid and a financial supplement of $447.2 million. Manila Water’s financial supplement was almost $50 million less, at about $400 million. The Notice of Award was given 13 December 2006, less than 6 months from the date of first publication to bid.

**Evaluation Criteria**

During the technical and financial bid stage, the key evaluation criterion was the technical capability to meet the minimum requirements set by the MWSS. This was assessed on a pass/fail basis and if a bid failed, then the financial bid was returned to the bidder unopened. For bids that passed and complied with the technical requirements, the highest financial bid above the minimum bid requirement of $56.37 million was awarded the concession and the right to own 83.97% of Maynilad’s equity shares.

**Approval Process**

The approval process to award the contract required the following:

- The MWSS Board of Trustees recommends approval of award to the Privatization Council of the Philippines, which then endorses the recommendation to the President.
- The Chief Presidential Legal Counsel and the Executive Secretary also endorse the recommendation to the President.
- The President approves the award of contract through the issuance of a Special Authority.
- The MWSS enters into the transaction documents.

This process took approximately 7 months from the date of first publication (June 2006) to complete the reprivatization of the West Zone concession.
Contractual Arrangements

Contractual Arrangements and Obligations

The key documents for the West Zone concession are the CA between the MWSS and Maynilad and Amendment No. 1. The Maynilad and Manila Water Company, Inc. (the East Zone concessionaire) have also entered into ancillary agreements on certain shared and common purpose facilities as well as water transfers within the zones.

The Concessionaire is required to

- offer water supply services to all existing customers and make sufficient connections (net of any disconnections) to meet the coverage target percentages;
- collect revenue from these services;
- ensure the availability of 24-hour water supply to all customers;
- at all times, supply water at a level of positive pressure sufficient to secure the system against the ingress of untreated water or other contaminants;
- comply with the Philippine National Drinking Water Standards;
- provide water other than through the water mains, as necessary;
- maintain existing sewerage customers and offer new sewerage connections;
- connect customers to the public sewer for a connection fee;
- comply with all national and local environmental laws and standards relating to treated wastewater;
- offer septic and sanitation cleaning services;
- provide the highest quality services to its customers that is practically achievable, subject to guidelines issued by the MWSS-RO;
- operate, maintain, renew and, as appropriate, decommission facilities in a manner consistent with the National Building Standards and best industrial practices so that the system is capable of meeting its service obligations;
- repair and correct any defect in the facilities that could adversely affect public health, welfare, or cause damage, as a priority;
- have sufficient financial, material, and personnel resources available to it to meet its obligations;
- provide data and supporting evidence to the Regulatory Office that demonstrates compliance with such coverage targets, along with the method by which such compliance was calculated, prior to each Rate Rebasing Date; and
- provide an Asset Condition Report to the MWSS-RO within 2 years, stating and classifying the condition of all existing infrastructure assets and facilities.

The West Zone Concessionaire is required to provide

- a commencement fee of $5 million,
- an equity cash investment of $100 million,
- a performance bond of $120 million (but later rationalized to $30 million in accordance with the bid terms for the reprivatization, as approved by the Philippine government),
- a yearly fee of $1 million for the MWSS-RO,
the yearly budget for the residual MWSS ($4.25 million between the East and West Zone concessionaires), and

- a yearly concession fee to service MWSS’ foreign debt obligations.

The Concessionaire has exclusive right to serve customers in its service area and allow for third-party provision of services as long as the activity is properly licensed and has the Concessionaire’s consent. Any assets transferred, acquired, or built by the Concessionaire remain in the ownership of MWSS and all such assets revert to MWSS upon termination or expiration of the CA.

The MWSS is required to

- cooperate with the Concessionaire, and
- appoint the Concessionaire as its agent and representative to apply for and exercise its easement, eminent domain, right-of-way, and similar rights and powers given to MWSS under its charter for infrastructure projects and works.

In the event of government default:

- The government assumes the Concessionaire’s debts.
- The Concessionaire is compensated for actual investments up to the early termination date.
- A single payment is made as a promissory note and/or debt instrument to the Concessionaire.

In the event of Concessionaire default:

- The creditors of the Concessionaire assume operations.
- The MWSS will take over operations in the event that the creditor is unable to find a substitute concessionaire, and the government will pay 75% of the discounted value of the assets taken over only up to the amount of outstanding loans of the Concessionaire.

The parties are to use reasonable efforts to resolve disagreements or disputes concerning the interpretation or implementation of the CA through mutual consultation and negotiation. All disagreements and claims by both parties that cannot be resolved through consultation and negotiation are to be resolved by arbitration in accordance with the rules of the United Nations Commission on International Trade Law.

During the concession, Maynilad and the government agreed to Amendment No. 1 that allowed the Concessionaire to

- recover forex losses and increased capital costs resulting from devaluation in the past by implementing an Accelerated Extraordinary Price Adjustment,
- impose the Foreign Currency Differential Adjustment (FCDA) to the water tariff due to fluctuations in the peso–dollar and other currency rates, and
- undertake the first rate rebasing in 2003.
Financing Arrangements

In the 1997 privatization, Maynilad’s equity was initially provided by

- Benpres Holdings: 59%
- Lyonnaise Asia Water Holdings Pte. Ltd. (Suez Group): 20%
- Ondeo Services (Suez Group): 20%
- Metrobank: 1%

In 2005, a DCRA was implemented among Maynilad, MWSS, its shareholders, and creditors and incorporated a rehabilitation plan for Maynilad. This plan provided the MWSS with the option to subscribe to 84% of the equity in Maynilad. In 2007, the MWSS conducted a bidding process for this equity, which was won by a consortium of DMCI–MPIC for a total bid of $504 million. The Lyonnaise Asia Water Holdings Pte. Ltd. retained a 16% shareholding.

At the time of the DCRA, the main creditors were Equitable PCI Bank, Rizal Commercial Banking Corp., East West Bank, Development Bank of the Philippines, Credit Agricole Indosuez Merchant Bank Asia Ltd, Citibank N.A., Barclays Bank PLC, BNP Paribas, the MWSS, the Suez Group, and a number of other foreign banks. The total debts at this time were approximately $488 million.

In 2008, under new ownership, Maynilad signed a 10-year corporate notes issue for $365 million with lead underwriters—BDO Capital & Investment Corporation and the Development Bank of the Philippines—to partially fund the rehabilitation of the pipe network to reduce system losses. The capital structure of the company in 2007 and 2008 are as follows:

<table>
<thead>
<tr>
<th>Shareholders</th>
<th>2007 (%)</th>
<th>2008 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMCI-MPIC</td>
<td>83.96</td>
<td>94.11</td>
</tr>
<tr>
<td>Metrobank</td>
<td>0.04</td>
<td>0.01</td>
</tr>
<tr>
<td>LAWL</td>
<td>13.00</td>
<td>5.88</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100.00</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>


Source: Internal data from Maynilad.

Government Support Arrangements

The government provided the concessionaires with tax incentives under the Investment Incentives Program of the Board of Investments via a 6-year income tax holiday, a preferential tariff of 3% on capital equipment imports, and tax credits on locally fabricated capital equipment until the end of 2002 or during rehabilitation phase,
whichever comes later. The Concessionaire is also exempt from local government and franchise taxes and the value-added tax (VAT) on the supply and distribution of water. However, VAT is still applied to the provision of sewerage and sanitation at a rate of 12%.

The Department of Finance also provided a performance undertaking to guarantee the commitments of the MWSS under the CA. The concessionaires assumed all existing MWSS loans from ODA agencies and local banks.

**Sponsor Support Arrangements**

In the first 1997 privatization, Benpres Holdings and the Suez Group provided sponsor guarantees for the bridge loan facilities, the Standby Letter of Credit facility that provided the performance bond and other foreign currency and local currency loans prior to the DCRA.

In 2003, when Maynilad first defaulted on its loan repayments, Benpres Holdings also defaulted on its obligations under the guarantees provided. The Suez Group made payments in accordance with the guarantees it had provided for these facilities. In 2005, the DCRA required Benpres Holdings to relinquish its shareholding in Maynilad and released it from these obligations and guarantees. Upon assumption in January 2007, DMCI-MPIC immediately commenced the process for the early exit of Maynilad from corporate rehabilitation through a prepayment of all of Maynilad’s DCRA loans and obligations through funds coming from its sponsor commitment.

**Performance Measures and Regulation**

The following expansion targets were set for the West Zone concession in 1997 and were provided as a percent of the covered population:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Water services</td>
<td>62.0</td>
<td>87.4</td>
<td>97.1</td>
<td>97.4</td>
<td>97.7</td>
<td>98.4</td>
</tr>
<tr>
<td>Sewage</td>
<td>13.0</td>
<td>16.0</td>
<td>20.0</td>
<td>21.0</td>
<td>31.0</td>
<td>66.0</td>
</tr>
</tbody>
</table>

Source: Internal data from Maynilad.

The specified service standards for water quality, pressure, reliability, and customer service standards were also detailed, as follows:

- Water quality to conform to the Philippine National Standards for Drinking Water and with World Health Organization water and effluent standards,
- Water reliability to be at 24 hours/day for all rehabilitated or new area until 2012,
- Water pressure at no less than 16 pounds per square inch (psi) for all rehabilitated or new area until 2012, and
- A reduction of non-revenue water from 66% in 2007 to 40% in 2012.
The MWSS-RO is responsible for regulating the performance of the Concessionaire. To perform this role, the Concessionaire provides the MWSS-RO the following:

- Data and supporting evidence that demonstrates compliance with its coverage targets, along with the method by which such compliance was calculated, every 5 years (or prior to Rate Rebasing exercise);
- Annual audited accounts;
- An Asset Condition Report within 2 years; and
- Key performance indicators and business efficiency measures.

The MWSS-RO has the right to commission an independent technical audit of the accuracy and completeness of the Asset Condition Report. After 5 years, if the MWSS-RO concludes that the Concessionaire is not meeting its obligations, the latter has 60 days to rectify the issues before the MWSS-RO is entitled to appoint a third party to rectify the issues, at the Concessionaire’s cost.

The Concessionaire is also required to provide other information as the MWSS-RO may reasonably request and to observe any requirements regarding sampling, record keeping, or reporting that may be specified by Philippine law.

**Regulation of Tariff**

The concessionaires implemented the same tariff structure as the MWSS, which is a progressive block system that differs among residential, semi-business, commercial, and industrial customer mix. The system is designed to charge higher unit prices to customers using higher quantities of water, and lower unit prices to other low-consuming customers. There is a discount given to low-income, lifeline consumers.

The tariff structure is progressive and includes the following provisions:

- Rate Rebasing, or review of performances, plans, and expenditures every 5 years;
- Annual adjustments for inflation (Consumer Price Index) and exceptional events;
- Maximum connection fees of $106 for each water and sewage, and installment plans for connections are permitted;
- A 10% environmental charge for all connected customers;
- An additional sewerage charge of 50% for all sewerage-connected customers; and
- A fixed maintenance service charge per connection that is dependent on the meter size (P1.5–P50 per billing month).

In 2000, the Concessionaire introduced a quarterly FCDA that was also charged for all connections.

The MWSS-RO is responsible for tariff regulation. Applications for tariff adjustments are submitted to the MWSS-RO, which has recommendatory powers. The approval of any tariff adjustment is vested in the MWSS Board of Trustees. The MWSS-RO is also responsible for conducting the review of the water supply and sewage operations and rates charged by the Concessionaire, known as Rate Rebasing process, which is
undertaken every 5 years as provided for under the CA. The MWSS-RO undertakes a
detailed review of previous and projected cash flows provided by the Concessionaire
to determine how much it is able to charge based on an appropriate discount rate
of its investments.

Outcomes, Issues, and Key Lessons Learned

Realized Benefits or Outcomes

Quantitative Service Outcomes

Prior to the 2007 reprivatization, as of end of 2000 under the previous operator, the
following service level indicators have been reported:

- A survey conducted by the MWSS-RO and the World Bank showed that 67%
of the 10,000 respondents felt that water services did not improve or became
worse since the concession. More than 50% also provided a poor rating for
the quality of service. Sewage expansion to low-income neighborhoods had
not commenced;
- Demand for sanitation had not been assessed;
- A master plan for sewerage extension options was being developed; and
- Non-revenue water increased to 67% (from 56% reported by MWSS prior to
the concession and 63% observed in the West Zone in 1997).

In 2003, an outbreak of gastrointestinal disease occurred in the poor communities
of the West Zone. Six people died and laboratory results indicated that Maynilad’s water
has 700 times the national standard of E.coli bacteria. The results were conducted by
the University of the Philippines Natural Sciences Research Institute at the request of
the Freedom from Debt Consolidation organization in the Philippines. Maynilad and
a MWSS-RO report cited the cause of the outbreak as due to illegal connections to
the existing pipelines.

By the end of January 2007, the new owners (DMCI-MPIC) of Maynilad reported the
following operational data:

- 46% of homes had water supply 24 hours/day
- 53% of homes had water supplied at a minimum of 7 psi average pressure
- Non-revenue water is at 67%
- 77% total coverage of the West Zone population with 704,000 water
connections

By the end of 2008, just 2 years under the new operator, service levels have signifi-
cantly improved as shown in the following data:

- 58% of homes had water supply 24 hours/day
- 67% of homes had water supplied at a minimum of 7 psi average pressure
- Non-revenue water is at 60%
- 78% total coverage of the West Zone population with 763,000 water
connections
The new Maynilad had invested P5 billion in 2007 and P8 billion in 2008 in capital infrastructure to improve the network's operational efficiency in terms of

- new and rehabilitated pipelines,
- rehabilitation of reservoirs and pumping stations,
- use of information technology infrastructure,
- Non-Revenue Water Reduction Program,
- creation of district meter areas, and
- rehabilitation and upgrading of treatment plants and wastewater facilities.

**Costs to Users, Government, and Investors**

The following average water rates have been observed in the West Zone:

- 1996: P8.78 (pre-privatization basic rate)
- 1997: P4.96
- 1998: P4.96
- 1999: P5.80
- 2001: P6.13
- 2002: P15.46 (includes the P7.18 basic charge, P4.21 Extraordinary Price Adjustments (EPA), and P4.07 Foreign Currency Differential Adjustment (FCDA))
- 2007: P22.47
- 2008: P23.05

The 1997 privatization brought down the water rates drastically, based on winning bids. The gradual increase in average rates from 1998 to 2001 reflects the CPI and EPA. The sudden increase in 2002 reflects the cost to users of two forex adjustment mechanisms, the EPA and the FCDA. Because 90% of the MWSS debt (mostly in US dollars) was assumed by Maynilad, the tariff of the West Zone concession consumers significantly increased when the value of the Philippine peso depreciated by approximately 60% against the US dollar on the first year of the concession due to the Asian financial crisis.

As a result of the legal dispute between the MWSS and Maynilad, the MWSS needed to borrow funds to meet its debt obligations when Maynilad failed to provide concession payments. The original shareholders and creditors of Maynilad suffered financial losses, as they were required to write down their exposure to the company as part of the DCRA.

**Labor Outcomes**

In 1995, prior to privatization, MWSS employed approximately 9.5 employees for every 1,000 customers. This ratio was much higher than other major Asian cities at the time (Jakarta had 7.7, Bangkok had 4.6, and Kuala Lumpur had 1.1 employees per 1,000 customers). The early retirement plan offered under the Water Crisis Act resulted in approximately 27% of the workforce retiring and 68% of the remaining workforce was retained by the concessionaires. The remaining staff was employed by the two new MWSS entities or took retirement packages when the concessions were signed.
In December 2007, the new Maynilad implemented a Right-Sizing and Redundancy Program that resulted in a 33% reduction of the workforce from 2,325 employees in December 2007 to 1,554 employees by February 2008. This reduced the manpower ratio to 2.2 employees for every 1,000 service connections.

Other Qualitative Outcomes

By 2008, after the takeover of the new management, the following outcomes of the West Zone concession have been observed:

- Maynilad improved access to water for poor communities by implementing community-based programs that provide simple, low-cost infrastructure such as small diameter pipes from the main system to the households. The maintenance of the pipes and meters is the customer’s responsibility and the billing process is managed either by the local government unit or by community-based organizations. These programs provide individual meters and low-cost infrastructure that is designed to reduce the amount of non-revenue water lost through the system.
- Maynilad implemented new policies to improve customers’ demand for water services and reduce non-revenue water. A simplified application process was implemented that did not require a land title and connection fees could be paid via installment payments for up to 3 years. Community programs for bulk water and individual metering were also initiated in poor communities.
- In many underserved and unserved communities, third-party water providers were engaged by homeowners and/or customers for the delivery of water supply that resulted in prices of more than 3–4 times the price of Maynilad’s water services.
- Many poor communities access water via the bulk water selling scheme, which results in higher costs for the poor than if they were able to access the direct water connection of Maynilad.
- The extensive financial difficulties of Maynilad and the protracted arbitration process that occurred from 2001 to the DCRA in 2005 and the appointment of new owners in 2007 undoubtedly delayed the improvement in water and wastewater services to the residents of the West Zone as the CA had aimed to achieve in 1997.
- In 2007, the total bid of DMCI–MPIC consortium was for $504 million, comprising of the minimum bid of $57 million and a financial supplement of $447 million, which assured Maynilad of the much-needed capital investments. Also in February 2008, Maynilad was released from the court-administered corporate rehabilitation allowing the company to access financial markets.
- By January 2008, Maynilad announced that it had paid off its debt under the DCRA and had raised necessary financing to implement a robust capital investment program to reduce non-revenue water and improve the network’s efficiency.
- Foreign debts of the MWSS are now being paid by the new Maynilad, relieving the government of debt repayment.
Issues in Implementation

Project Preparation and Analysis

A key issue faced by the Concessionaire in 1997 until 2007 was the inaccurate information provided by the MWSS on the length of pipes and assets in the West Zone. Based on the bid documents in 1997, the West Zone had approximately 2,500 kilometers (km) of pipes, and the Concessionaire developed a strategy to decommission old pipes and relay new ones to achieve a reduction in non-revenue water. However, a later study of the network indicated that there were almost 4,000 km of pipes, which significantly impacted the Concessionaire’s operational plans and non-revenue water reduction strategy. Maynilad had an inaccurately calibrated hydraulic model that provided very inaccurate data for proper water supply management and lacked a well-defined, sustained non-revenue reduction program.

Lack of Clearly Defined Regulatory Regime

Under the CA, the MWSS Board of Trustees created a Regulatory Office directly under the jurisdiction of the board and funded from concession fees paid to the MWSS. The potential conflict could arise in the implementation of certain tariff and regulatory issues since the owner (MWSS) is effectively also the Regulator, having jurisdiction over the regulators and its staff. Therefore, unless regulatory policies, rules, and practices are clearly defined and understood, the private operator could be on the short end of the arrangement. The CA should therefore also provide for some sovereign guarantee in case the MWSS does not perform its contractual obligations. An Undertaking Letter was issued by the Secretary of Finance for and in behalf of the Philippine government to protect the private sector from any loss against nonperformance of the MWSS of its contractual obligations.

Risk Analysis and/or Understanding of Project Risks and Allocations

Lack of thorough risk assessment, on the part of both the MWSS and the Concessionaire, caused a lack of understanding of the project risks and risk allocation. Key risk factors include

- regulatory and tariff risk;
- lack of foreign currency and/or peso devaluation adjustment mechanism;
- force majeure events;
- source of water from a single source dam, which is a multiuse facility;
- an independent water regulatory body with unclear responsibility and authority;
- highly politicized water tariff determination; and
- lack of enforcement of existing laws on water, and environmental law compliance.

Tariff-Driven Bidding

In the 1997 privatization, the government’s approach to awarding the concessions was based on the bidder’s ability to offer the lowest water tariff to its customers that resulted in water rates almost half of the then prevailing water rates. Consideration of other aspects of the concessions in the evaluation process may have provided the
government with an opportunity to evaluate the assumptions underlying the bids, the Concessionaire’s approach to risk management, and the broader implications of the bid structure on the government and community. It may also have resulted in bidders taking more conservative assumptions, approaches to risk management, and pricing that may have alleviated some of the issues faced in implementation. However, the 2007 reprivatization got away from tariff-driven bidding but based the award on the highest-level investment commitment of the winning bidder.

**Contractual Arrangements**

Key clauses in the CA on dispute resolution, early termination, and force majeure events were not easily implemented by the parties during the concession. As a result, claims, counter claims and deliberations at different court levels resulted in protracted negotiations that delayed resolutions and delayed improvements in the water and wastewater services that the concession aimed to achieve.

**Contractual Relationship**

The contractual relationship between the government and the Concessionaire was strained mainly due to the structure of the CA. The Concessionaire assumed all major project risks and a significant amount of the MWSS’ operational issues and debt obligations, while the MWSS, the project owner (MWSS-CO) was also the regulator (MWSS-RO) at the same time. A lack of understanding of the other party’s authority and limitations further contributed to the strained relationship. As a result, an apparent lack of clear delineation of responsibility and authority affected the early resolution of issues and disputes and policy implementation affected the contractual relationship of the concessionaires with the MWSS.

**Lessons Learned**

**Transparent and Credible Procurement Process**

The public entity entering into a PPP agreement has to ensure that the whole bidding, procurement, and selection process has to be very transparent, well publicized, and credible to be successful.

**Clearly Defined Regulatory Roles**

PPP can work better under clearly defined regulatory regime and rate rebasing process. At the start of the procurement process, it is best to consider suggestions coming from the serious bidders since they are supposed to know what risks and problems they may encounter in the long term. It is important that the regulatory responsibility and authority for implementing the CA and the related tariff adjustments are clearly defined. An independent regulatory agency is ideal to ensure that tariff discussions and adjustments are not too biased in favor of the concession owner (MWSS).

**Good Working Relationship**

A PPP is a long-term partnership between the government and the private investor. As such, a good working relationship with clear understanding of roles, risks, and clear provisions are incorporated in the PPP agreement.
Thorough Due Diligence and Risk Assessment

It is important for the government to conduct a thoroughly prepared due diligence and risk assessment and/or allocation report when developing a PPP project. The government must be given sufficient time to conduct further investigations during the bid process. Investigations into the project risks and the condition of assets to be offered in the concession can have a significant impact on the outcomes of the concession.

More Flexible Recovery or Compensation Mechanism

The PPP agreement has to have clear mechanisms for handling unforeseen events, currency fluctuations, and residual value or expiration payment determination. A more flexible and short time recovery or compensation mechanism that will cater to extraordinary or unforeseen events should be established similar to what were developed for foreign exchange’s abrupt movements. The present extraordinary price adjustment (EPA) mechanism allows recovery or compensation over the remaining term of the concession and requires certain level of materiality threshold. Further, the grounds to gain eligibility for EPA should be reviewed and updated.

Basis of Determining the Winning Bid

The terms of reference and the basis of determining the winning bid should be carefully studied. In the case of the 1997 bidding, the winner was determined by the lowest tariff proposal. The bidders took the risk and failed to consider other regulatory risks like lack of foreign currency adjustment mechanism, the severe water shortage caused by El Niño, the worldwide financial crisis, and others.

Early Agreement on Labor and Employee Issues

Before final bid submission, all labor and employee issues should already be settled and agreed upon by the management and the labor unions and employees. This is to avoid delays in the actual takeover or exit from the rehabilitation program as what happened to Maynilad.

Determination of Terminal Residual Value or Expiration Payment

The CA is vague on the determination, if any, of the terminal residual value or expiration payment at the end of the concession period. As such, the concessionaires are forced to recover all capital expenditures over the life of the CA, which results to a continuing tariff increase. A clear provision as to how to determine terminal residual value and the mode of payment of such residual or termination payment is necessary.

Clear Event of Termination or Force Majeure Provisions

The CA should clearly define events of termination and the responsibility of the defaulting party. Similarly, force majeure provisions should be well defined and clearly understood by both parties.
Key Words and Metadata

List of Key Words and Metadata for Searching the Document

- Appropriate Discount Rate (ADR)—At any time, the real (i.e., not inflation-adjusted) weighted average cost of capital (after taxes payable by the concession business), which is the allowed rate of return to the Concessionaire on its investments.
- Concession Agreement (CA)—The contract between the MWSS as owner and the private operators, which give certain rights and powers to the contracted private operator to exercise certain rights and powers of the MWSS, including the sole right to manage, operate, repair, decommission, and refurbish facilities in the service area, and to collect fees.
- Debt and Capital Restructuring Agreement (DCRA)—This is the agreement signed on 29 April 2005 among the Maynilad Water Services, Inc, MWSS, Benpres Holdings Corp, Suez Group (Suez SA, Suez Environment), Lyonnaise Asia Water Holdings, Pte Ltd (LAWL), and the lenders, which sets out the terms and conditions in connection with the restructuring of the debt and capital of the Borrower (Maynilad).
- Service Obligations—The specific obligations and performance targets of the Concessionaire within the concession period, such as water supply coverage, number of water and sewerage service connection, water pressure, customers service standards, and water quality.
- Foreign Currency Differential Adjustment (FCDA)—The pricing mechanism to cover any movement (appreciation or devaluation) of the peso against any foreign currency-denominated indebtedness incurred by Maynilad in its operations.
- Rate Rebasing Determination—The process of general adjustment of the Concessionaire’s rates for water and sewerage services to enable it to recover—over the term of the concession—its operating, capital maintenance, investments, and debt service expenses and to earn a return of these expenditures. The Rate Rebasing Process is done at 5-year intervals.
- Undertaking Letter of the Republic—A letter of undertaking issued by the Secretary of Finance of the Republic of the Philippines, which guarantees any payment obligations the MWSS may become liable under the CA.

List of Phrases and Key Points

- The FCDA protects all parties from a protracted legal dispute to determine tariff rate adjustment as a result of external or internal extraordinary financial turmoil.
- Extensive risk assessment and risk allocation as part of the due diligence study is essential to developing a comprehensive CA and a workable PPP.
- Service obligations should have realistic targets and clearly defined assumptions.
- Employee and labor concerns can best be managed if these are addressed and discussed with concerned employee groups early in the PPP development process.
- Due diligence by both parties is essential to provide a thorough understanding of the project, contract terms, and conditions and to improve significantly the successful outcome of the project.
• Water, being the most basic commodity, is a highly political issue and should be recognized and accepted by the contracting parties that it could be subject to political intervention from many quarters.
• A clear and efficient process for resolving disputes and claims expeditiously can assist in minimizing the impact of a risk event.
• The government should ensure transparency in developing and awarding PPP projects to encourage more private sector participation.
• Wastewater cleaning becomes imperative to sustainable, modern living.

**Project Reference and Sources**

• Manila Water Services Inc. Concession Agreement (East Zone) (www.manilawater.com/file_download/129)
Project Summary

Background

Focus of the Case Study

The focus of this case study is the formation of a public–private partnership (PPP) between the Commonwealth of Virginia’s Department of Transportation and the private sector to ease traffic congestion by connecting two major commuter routes in the Richmond, Virginia (VA) metropolitan area. Using the design–build–finance–own (DBFO) methodology, the state initiated the process in 1997.

Background and Geographic Information

Richmond is the capital of the Commonwealth of Virginia, on the east coast of the United States. The city is the center of the Greater Richmond Area and is surrounded by Henrico and Chesterfield counties. In 2007, the City of Richmond had a population of approximately 200,000 with an estimated population of 1,212,977 for the entire Greater Richmond Area, making it the third largest metropolitan area in Virginia.

The majority of Richmond’s industry is located in the downtown area. Law and finance serve as the two major industries in the area while federal, state, and local government employment also drive the local economy. The city is also home to 9 Fortune 500 and 13 Fortune 1000 companies.

With a large portion of the population living outside the city limits, but the vast majority of jobs located within the city, transport in and around the Richmond area is of extreme importance. Although the city benefits from being located at the crossroads of two major state interstate highways—Interstate 64, an east–west highway; and Interstate 95, a major north–south thoroughfare—traffic congestion is a serious concern, particularly during peak commuting periods.

To ease transport through the Greater Richmond Area, studies were conducted to identify where improvements could be made and how best to implement these recommended improvements. Almost 18 years after the original studies were conducted, the construction of the Pocahontas Parkway began.

Issues to Be Addressed

With a growing suburban population and lack of connector roads for the Greater Richmond Area, the Virginia Department of Transportation (VDOT) and the Commonwealth Transportation Board (CTB) began conducting studies to identify optimum locations for new roads back in 1980. It was determined that a priority requirement was a connector road between two major commuting routes. The new connector road would need to be a multilane, 9-mile highway, with a bridge over the James River; consequently, significant funding would be needed to design, construct, and
operate the highway. Although these studies identified a need, lack of funds and other priorities took precedence over building the connector road.

The Commonwealth of Virginia, specifically VDOT, would be unable to easily and quickly finance an infrastructure project that large. It was estimated that it would take 15 years to coordinate the required financing. In 1995, the Virginia General Assembly enacted the Public–Private Transportation Act (PPTA), allowing public entities to enter into agreements with the private sector to acquire, construct, improve, operate, and maintain transport facilities. This act allowed VDOT to look at creative approaches to infrastructure projects. Once the PPTA was enacted, there was an immediate positive reaction from private sector entities, with VDOT receiving unsolicited proposals to design and build the connector road. This act served as the impetus to move forward with a project that had been on hold for over 15 years because the financial roadblock could now be resolved, using innovative ways to finance the project through a PPP.

**Project Objectives**

**Primary Objective**

The primary objective of the Pocahontas Parkway project was to construct a four-lane highway connecting two major commuter roads to reduce commuter time for parts of the Greater Richmond Area. To achieve this, the VDOT needed an innovative way to design, build, finance, and operate the new highway.

**Broader Strategic Objectives**

The broader strategic objectives and benefits of the Pocahontas Parkway project were to

- provide quality transport infrastructure,
- decrease commute times,
- relieve state and local taxpayers from paying for new infrastructure, and
- anticipate future population growth and commuter demand.

Another objective of this project was to demonstrate the feasibility of using innovative processes to build state infrastructure projects, and to build a strong relationship between the public and private sectors for the betterment of Virginia’s transport modalities.

**Timetable Overview of Pocahontas Parkway Project in Virginia**

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Project Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>Early transport studies were conducted.</td>
</tr>
<tr>
<td>1995</td>
<td>The Commonwealth of Virginia passed the Public–Private Transportation Act enabling the Virginia Department of Transportation (VDOT) to enter into agreements authorizing private sector entities to develop and/or operate transport facilities.</td>
</tr>
<tr>
<td>1997</td>
<td>The Pocahontas Parkway Association, a nonprofit organization, is formed to issue bonds for constructing and operating the parkway.</td>
</tr>
</tbody>
</table>

*continued on next page*
<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Project Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>Construction of the Pocahontas Parkway begins.</td>
</tr>
<tr>
<td>2002</td>
<td>Hybrid road opening—to begin collecting funds, the parkway was open in stages as parts of the road were finished. In 22 May 2002, the eastbound roadway opened to traffic.</td>
</tr>
<tr>
<td>2002</td>
<td>The entire Pocahontas Parkway opens to traffic on 20 September 2002.</td>
</tr>
<tr>
<td>2004</td>
<td>On 1 August 2004, tolls on the Pocahontas Parkway were raised due to low revenue levels.</td>
</tr>
<tr>
<td>2005</td>
<td>The Commonwealth of Virginia searched for other PPP solutions due to the low revenue and decided to convert the Pocahontas Parkway into a concession.</td>
</tr>
<tr>
<td>2006</td>
<td>On 29 June 2006, the VDOT and the Pocahontas Parkway Association signed a 99-year lease with Transurban to manage the parkway and immediately takes over management.</td>
</tr>
<tr>
<td>2007</td>
<td>Transurban secures loan using the Transportation Infrastructure Finance and Innovation Act (TIFIA) for the construction of a connector road to Richmond International Airport.</td>
</tr>
</tbody>
</table>

Source: Virginia Department of Transportation (VDOT).

**Why a Public–Private Partnership**

In general, with growing populations and an increased number of automobiles and trucks using highways, the demand for new roads exceeds available government funding. PPPs can

- attract new capital to develop infrastructure;
- accelerate infrastructure development, spurring economic growth;
- streamline processes; and
- reduce project time and cost.

During the administration of Governor George Allen, a major strategy of the government was to use private sector investment where feasible and when possible. Therefore, with the passing of the PPTA legislation in 1995, the VDOT was well poised to utilize this PPP opportunity to build the Pocahontas Parkway.

The Commonwealth of Virginia understood its financial limitations, as feasibility studies determined that without using a PPP it would take approximately 15 years to assemble the necessary financing. Recognizing that the private sector could provide the requisite financing and accelerate project delivery, the VDOT decided to use a DBFO model with 63-20 public benefit corporation providing the financing.

**Public–Private Partnership Contract Type**

The original partnership between VDOT and Fluor Daniel and Morrison Knudsen with financial backing from the Pocahontas Parkway Association was a DBFO Real Toll. The Pocahontas Parkway Association, a 63-20 public benefit corporation, financed the project while Fluor Daniel and Morrison Knudsen (FD/MK) designed, built, and operated the parkway. Over the 30-year term of the operational phase of the project, the
private sector investors, and the construction and operation and maintenance firms, would receive the toll revenues, which would repay the $354 millions of bond used to finance the project and cover operational costs. At the end of the 30-year term, the parkway would be turned over to the Commonwealth of Virginia, which would assume the operation and maintenance responsibilities.

Due to lower-than-expected toll revenue, in 2005, the VDOT searched for alternative PPP arrangements and decided to use a long-term lease partnership. In June 2006, the VDOT entered into a 99-year lease agreement with Transurban. Transurban will operate, maintain, and develop the Pocahontas Parkway and receive compensation in the form of toll revenue.

**Assets to Be Delivered**

The initial PPP delivered a 9-mile, 4-lane highway, with an elevated bridge over the James River. Under the contract agreement, this asset was to be constructed, operated, and maintained by the private parties until the end of the 30-year term. At that point, the maintenance, operation, and revenue would revert to the state.

When the initial traffic on the toll road failed to meet projections, the VDOT looked for ways to increase demand and bolster revenue. As a consequence, in 2006, when the Parkway was converted to a concession, the new contract required an additional connector road to be built, connecting the Pocahontas Parkway with the access road to Richmond International Airport. As part of the 99-year lease agreement, Transurban will operate, maintain, and develop the Pocahontas Parkway, assume the initial project debt, and build an airport connector road. The construction of the new connector road was made contingent on the receipt of the Transportation Infrastructure Financing and Innovation Act of 1998 (TIFIA) financing from the Federal Highway Administration (see section on Legal, Regulatory, and Institutional Framework).

**Services to Be Delivered**

The service obligations of the private sector included the following:

- Construct an 8.8-mile toll highway (and later, a 1.6-mile airport connector road).
- Operate, maintain, and improve the highway and its infrastructure, to include toll collection.

**Legal, Regulatory, and Institutional Framework**

**Legislation, Policy, and Regulatory Framework**

**Federal Regulatory Framework**

There were two pieces of federal legislation that allowed the VDOT to take full advantage of PPPs: the Internal Revenue Service (IRS) Revenue Ruling 63-20 and the TIFIA.

**IRS Revenue Ruling 63-20**

This ruling establishes that state and local governments can issue tax-exempt toll revenue bonds through either established conduit users or creation of not-for-profit
corporations. This type of debt keeps interest costs low and generates attractive opportunities for nonpublic investors (Smith 2008). Therefore, if a nonprofit private entity is established whose sole purpose is to build and/or operate an infrastructure asset for a public agency, bonds issued by the nonprofit organization will be treated like public bonds (tax-free).

**Transportation Infrastructure Financing and Innovation Act of 1998**

This federal credit program is for large infrastructure projects that are at risk of being delayed or put on hold indefinitely due to complexity, cost, or risk. TIFIA was created to attract private sector entities and other nonfederal co-investment to assist in improving the nation’s transport system by offering secured loans, loan guarantees, and standby lines of credit. Many times, these types of credit offer special rates and terms. PPPs and other legal entities may apply directly for TIFIA assistance.

**Virginia State Statute**

The Commonwealth of Virginia General Assembly enacted the PPTA in 1995. This allowed the VDOT to enter into agreements authorizing private sector entities to acquire, construct, improve, operate, and maintain transport facilities. The Pocahontas Parkway was the first project to be implemented under the PPTA. Since 1995, the Virginia General Assembly has updated the PPTA with additional guidelines to “promote competition to create multimodal and intermodal solutions; increase flexibility in the development of interim agreements to accelerate required activities; and required greater commitments or guarantees by proposers with mandatory risk sharing.”

**Government Leadership Roles in the Project**

In developing and constructing the Pocahontas Parkway project, the VDOT used in-house personnel to provide oversight of the project.

**Stakeholder Consultation Involving the General Public**

Despite the lack of any requirement for formal public consultation, the VDOT did notify the public about the project. City and county planning meetings were held to discuss the project and meeting minutes were posted on the internet. Media outlets published articles and local area television stations aired segments about the project many times. Also, public participation was encouraged during the phase of the solicitation process when the proposals were being reviewed by the Independent Review Panel.

**The Procurement Process**

**Project Development and Selection of Public–Private Partnership**

As far back as 1980, the Richmond area transport boards were conducting studies to examine the need of connector roads; however, none of the early study recommendations was implemented. It was not until 15 years later—when the Virginia General Assembly enacted the PPTA and the Allen administration that supported private sector investment strategies—that the connector road, the Pocahontas Parkway, was constructed.
The decision to enter into a PPP arrangement using the DBFO process was primarily based on the need for innovative financing. Also, this type of arrangement was considered appropriate as it enabled the VDOT to transfer the design, construction, financing, and operational risk to the private sector.

**Stages in Procurement**

The initial proposal for the Pocahontas Parkway was unsolicited and the VDOT followed the stated guidelines for unsolicited proposals in the 1995 PPTA.

However, in 2005, when a new concession agreement was required, the PPTA Guidelines for solicited proposals was followed. The key stages in the selection of a private sector company included

- preparation of the contractual terms,
- issuance of the solicitation,
- submission of the technical bids,
- evaluation of the technical bids to ensure compliance with technical requirements,
- negotiations with the “winning” proposal contractor, and
- contract award and signing of the 99-year lease agreement.

**Bid Process**

*Technical Bids*

Since the PPTA offers an alternative in procurement procedures, outlined provisions are included for competitive seal and competitive negotiation, as well as procedures for solicited and unsolicited proposals.

The PPTA outlines a six-phase process, as paraphrased in the National Council for Public–Private Partnerships website, and is presented below:

- **Quality control.** VDOT’s quality control evaluation consists of whether the proposal addresses public needs that may not be wholly satisfied by existing methods of procurement. The review identifies if the proposal will result in a timely and efficient delivery and provide for cost and/or risk sharing with private entities.
- **Independent Review Panel (IRP).** A review panel, consisting of public sector stakeholders, reviews and evaluates the proposal. The IRP makes its recommendation to the VDOT and the Commonwealth Transportation Board (CTB). Public participation is a part of this phase.
- **CTB recommendation.** The CTB reviews the conceptual proposals and IRP recommendations to recommend whether to advance the process to a detailed proposal. Public funding, if applicable, is reviewed.
- **Submission and selection of detailed proposals.** Based on recommendations, VDOT reviews the proposal and either rejects it or advances it for competitive negotiation.
- **Negotiations.** If VDOT, upon review of the detailed proposal determines that (i) the proposal meets the selection criteria and (ii) the negotiation stage is in the public interest, VDOT may initiate the negotiation stage.
• **Interim and/or comprehensive agreement.** The draft agreement is forwarded to the Office of the Attorney General and Secretary of Transportation for review. The commissioner has the statutory authority to enter into an agreement upon written approval.

At the end of this evaluation process, the agreement will be signed by all interested parties.

**Bid Award**

The original contract award between the VDOT and the FD/MK LLC was signed in 1997. This agreement was for a 30-year term where FD/MK LLC will design, build, and operate the Pocahontas Parkway and the Pocahontas Parkway Association would issue the required debt to finance the project on behalf of FD/MK LLC. The VDOT would own the road. At the end of the agreement, all operations and maintenance work would revert to the government.

Following the early end of the previous agreement, the VDOT entered into a 99-year lease term with Transurban on 29 June 2006. This agreement is outlined in detail in the Contractual Arrangements section.

**Process Length**

Both agreement processes took approximately 18 months.

**Contractual Arrangements**

**Contractual Arrangements and Obligations**

In response to the PPTA, Fluor Daniel, a global engineering firm, submitted an unsolicited proposal to the VDOT. As required by the PPTA, the VDOT had 30 days to review the proposal to determine if it meets all the legal and policy requirements. At this time, the VDOT could ask for modifications and amendments to the conceptual proposal based on the vision of the project or the department’s priorities. To ensure fair competition, the VDOT posted the opportunity on the appropriate state system inviting others to submit proposals for evaluation. Following this evaluation and review process, the partnership of Fluor Daniel and Morrison Knudsen, a construction firm, was awarded the Pocahontas Parkway project.

Although these two firms, which became a joint venture known as FD/MK LLC, were to design, build, and operate the parkway, financing needed to be secured. Taking advantage of the IRS Revenue 63-20 law to issue tax-free debt, the Pocahontas Parkway Association was created. This nonprofit public benefit corporation issued a $354 million tax-exempt debt on behalf of FD/MK LLC. The debt was to be paid by the revenue from the tolls on the parkway over the life of the 30-year contract. At the end of this 30-year period, the parkway would revert to the government for operation and maintenance. With this type of agreement, the majority of the risk fell to the Pocahontas Parkway Association, as the VDOT only contributed $27 million to the project.
In the Fall of 1998, construction on the Pocahontas Parkway began. By May 2002, the eastbound portion of the parkway was opened to traffic, while the westbound span and ramps were not yet completed and opened only in September 2002. The rationale behind this partial roadway opening was for the Pocahontas Parkway Association to begin receiving toll revenue as soon as possible.

Although there was a significant volume of cars on the Pocahontas Parkway at the onset, toll revenue did not meet projected targets outlined in the early studies; in fact, revenues were 42% below the original projections. To make up for this difference, on 1 August 2004, the tolls on the parkway were raised to make the required bond payments. Even after this toll increase, the confidence in the project was low and therefore the bonds were downgraded and the VDOT was required to step in and issue loans to keep the project viable.

Based on the lower-than-expected revenues, the VDOT chose to end its contract with FD/MK LLC and pursue another type of PPP. In 2005, after the PPTA Amendment, the VDOT issued a request for proposal (RFP) to convert the Pocahontas Parkway into a concession. Following the six-phase proposal evaluation process, the VDOT awarded a 99-year lease agreement to Transurban, an Australian toll road operator, on 29 June 2006. Transurban immediately took over managing the operations of the parkway.

Transurban paid $611 million to operate, maintain, and develop the Pocahontas Parkway. The agreement included upgrading the toll equipment, developing a connector road to Richmond International Airport (if TIFIA credit was available), assuming the initial project debt (approximately $500 million), and sharing revenues with the Commonwealth if they exceeded expectations. The private sector would do all of this in exchange for toll revenues, with revenue sharing (based on a series of calculations tied to real net cash flow and rate of return) over the lifetime of the agreement. The VDOT will continue to own the parkway and at the end of the contract term, operations and maintenance will revert to the government.

In July 2007, a federal funding of $150 million (through TIFIA) was granted for the airport connector road to be built. Transurban issued an RFP and awarded a contract for the design and building of the new road. Construction on the road began in late 2008 with a projected completion date in early 2011.

**Financing Arrangements**

Under the original contract, the Pocahontas Parkway Association, a nonstock, nonprofit corporation without members, issued $354 million in tax-exempt toll bonds to finance the construction of the Pocahontas Parkway to be built by FD/MK LLC. The VDOT contributed $27 million of its funds to the project. This placed a majority of the risk on to the Pocahontas Parkway Association. When projected revenue was 40% lower than expected and the toll increases could not make up for the difference, the contract was terminated. Not wanting to pass along the $500 million debt to the Virginia taxpayers, the VDOT decided to refinance the project and award another concession. The subsequent partnership between VDOT and Transurban equated to approximately $611 million; $195 million was in equity and subordinated debt and $416 million was in bank loans. This time, to protect the VDOT and the taxpayers of Virginia, the contract included nonrecourse financing.
Outcomes, Issues, and Key Lessons Learned

Realized Benefits or Outcomes

Project Outcomes

Although the initial partnership between the VDOT and FD/MK LLC was unsuccessful at delivering the required revenue to maintain the required bond levels, the Pocahontas Parkway was a success for FD/MK LLC and VDOT in that the highway was built thereby decreasing commuter time by 24 minutes. The current concession agreement with Transurban has been a huge success. By the end of 2008, the Pocahontas Parkway PPP had achieved these technical and financial successes:

- Reduced commuter time in the Greater Richmond area,
- Designed and constructed a new connector road to the Richmond International Airport,
- Eliminated the bond debt of the Pocahontas Parkway Association,
- Updated tolling equipment, and
- Placed a defined cap on toll road increases through 2016.

Costs to Users, Government, and Investors

As has been discussed, there was no cost to Virginia taxpayers. The Commonwealth of Virginia contributed $27 million using VDOT funding. As for the original PPP investors, FD/MK LLC did not carry a financial burden due to the creation of the 63-20 public benefit corporation—the Pocahontas Parkway Association. However, had a new concession not been implemented, approximately $500 million would have become taxpayers’ burden. Transurban has incurred all of the financial risk of this project, approximately $611 million, with toll receipts as their revenue.

Other Outcomes

Almost 3 years after the new concession agreement was reached, other outcomes have been observed. These include the following:

- As Virginia’s first project to use PPTA, the Pocahontas Parkway serves as a business and finance model for other transport projects.
- The Pocahontas Parkway has earned several awards in recent years, as follows:
  - 2007—Excellence in Virginia Government Public–Private Partnership Award
  - 2007—International Financial Law Review Project Finance Deal of the Year
  - 2006—American Road & Transportation Builder’s Association—One of Four Best Public–Private Venture Transportation Project

Issues in Implementation

Understanding of Project Revenues and Finances

As outlined earlier, less than thorough financial risk assessment done by the FD/MK LLC, Pocahontas Parkway Association, and VDOT at the start of the project created a lack of understanding of the project’s possible revenues versus the finances required
to operate properly the highway. This issue created major problems upon comple-
tion of the parkway. Parkway usage estimates were off by over 40%, thereby creating
a significant difference in revenue versus operational costs. Since the Pocahontas
Parkway Association issued the tax-exempt bonds, they were the ones left holding
the debt when the FD/MK LLC’s estimated revenue was not achieved. However, when
the association defaulted on bonds, the responsibility fell to the VDOT to issue loans
for the difference. At this point in the project, it became clear that the financial part
of the parkway had failed due to incorrect revenue projection, and therefore a new
concession was required. The VDOT did learn from the original partnership, and
in the subsequent concession agreement with Transurban, it included nonrecourse
financing.

**Lessons Learned**

**Public–private partnership allows for a multitude of opportunities**

This project highlighted some of the positive opportunities afforded to governments
including:

- Reduction of state debt in large infrastructure projects,
- Faster project time frame when using non-state and/or local funding,
- Private sector expertise in road management and operations,
- Allowing for innovative financing, and
- Minimizing the state’s risk by requiring a 63-20 public benefit corporation
  or private sector entity to provide financing.

**Preplanning for case studies is of vital importance**

The major cause of failure for the first contract between the VDOT and FD/MK LLC
was that early studies overestimated traffic on the Pocahontas Parkway. These poor
projections led to a 42% shortfall in revenue and caused the Pocahontas Parkway
Association to default on bonds. Preplanning for large infrastructure projects should
be perceived as extremely important, information and data gathered should be care-
fully analyzed and reviewed for realism (specifically those related to the rate of return
and forecasted use), and solid decisions should be made at the beginning of the
process, not midway through or at the end.

**Key Words and Metadata**

**Project Reference and Sources**

**Cited Sources**

  Management for Public-Private Partnerships. Edited by A. Akintoye and M.
- www.ncppp.org/cases/pocahontas.shtml
Background Information Sources

- www.fhwa.dot.gov/ppp/case_studies_pocahontas.htm
- www.pocahontas895.com/
- www.roadstothefuture.com/Route_895_Connector.html
- www.virginiadot.org/business/ppta-Guidelines.asp
- www.virginiadot.org/newsroom/statewide/2006/pocahontas_parkway_honored_as14717.asp
- http://tifia.fhwa.dot.gov/
Water Supply Project of the United States

Project Summary

Background

Focus of the Case Study

The focus of this case study is the formation of a public–private partnership (PPP) between Tampa Bay Water and the private sector to supply drinking water to the Tampa Bay, Florida area. Using the design–build–own–operate–transfer (DBOOT) methodology, the city initiated the process in 1996.

Background and Geographic Information

Tampa is the third largest city in Florida with approximately 3.5 million residents and serves as the hub to Hillsborough County. Because of its location in Hillsborough County, the Tampa Bay area is part of the Southwest Florida Water Management District (SWFWMD). The SWFWMD serves as one of the state’s five districts that oversees water management, quality, and protection of resources. The SWFWMD serves 16 counties on the central west coast of Florida.

Until the mid-1990s, the water service in the Tampa Bay area was operated by a cooperative, the West Coast Regional Water Supply Authority. Due to its organizational structure, there were disparities in the members thereby impeding progress in developing new water supplies. In 1996, an idea for creating a regional water authority sparked interest in the legislature. After almost 2 years of researching the idea of a regional utility, Tampa Bay Water was established in August 1998 as a regional utility located within the SWFWMD. The utility serves six municipalities including Hillsborough, Pasco, and Pinellas counties and the cities of New Port Richey, St. Petersburg, and Tampa. As a water wholesaler, Tampa Bay Water supplies water to the Greater Tampa Bay region.

The city of Tampa is located between two main waterways, the Hillsborough River and the Tampa Bay on the central west coast of Florida. Until the late 1990s, the drinking water was historically supplied from well of fields. Due to a population boom and continuous severe droughts, the SWFWMD tasked Tampa Bay Water with finding alternative water sources for the area to relieve the stress on the aquifer.

Issues to Be Addressed

The combination of the booming Tampa Bay area population and the increasing number of droughts severely impacted the aquifers. Therefore, a new water source needed to be researched and utilized to relieve the stress on the then current water system. With a population that was expected to grow continually and the climate
as a leading environmental factor, the West Coast Regional Water Supply Authority began in the mid-1990s to research various water purification methods that would decrease the use of groundwater. The authority discovered that new technologies would increase the cost of water treatment and production; however, with the groundwater shortage, there was little choice that a new technology would need to be implemented. Moving forward with the Master Water Plan, the authority decided to construct a desalination plant using the Tampa Bay as the water source.

The Tampa Bay Seawater Desalination Plant would be the largest desalination plant in the United States. Also, this alternative water filtration technology would significantly increase the cost of water per gallon. Understanding these two major challenges, the West Coast Regional Water Supply Authority explored unconventional contracting methods where the public sector would gain subject matter expertise in water desalination and assistance in financing the project from the private sector. Deciding to use a PPP method, the authority issued a request for proposal (RFP) for the construction of the water desalination plant in October 1996.

**Financial Assistance**

The cost to build the water desalination plant was estimated at $110 million. The SWFWMD would only reimburse the regional utility $85 million in capital costs, leaving a gap of approximately $25 million. The success of the project hinged on finding a private sector company that could not only design, build, and operate the facility but also serve as a guarantor to help with the additional financing needed.

**Project Objectives**

**Primary Objective**

The primary objective of the Tampa Bay Seawater Desalination Plant project was to supply quality drinking water to its customers, while at the same time reducing the environmental impact on the groundwater aquifers. To achieve this, Tampa Bay Water (formerly West Coast Regional Water Supply Authority) needed the desalination subject matter expertise and investment capital.

**Broader Strategic Objectives**

The broader strategic objectives and benefits of the Tampa Bay Seawater Desalination Plant included the following:

- Provide quality water to the Tampa Bay area (approximately 10% of the population),
- Ensure water quality and efficiency of the plant operations,
- Increase water production (if ever required),
- Ensure that the technology and/or process used is a drought-proof solution,
- Meet current and future water quality standards, and
- Ensure long-term viability of the desalination process.

The long-term goal of this project was to achieve the broader objectives of providing quality drinking water, minimizing environmental impacts to the existing wellfields, and building a strong relationship between the public and private sector partners.
Another key attribute of this project was technological risk; state-of-the-art filtration processes would be required. Tampa Bay Water felt that it was inappropriate for a public agency to assume this risk. Thus, the transfer of the technological risk of the project to the private sector became an additional objective.

Timetable Overview of Tampa Bay Seawater Desalination Plant Project

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Project Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 1996</td>
<td>Request For Proposal issued for Tampa Bay Seawater Desalination Plant</td>
</tr>
<tr>
<td>1997</td>
<td>Prequalification of potential contractors</td>
</tr>
<tr>
<td>August 1998</td>
<td>Negotiations conducted with potential contractors</td>
</tr>
<tr>
<td>August 1998</td>
<td>West Coast Regional Water Supply Authority becomes Tampa Bay Water</td>
</tr>
<tr>
<td>1998</td>
<td>Partnership Agreement signed between Tampa Bay Water and Southwest Florida Water Management District</td>
</tr>
<tr>
<td>February 1999</td>
<td>Best and Final Offers submitted</td>
</tr>
<tr>
<td>July 1999</td>
<td>Contract with S&amp;W Water (a partnership between Stone &amp; Webster and Poseidon Resources Corp.) awarded</td>
</tr>
<tr>
<td>June 2000</td>
<td>Stone &amp; Webster declared bankruptcy and was acquired by Poseidon Resources Corp.</td>
</tr>
<tr>
<td>2001</td>
<td>Poseidon Resources Corp. replaced Stone &amp; Webster with Covanta Tampa Construction</td>
</tr>
<tr>
<td>Spring 2001</td>
<td>Permission granted</td>
</tr>
<tr>
<td>August 2001</td>
<td>Construction began</td>
</tr>
<tr>
<td>December 2001</td>
<td>Covanta Tampa Bay, Inc. did not secure the needed financing</td>
</tr>
<tr>
<td>May 2002</td>
<td>Tampa Bay Water purchased the project from Poseidon Resources Corp.</td>
</tr>
<tr>
<td>November 2002</td>
<td>Final operating permits were obtained</td>
</tr>
<tr>
<td>March 2003</td>
<td>Initial plant start-up occurred</td>
</tr>
<tr>
<td>May 2003</td>
<td>First acceptance test began</td>
</tr>
<tr>
<td>19 February 2004</td>
<td>Plant placed in standby mode</td>
</tr>
<tr>
<td>March 2004</td>
<td>Tampa Bay Water sought proposals from qualified teams to remediate the plant and operate it on a long-term basis</td>
</tr>
<tr>
<td>November 2004</td>
<td>Tampa Bay Water Board of Directors approved the contract with American Water-Pridesa to resolve design and construction deficiencies</td>
</tr>
<tr>
<td>31 January 2005</td>
<td>Large-scale pilot testing began</td>
</tr>
<tr>
<td>June 2005</td>
<td>NPDES minor permit modification application was submitted</td>
</tr>
<tr>
<td>September 2005</td>
<td>Design of remediated plant was completed</td>
</tr>
<tr>
<td>October 2005</td>
<td>Remedial construction commenced</td>
</tr>
<tr>
<td>Spring 2007</td>
<td>Remedial construction was completed</td>
</tr>
<tr>
<td>7 November 2007</td>
<td>Acceptance test was completed</td>
</tr>
<tr>
<td>5 January 2008</td>
<td>Full operations commenced</td>
</tr>
</tbody>
</table>
Why a Public–Private Partnership

Tampa Bay Water understood its financial limitations ($85 million) and lack of in-house expertise regarding alternative water production methods, such as desalination. Recognizing that the private sector could provide both the technological knowledge and financing, Tampa Bay Water decided that a DBOOT contracting vehicle would encourage private companies to collaborate with the public sector water entity. Tampa Bay Water was able to use this nontraditional contracting methodology and was not required to use in-house personnel because of Florida Statute, Title XXXIII, Ch. 489 §146, which allows the public sector to contract with companies if the service required can be performed more efficiently by the private sector.

Tampa Bay Water had little choice but to enter into a PPP to implement alternative water production and overcome these two obstacles, as well as other issues.

Among the key issues that had to be addressed were to

- determine the most cost-effective and environmentally safe location for the plant,
- resolve what would serve as the power source,
- obtain a fixed price for water service,
- ensure flexibility to produce additional water if the population increases significantly, and
- ensure that the process would be able to meet stricter water quality regulations.

Tampa Bay Water would not be able to overcome all of these issues without assistance from a more experienced private sector entity.

Public–Private Partnership Contract Type

The partnership between Tampa Bay Water and the private sector allowed the contractor to retain the risk and responsibility for the design, construction, ownership, and operation of the facility for a certain period, after which ownership and operation would be transferred to the public sector. The private sector retains full design, construction, and operational rights for the project as long as the defined performance standards in the agreement are met.

The Tampa Bay Seawater Desalination project carries a 30-year contract term, with an option for Tampa Bay Water to purchase the plant before the expiration if the quantity and quality standards are not met.

Assets to Be Delivered

The contract stipulated that all the assets would be owned by the private sector with the option to transfer ownership to Tampa Bay Water after contract expiration. The private sector is responsible for acquiring, installing, upgrading, and maintaining the assets (desalination facility and pipeline) to meet the contractual performance standards on water supply for the defined scope (approximately 25 million gallons of water per day [MGD]).
**Services to Be Delivered**

The service obligations of the private sector included the following:

- Provide a drought-proof and environmentally safe water supply,
- Provide a minimum of 25 MGD,
- Meet drinking water quality standards, and
- Ensure that operations are efficient and effective to minimize costs.

**Legal, Regulatory, and Institutional Framework**

**Legislation, Policy, and Regulatory Framework**

*Legal and Water Regulatory Framework*

In 1961, the Florida State Legislature formed a board, the SWFWMD, to oversee the Four River Basins Florida Project. This flood control project was created in coordination with the United States Army Corps of Engineers and served to build structures to prevent massive flood damage in the future. Following this project, regulatory programs and legislation were passed and the SWFWMD assumed more responsibility.

Late in the 1960s, a new regulatory program was initiated for the wellfields in the Tampa Bay region and the Florida State Legislature passed the Water Resources Act in 1972. The act greatly increased the scope of work that the district was to oversee in that it required a comprehensive approach to water management. The SWFWMD became the body “to manage and protect water and related natural resources,” not just assist with flood control issues and policy making.

As the body that maintains the overall responsibility for water resource management and regulation of the utilization, exploitation, development, and protection of water resources, the SWFWMD directed Tampa Bay Water to reduce groundwater pumping from the 11 long-producing regional facilities and develop alternative water-producing recommendations. The partnership agreement between SWFWMD and Tampa Bay Water signed in 1998 allocated $85 million, from SWFWMD to Tampa Bay Water, to use in the building of capital assets related to the desalination plant.

*Florida State Statute*

Although Tampa Bay Water was charged with developing and implementing a new water supply, it was the Florida State Statute Title XXXIII, Ch. 489 §146 that allowed Tampa Bay Water to establish a PPP to perform the project. The statute states “…the department shall make all reasonable efforts to contract with one or more private entities for the provision of such services, when such services can be provided in a more efficient manner by private entities.” Without this legislation, the use of PPP would not have been permitted.

Another important piece of legislation that allowed Tampa Bay Water to continue to move forward with the desalination facility was Senate Bill 536. This piece of legislation, also known as the “Desal Bill” was approved by the Florida State Legislature and became Chapter 2001–188, Laws of Florida. The bill outlined the following three items:
• Encouraged the use and advancement of membrane technology,
• Clearly defined demineralization concentrate discharge as a “potable water bi-product” regardless of quality or facility size, and
• Directed the Florida Department of Environmental Protection to create a specific rule addressing membrane facility and associated disposal practices.

Government Leadership Roles in the Project
In developing and implementing the Tampa Bay Seawater Desalination project, the regional utility used existing boards and personnel rather than establish a special purpose PPP group. The key institutions and/or boards directly involved in the DBOOT process were as follows:

• The SWFWMD consists of 13 board members, each appointed by the governor. This board had the authority to charge Tampa Bay Water with developing and implementing alternative water production. The SWFWMD allocated $85 million for the desalination project’s capital assets.
• Tampa Bay Water, formerly West Coast Regional Water Supply Authority, served as the public entity in the PPP for the Tampa Bay Seawater Desalination project.
• Technical, financial, and legal advisors advised and assisted throughout the process.

Stakeholder Consultation Involving the General Public
Despite the lack of any requirement for formal public consultation, Tampa Bay Water conducted public forums and released communications to the general public and the various stakeholders (customers, lenders, other government-like entities) about the project arrangements. The public information focused on the need for seawater desalination and the actions being taken to mitigate any environmental impact.

Interested bidders were regularly informed of the status of the solicitation process and the terms and conditions of the bidding.

The Procurement Process
Project Development and Selection of Public–Private Partnership
In 1995, the West Coast Regional Water Supply Authority prepared a Master Water Plan with the inclusion of a seawater desalination facility to reduce groundwater dependence. In October 1996, the authority issued a solicitation that requested private entities to develop proposals to design, build, own, and operate a desalination facility and sell the water to the authority at a predetermined fixed price.

The decision to enter into a PPP arrangement using the DBOOT process was primarily based on (i) the view that the current water supplier was inexperienced in the implementation of alternative water technology, and (ii) the need for additional financing. Also, this type of arrangement was considered appropriate as it enabled Tampa Bay Water to transfer the design, construction, cost, and operational risk to the private sector.
Stages in Procurement

The key stages in the selection of a private sector company included:

- Preparation of the contractual terms, such as
  - specification for a 10% investment,
  - creation of the performance requirements,
  - volume and/or quantity of water needed, and
  - development of the performance standards and/or outcome;
- Issuance of the solicitation;
- Submission of the technical bids;
- Evaluation of the technical bids to ensure compliance with technical requirements and approval of the proposals from the four semifinalists to move forward with the process;
- Submission of the Best and Final Proposals (four bids);
- Negotiations with the “winning” proposal contractor; and
- Contract award and signing of the Water Purchase Agreement.

Bid Process

Technical Bids

Since the DBOT served as the project model, the RFP issued was performance-based, which allows for a more innovative approach as the RFP does not require specific processes; the bidder is allowed to develop any solution as long as it meets the specified outcome.

In October 1998, Tampa Bay Water received six proposals. The first stage of the evaluation was to review the technical bids in order to verify that all technical requirements were met. The following represents the minimum qualifications and/or criteria for bidders:

- A competent operator of water supply service to contribute a minimum of 10% equity to financing, and
- Able to provide 25 MGD with possible expansion to 35 MGD with the proposed technical solution.

From the six original bidders, four bidders were chosen as semifinalists. These companies were then asked to submit a Best and Final Proposal in February 1999. Again, the proposals were reviewed for technical capability and the solutions submitted by each bidder were ranked using criteria such as environmental impact, water quality, economics and/or financials, and permitability.

One proposal was chosen to move forward with final negotiations.

Bid Award

In July 1999, Tampa Bay Water and S&W Water, LLC (a partnership between Stone & Webster and Poseidon Resources Corp.) signed a 30-year Water Purchase Agreement. Tampa Bay Water would buy water at a fixed price of $1.71 for every 1,000 gallons of water (kgal) during the first year of operation, a price well below the cost of water from other similar and recent desalination plants. The estimated 30-year average cost would be $2.08/kgal. As a note, the highest of the final four bidders was also...
well below the average water cost from desalination plant; the highest first year cost proposed was $2.12/kgal, with an average of $2.54 throughout the 30-year period.

**Process Length**

The solicitation, proposal, negotiation, and award process took approximately 2.5 years.

**Contractual Arrangements**

**Contractual Arrangements and Obligations**

Due to the numerous changes in parties involved in the desalination plant, a series of key documents exist.

First, the West Coast Regional Water Supply Authority approved a Master Water Plan in 1995 that included seawater desalination as a new source of regional drinking water. Subsequently in October 1996, the authority issued an RFP for the design, building, ownership, and operation of a desalination facility to take advantage of the private sector’s expertise. Under this RFP, the private sector owner would sell water to the authority at a predetermined price. Respondents to the RFP were allowed to select their own plant site, facility size, and operations and method of seawater desalination, and the RFP included a possible future transfer of facility ownership to the authority.

The authority received six proposals, of which four semifinalists were selected. Proposals were reviewed and ranked by the authority’s engineering consultant, Waterfinancial advisors. Criteria included environmental impact, ability to meet water quality requirements, economic feasibility, permittability, and design.

As negotiations with bidders were being held, the authority became Tampa Bay Water in August 1998. Upon submittal of the bidders’ Best and Final Offers in February 1999, Waterfinancial advisors ranked the proposals using an evaluation criteria matrix.

The next key document is the Partnership Agreement among Tampa Bay Water (the successor to the West Coast Regional Water Supply Authority) and its member governments and the SWFWMD. This document, which was created in 1998, called for the use of alternative water supplies in lieu of dependence on the 11 existing regional groundwater-pumping facilities. As part of the agreement, SWFWMD earmarked $183 million in ad valorem taxes for non-groundwater projects, including the desalination plant. Of this earmarked amount, Tampa Bay Water would be provided $85 million for capital costs associated with the desalination plant over an 18-month period, to begin once the plant is operational. (This amount was, at the time, estimated to be 90% of the total cost of the plant.)

Tampa Bay Water’s Board of Directors awarded the final Water Purchase Agreement for the construction and operation of the seawater desalination plant to S&W Water, LLC in July 1999. S&W Water was a partnership between Stone & Webster and Poseidon Resources Corp. In June 2000, Stone & Webster declared bankruptcy, and Poseidon then acquired 100% of S&W Water. Poseidon replaced Stone & Webster with Covanta Energy in 2001 and changed the consortium’s name to Tampa Bay Desal.
Financing issues then caused a change in the transfer timeline. In December 2001, Covanta Energy failed to post the required construction bond for the project, and the sale of private bonds to fund the project was postponed. In March 2002, Tampa Bay Water’s Board of Directors authorized the agency to purchase the project from Tampa Bay Desal. The purchase was finalized on 15 May 2002. By having the plant be owned by the public, Tampa Bay Water could then obtain financing using its excellent credit rating. Note that at the time of the purchase, design, and permitting on the plant was 100% complete but construction was only 30% complete.

Tampa Bay Water then contracted with Covanta Tampa Construction to build the plant, and with Covanta Tampa Bay, Inc. to operate the facility.

Under the design and/or build contract, Covanta Tampa Construction and its main subcontractor, Hydranautics, were required to ensure the plant met specified parameters for water quality, power use, chemical use, and other criteria, to be ascertained via a 14-day acceptance test. The initial testing in May 2003 failed and Covanta Tampa Bay Water failed to repair the deficiencies and achieve a successful performance test by 30 September 2003 deadline. On 1 October 2003, Tampa Bay Water subsequently issued a notice of default to the contractor. Tampa Bay Water placed the plant in standby mode on 19 February 2004 and shut down the facility in June 2005 due to continuing design and construction deficiencies.

In March 2004, prior to the shutdown, Tampa Bay Water released an RFP for the remediation of the facility’s design and its construction deficiencies. In September 2004, Tampa Bay Water’s Board of Directors selected American Water–Pridesa (a joint venture between American Water and Acciona Aqua) to remediate design and construction deficiencies in the plant and to operate it on a long-term basis, with a negotiated contract being signed in November 2004. American Water–Pridesa performed the remediation construction from November 2005 through Spring 2007. To assist in the design–build modifications, American Water–Pridesa obtained a subcontractor, the consulting engineering firm of Hatch Mott MacDonald, headquartered in Millburn, New Jersey.

The Water Purchase Agreement between Tampa Bay Water and American–Water-Pridesa, which included a guaranteed water price, was also signed.

The private company is required to

- provide 25 MGD with expansion to 35 MGD (if required);
- conduct remedial construction on the facility (including redesigning and replacing all the first-pass membranes; modifying the chemical facilities, pre-treatment system, flocculation, and sedimentation; modifying sand filters and pumps; and installing an additional filtration system) in order to meet contract requirements, pass acceptance tests, and obtain all required permits (approximately 18–20); and
- manage and operate the facility 24 hours per day, 7 days per week.

Tampa Bay Water is required to

- monitor and/or sample water quality against the specified performance standards;
- Monitor water to meet the quality standards; and
• Pay for quantity of water received, standby fee for excusable interruptions in water delivery, and for increased capital and operating costs associated with certain force majeure and changes in regulations.

The parties are to use reasonable efforts to resolve any disagreements or disputes concerning the interpretation or implementation of the Water Purchase Agreement through mutual consultation and negotiation.

**Financing Arrangements**

Under the original contract, Poseidon Resources was required to make an investment of at least 10% in the plant. A primary reason for this requirement was to provide incentive for a successful project. The remaining 90% of the desalination facility would be financed by SWFWMD.

As discussed in the Contractual Arrangements section, Tampa Bay Desal (the Poseidon/Covanta team) was unable to secure financing in 2002, causing Tampa Bay Water to buy out the project.

The subsequent contract between Tampa Bay Water and American Water–Pridesa for remediation construction in 2004 was for $29.1 million. This contract also included an owner’s allowance of $2.5 million. The remediation work performed by American Water–Pridesa was guaranteed against a $36-million performance bond.

In 2007, Tampa Bay Water’s Board of Directors approved an agreement that settled its outstanding litigation regarding the failed 2003 plant. Under the agreement, Indian Harbor Insurance Company would pay Tampa Bay Water $7.9 million under an insurance policy obtained for the project. In return, Tampa Bay Water dropped claims against Indian Harbor’s insurees—Hydranautics, Inc., the membrane manufacturer that guaranteed the plant’s performance; Hydranautics co-sureties, Fidelity and Deposit Company of Maryland and Zurich American Insurance; Delaware Engineering, P.C.; and James Suozzo, P.E.

**Performance Measures and Regulation**

Required pretreatment performance parameters for the Tampa Bay Seawater Desalination include the following:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Maximum Allowable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silt Density Index (SDI)</td>
<td>5 90th Percentile &lt; 4</td>
</tr>
<tr>
<td>Turbidity</td>
<td>1 NTU 90th Percentile &lt; 0.2 NTU</td>
</tr>
<tr>
<td>Temperature</td>
<td>109.5 F 90th Percentile &lt; 96.8 F</td>
</tr>
<tr>
<td>pH</td>
<td>8.5 Minimum 6.5</td>
</tr>
</tbody>
</table>
Other performance parameters include the following:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Maximum Allowable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase in Membrane Differential Pressure (psi)</td>
<td>8 psi</td>
</tr>
<tr>
<td>TTHM</td>
<td>&lt;0.08 mg/L</td>
</tr>
<tr>
<td>HAA5</td>
<td>&lt;0.05 mg/L</td>
</tr>
<tr>
<td>Sodium</td>
<td>&lt;80 mg/L</td>
</tr>
</tbody>
</table>

psi = per square inch.

Tampa Bay Water will conduct environmental monitoring to ensure there is no adverse environmental impact.

**Outcomes, Issues, and Key Lessons Learned**

**Realized Benefits or Outcomes**

*Project Outcomes*

According to a Tampa Bay Regional Planning Council economic impact study, construction and operation of the facility will add $550 million in economic activity statewide and $482 million regionally in the next 30 years.

Yet another economic impact is the fact that Tampa can market its drought-proof water supply to new businesses. As recognized by the chief environmental planner for Tampa Bay Water “…because we have been able to bring on new supply sources in a timely and cost-effective fashion, water is not a missing factor for businesses. It doesn’t limit their growth and choices, it supports them and their ability to develop where they want to.”

**Costs to Users, Government, and Investors**

As a result of the issues early on in the process and the remediation efforts that increased the cost of the plant, exact costs are not yet available.

**Other Outcomes**

By early 2009, almost 1 year after the Tampa Bay Seawater Desalination Plant was fully operational, other outcomes have been observed, as follows:

- As the nation’s largest desalination plant, Tampa Bay Seawater Desalination Plant is serving as a business model for multiple coastal cities and projects such as the Gulf Coast Desalination Plant, Carlsbad Desalination Plant, and multiple desalination facilities in Texas.
- The plant has earned three awards in the last year including:
  - 2008 Desalination Plant of the Year by Global Water Intelligence
  - 2008 Trendsetters by Hanley Wood’s Public Works Magazine
  - 2008 Public–Private Partnership Award from the National Council for Public-Private Partnerships.
Issues in Implementation

Risk Analysis and/or Understanding of Project Risks and Allocations

Lack of thorough risk assessment both on the part of Tampa Bay Water and the original contractor—S&W Water—created a lack of understanding of the project’s risks and risk allocation. Key risk factors included

- financial stability,
- new desalination technology, and
- regulatory risks.

Cost Emphasis in the Solicitation Process

During the original solicitation process (1996–1999), the government’s approach to award the contract was primarily based on the bidder’s ability to offer the lowest price of water to Tampa Bay Water and therefore the Greater Tampa Bay water customers. This in turn would prove as one of the downfalls during the original process. To keep costs low, the winning bidders cut corners in the design, did not use proven technology, and took as partners subcontractors that had little or no experience in the design and/or construction of the desalination plant. Increased consideration of other aspects during the evaluation process may have provided the government with an opportunity to evaluate the assumptions underlying the bids, such as experience, quality of subcontractors, and financial stability. This may also have resulted in bidders taking a more conservative approach to risk management and pricing that may have alleviated some of the issues faced during implementation.

The solicitation process to perform the remediation work in 2004 was improved and American Water–Pridesa prevailed in the competition. This partnership provided the necessary technical qualifications, with partner Acciona Aqua being one of the largest seawater desalination companies in the world, having designed, built, and operated more than 70 desalination facilities. American Water–Pridesa performed the remediation tasks to correct the original design flaws and was able to bring the desalination plant successfully on line in 2008, with minimal issues.

Contractual Arrangements

Key issues in the Water Purchase Agreement relating to dispute resolution and early termination were not easily implemented by the parties during the implementation process. As a result, claims and court deliberations resulted in delayed resolutions and delayed water improvements. As noted in the Financing Arrangement section, Tampa Bay Water did settle its case in 2007.

Contractual Relationship

Due to several issues (e.g., bankruptcy, inexperience, and bond issuance), the relationship between Tampa Bay Water and the original partners Stone & Webster, Poseidon Resources Corp., and then Covanta Energy was ineffectual (see Contractual Arrangements section for details). However, since remediation began in 2004, the relationship between Tampa Bay Water and American Water–Pridesa has been effective thus causing few implementation issues.
Lessons Learned

Public–Private Partnership Allows for a Multitude of Opportunities

This project highlighted some of the positive opportunities afforded to governments using the DBOOT process, including the following:

- Reduction of cost, and with the government still able to retain control;
- Minimization of the government’s risk by requiring the contractor to use some of its equity in building the project, therefore placing a personal stake and/or financial burden on the company to ensure success; and
- Allowing the use of special and advantageous financial agreements in combination with the expertise of a private sector contractor to gain operating efficiencies and tax-free financing available to governments.

Public Sector Persistence may be Required to Achieve the Potential Benefits of Public–Private Partnerships

Despite significant challenges, even setbacks, Tampa Bay Water continued to seek a partnership-based solution. This persistence ultimately resulted in the achievement of the public sector’s objectives, with significant risk transfer to the private sector.

Do Not Overemphasize the Project Cost in the Procurement Process

At the start of the process, the West Coast Water Supply Authority (currently Tampa Bay Water) was reluctant to proceed with desalination due to the possibility of significant water price increase. During the process, especially during the solicitation phase, the cost of the system was emphasized, thereby leading to poor contract decisions in both the contractors hired and the technologies used. To keep the price down, corners were cut in the design process, leading to design and/or plant failures. Seeking the best value for money, rather than the lowest cost, would have led to better initial outcomes.

Use Experienced Engineers and Contractors

As noted above, the overemphasis on cost led to poor contract decisions. For future solicitations that implement new technologies, there should be more emphasis on both—experience in using the technology and the financial stability of the company to guarantee its capability of implementing a long-term project. The original contractor, Poseidon Resources Corp., subcontracted with two inexperienced companies, both of which went bankrupt.

Provide Fail–Safe Pretreatment

The most notable flaw in the Tampa Bay Seawater desalination facility was the pretreatment process. The initial filter systems were clogging much more frequently than expected. Equipment failure was a large issue, with membranes only lasting months instead of years and cartridges lasting weeks instead of months. In the future, pretreatment should be considered a significant design aspect with considerable time to perform pilot testing.
Clear Event of Termination or Force Majeure Provisions

The Water Purchase Agreement should clearly define events of termination and the responsibility of the defaulting party. Similarly, force majeure provisions should be well defined and clearly understood by both parties.

Provide a Drought-Proof Water Supply Source

A large-scale desalination plant can be built on a United States estuary and provide drinking water using a drought-proof technology. The Tampa Bay Seawater Desalination Plant will provide a long-term water supply source and alleviate the stress on the regional aquifers.

Key Words and Metadata

Project Reference and Sources

Cited Sources

- www.bizjournals.com/tampabay/stories/2008/08/11/focus2.html
- www.leg.state.fl.us/Statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=Ch0489/SEC146.HTM&Title=-&year=2008->Ch0489-Section%20146#0489.146

Background Information Sources

- www.tampabaywater.org/watersupply/gcdesalschedule.aspx
- www.tampabaywater.org/documents/AnnualReports/Tampa_Bay_Water_2008_AR.pdf
- www.dicksteinshapiro.com/files/Publication/982b12a2-615a-45a4-95da-23bb23a9e516/Presentation/PublicationAttachment/5c7bf42b-357c-47e4-b31d-ece4d78c69c5/tampabaydesal.pdf
- www.pacinst.org/reports/desalination/appendix_C.pdf
Water and Wastewater Services Project of the People’s Republic of China

Introduction

In the past 20 years, the economy grew rapidly at a rate exceeding 7%. At the same time, urbanization rose at an average speed of 1% yearly, while some economically advanced cities even surpass 2%. Urbanization, especially with the improvement in infrastructure construction and public service, has great impact on economic development. Rapid urbanization aggravates the gap between the need to provide increased public goods for the urban population and the relatively inadequate supply of public finance.

The fundamental function of the government is to supply public goods. However, under the traditional model, the need for rapid development in terms of providing urban public goods and infrastructure investment makes the government fall into heavy debt, which constrains the development of infrastructure and affects the quality of public service. With the strengthening of the economic power of the private sector, the desire to invest private capital, which is the most active economic factor of the society, has been running high. Stable return of investment in public production sectors becomes an attractive reason for private capital investment.

The construction and operation of urban public projects in the People’s Republic of China (PRC) is undergoing a new marketing reform. From the single investment type initiated by the government, the construction and operation of public projects have been changed into a diversified public–private partnership (PPP) investment method. Through the profit-sharing and different type of controlling mechanism of the PPP, the government can broaden its public investment capacity by forming partnerships with the private sector thereby accelerating urban development. As a result, PPP in urban public projects has become a main field of research and a focus of present urban construction investment and financing reform in the PRC.

Public–Private Partnership Financing in Urban Public Projects

Key Characteristics of Urban Public Infrastructure Projects

Urban public projects have two key characteristics:

- **Public character**—That public projects are not for individuals, individual families, or individual sectors, but are meant to provide socialized service for the whole city, and to provide direct service and social support to the urban
workforce. Urban public projects aim to not only support socialization in urban area, but also serve as important premises of urban modernization. Theoretically speaking, this public character also appears in the definition of public goods, which states that “the consumption by each person will not reduce the consumption of others.”

- **Welfare character**—That urban public projects are investments that redound to social, environmental, and long-term profitability of the city, instead of bringing in direct economic profits. For example, implementing the urban water environment improvement project will improve the quality of environment and investment condition, and results in a more comfortable living environment that can make people healthier. Cities with optimized public facilities are more attractive to investors, so eventually, these will bring in more significant economic profits.

**Rationale for Using Public–Private Partnership in Urban Public Infrastructure Projects**

In the past, fund resource of urban public infrastructure relied on finance from different government levels in the PRC. If it is not available, bank loan will be provided through organizations and enterprises directly under the government. Since local government debt is not supported by current regulations in the PRC, and debt repayment ability of organizations and enterprises directly under the government is limited, PPP financing has been adopted by cities, especially big cities, to guarantee urban sustainable development.

PPP, in this context means that the public sector provides public product or service by setting partnership with the private sector. Compared with the traditional financing method, the PPP model provides the advantages of bringing in the private sector into the public service field, with its mechanism of sharing responsibility and risk, finding new fund source, improving quantity and efficiency of public service supply, and increasing revenue of both the public and private sectors.

**Typical Structure of Public–Private Partnership Financing in the People’s Republic of China**

![Diagram of PPP Structure]

Source: Internal data from Nanjing Construction Commission.
Advantages of Public–Private Partnership Financing in the People’s Republic of China

By using the PPP model, relevant government organizations can take advantage of the use of private funds, operations management can be made more flexible, and the public can get results that are more satisfactory. In addition, the public sector can greatly improve its operational efficiency, avoid delays in the project’s construction period, prevent too large-scale projects and over-budget estimation, and guarantee service quality.

Forms of Public–Private Partnership Financing in the People’s Republic of China

According to the method and extent of participation, the difference of leading position of government, and the private sector participation in each project, PPP financing can be divided into debit and credit financing, franchise, shareholding partnership, and so on. Due to different factors such as government policy and project condition, depending on specific operation, financing can be divided into (i) Asset-Backed Security (ABS) financing, (ii) bond financing, (iii) fiduciary financing, (iv) personal consignment loan, (v) personal guarantee loan, (vi) build–operate–transfer (BOT), (vii) transfer–operate–transfer (TOT), (viii) equity financing, and so on.

• ABS is a process of transferring the collected cash income flow, though now lacking fluidity, into a bond that can be sold and circulated in the financial market.
• Bond financing is a financing method where the government, public organizations, or enterprises issue debt certificate in capital market, and interest will be paid regularly at a certain ratio. Repayment of the principal will be paid in due time.
• Fiduciary financing is when the trustee–fiduciary enterprise receives the consignment, then issues loan from funds or physical goods of the consigner according to the designated object, purpose, deadline, interest rate, and amount. Fiduciary financing is also in charge of return of loan interest and principal in due time.
• Personal consignment loan is where individuals raise funds for public organizations that are in charge of public infrastructure projects by taking out a loan, and gains corresponding investment profit. According to loan object, purpose, amount, deadline, and interest rate determined by the consigner, the bank is responsible for the issuance, supervision, and loan return. As for the personal consignment loan, the bank is only responsible for fiduciary obligation, not for loan risk.
• Personal guarantee loan is where several individual investors provide guarantee for the bank loan of public organizations who take charge of public infrastructure construction with their own deposit. The borrower public organization will pay guarantee fee to the individual investors.
• BOT is a form of agreement reached between the public sector and the private sector on franchise rights of public projects. As the investor in the project, the private sector operates and gains commercial profit from it
for a limited time. At the end of the contract agreement, the project is transferred to the appropriate government organization. BOT can be also changed to various models such as build–own–operate (BOO), build–transfer, and so on.

- TOT is another form of agreement where after the reevaluation of some built urban public infrastructure (such as wastewater treatment facilities), a government organization may transfer its operation to an assignee, for a certain period. The operation rights return to the government when the contract expires, without compensation.
- Equity financing means the construction of public enterprises and selling part of their equity to private sectors or individuals to realize investment intake along with transition of operation mechanism.

Case Analysis: Public–Private Partnership Financing in Nanjing Urban Water Environment Improvement Project

Background
Since the 1980s, the economy of Nanjing has been increasing by more than 10% each year. Meanwhile, the urbanization process rapidly advances by 2% annually and urban population by 5%. The urban water environment worsens due to sharp expansion of urban population and continuing enlargement of production and life scale. To improve living environment and realize sustainable development of the urban economy, CNY8,266 million investments has been put by the Nanjing municipal government since 2003 to improve urban water environment under the help of the UN-Habitat and the Asian Development Bank (ADB). The main task is urban river improvement and the construction of wastewater treatment facilities. Since only CNY350 million financial fund will be provided each year, various financing scenarios, including PPP were adopted.

Public–Private Partnership Financing Plan
The Nanjing Urban Water Environment Improvement Project, with a total investment of CNY5,650 million, is funded by loans from ADB and the China National Development Bank, personal consignment loan, personal guarantee loan, bond issuance, and others. Total investment in the wastewater treatment facilities project is CNY2,610 million, and financing is a combination of ABS financing, BOT and/or TOT financing, and others. The financing plan is as follows:
Table 15-1 Financing Plan of the Nanjing Urban Water Environment Improvement Project

(Unit: CNY10,000)

<table>
<thead>
<tr>
<th>No.</th>
<th>Project</th>
<th>Total</th>
<th>2003~2005</th>
<th>2006~2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>Government fund</td>
<td>250,000</td>
<td>75,000</td>
<td>175,000</td>
</tr>
<tr>
<td></td>
<td>Finance fund</td>
<td>150,000</td>
<td>75,000</td>
<td>75,000</td>
</tr>
<tr>
<td></td>
<td>Benefit from land</td>
<td>100,000</td>
<td>–</td>
<td>100,000</td>
</tr>
<tr>
<td>II.</td>
<td>Loan from financing organizations</td>
<td>193,600</td>
<td>10,000</td>
<td>80,000</td>
</tr>
<tr>
<td></td>
<td>ADB</td>
<td>80,000</td>
<td>–</td>
<td>80,000</td>
</tr>
<tr>
<td></td>
<td>CNDB</td>
<td>113,600</td>
<td>113,600</td>
<td>–</td>
</tr>
<tr>
<td>III.</td>
<td>Private sector investment</td>
<td>383,000</td>
<td>33,000</td>
<td>350,000</td>
</tr>
<tr>
<td></td>
<td>Personal consignment loan</td>
<td>30,000</td>
<td>30,000</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>Personal guarantee loan</td>
<td>3,000</td>
<td>3,000</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>ABS financing</td>
<td>80,000</td>
<td>–</td>
<td>80,000</td>
</tr>
<tr>
<td></td>
<td>Bond financing</td>
<td>200,000</td>
<td>–</td>
<td>200,000</td>
</tr>
<tr>
<td></td>
<td>TOT/BOT financing</td>
<td>70,000</td>
<td>–</td>
<td>70,000</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>826,600</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>


Source: Internal data from Nanjing Construction Commission.

**ADB and China National Development Bank Loan**

Under the guidance of the “Water for Asian Cities Programme” promoted by the UN-Habitat and ADB, Nanjing successfully applied for $100 million ADB loan for public projects. At the same time, due to ADB policy, Nanjing also gained CNY1 billion Women’s Development Businesses loan. International finance organizations and their loan policy have a key function in the entry of private capital into the Nanjing Urban Water Environment Improvement Project.

**Personal Consignment Loan**

In December 2002, the Nanjing Urban Construction (Holding) Group Co., Ltd. (NCIC), together with China Min Sheng Bank, issued the first personal consignment loan for the Qinhuai River improvement project the total amount of CNY300 million, at 4% annual interest rate, and a time limit of 5 years. Compared to a bank loan, some CNY30 million financial expense was saved by the government. This case was judged as one of the most important 10 financial events that year.

**Personal Guarantee Loan**

In September 2005, the NCIC together with China Min Sheng Bank issued the Qinhuai River improvement project the personal guarantee loan financing products to solve the current capital problem of the project. The CNY30 million financing had a 4.5% annual benefit rate for the private investor, which was much higher than what a deposit interest rate would realize. Meanwhile, the NCIC controlled the financing within 4.5% through bank money discount.
ABS Financing

In November 2005, the NCIC applied to the China Security Regulatory Commission for a “Nanjing Water ABS Financing Plan,” taking wastewater treatment fee as profit guarantee. The total cost of the plan reaches CNY800 million and a financing cost of about 5%. Compared to a bank loan, some CNY30 million is estimated to be saved by the government from this transaction. This project has recently passed the evaluation of the China Security Regulatory Commission and becomes the first urban water finance project in the PRC.

Bond Financing

The NCIC applied to the National Development and Reform Commission for the issuance of a “water construction” bond of CNY2 billion with a 10-year time limit. Guaranteed by ADB together with the domestic financing organizations, the estimated fund cost is 4.5% of the total bond amount. Compared to a bank loan, this is estimated to save CNY300 million for the government.

Transfer–Operate–Transfer and Build–Operate–Transfer Financing

The NCIC plans to raise CNY700 million through TOT for North Wastewater Treatment Plant of Nanjiang Jiangning City and through BOT for Xian Lin Wastewater Treatment Plant, which are under its control, to improve their financial structure and operation efficiency. Many international private water companies have signified interest to participate in the bidding for these projects.

Equity Financing

For its next steps, the NCIC plans to attract world-renowned private water companies to participate in the water sector projects in Nanjing to improve the management ability of the local companies. The NCIC also plans to issue stocks to the public to strengthen its investment and profit-making ability.

Prospects and Challenges of Public–Private Partnership Financing in the People’s Republic of China

Experience and Prospects of Public–Private Partnership Financing

Based on the experience and practice of PPP financing of the Nanjing Water Environment Improvement Project, it has been established that PPP can further promote the development of an urban economy, improve urban management ability, and bring benefits to the government, private investors, and the citizens. The other benefits are as follows:

- With the introduction of private capital to finance public service projects, the government was able to improve the urban environment and pursue economic development.
- Urban public infrastructure projects can provide a wide range of investment opportunities for private capital thereby enhancing the private sector’s profitability.
- The participation of private financing organizations plays an important role in the entry of private capital into public projects.
• The comprehensive application of various financing methods, especially the direct investment of private capital can largely reduce financial cost.
• The participation of private capital can improve the operational efficiency of public projects.

In general, as long as the government meets the demand for a timely delivery of urban public projects and the operational efficiency improves, the government should maintain an open mind about adopting new methods of implementing public infrastructure projects. The old, traditional way of construction investment can be totally changed. A single-investment method can be converted into multiple financing, a government-initiated construction into people-initiated construction, the promotion of diverse development financing to attract more funds, and more advanced management methods into the construction, operations, and management of public projects could be introduced.

Challenges of Public–Private Partnership Financing in the People’s Republic of China

As the main method of financing government projects, PPP financing has a bright prospect. However, to achieve further development, more research on legal norms should be conducted, government supervision should be enhanced, and interest return should be optimized.

In PPP financing in the PRC, the government should play three roles: as supervisor, consumer, and cooperator. Because of the natural monopolistic feature of a PPP project, and lack of financial resources to operate the projects, the government should repay the investors in the form of fund subsidy, franchise, and provision of development land or purchase public product representing consumers when the price of the project’s product and service is poor. This will guarantee an adequate investment payback for the investor. Furthermore, under a national policy, the government should help investors with multiple methods of financing to improve investment profit and operational efficiency.

A legal institution is needed to implement PPP efficiently in urban public projects in the PRC. Regulation and policy in the management of PPP investments and financing should be optimized to achieve a win–win situation between the government and the private investor.

With the expansion of urbanization, the private sector has a wider investment space. More and more, new PPP financing forms with high efficiency will appear and the government will need to reform its financing system and undertake organizational reforms.
Appendix 1

Workshop Program and Details

KDI–ADB–ADBI–WBI Conference
Grand Hyatt Hotel, Seoul, Republic of Korea
19–21 May 2009

Knowledge Sharing on Infrastructure
Public–Private Partnerships in Asia

Increased investments in infrastructure and social services are needed for enhancing and sustaining economic growth. However, infrastructure investment requirements that exceed readily available public sector resources have resulted in a funding backlog. As a result, public–private partnerships (PPPs) for infrastructure are being increasingly explored around the globe as a strategic approach for increasing investment for infrastructure development, expanding access to infrastructure services, and achieving efficient and effective infrastructure service delivery.

While the impact of the global financial crisis on PPP for infrastructure is still being assessed, the fundamental components of PPPs—delivery of quality service, capturing efficiency gains through private sector participation, and sharing risks—will be as important as ever. In this challenging environment, it is even more important for the lessons learned by mature PPP programs worldwide to be shared with those who are embarking on, or in the initial stages of launching their PPP programs and/or projects.

This conference, co-organized by the Korea Development Institute and the Asian Development Bank in collaboration with the Asian Development Bank Institute and the World Bank Institute,10 offers a unique knowledge-sharing opportunity for senior PPP and infrastructure policy makers and program managers from across Asia and the Pacific region, as well as globally, to engage in an in-depth review of the different components and salient features of the PPP program framework and multisector approach implemented by the Republic of Korea for over a decade. The Republic of Korea’s PPP approach will be profiled, together with approaches and practices of other countries with advanced PPP programs from Asia, and globally. The comparative assessment of different country approaches to PPP program management and implementation will enable participating country delegates to explore alternative PPP approaches that may be relevant and pragmatic for the specific challenges faced in their countries.

10 The collaboration of ADBI and WBI is in conjunction with the Multilateral PPP for Infrastructure Capacity Building Initiative being implemented by ADBI, together with the multilateral investment fund—Inter-American Development Bank—and the WBI.
KDI–ADB–ADBI–WBI Conference
Grand Hyatt Hotel, Seoul, Republic of Korea
19–21 May 2009

Knowledge Sharing on Infrastructure
Public–Private Partnerships in Asia

CONFERENCE PROGRAM
Day 1, Tuesday, 19 May 2009

08:30–09:00 a.m. Registration and Networking

OPENING

09:00–09:20 a.m. Opening Ceremony

Opening Address by Oh-Seok HYUN
President, Korea Development Institute (KDI), Republic of Korea

Welcome Address by Yong Geol LEE
Vice Minister, Ministry of Strategy and Finance, Republic of Korea

09:20–09:40 a.m. Keynote Address by Ursula SCHAEFER-PREUSS
Vice President, Knowledge Management, ADB

09:40–10:00 a.m. Coffee Break

SESSION 1: POLICY AND INSTITUTIONAL APPROACHES FOR PPPs IN INFRASTRUCTURE
Chair: Jay-Hyung KIM, Managing Director, Public and Private Infrastructure Investment Management Center (PIMAC), KDI, Republic of Korea

10:00–11:15 a.m. Country Comparison

Republic of Korea—Byung Tae YOON
Director, Private Investment Policy Division, Ministry of Strategy and Finance, Republic of Korea

Chile—J. Luis GUASCH
Chairman of the World Bank Global Expert Team on Public–Private Partnerships

India—Namita MEHROTRA
Director of Infrastructure, Infrastructure Division, Planning Commission, India

Australia—Richard FOSTER
Executive Manager, Department of Treasury and Finance, Partnerships Victoria, Australia

United Kingdom—Edward FARQUHARSON
Director, International Department, Partnerships UK, United Kingdom

SESSION 2: PPP LEGAL AND REGULATORY FRAMEWORK
Chair: Mark Moseley, Senior Counsel–Energy, and GET Public–Private Partnerships Team Member, Legal Vice President, World Bank

11:15–11:45 a.m. Country Comparison

Republic of Korea—Sanghoon AHN
Head, Policy and Research Division, PIMAC, KDI, Republic of Korea

Australia—Kylee ANASTASI
Associate Director, Project Finance Advisory, Ernst & Young, Australia

11:45 a.m.–12:45 p.m. Lunch

continued on next page
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
<th>Country</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:45–1:30 p.m.</td>
<td>3</td>
<td>India</td>
<td>Namita MEHROTRA</td>
<td>Director of Infrastructure, Infrastructure Division, Planning Commission, India</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chile</td>
<td>J. Luis GUASCH</td>
<td>Chairman of the World Bank Global Expert Team on Public–Private Partnerships</td>
</tr>
<tr>
<td></td>
<td></td>
<td>United Kingdom</td>
<td>Edward FARQUHARSON</td>
<td>Director, International Department, Partnerships UK, United Kingdom</td>
</tr>
<tr>
<td>1:30–2:00 p.m.</td>
<td></td>
<td></td>
<td></td>
<td>Q&amp;A and Discussion</td>
</tr>
<tr>
<td>2:00–3:15 p.m.</td>
<td>3</td>
<td>India</td>
<td>Ravi PERI</td>
<td>Director of PPPI, Infrastructure Development Finance Company (IDFC), India</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Australia</td>
<td>Kylee ANASTASI</td>
<td>Associate Director, Project Finance Advisory, Ernst &amp; Young, Australia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Republic of Korea</td>
<td>Kang Soo KIM</td>
<td>Head, PPP Division, PIMAC, KDI, Republic of Korea</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chile</td>
<td>J. Luis GUASCH</td>
<td>Chairman of the World Bank Global Expert Team on Public–Private Partnerships</td>
</tr>
<tr>
<td></td>
<td></td>
<td>United Kingdom</td>
<td>Edward FARQUHARSON</td>
<td>Director, International Department, Partnerships UK, United Kingdom</td>
</tr>
<tr>
<td>3:15–3:30 p.m.</td>
<td></td>
<td></td>
<td></td>
<td>Coffee Break</td>
</tr>
<tr>
<td>3:30–4:45 p.m.</td>
<td>4</td>
<td>Republic of Korea</td>
<td>Sung Hwan SHIN</td>
<td>Professor, Hongik University, Republic of Korea</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Australia</td>
<td>Richard FOSTER</td>
<td>Executive Manager, Department of Treasury and Finance, Partnerships Victoria, Australia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>India</td>
<td>Ravi PERI</td>
<td>Director of PPPI, Infrastructure Development Finance Company (IDFC), India</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chile</td>
<td>J. Luis GUASCH</td>
<td>Chairman of the World Bank Global Expert Team on Public–Private Partnerships</td>
</tr>
<tr>
<td></td>
<td></td>
<td>United Kingdom</td>
<td>Edward FARQUHARSON</td>
<td>Director, International Department, Partnerships UK, United Kingdom</td>
</tr>
<tr>
<td>4:45–5:15 p.m.</td>
<td></td>
<td></td>
<td></td>
<td>Q&amp;A and Discussion</td>
</tr>
<tr>
<td>6:30 p.m.</td>
<td></td>
<td></td>
<td></td>
<td>Dinner</td>
</tr>
</tbody>
</table>
### Day 2, Wednesday, 20 May 2009

#### SESSION 5: PPP IN THE TRANSPORT SECTOR

**Chair:** Hyeon PARK, Senior Evaluation Specialist, Independent Evaluation Department, ADB

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00–10:00 a.m.</td>
<td>Roads</td>
<td>Soundararajan AIYALU</td>
<td>India</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ECC Division, Larsen &amp; Toubro Limited</td>
<td></td>
</tr>
<tr>
<td>10:00–10:15 a.m.</td>
<td>Q&amp;A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:15–10:30 a.m.</td>
<td>Coffee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:30–11:30 a.m.</td>
<td>Ports</td>
<td>Jungwook KIM</td>
<td>Republic of Korea</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fellow, PIMAC, KDI</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Balasubramanian ANANTHASUBRAMANIAN</td>
<td>India</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Director, Infrastructure Development Finance Company (IDFC)</td>
<td>India</td>
</tr>
</tbody>
</table>

#### SESSION 6: FIELD TRIP

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:45–1:45 p.m.</td>
<td>Hotel → Incheon</td>
<td></td>
</tr>
<tr>
<td>1:45–3:45 p.m.</td>
<td>Site Visit 1: Incheon Bridge (BTO Facility)</td>
<td>Incheon</td>
</tr>
<tr>
<td>3:45–4:45 p.m.</td>
<td>Incheon → Gimpo</td>
<td></td>
</tr>
<tr>
<td>4:45–5:45 p.m.</td>
<td>Site Visit 2: Gochon Elementary School (BTL Facility)</td>
<td>Gimpo</td>
</tr>
<tr>
<td>5:45–6:30 p.m.</td>
<td>Gimpo → Hotel</td>
<td></td>
</tr>
</tbody>
</table>

### Day 3, Thursday, 21 May 2009

#### SESSION 7: PPP IN THE URBAN SECTOR

**Chair:** Anand CHIPLUNKAR, Senior Water Supply and Sanitation Specialist, Regional Sustainable Development Department, ADB

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00–10:30 a.m.</td>
<td>Water Supply</td>
<td>Art SMITH</td>
<td>USA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>World Bank Consultant and Chairman, National Council for PPPs, USA</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rogelio L. SINGSON</td>
<td>Philippines</td>
</tr>
<tr>
<td></td>
<td></td>
<td>President, Maynilad Water Services Inc., Philippines</td>
<td></td>
</tr>
<tr>
<td>10:30–11:30 a.m.</td>
<td>Q&amp;A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:30 a.m.–12:30 p.m.</td>
<td>Lunch</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### SESSION 8: PPP IN THE SOCIAL SECTOR

**Chair:** Edward FARQUHARSON, Director, International Department, Partnerships UK, United Kingdom

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:30–1:30 p.m.</td>
<td>Schools</td>
<td>Seok Joon CHOI</td>
<td>Republic of Korea</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Professor, University of Seoul, Republic of Korea</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Toshiaki TASHIRO</td>
<td>Japan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Policy Researcher, PFI Promotion Office, Cabinet Office, Japan</td>
<td></td>
</tr>
</tbody>
</table>

*continued on next page*
<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:30–1:45</td>
<td>Q&amp;A and Discussion</td>
</tr>
<tr>
<td>1:45–2:45</td>
<td>Health Care</td>
</tr>
</tbody>
</table>
|           | **Australia—Richard FOSTER**  
|           | Executive Manager, Department of Treasury and Finance, Partnerships Victoria, Australia     |
|           | **Philippines—Pascual De GUZMAN**  
|           | Executive Director, BOT Center, Philippines                                                   |
| 2:45–3:00 | Q&A and Discussion                                                                          |
| 3:00–3:20 | Coffee Break                                                                                |

**SESSION 9: KNOWLEDGE SHARING OF COUNTRY SPECIFIC PPP APPROACHES FOR PPP GLOBAL CAPACITY BUILDING**

*Chair: Elaine GLENNIE, Senior Capacity Building Specialist, ADBI*

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
</tr>
</thead>
</table>
| 3:20–3:35 | **Topic 1**  
|           | PPP Capacity Building Using Country Comparisons of Best Practices for Problem Solving         |
|           | Govindan NAIR (Lead Economist, WBI)                                                          |
| 3:35–3:50 | **Topic 2**  
|           | Using Country Comparisons to Determine Scope for PPPs in a National Strategy                  |
|           | Art SMITH (Chairman, National Council for PPPs, USA)                                          |
| 3:50–4:05 | **Topic 3**  
|           | Using Country Comparisons to Develop Pragmatic Approaches for PPP Procurement                 |
|           | Kylee ANASTASI (Associate Director, Project Finance Advisory, Ernst & Young, Australia)      |
| 4:05–4:20 | **Topic 4**  
|           | Impact of the Global Financial Crisis—What Does It Mean for PPPs in the Short to Medium Term?|
|           | Geoffrey HAMILTON (Chief of Section, Economic Cooperation and Integration Division, UNECE)   |
| 4:20–4:40 | Coffee Break                                                                                |
| 4:40–5:10 | Q&A and Discussion                                                                          |

**SESSION 10: ROUND TABLE DISCUSSION—PPPs IN THE FUTURE**

*Chair: Ashok SHARMA, Director, Financial Sector, Public Management and Trade Division (SAFM), SARD, ADB*

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
</table>
| 5:10–6:00 | Open Discussion  
|           | Concluding Remarks                                                                          |
|           | Jay-Hyung KIM (Managing Director, PIMAC, KDI, Republic of Korea)                            |
## Appendix 2
### Participants’ List

<table>
<thead>
<tr>
<th>No.</th>
<th>Country</th>
<th>First Name</th>
<th>Last Name</th>
<th>Job Title</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Afghanistan</td>
<td>Abdul Razique</td>
<td>Samadi</td>
<td>Deputy Minister</td>
<td>Ministry of Finance</td>
</tr>
<tr>
<td>2</td>
<td>Australia</td>
<td>Richard</td>
<td>Foster</td>
<td>Executive Manager</td>
<td>Partnerships Victoria</td>
</tr>
<tr>
<td>3</td>
<td>Bangladesh</td>
<td>Nazrul</td>
<td>Islam</td>
<td>Executive Director and CEO</td>
<td>Infrastructure Investment Facilitation Center (IFC)</td>
</tr>
<tr>
<td>4</td>
<td>Bangladesh</td>
<td>Meer Ahemed Tariqul</td>
<td>Omar</td>
<td>Assistant Chief</td>
<td>Government of Bangladesh</td>
</tr>
<tr>
<td>5</td>
<td>Bangladesh</td>
<td>Mamdood</td>
<td>Alamgir</td>
<td>Director</td>
<td>Board of Investment</td>
</tr>
<tr>
<td>6</td>
<td>Bhutan</td>
<td>Rinchen</td>
<td>Dorji</td>
<td>Director</td>
<td>Ministry of Works and Human Settlement (MOWHS)</td>
</tr>
<tr>
<td>7</td>
<td>Cambodia</td>
<td>Vutha</td>
<td>Sar</td>
<td>Deputy Director</td>
<td>Ministry of Public Works and Transport (MPWT/GDPW)</td>
</tr>
<tr>
<td>8</td>
<td>Cambodia</td>
<td>Premarak</td>
<td>Sao</td>
<td>Senior Civil Engineer/ Counterpart to the Resident Engineer</td>
<td>Ministry of Public Works and Transport</td>
</tr>
<tr>
<td>9</td>
<td>India</td>
<td>Namita</td>
<td>Mehrotra</td>
<td>Director (Infrastructure)</td>
<td>Planning Commission</td>
</tr>
<tr>
<td>10</td>
<td>India</td>
<td>Balasubramanian</td>
<td>Ananthasubramanian</td>
<td>Director</td>
<td>Infrastructure Development Finance Company (IDFC)</td>
</tr>
<tr>
<td>11</td>
<td>India</td>
<td>Ravi</td>
<td>Peri</td>
<td>Senior Director</td>
<td>Infrastructure Development Finance Company (IDFC)</td>
</tr>
<tr>
<td>12</td>
<td>Indonesia</td>
<td>Bambang</td>
<td>Goeritno</td>
<td>Director General of Investment</td>
<td>Ministry of Public Works</td>
</tr>
<tr>
<td>13</td>
<td>Indonesia</td>
<td>Bambang</td>
<td>Susantono</td>
<td>Deputy Minister for Infrastructure &amp; Regional Development</td>
<td>Office of Coordinating Ministry for Economic Affairs</td>
</tr>
<tr>
<td>14</td>
<td>Indonesia</td>
<td>Wahyu</td>
<td>Utomo</td>
<td>Assistant Deputy Minister</td>
<td>Coordinating Ministry of Welfare</td>
</tr>
</tbody>
</table>

*continued on next page*
<table>
<thead>
<tr>
<th>No.</th>
<th>Country</th>
<th>First Name</th>
<th>Last Name</th>
<th>Job Title</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Indonesia</td>
<td>Maurin</td>
<td>Sitorus</td>
<td>Director</td>
<td>Ministry of Finance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>External Funds Management</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Indonesia</td>
<td>Frans</td>
<td>Nembo</td>
<td>Director</td>
<td>PT. Sarana Multi Infrastruktur (PT. SMI)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sukardi</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Japan</td>
<td>Toshiaki</td>
<td>Tashiro</td>
<td>Policy Researcher</td>
<td>Cabinet Office</td>
</tr>
<tr>
<td>18</td>
<td>Kazakhstan</td>
<td>Talgat</td>
<td>Lastayev</td>
<td>Head</td>
<td>Ministry of Transport and Communications</td>
</tr>
<tr>
<td>19</td>
<td>Kyrgyz Republic</td>
<td>Kubat</td>
<td>Murzaev</td>
<td>Head, Division on PPP</td>
<td>Ministry of Economic Development and Trade</td>
</tr>
<tr>
<td>20</td>
<td>Kyrgyz Republic</td>
<td>Ahmadhon</td>
<td>Yusupkhanov</td>
<td>Specialist</td>
<td>Ministry of Economic Development and Trade</td>
</tr>
<tr>
<td>21</td>
<td>Lao People’s Democratic Republic</td>
<td>Phouthasack</td>
<td>Toto</td>
<td>Deputy Director</td>
<td>Ministry of Planning and Investment</td>
</tr>
<tr>
<td>22</td>
<td>Mongolia</td>
<td>Batjargal</td>
<td>Khalzan</td>
<td>Director</td>
<td>National Development and Innovation Committee (NDIC)</td>
</tr>
<tr>
<td>23</td>
<td>Mongolia</td>
<td>Bekhbat</td>
<td>Sodnom</td>
<td>Advisor</td>
<td>Parliament of Mongolia</td>
</tr>
<tr>
<td>24</td>
<td>Nepal</td>
<td>Shiva Hari</td>
<td>Sapkota</td>
<td>Senior Divisional Engineer Project Manager</td>
<td>Ministry of Physical Planning and Works</td>
</tr>
<tr>
<td>25</td>
<td>Nepal</td>
<td>Uma Kanta</td>
<td>Jha</td>
<td>Secretary</td>
<td>Ministry of Physical Planning and Works</td>
</tr>
<tr>
<td>26</td>
<td>Nepal</td>
<td>Pande</td>
<td>Kamal Raj</td>
<td>Joint Secretary</td>
<td>Ministry of Physical Planning and Works</td>
</tr>
<tr>
<td>27</td>
<td>Pakistan</td>
<td>Ghulam</td>
<td>Murtaza Satti</td>
<td>Advisor</td>
<td>Ministry of Finance</td>
</tr>
<tr>
<td>28</td>
<td>Pakistan</td>
<td>Khalid Ahmed</td>
<td>Khan</td>
<td>Joint Secretary</td>
<td>Ministry of Communications, Government of Pakistan</td>
</tr>
<tr>
<td>29</td>
<td>Pakistan</td>
<td>Sarfraz Khan</td>
<td>Lashari</td>
<td>Chief Coordinator</td>
<td>Ministry of Finance</td>
</tr>
<tr>
<td>30</td>
<td>Pakistan</td>
<td>Muhammad</td>
<td>Tanveer</td>
<td>Director</td>
<td>Ministry of Communications, Government of Pakistan</td>
</tr>
<tr>
<td>No.</td>
<td>Country</td>
<td>First Name</td>
<td>Last Name</td>
<td>Job Title</td>
<td>Organization</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------</td>
<td>------------</td>
<td>-----------</td>
<td>------------------------------------------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td>31</td>
<td>Pakistan</td>
<td>Altamash</td>
<td>Khan</td>
<td>General Manager (Construction)</td>
<td>Ministry of Communications, Government of Pakistan</td>
</tr>
<tr>
<td>32</td>
<td>Pakistan</td>
<td>Azeem</td>
<td>Tahir</td>
<td>Director (PPP)</td>
<td>Ministry of Communications, Government of Pakistan</td>
</tr>
<tr>
<td>33</td>
<td>Papua New Guinea</td>
<td>Oswald</td>
<td>Tolopa</td>
<td>Director-Policy</td>
<td>Department of Lands and Physical Planning (DLPP)</td>
</tr>
<tr>
<td>34</td>
<td>Philippines</td>
<td>Pascual</td>
<td>de Guzman</td>
<td>Executive Director</td>
<td>Department of Trade and Industry</td>
</tr>
<tr>
<td>35</td>
<td>Philippines</td>
<td>Rogelio</td>
<td>Singson</td>
<td>President and CEO</td>
<td>Maynilad Water Services, Inc.</td>
</tr>
<tr>
<td>36</td>
<td>Philippines</td>
<td>Anouj</td>
<td>Mehta</td>
<td>Senior Infrastructure Finance Specialist (PPP)</td>
<td>ADB</td>
</tr>
<tr>
<td>37</td>
<td>Philippines</td>
<td>Jennifer</td>
<td>Romero-Torres</td>
<td>Financial Specialist</td>
<td>ADB</td>
</tr>
<tr>
<td>38</td>
<td>Philippines</td>
<td>Kilisitina</td>
<td>Tuameiap</td>
<td>Director's Advisor</td>
<td>ADB</td>
</tr>
<tr>
<td>39</td>
<td>Philippines</td>
<td>Mike</td>
<td>Lindfield</td>
<td>Principal Urban Development Specialist</td>
<td>ADB</td>
</tr>
<tr>
<td>40</td>
<td>Philippines</td>
<td>Ashok</td>
<td>Sharma</td>
<td>Director, Financial Sector, Public Management and Trade Division (SAFM)</td>
<td>ADB</td>
</tr>
<tr>
<td>41</td>
<td>Philippines</td>
<td>Elaine</td>
<td>Glennie</td>
<td>Senior Capacity Building Specialist</td>
<td>ADBI</td>
</tr>
<tr>
<td>42</td>
<td>Republic of Korea</td>
<td>Jay-Hyung</td>
<td>Kim</td>
<td>Managing Director</td>
<td>PIMAC</td>
</tr>
<tr>
<td>43</td>
<td>Republic of Korea</td>
<td>Sanghoon</td>
<td>Ahn</td>
<td>Head</td>
<td>PIMAC</td>
</tr>
<tr>
<td>44</td>
<td>Republic of Korea</td>
<td>Kang-Soo</td>
<td>Kim</td>
<td>Head</td>
<td>PIMAC</td>
</tr>
<tr>
<td>45</td>
<td>Republic of Korea</td>
<td>Jungwook</td>
<td>Kim</td>
<td>Associate Research Fellow</td>
<td>PIMAC</td>
</tr>
</tbody>
</table>

Participants' List continued

continued on next page
<table>
<thead>
<tr>
<th>No.</th>
<th>Country</th>
<th>First Name</th>
<th>Last Name</th>
<th>Job Title</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>46</td>
<td>Samoa</td>
<td>Justina</td>
<td>Sau</td>
<td>Head</td>
<td>Ministry of Finance</td>
</tr>
<tr>
<td>47</td>
<td>Sri Lanka</td>
<td>Duminda</td>
<td>Premaratne</td>
<td>Manager (Project Finance)</td>
<td>Board of Investment of Sri Lanka</td>
</tr>
<tr>
<td>48</td>
<td>Switzerland</td>
<td>Geoffrey</td>
<td>Hamilton</td>
<td>Chief of Section</td>
<td>United Nations Economic Commission for Europe</td>
</tr>
<tr>
<td>49</td>
<td>Thailand</td>
<td>Kullakarn</td>
<td>Aramthong</td>
<td>Economist</td>
<td>Ministry of Finance</td>
</tr>
<tr>
<td>50</td>
<td>Thailand</td>
<td>Upama</td>
<td>Jaihon</td>
<td>Senior Financial Analyst</td>
<td>Ministry of Finance</td>
</tr>
<tr>
<td>51</td>
<td>United Kingdom</td>
<td>Edward</td>
<td>Farquharson</td>
<td>Director</td>
<td>Partnerships UK</td>
</tr>
<tr>
<td>52</td>
<td>Viet Nam</td>
<td>Quynh le</td>
<td>Vu</td>
<td>Official</td>
<td>Ministry of Planning and Investment</td>
</tr>
<tr>
<td>53</td>
<td>Viet Nam</td>
<td>Hien Thi</td>
<td>Minh</td>
<td>Deputy Director</td>
<td>Ministry of Planning and Investment</td>
</tr>
<tr>
<td>54</td>
<td>Hong</td>
<td>Wang</td>
<td></td>
<td>Senior CAREC Coordinator</td>
<td>ADB</td>
</tr>
<tr>
<td>55</td>
<td>Michael</td>
<td>Barrow</td>
<td></td>
<td>Director</td>
<td>ADB</td>
</tr>
<tr>
<td>56</td>
<td>Ursula</td>
<td>Schaeffer-Preuss</td>
<td></td>
<td>Vice President</td>
<td>ADB</td>
</tr>
<tr>
<td>57</td>
<td>Anand</td>
<td>Chiplunkar</td>
<td></td>
<td>Senior Water Supply and Sanitation Specialist</td>
<td>ADB</td>
</tr>
<tr>
<td>58</td>
<td>Govindan G.</td>
<td>Nair</td>
<td></td>
<td>Lead Economist</td>
<td>WBIFP</td>
</tr>
<tr>
<td>59</td>
<td>Arthur</td>
<td>Smith</td>
<td></td>
<td>Consultant, World Bank</td>
<td>World Bank</td>
</tr>
<tr>
<td>60</td>
<td>Kylee</td>
<td>Anastasi</td>
<td></td>
<td>Consultant, World Bank</td>
<td>World Bank Institute</td>
</tr>
<tr>
<td>61</td>
<td>J. Luis</td>
<td>Guasch</td>
<td></td>
<td>Chairman</td>
<td>World Bank</td>
</tr>
<tr>
<td>62</td>
<td>Mark</td>
<td>Moseley</td>
<td></td>
<td>Senior Counsel–Energy and GET PPPs Team</td>
<td>World Bank</td>
</tr>
</tbody>
</table>
About the Editors

Jay-Hyung Kim

Jay-Hyung Kim was appointed managing director of the Public and Private Infrastructure Investment Management Center (PIMAC) at the Korea Development Institute (KDI) in April 2006. According to the National Finance Law and the Public Private Partnership Law, the center is mandated to be responsible for managing and supervising efficient and transparent public and private infrastructure investment projects. It also provides professional support to the Government of the Republic of Korea through efficient and transparent public and private infrastructure investment management. Jay-Hyung Kim has been a fellow at the KDI since 1994, conducting research on regional development, infrastructure development, public finance, and urban planning. He has helped the Ministry of Strategy and Finance and other ministries formulate budget plans, social and economic development plans, and other policies. He has also served as a director of the Public Investment Management Center and as a director of the Department of Public Private Partnership (PPP) Program.

Jay-Hyung Kim currently serves as an advisor to the Board of Audit and Inspection and to the Ministry of Education, Science and Technology. He has also been a serving member of advisory committees to the Ministry of Strategy and Finance; the Ministry of Land, Transport and Maritime Affairs; and the Ministry of Defense.

Jay-Hyung Kim’s planning and public finance experience also includes serving as a senior evaluation officer and senior economist at the World Bank from 2003 to 2005. His responsibilities included evaluations of World Bank projects in many countries, and sector and thematic evaluation of urban development projects. He has worked for several countries including Indonesia, Kazakhstan, Mongolia, Thailand, and Viet Nam. He is currently a member of the board and the team of specialists on public-private partnerships at the United Nations Economic Commission for Europe.

Born in the Republic of Korea, Jay-Hyung Kim holds bachelor and master degrees in economics from Seoul National University, and a PhD in economics from the University of Chicago (1993).

Jungwook Kim

Jungwook Kim was appointed fellow of the Public Private Partnership (PPP) Division of PIMAC at KDI in 2007. The division is responsible for managing, supervising, and providing administrative support to the public-private partnership programs in the Republic of Korea.

Since joining KDI, Jungwook Kim has conducted research on regional development, infrastructure development, local public finance, and urban planning. He has also helped the Ministry of Strategy and Finance and other ministries formulate budget plans, social and economic development plans, and other policies. His publications are Auctions with Public Information about Private Valuation, Optimal Collusion-proof Contract under Relative Performance Evaluation and Innovative Activity and Competition Effect.

Born in the Republic of Korea, Kim holds bachelor and master degrees in economics from Seoul National University, and a PhD in economics from the University of Wisconsin-Madison.
Public–Private Partnership
Infrastructure Projects:
Case Studies from the Republic of Korea
Attachment: Global Country Comparison of Public–Private Partnership Frameworks and Projects

Jay-Hyung Kim
Jungwook Kim

About the Korea Development Institute
KDI, established in 1971, is an independent policy-oriented research organization and a leading think-tank of the Republic of Korea. It has contributed to policy making and institutional reform by conducting research in many areas, including macroeconomics, finance, fiscal policy, social security, labor, industry, trade, economic law, and the economy. It has developed into a comprehensive policy institute of international recognition by taking up diverse roles and functions.
The Public and Private Infrastructure Investment Management Center, the affiliated body of KDI, started its operations in 1999, serving as a gatekeeping agency of the Government of the Republic of Korea, then to procuring economic and social infrastructure, and enhancing efficiency and transparency of public and private infrastructure investments.

About the Asian Development Bank
ADB’s vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region’s many successes, it remains home to two-thirds of the world’s poor: 1.8 billion people who live on less than $2 a day, with 903 million struggling on less than $1.25 a day. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.
Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.