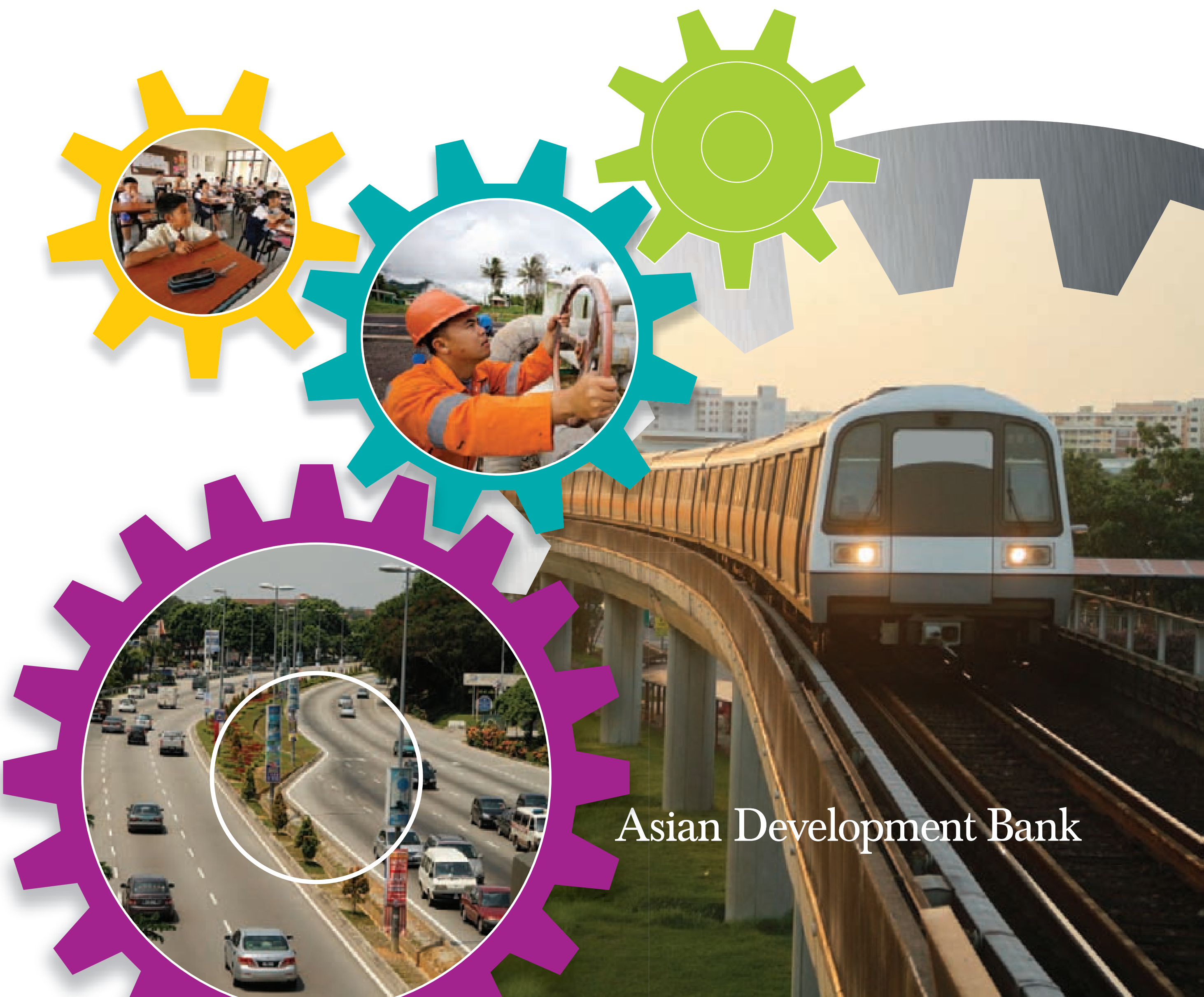
ADB

Public–Private Partnership Operational Plan 2012–2020

Realizing the Vision for Strategy 2020: The Transformational Role of Public–Private Partnerships in Asian Development Bank Operations



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Contents

Abbreviations

ADB	–	Asian Development Bank
CPM	–	Country Planning Mission
CoP	–	community of practice
DMC	–	developing member country
IFC	–	International Finance Corporation
KPI	–	key performance indicator
MP3IC	–	Multilateral Public–Private Partnership for Infrastructure Capacity Development
PDF	–	project development fund (facility)
PPP	–	public–private partnership
PSC	–	public sector comparator
PSD	–	private sector development
PSOD	–	Private Sector Operations Department
PSP	–	private sector participation
SES	–	special evaluation study
TA	–	technical assistance
VFM	–	value for money

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Executive Summary

Strategy 2020, the long-term strategic framework of the Asian Development Bank (ADB) for 2008–2020, identifies private sector development (PSD) and private sector operations as drivers of change in Asia and the Pacific. Under Strategy 2020, ADB will expand work with the private sector to generate greater economic growth in the region. Public–private partnership (PPP) is seen as an important modality to achieve this objective, and Strategy 2020 emphasizes the promotion of PPPs in all of ADB's core operations. This approach is aligned with the Group of 20 perspective that multilateral development banks need to promote project financing in cooperation with the private sector, especially where partial or full cost recovery is possible. In 2009, ADB's Independent Evaluation Department released the first special evaluation study on ADB assistance for PPPs in infrastructure development during 1988–2008. In response to the study's recommendations, ADB Management agreed to prepare a corporate business plan to provide a consistent analytical and operational framework for PPP assistance in support of Strategy 2020.

Given the evolution of PPP concepts and terminology, the definition of PPP has important implications for reframing ADB policies and procedures to effectively accommodate and eventually mainstream PPP modalities in ADB operations. Within ADB operations, all contracts such as performance-based contracts (management and service contracts), lease–operate–transfer, build–own–operate–transfer, design–build–finance–operate, variants, and concessions are considered as various forms of PPP. Contracts involving turnkey design and construction as part of public procurement (engineering, procurement, and construction-type contracts) are excluded.

The Asia and Pacific region requires infrastructure investment of at least $8 trillion until 2020. Available funding from traditional sources falls far short of the investment need. To address the massive infrastructure requirements, countries have three principal options: (i) review traditional sources of funds and explore additional funding from them, (ii) investigate mechanisms for generating more resources from off-budget sources, and (iii) consider a greater role for PPPs in procuring infrastructure and identifying and addressing impediments to the development of PPP transactions.

The private sector is often considered to provide greater efficiency than the public sector when managing infrastructure projects and delivering infrastructure services. Involvement of the private sector has the potential to increase operating efficiency by making investments in new technologies, bringing innovative solutions, and encouraging more transparent organizational structures. However, not all infrastructure projects are suitable for PPP, and conditions need to exist that attract private sector participation in the delivery of infrastructure assets and provision of service. When efficiently and transparently procured, the benefits of involving the private sector in the delivery of infrastructure include (i) efficient use of the resources, (ii) improved asset and service quality, (iii) improved public sector management, and (iv) overall improvement in public sector procurement.

Keeping in view the operating environment and varying economic profiles of ADB developing member countries (DMCs), ADB bases its PPP operations on four pillars: advocacy and capacity development, enabling environment, project development, and project financing. Under pillar 1, regional departments will play a leadership role in advocating for PPPs within their DMCs; under pillar 2, regional departments will strengthen assistance to DMCs to develop the overall enabling environment for PPPs; under pillar 3, regional departments will actively encourage PPP and enhance DMCs' abilities to carry out project identification and meet subsequent development needs; and under pillar 4, ADB's Private Sector Operations Department will enhance its nonsovereign products and their application, and commercial cofinancing to enable it to leverage assistance and catalyze change through greater private investment in the DMCs. Regional departments may offer sovereign products to support PPP financing.

Regional departments recognize that PPPs, and in particular the crosscutting themes of enabling environment, holistic life-cycle project support for DMCs, and broadly applied financing support for countries, should be reflected in the country partnership strategy process. Regional departments will develop national strategies for PPPs with their DMCs considering all relevant sector divisions, thus requiring close coordination with ADB's regional department sector divisions and Private Sector Operations Department. Therefore, the proposed strategic changes include incorporating the PPP development program and options in the country partnership strategy and country operations business plan, supporting capacity development, creating awareness and an enabling environment for PPPs, providing hands-on support for the development of PPP projects, creating an initial pipeline list of privately financed and PPP projects, and structuring PPP projects with private sector financing and public sector financing (if needed).

To ensure a more cohesive approach to PPPs and PSD and, moreover, to actively promote the precepts of Strategy 2020, ADB practices need to be redesigned to make fully private-financed projects, followed by PPPs, the preferred option before resorting to public (sovereign)-financed projects. PPP interventions should be informed by the overall goals for PSD, as the two are integral. Therefore, projects should be put through an initial PSD screening and, more specifically, PPP project screening process to identify areas where private sector technical, operations, skills, involvement, and/or financing can be maximized, and where ADB can leverage its technical support and financial resources most effectively.

The shift to PPP will create a need to redefine the performance matrix within each department and division. PPPs often cut across sector lines, requiring inputs from and coordination with a number of constituencies within and outside ADB. Such initiatives include providing pure PPP transaction advisory assignments that result in the development of bankable projects for a DMC and that lead to private sector participation (whether or not resulting in ADB project funding).

To respond better to DMC needs, regional department staff will be well versed in the PPP potential and options, as well as with supporting concepts. Paramount in capacity development is the need for general transaction screening and effective dialogue with DMCs on PPPs, preparation and administration of technical assistance projects to provide necessary PPP capacity, and development of PPP transactions with an emphasis on project finance structuring and assessment skills. To facilitate the transition of regional departments to more commercially oriented PPP transaction development, PPP experts in regional departments, supported by the new ADB community of practice for PPP, will initially take a more active role in project concept formation, ideally prior to the concept paper stage.

Implementation of the PPP operational plan will be in two parts. The first part (up to 2013) will include activities to be implemented within ADB to establish processes and practices to support PPP. These activities are crucial and will actually shape how ADB moves forward in supporting and expanding PPP initiatives within its offices. The regional departments, in consultation with their respective DMCs, will implement the second part. After completion of the 2 years of operational plan execution, ADB will undertake an internal review of its PPP work.

I. Introduction

1. Strategy 2020 of the Asian Development Bank (ADB)[1] identifies private sector development (PSD) and private sector operations as drivers of change in Asia and the Pacific. Under Strategy 2020, ADB will expand work with the private sector to generate greater economic growth in the region. Public–private partnership (PPP) is seen as an important modality to achieve this objective, and Strategy 2020 emphasizes the promotion of PPPs in all of ADB's core operations. This approach is aligned with the Group of 20 perspective that multilateral development banks need to promote project financing in cooperation with the private sector, especially where partial or full cost recovery is possible. Applying PPP principles holistically to ADB operations holds the potential to vastly improve the quality of design and outputs of PPP projects in support of Strategy 2020 targets. It also provides ADB with an opportunity to significantly leverage its limited resources in attracting private sector investments and commercial financing to meet the Asia and Pacific region's huge and growing infrastructure investment needs.

2. In 2009, ADB's Independent Evaluation Department released the first special evaluation study (SES) on ADB assistance for PPPs in infrastructure development during 1988–2008. The SES is intended to provide inputs to the formulation of strategies and business plans for implementing ADB support to PPP operations in developing member countries (DMCs). The SES findings and recommendations were timely as ADB was scaling up PSD and private sector operations under Strategy 2020.

3. In response to the SES recommendations, ADB Management agreed to prepare a corporate business plan to provide a consistent analytical and operational framework for PPP assistance in support of Strategy 2020. While the fundamental principles of PPPs are universal, how they are applied in practice must be tailored to the needs, resources, and constraints in each DMC. Thus, each PPP needs to be explicitly designed and incorporated into country partnership strategies and country operations business plans. The PPP operational plan 2012–2020 is prepared to establish strategic principles to ensure consistency in ADB PPP operations across regions.

1 ADB. 2008. *Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank, 2008–2020*. Manila.

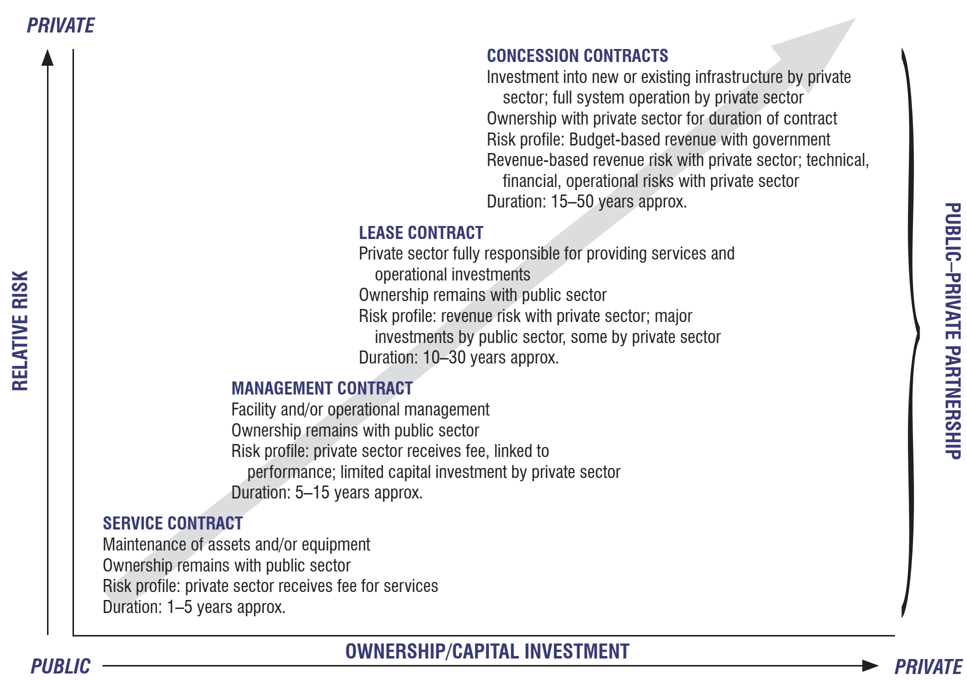
II. Conceptual Framework

A. Public–Private Partnership

4. A PPP refers to a contractual arrangement between public (national, state, provincial, or local) and private entities through which the skills, assets, and/or financial resources of each of the public and private sectors are allocated in a complementary manner, thereby sharing the risks and rewards, to seek to provide optimal service delivery and good value to citizens. Figure 1 illustrates the major types of PPP as a subset of broader private sector participation (PSP).

5. Although the terms "PPP" and "privatization" are sometimes used interchangeably, they must be clearly differentiated. Privatization refers to the transfer of physical assets and/or business from public to private ownership. The sale of a public utility through a sale of a government's equity share constitutes a straightforward privatization. When a public sector

Figure 1 **Public–Private Partnership Spectrum**



Source: Asian Development Bank.

utility or entity is privatized, the private firm that takes over the utility or business assumes the responsibility for service delivery. Privatization in the infrastructure and utilities sectors is usually accompanied by sector-specific regulatory arrangements to take account of the monopolistic nature of these activities, social and policy concerns related to the sale, and/or the continuing operation of assets used for public services.

6. PPPs involve both construction and maintenance of new infrastructure (greenfield) assets as well as management of existing public sector assets (brownfield). In a PPP, the public sector retains the ultimate responsibility for service delivery, although the private sector provides the service for an extended time. PPPs are individually regulated by the contract that specifies the responsibilities of both parties (offtaker and/or grantor, and the private sector and/or concessionaire). The contract specifies how, when, and under what conditions the private sector would be eligible to receive payments (regular as well as termination) and how any indexation of payments would be established.

7. The terms "PPP" and "PSP" are also often used interchangeably. PSP contract terminology was used in the 1990s when governments sought to transfer investment obligations to private sector parties as a means to free up budgets rather than emphasize the opportunity for partnership. However, this requires a partnership (i.e., contractual obligation or commitment) between government entities and the private sector. In certain instances, when some PSP schemes were overambitious and the social agenda was overlooked, this led to legitimate public concerns about charges for user services and allowable profits due to the monopolistic nature of the activities. The PSP era experience provides valuable insights on how to improve and refine the PPP process overall. The critical analysis of the PSP experience has led to the design of a new generation of transactions, more commonly known as PPP, with emphasis on improved delivery of public services through a partnership and demonstrating value for money throughout the full life cycle of the asset.

8. Given the evolution of PPP concepts and terminology, the definition of PPP has important implications for the ways in which ADB policies and procedures need to be reframed to more effectively accommodate and eventually mainstream PPP modalities in ADB operations. PPPs are a way of procuring efficient and modernized public service, and should not be viewed as just getting private finance for asset creation. It should be one type of modality for the management of infrastructure facilities and delivery of public services through a long-term partnership. It aims to deliver improved services for customers and better value for money for taxpayers through optimal risk allocation, management synergies, encouragement of innovation, efficient asset utilization, and asset management with a whole-of-life-cycle approach. In PPPs, certain defined aspects of service delivery, infrastructure development, and operations should be placed with the private sector, while other elements are retained under public sector responsibility.

B. Public–Private Partnership in the Context of ADB Operations

9. Within ADB operations, all contracts such as performance-based contracts (management and service contracts), lease–operate–transfer, build–own–operate–transfer, design–build–finance–operate, variants, and concessions are considered as various forms of PPP. Contracts involving turnkey design and construction as part of public procurement (engineering, procurement, and construction contracts) are excluded. Also excluded are simple service contracts that are not linked to performance standards (those that are more aligned to outsourcing to private contractor staff to operate public assets) and construction contracts with extended warranties and/or maintenance provisions of, for example, up to 5 years

post-completion (wherein performance risk-sharing is minimal as the assets are new and need only basic maintenance).[2] However, in some cases, service contracts can be used as a first step in moving to a higher form of PPP, especially in situations where the public sector is just beginning to explore PPP modalities. While both privatization and divestitures bring private sector skills and capital into a facility, ADB's support for privatization and divesture should be considered as a separate initiative to PPPs. Accordingly, all privatization and divestures are also excluded. Appendix 1 provides a list of PPP elements and the sectors where PPPs typically are applied.

[2] However, extended warranty and maintenance provisions in an extended construction contract should be preferred over a simple construction contract. This may be the case in many of the small and fragile economies in the region.

III. Challenges in Infrastructure Financing

A. External Financing Available for Infrastructure

10. From 2010 to 2020, Asia's overall national infrastructure investment needs are estimated at $8 trillion,[3] 68% of which is for new capacity and 32% for maintaining and replacing existing infrastructure. The average annual infrastructure investment during this period is about $750 billion. Box 1 provides estimated infrastructure funding requirements in some ADB DMCs.

11. Available funding for infrastructure from traditional sources falls far short of the investment needs. ADB's sovereign and nonsovereign lending portfolio for infrastructure at

Box 1 Estimated Infrastructure Funding Requirements in Select ADB Developing Member Countries

India: Goldman Sachs estimates that India will require $1.7 trillion in financing during 2010–2020 to meet its infrastructure needs.

Source: Goldman Sachs. 2009. India CAN Afford Its Massive Infrastructure Needs. *Global Economics Paper.* 187 (September).

Malaysia: $20 billion for 52 proposed public–private partnership projects for 2011–2015, or $5 billion per year.

Source: Government of Malaysia. 2011 *Tenth Malaysian Plan, 2011–2015*. Kuala Lumpur.

Viet Nam: $167 billion in proposed infrastructure investment for 2011–2020, with $65 billion to be sourced from the private sector or approximately $6.5 billion per year.

Source: Government of Viet Nam, Ministry of Planning and Investment estimates.

Indonesia: $211 billion in proposed infrastructure investment for 2011–2025, with $105 billion to be sourced from the private sector or approximately $4.2 billion per year.

Source: Government of Indonesia. 2011. *Master Plan for Acceleration and Expansion of Economic Development, 2011–2025.* Jakarta.

Thailand: $48 billion for 2009–2012, with $4.9 billion to be sourced from the private sector or approximately $1.6 billion per year.

Source: Government of Thailand. 2009 Stimulus Package No. 2 Program. Bangkok.

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3 ADB and ADB Institute. 2009. *Infrastructure for a Seamless Asia*. Manila.

$11.02 billion[4] and the World Bank's at $23 billion[5] can only make modest contributions to the region's growing demand for infrastructure investment. Bilateral and multilateral development finance, including ADB's ordinary capital resources plus its stock of concessional resources (Asian Development Fund and grants for technical assistance [TA]) can meet only a small part of the region's needs for investment in economic and social infrastructure and public services.

12. With countries in the region facing a huge shortfall in investment and its negative consequences on economic growth, measures are urgently needed to meet the additional funding requirements. Countries have three principal options: (i) review traditional sources of funds and explore additional funding from them; (ii) investigate mechanisms for generating more resources from off-budget sources; and (iii) consider a greater role for PPPs as a way to procure infrastructure, and identify and address impediments to the development of PPP transactions. ADB support to DMCs is to ameliorate the critical gap faced by them in delivering modernized and efficient infrastructure services. Accordingly, ADB support to promote PPPs in these countries should form a significant part of ADB's intervention.

B. Private Sector Investment and Financing

13. The private sector is often considered to provide greater efficiency than the public sector in managing infrastructure projects and delivering infrastructure services. Involvement of the private sector holds the potential to increase operating efficiency by making investments in new technologies, bringing innovative solutions, and encouraging more transparent organizational structures. This often results in better governance and improved transparency, competition, and accountability, and thereby improves value for money. PPPs, in particular with a long-term contract, can bring significant benefits for government in the delivery of public services and asset creation. Usually PPP projects are bid out in an open and transparent manner wherein the participating bidders are provided with sufficient information on the evaluation of bids and contract awards. This is critical as, unlike conventionally procured projects, PPPs that involve raising limited recourse financing require private sector companies and their financiers to bid not only for the right to deliver a public asset, but to provide up-front funding as part of a long-term contract agreement with the procuring authorities to design, build, operate, and maintain. Therefore, the project equity investors and debt financiers need to establish how and on what basis the contract would be awarded. Benefits of involving the private sector in the delivery of infrastructure include the following:[6]

(i) **Efficient use of resources**. A well-managed PPP contract that optimally allocates risks between the private and public sectors enables more efficient use of resources over the life of an asset. The private sector partner has an incentive to consider the long-term implications of the costs of design and construction quality versus the costs of ongoing maintenance and life cycle capital expenditures or the costs of expansion in the case of existing facilities.

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[4] ADB. 2010. *Annual Report 2009*. Manila. The Private Sector Operations Department (PSOD) has provided more than $6.25 billion (including loans, equity, political risk guarantee, partial credit guarantee, complementary financing schemes, and B loans) to 47 public–private partnership projects in the region.

[5] World Bank. 2010. *Annual Report, 2009*. Washington, DC. Figures include total assistance to the region for all sectors and include assistance to Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Georgia, Kazakhstan, the Kyrgyz Republic, Kosovo, Macedonia, Moldova, and Montenegro in the Asia and Pacific region.

[6] A detailed discussion is presented in E. Farquharson, C. Torres de Mästle, and E. R. Yescombe, with J. Encinas. 2011. *How to Engage with the Private Sector in Public–Private Partnerships in Emerging Markets*. Washington, DC: Public Private Infrastructure Advisory Facility, World Bank.

(ii) **Improved asset and service quality**. Since lenders and equity investors fund PPP projects, these projects face increased scrutiny by parties external to the government. Since a significant amount of capital is at risk, these external parties normally undertake much greater due diligence and quality assurance than the standard public procurement process as the public authority prepares its projects and engages with the market.

(iii) **Improved public sector management**. PPPs require governments to think and behave in new ways that require new approaches and skills, and can help drive broader economic reform and business climate reform agendas. For example, PPP can be a tool for increasing competition or reforming procurement and public service delivery, and not merely a means of leveraging private sector resources. A PPP is more than a one-off financial transaction with the private sector. As a consequence, it needs to be based on firm policy foundations, a long-term political commitment, and a sound and predictable legal and regulatory environment. Sophisticated private sector partners understand this and will look for these factors when deciding on whether to participate in a project.

(iv) **Overall improvement in public sector procurement**. By procuring infrastructure projects using PPPs, governments are able to strengthen their overall public sector procurement processes and capacity. By successfully structuring and delivering PPPs, governments can improve their strategic planning process and project management and negotiating capacities, inculcate financial discipline, and develop capability to administer long-term complex contracts.

IV. Public–Private Partnership Operational and Guiding Principles

14. For a PPP, certain defined aspects of infrastructure development and operations are placed with the private sector, while other elements are retained under public sector responsibility. The public sector may look to the private sector to provide technology, innovation, and know-how. This includes access to skills, management processes, and technologies, otherwise unavailable to government or developed for the project specifically, that would not be developed through other procurement mechanisms. PPPs often require the application of best practice and international standards, which, in concert with local standards, may provide the government with better-quality services and prepare the government for additional foreign investment as it addresses potential gaps between local and international standards.

15. A PPP takes longer to structure and is more complex than traditional public sector project processes. However, the PPP structuring process makes transparent all of the specifications, costs, support, and procedures required to yield a sustainable project—matters that are often obscured from view within public sector transactions. In traditional public procurement, broad assumptions are often made without more rigorous analysis of the government's ability and willingness to fund and manage key project elements. They often lack attention to and provision for key operating, budget, and implementation parameters. Through engagement with DMC governments via a PPP model, these issues are made transparent and open to discussion in terms of the potential modality and form of ADB support. Accordingly, application of PPP assessment metrics holds the potential to improve the structure of almost any project proposed by the public sector for ADB consideration.

16. Not all infrastructure projects are suitable for PPPs. A number of specific conditions have to be achieved before a PPP can be successful. PPPs cannot replace public sector spending in infrastructure and service delivery. It can only complement public, official development assistance, and other sources. Even in a mature market like the United Kingdom, PPPs (the United Kingdom uses the term "private finance initiative") play a small but important role in the government's investment in public services and represents about 10%–15% of overall public sector procurement. This represents more than £60 billion ($100 billion) in capital value in 625 PPP deals from 1990/91 to 2005/06.[7] In comparison, the Eleventh Five Year Plan (2007–2012)

[7] Government of the United Kingdom, Her Majesty's Treasury. 2006. *Private Finance Initiative: Strengthening Long-Term Partnerships*. London (March, p. 15).

of India's Planning Commission envisages relatively ambitious private sector investment in infrastructure at about 30% of overall infrastructure investment.

A. Public–Private Partnership Operational Framework

17. ADB's PPP operations are based on four pillars: (i) advocacy and capacity development, (ii) enabling environment, (iii) project development, and (iv) project financing. In Figure 2, each pillar includes illustrative activities that ADB can undertake to support PPPs in the DMCs.

B. Pillar 1: Advocacy and Capacity Development

Regional departments take a leadership role in advocating for PPPs within the DMCs

18. Capacity development and training for public sector officials, agencies, and decision makers in DMCs will be needed. In selective instances, support from the private sector investors and financial institutions, in the context of appropriately dealing with and assessing the environment that results from government support for PPPs, will also be required. Capacity development in the DMCs will have to focus on helping the public sector adapt to its new role in the PPP arrangement. The challenge is to continually develop public institutions, procedures, and

Figure 2 **The Four Pillars of ADB's Public–Private Partnership Operational Framework**

Pillar 1	Pillar 2	Pillar 3	Pillar 4
Advocacy and capacity development	Enabling environment	Project development	Project financing
• Create awareness • Invoke leadership • Identify PPP potential in sector planning and the private sector development agenda • Development capacity of government and ADB staff • Enhance external knowledge management links	• Develop policy, legal, regulatory, and institutional framework to facilitate, guide, and manage the development of PPPs (country- or sector-specific)	• Align ADB project cycle to the PPP development process • Assist in the development of pathfinder projects • Provide support (including advisory support) throughout the process up to contract award and/or financial close that can come as expert support, tool kits, funding costs of transaction advisors, or procurement support	• Provide credit enhancement products, e.g., equity, long-term debt, refinancing subordinate debt, cofinancing, and guarantees • Establish credit guarantee facility • Provide public sector financial support through schemes such as viability gap funding
Regional Department Responsibility			**Private Sector Operations Department and Regional Department**

PPP = public–private partnership.
Source: Asian Development Bank.

processes for effective delivery of public services through PPPs.[8] DMC officials will also need capacity development to effectively manage the partnership. Access to high-quality experts and advisors with PPP transaction skills is particularly important. Political commitment at the most senior levels of government is essential for the successful establishment of a PPP program.

19. Governments need sufficient capacity to undertake analyses and road maps of sectors that have potential for PPPs and that are consistent with the overall policy and development framework of the country. The public sector procuring agency should be able to clearly articulate the strategic justification for the project; whether the project is affordable (irrespective of how it is procured); whether the project is commercially viable or bankable; and whether the public sector agency has the right resources, skills, and organization to manage the procurement process.

20. ADB will examine and partner, as needed, with existing initiatives such as the Multilateral Public–Private Partnership for Infrastructure Capacity Development (MP3IC)[9] and the Asia PPP Network,[10] in conjunction with other direct ADB initiatives in order to not duplicate ongoing efforts, while ensuring that efforts and initiatives are relevant and contextual to DMC needs.

C. Pillar 2: Enabling Environment

Regional departments strengthen their assistance to DMCs to develop the overall enabling environment for PPPs in collaboration with ADB's Private Sector Operations Department

21. Once a decision is made to pursue PPPs as a procurement modality, DMCs are often keen to immediately progress to implementing projects, at times without overarching enabling environment improvements. While a material development impact can be achieved via a "learning by doing" approach, a number of preconditions are required to assure PPP projects are successfully realized. The lack of frameworks to facilitate PPPs in DMCs or the lack of appropriate frameworks founded on balanced, market-based commercial risk–reward principles is often a major reason the private sector is hesitant to enter into a PPP. Overarching issues of investment law, tax law, rights of parties under and enforceability of contracts, definitive land rights, and resource allocations all impact the feasibility of PPP projects. Project or sector-specific matters of revenues and/or payments, tariff adjustments, and available security structures greatly impact project feasibility, and often require overarching regulation, policy, or law. If such enabling environment adjustments are codified by contract under a specific project,

[8] A parallel example of such improvements can be found in the corporatization of state-owned enterprises, particularly those in the utility sectors. Corporatization introduced the concept of professional management, accountability, and sustainable economic operations to entities that previously operated as government departments. Transitioning certain public services to the PPP model holds similar potential for sustainable, long-term improvements and development.

[9] ADB, together with the World Bank Institute and the Inter-American Development Bank, launched the MP3IC, a capacity development initiative in 2008 to develop and implement a learning program that is relevant for a globally diverse group of PPP practitioners. MP3IC is aimed at preparing and disseminating learning and knowledge products, such as the PPP core learning program, that comprise a graduated series of pragmatic interactive multimedia training modules that can be linked to relevant certificate and/or degree programs offered by national, regional, and international academic institutions; a PPP readiness index and comparison of PPP country approaches; a multivolume PPP publication (*Global PPP Capacity Development Sourcebook*); a PPP knowledge portal; and a PPP video dialogue series. Knowledge creation and sharing with respect to PPPs can be done within MP3IC where ADB is a partner.

[10] The Asia PPP Network, a regional forum for PPPs, responds to the needs of regional practitioners seeking opportunities for regional knowledge sharing and training.

the risk is significant that the outcome will be either sector- or project-specific or result in a one-off project (if any at all), where institutional learning and development suffers or does not create the conditions for sustainability or replication.

22. Accordingly, public sector capacity needs to be strengthened in terms of institutions, policies, legal and regulatory frameworks, investment guidelines, and finance sector development. Creating confidence in embracing the PPP pathway with stakeholders involves

(i) establishing policies and frameworks to address the nature and extent of government support for PPP projects across sectors;

(ii) creating mechanisms within government to support sustainable PPP revenue models;

(iii) assisting DMCs in developing fiscal risk management mechanisms to ensure that PPPs are fiscally affordable and economically sustainable;

(iv) establishing a transparent, predictable, flexible, responsive, and equitable procurement system for PPPs, including arrangements to deal with unsolicited projects and contracts negotiated with only one counterparty;

(v) where appropriate, establishing monitoring, measurement, and assessment mechanisms (e.g., affordability from a budgetary perspective, value for money[11] and/or public sector comparator, or performance of public services) to initially determine whether a PPP is the appropriate financing scheme and, subsequently, made a part of a program of continuous review and improvement on decision-making framework and management practice; and

(vi) assisting DMCs in establishing a predictable, equitable, and timely system for the compulsory purchase and clearance of land required for PPP projects in a manner that conforms to ADB environmental and social safeguards.

D. Pillar 3: Project Development

Regional departments actively encourage PPPs and enhance DMC capacity to carry out project identification and subsequent development

23. Better planning and project preparation lead to better, more efficient projects at implementation. The failure of DMCs to close on a meaningful volume of PPP transactions to date, or subsequent delays, underperformance, and/or cancellation of PPP projects that do progress, can be directly attributed to lack of sufficient project preparation.

24. Regional departments will support governments in developing a credible and recognized advisory capability to cover commercial, economic, fiscal, and contractual structuring; risk allocation; and project financing to develop PPP transactions. Advisory support for governments can complement PPP activities in DMCs where enabling environment activities have been, or are currently, taking place. ADB is uniquely positioned to assist governments as a neutral mediator in negotiating the requirements of the DMC and the private sector parties willing to implement the project. ADB has both (i) the resources to support DMCs in their PPP efforts and a deep understanding of DMC sector issues and agenda through its sovereign operations; and (ii) a well-informed understanding of the issues and investment criteria applied by private sector

[11] A more detailed discussion on value for money is in Appendix 3 and its application in the context of this operational plan is discussed in para. 28.

sponsors and developers, investors, and financiers through nonsovereign operations of ADB's Private Sector Operations Department (PSOD); as well as the ability to catalyze financing by the private sector. ADB will use the combination of these skills, resources, and knowledge to help DMCs develop PPP initiatives. Advising governments on structuring PPP transactions is the missing link required to enable a flow of well-prepared and structured projects, capable of being externally financed, ensuring that ADB leverages its scarce resources in the face of the region's soaring infrastructure needs.

25. ADB support for PPP project development in DMCs helps guide DMCs through the process—with government policy makers beforehand; with project teams during development; and with monitoring and oversight functions after a project is operational, particularly in countries where PPP frameworks are new, untested, and therefore evolving. Hence, the option and potential for PPPs should be discussed and explored with DMCs considering PPP readiness early in the process of drafting sector analyses, strategies, and road maps; preparing the country partnership strategy and country operations business plan; and conducting associated consultations. Regional departments need to undertake the upstream PPP development as identified in the country partnership strategy and country operations business plan as the key approach for engaging with DMCs. Appendix 2 provides a step-by-step guide for undertaking project development for PPP projects.

26. Given ADB's finite budget for supporting DMC infrastructure needs, both on a country and sector basis, ADB interventions need to prioritize the engagement and focus on ways to leverage its participation in PPP projects. In DMCs, where asset financing can be accessed through domestic sources and where ADB's total funding contribution is limited in comparison with the investment need, a substantial portion of ADB assistance can be utilized for project development efforts. The creation of bankable projects through to early-stage project development support, both in the form of provision of project development advisory skills and targeted project development funding, is expected to leverage ADB money to attract private sector capital. Conversely, in DMCs where long-term asset financing is limited locally and ADB assistance is highly needed, ADB assistance can be used for traditional lending in the short term, and then transitioned to project development initiatives.

27. During the initial stages of discussions with DMCs, ADB will apply a screening process to provide a quick assessment of the potential for the project to be structured as a PPP. This requires the development of a country-specific screening test, keeping in view the economic, political, and social conditions of each country. A generic PPP screening checklist is presented in Table 1.

28. To determine if a given project is appropriate for a PPP, an objective assessment of a project's fundamentals is needed to determine the extent to which private sector involvement can be achieved or whether the project is best suited for public sector execution. Typically, this is achieved through the use of a value-for-money (VFM) analysis through the filter of public sector comparators (PSCs). These same tools can be used to test the PPP project design to assure principles of value and affordability are achieved throughout the structuring process, thus reinforcing confidence of the public sector and stakeholders (Appendix 3).

29. To combat weakness in project preparation ahead of bidding, DMC governments need to have access to appropriate skill sets to achieve proper project development. Often, such resources require external professional services to, for instance, conduct preliminary designs, develop technical and operating criteria, undertake special studies (e.g., traffic, environmental impact, and load flow), create preliminary financing structures and undertake exploratory

Table 1 Generic Public–Private Partnership Screening and Project Selection Checklist

Screening Criteria	Yes or No
1. Is the project a clear government priority (mentioned in a national development plan)? Do initial assessments (budget plans) indicate that the government's agency can afford to make required payments for or support this project over its entire life (7, 10, 15, 20+ years)?	
2. Does the project require large, new capital investment (>$25 million)?[a]	
3. Does the project require long-term maintenance, measurable performance and/or operations, and periodic renewals?	
4. Does initial analysis indicate that the project is technically, economically, and environmentally feasible?	
5. Are innovative structures available that can make the project affordable?	
6. Have international, regional, or national public–private partnerships been developed in the same sector?	
7. Has the private sector indicated interest?	
8. How comfortable is the private sector in assuming the risks associated with the project? If not, can the risk be structured so that a creditworthy counterparty or the government itself can provide some support?	
9. Are revenue streams clearly identifiable (from government, directly from public users, or a combination of the two)?	
10. Can project performance be measured in clear, quantifiable outputs and key performance indicators?	

[a] A number of factors would shape this, e.g., the project's position within the public–private partnership (PPP) spectrum. Clearly, a service contract or management contract would require no or minimal capital expenditure from the private sector, yet may be a good way to get the private sector involved in the relatively new PPP market or sectors (subsectors). While a performance-based management contract and concession-based structures could be explored in places that have established track records for engaging with the private sector and where the enabling frameworks are conducive for such contracts. PPP project development entails substantial transaction cost. Therefore, the capital size of the project should justify undertaking such expenses. Based on the assessment of developing countries around the world, the capital cost of $25 million has been suggested as one of the qualifying criteria for a PPP project. However, regional departments have the flexibility to develop region- and country-specific cost criteria.

Source: Asian Development Bank.

discussions with financing parties, and apply legal services to prepare project contracts and bidding documents. These services may require international professional inputs and, therefore, can be costly. However, their omission from project preparation undermines the likelihood of project success as a PPP.

30. Since structuring bankable PPP projects requires substantial financial and professional resources, a project development fund or facility (PDF)[12] may be established in DMCs for creating the foundation of successful PPP projects. PDFs augment available funds to address

[12] Project development activities, when compared with the total cost of a given project, require a relatively small amount of funding. However, these funds, and the manner in which they are deployed, are perhaps the most critical expenses in preparing a project. Project development costs typically average about 5% of the total project cost. For larger-cost projects, this amount could drop to 1%–2% of total project cost, where for smaller-cost projects the range could be 7%–10%. Development costs may rise for particularly complex projects. For PPP activities, which are highly reliant on project finance–related contract structures, the cost of legal and financial structuring is fairly consistent, regardless of total project cost. On average, $2 million–$3 million might be required to fund the transaction advisory support for a demonstration and pioneering PPP transaction in ADB DMCs.

critical project-specific preparation needs and can provide funds to support bringing projects to financial closure. Governments are often reluctant to make provisions from centralized or line ministry budgets for such activities, despite their critical need, due to the perceived high cost of professional advisors—a view that overlooks the value and time savings they often deliver. Having a special pool, via a PDF, for such support increases the likelihood that resources appropriate for addressing project development issues will be funded. However, PDFs require deliberate design and management to be successful. A number of options are available for PDF funding, allocation of support, and recovery of funds. Development finance institutions including ADB, government, or even the private sector can support the formation of PDFs. Appendix 4 provides a detailed discussion of the principles for consideration in PDF design and operation.

31. Notwithstanding the support for creating PDFs, TA will remain an effective instrument for advisory support to develop PPP projects in DMCs. In addition, ADB could deliver fee-earning transaction advisory work for its DMCs to make its advisory work self-sustaining. Other multilateral institutions like the International Finance Corporation (IFC), the private-sector arm of the World Bank Group, use TAs to support PPP transactions. IFC provides transaction advice to national and municipal governments in emerging markets to implement PPPs, and uses its TA resources to retain external experts (financial, legal, and technical) for a transaction. In addition to deploying TA resources, IFC charges a fee for its transaction advisory support, including a retainer that is paid for by the government agency using IFC's services and a success fee to compensate for the use of IFC's staff time. An illustration of how IFC finances its PPP transaction advisory services is provided in Appendix 5.

32. While providing PPP transaction advisory services to DMCs, regional departments will ensure that any potential conflicts of interest are strictly and actively managed. ADB's PPP transaction advisory services should be made available to DMCs without ADB's commitment or condition to finance transactions from its sovereign or nonsovereign lending window. If a conflict of interest arises where ADB is acting as an advisor to the government in a project where it might consider providing lending, specific steps will be taken to segregate relevant team members to maintain the integrity and independence of project processing and evaluation. As part of regional departments' implementing rules for the PPP operational plan, procedures for maintaining the independence, objectivity, and confidentiality of advisory and arranging and/or lending teams will be provided through specific staff instructions.

E. Pillar 4: Project Financing

PSOD enhances its nonsovereign products and their application and commercial cofinancing, enabling it to leverage its assistance and catalyze change through greater private investments in the DMCs; regional departments may offer sovereign products to support financing of PPPs

33. The products include direct financing, guarantees, loan and/or guarantee syndications, more judicious and innovative use of limited ordinary capital resources funds (e.g., predevelopment funding), innovative new financial instruments, as well as TA. Box 2 provides an illustration of ADB support for a pioneering project finance transaction with sovereign and nonsovereign private sector funding.

34. To assure ADB's limited funding is properly leveraged, use of ADB cofinancing and credit enhancement products will be enhanced. Export credit insurance, commercial financing

(supported by guarantees, where appropriate or necessary), and specialized development finance institution cofinancing facilities (e.g., Japan International Cooperation Agency Green[13]) will be examined up front. ADB will explore leveraging its credit enhancement products along with other credit enhancement providers (e.g., other multilateral development banks, export credit agencies, export–import banks, private insurance) and support DMC institutions that guarantee PPPs (e.g., the Indonesia Infrastructure Guarantee Fund).

Box 2 **Nam Theun 2 Project**

The $1.2 billion Nam Theun 2 is the biggest hydropower project in the Lao People's Democratic Republic (Lao PDR), with costs approaching one-third of the country's gross domestic product. It was designed as a multipurpose project that aims to contribute to local and regional development, reduce poverty, and provide a renewable and clean energy source. The Nam Theun 2 Power Company (NTPC), the project operator, is co-owned by Electricité de France (35% shareholding), the Government of the Lao PDR (25%), the Electricity Generating Public Company of Thailand (25%), and Italian–Thai Development (15%).

The Nam Theun 2 project is a good example of collaboration between a regional department and the Private Sector Operations Department, which resulted in a well-structured project. Through the financing agreement, signed in 2005, ADB supported the project by providing

(i) a $20 million public sector loan to the government to help fund its purchase of equity in NTPC,

(ii) a $50 million private sector loan directly to NTPC, and

(iii) a $50 million political risk guarantee to NTPC.

NTPC has a 25-year concession as owner of the project, during which time the government will accrue royalties, dividends, and taxes estimated at over $2 billion that will support poverty reduction programs. On 15 March 2010, NTPC started full generation service supplying the Electricity Generating Authority of Thailand with 1,000 megawatts of electricity. Electricity is also now available to the Lao PDR state utility, Electricité du Laos.

Source: Asian Development Bank.

13 The Japan International Cooperation Agency proposes to utilize the Global Action for Reconciling Economic Growth and Environmental Preservation (GREEN) facility to provide financing of up to $4.0 billion to developing countries under the Hatoyama Initiative until the end of 2012. Under this, the Japan Bank for International Cooperation will provide guarantees to eligible private sector partners providing both debt and equity to projects that significantly reduce greenhouse gas emissions.

V. Implementation of the Operational Plan

A. Strategic Direction

35. Support for PPP project development and related in-country capacity will be crucial for the success of future PPP programs. Substantial assistance will be needed for (i) sector development planning that adequately considers the role of the private sector in infrastructure development; (ii) project preparation in terms of adequate (pre)feasibility studies, land acquisition, and social and environmental assessments; (iii) the delivery and management of government support for PPPs; (iv) appropriate risk-sharing arrangements between public and private sector partners; and (v) PPP transaction advisory assignments. Rarely are PPP strategies confined to a specific sector-based product or intervention. A revised, holistic life-cycle project approach is required, incorporating PPP precepts throughout and requiring PPP-aware participants to be an integral part of the process. ADB will expand its PPP efforts in DMCs in close coordination with other development and financial partners to draw on each partner's comparative advantage in supporting PPPs and to not duplicate efforts. Roles and activities of each department in the context of a PPP are illustrated in Appendix 6.

36. Among all ADB departments, the regional departments and PSOD—given their frontline interface with DMCs, private sector investors, and banks—have significant catalyzing roles in leveraging private sector funds for PPPs. Regional departments support the development and financing of PPPs through their work to establish a conducive enabling policy, institutional frameworks, and the enabling environment for PPPs; provide project development support for DMCs; and provide sovereign financing including sovereign-backed credit enhancement for demonstration projects, if needed. Regional departments provide the necessary institutional guidance to initially develop projects, support commercial and financial structuring of PPP transactions, and guide the bidding and negotiation process. PSOD's role in PPPs includes supporting regional departments during the initial identification of potential PPP transactions during preparation of the country partnership strategy and country operations business plan; processing nonsovereign funding support for PPP projects; mobilizing commercial funds for PPPs; investing in private equity funds for PPPs; and directly supporting capital market and financial intermediaries in DMCs to increase availability of long-term financing for PPPs. PSOD also mobilizes cofinancing and credit enhancement products from private sector banks and guarantors to fund regional departments' PPP initiatives and financing.

B. Country Partnership Strategy

37. ADB recognizes that PPPs, particularly in areas of enabling environment, holistic life-cycle project support for DMCs, and broadly applied country financing support, are crosscutting themes and should be reflected as such in the country partnership strategy process. Current practice typically pushes such interventions down to the individual sector. While this practice captures sector-specific requirements, often in the context of a specific project, it can create omissions of opportunities for greater overarching enabling environment development. In certain cases where a DMC lacks or has a deficient enabling environment, a sector-only approach can lead to costly and time-consuming replication of enabling environment interventions within individual projects, which, when aggregated across multiple interventions in different sectors, may lead to inconsistent results or confusing messages to government. Thus, regional departments will develop national—or, where appropriate, state/provincial—strategies for PPPs with their DMCs with all relevant sector divisions in mind, thereby requiring close coordination with regional department sector divisions and PSOD. Continuous involvement of other departments such as ADB's Central Operations Services Office, Office of Cofinancing Operations, and Office of the General Counsel in the country partnership strategy process will be required. In DMCs that prefer to focus their PPP programs on a specific sector, design of PPP policies should nonetheless consider greater future application to other sectors, particularly as matters of importance to achieving successful PPP—investment, liabilities management, budgeting, and similar topics—are often national in nature. Regardless of form, sector interventions in PPPs should be done in close consultation between sector divisions, PSOD, and PPP experts to assure continuity and consistency of approach within a given DMC, the relevant department, and within ADB in general. Figure 3 provides a schematic representation of ADB support for PPPs within the country partnership strategy and country operations business plan process.

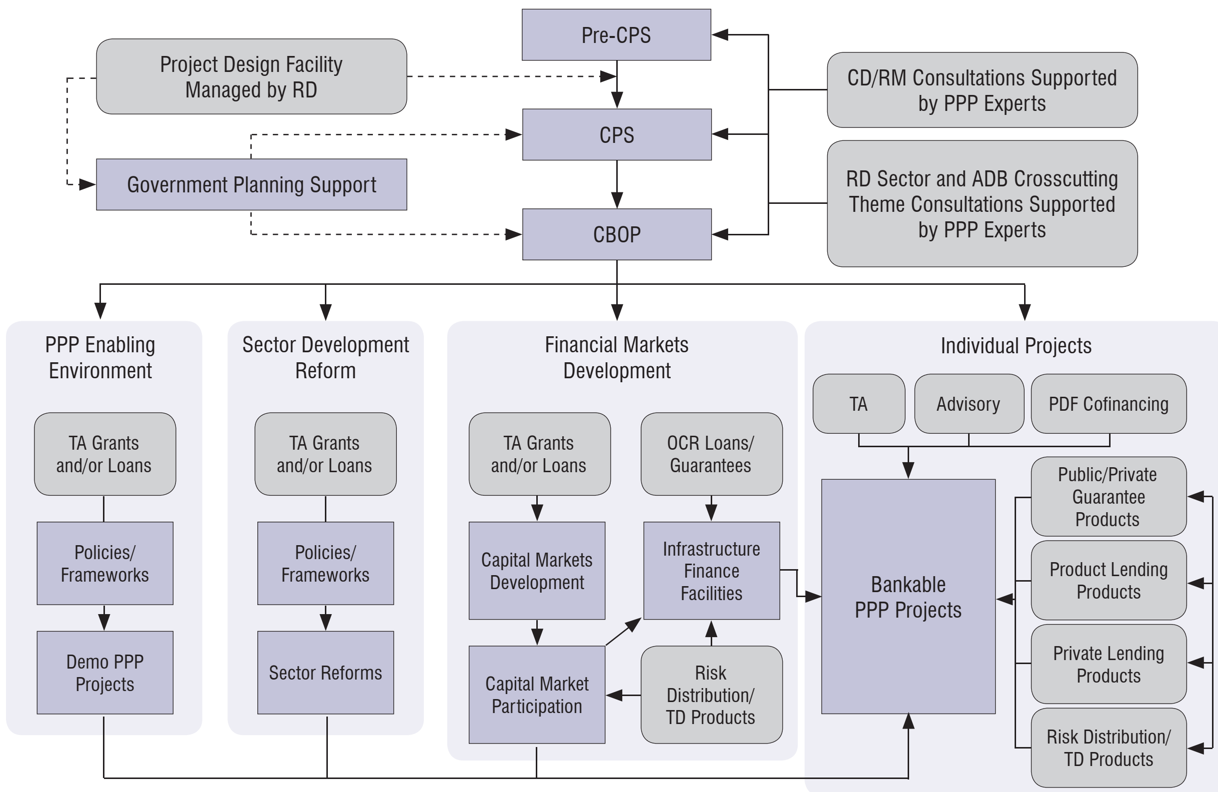
38. Strategic changes (Table 2) include incorporating PPP development programs and options in the country partnership strategy and country operations business plan, supporting capacity development, creating awareness and an enabling environment for PPPs, providing hands-on support for the development of PPP projects, creating an initially identified pipeline of privately financed and PPP projects, and structuring PPP projects with private sector financing and public sector financing (if needed). At the country level, country directors and key resident mission staff must be knowledgeable of the PPP potential and options, as well as with the supporting concepts to facilitate and cascade ADB support for PPPs in the DMCs.

C. Project Prioritization and Screening

39. To have a more cohesive approach to PPP and PSD, and to actively promote the precepts of Strategy 2020, ADB practices need to be redesigned to make fully privately financed projects, followed by PPPs, the preferred options before resorting to public (sovereign)-financed projects. PPP interventions should be informed by overall goals for PSD, as the two are integral. Therefore, projects should undergo an initial PSD screening and, more specifically, a PPP project screening process to identify areas where private sector technical, operational, skills involvement, and/or financing can be maximized, and where ADB can leverage its technical support and financial resources most effectively.

40. Sovereign funding should be considered only when the first two options are viewed as not viable or not viable without explicit sovereign support. Even within sovereign lending projects, support for PPP transactions or, at a minimum, some form of PSP may still be possible. Initial projects identified for ADB engagement through the country partnership strategy must be

Figure 3 **ADB Support for Public–Private Partnerships within the Country Partnership Strategy and Country Operations Business Plan Process**



CD = country director; COBP = country operations business plan; CPS = country partnership strategy; OCR = ordinary capital resources; PDF = project development facility/fund, cofinanced with developing member country monies; PPP = public–private partnership; RD = regional department; RM = resident mission; TD = Treasury Department.
Source: Asian Development Bank.

screened, through prefeasibility assessment to determine the pipeline of projects that can be developed in each of the three categories with the previously mentioned priority (Figure 4).

41. The filters must be applied based on agreement with DMCs and customized to the context of each specific country and sector in consultation with the DMC. The criteria, such as the minimum level of risk transfer to be achieved, and maximum percentage of liability that can fall on the government, would have to be put in place. The country- and sector-specific criteria would include factors such as bankability, indicative timetable, affordability, sponsor, and user commitment; all influence how projects are categorized through the filter. Thus, only the well-structured, economically feasible private sector–financed and PPP projects would get selected and proceed to procurement from among the universe of projects that can be proposed under the country partnership strategy.

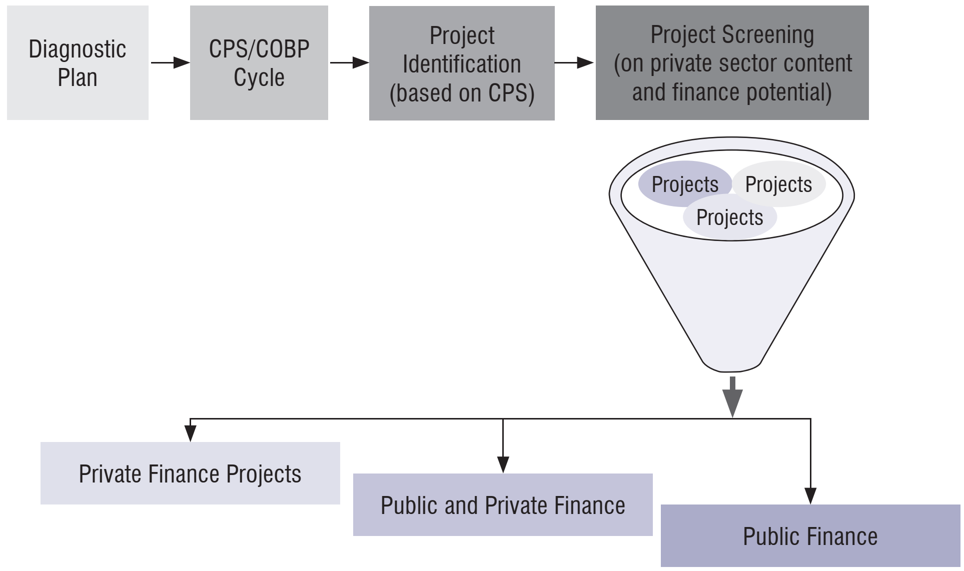
42. To achieve effective PPP integration into projects and plans, regional departments develop their PPP expertise and capacity to systematically examine and monitor projects at

Table 2 **Proposed Strategic Changes to Facilitate Implementation of the Public–Private Partnership Operational Plan**

Current Practice Used for Country Partnership Strategy and Country Operations Business Plan Process	Proposed Strategic Changes to Facilitate Implementation of Public–Private Partnership Operational Plan
Sector-based plans designed by regional department sector division with or without consultation with the regional department PSD specialists and inadequate integrated country planning	Need for holistic planning for multisector interventions in general. For PPP, any form of enabling environment interventions that impact how PPPs would be implemented in a given country needs to be taken at the country level, before specific sector division plans.
Mainstreamed crosscutting themes of gender, environment, and social standards currently considered and implemented as part of specific sector plans; PPP as crosscutting theme not systematically considered	PPP promoted as a crosscutting national theme, coordinating sector division inputs
PPP resources consulted remotely and/or after in the context of specific project intervention plans	PPP resources participate in pre-CPS consultation missions with DMC governments to identify needs, issues, and proposed actions for early incorporation into the draft CPS. PPP resources included as an integral part of the CPM team
Pre-CPS planning and consultations with DMC governments performed ad hoc	Internal cross-sectoral, cross-departmental strategy meetings required sufficiently in advance of the CPS to develop forward-looking needs assessment and approach to the CPS Targeted pre-CPS consultation missions fielded, comprising PPP sector experts and PSOD specialists, to discuss strategic concepts with relevant government entities and identify clear strategic areas, directions, and goals for PPP infrastructure and services development Advanced consultation required with private sector stakeholders to determine requirements and interest in being involved in PPP projects, and integrate these parameters into pre-CPS discussions with government Linkages identified between national targets for PPP (including policy, financial, and sector targets) with specific project actions and interventions for discussion pre-CPS
Projects implemented broadly in line with CPS	Preconcept screening of proposed projects under the CPS to assure principles of PPP agreed to are achieved and to identify additional, available means to leverage private sector involvement and cofinancing opportunities
Private sector development plans created separately from public sector plans	Regional departments and PSOD should jointly identify opportunities to promote PPP development in DMCs.

COBP = country operations business plan, CPS = country partnership strategy, DMC = developing member country, PPP = public–private partnership, PSD = private sector development, PSOD = Private Sector Operations Department.
Source: Asian Development Bank.

Figure 4 Up-Front Appraisal of Project Financing Options



COBP = country operations business plan, CPS = country partnership strategy.
Source: Asian Development Bank.

the preconcept stage, concept reviews, and other relevant milestones. Particularly for complex projects involving a PPP, regional departments mobilize PPP experts during processing, implementation, and operation.

D. Performance Measurement

43. The shift to PPP will create a need to redefine the performance matrix within each department and division. Since a PPP often cuts across sector lines, it requires inputs from and coordination with a number of constituencies within and outside ADB. Such initiatives include providing pure PPP transaction advisory assignments that result in the development of bankable projects for DMCs and that lead to PSP (whether or not resulting in ADB project funding). This will require developing new definitions and measures for success within ADB business processes. The new definitions and measures will reflect the recommended shift to a project life-cycle support approach that expressly promotes a more hands-on and longer-term approach to ADB involvement in PPP projects, with more up-front interaction with government policy makers at the outset, continuity of involvement during project development, and, importantly, implementation to ensure proper monitoring and oversight after a project becomes operational.

44. While the key performance indicators (KPIs) for PPP projects will have to be set in the context of the DMCs in the region, the number of projects facilitated and the degree of leverage achieved from third parties, especially private finance sources, should be the governing indicators, not the amount of ADB funds alone that are deployed as loans. Whether by providing financial products, such as guarantees or cofinancing, or services, such as nonlending PPP transaction advisory, the PPP modality holds the potential to greatly leverage the delivered benefit derived from the funds and the technical expertise ADB applies to projects. The KPIs developed

Figure 5 Key Performance Indicators for Public–Private Partnership Activities and Support to Developing Member Countries

Pillar 1	Pillar 2	Pillar 3	Pillar 4
Advocacy and capacity development	Enabling environment	Project development	Project financing
• New DMCs supported to enhance PPP readiness – through national events – through subregional or regional events *Note: interim outcomes, input to achievement of Pillar 2 and Pillar 3 outcomes*	• Number of DMCs adopt PPP policy, legislative, or regulatory reforms including sector-specific guidelines or tool kits or standard documentation or PPP procurement practices or promulgation of supporting processes substantially in line with ADB's advice – at country-level or – at subsovereign entity level *Note: interim outcomes input to achievement of Pillar 3 outcomes*	• Number of DMCs pursuing development of PPP projects • Number of projects commencing development as PPP projects • Number of ADB-supported PPP projects reaching executed agreement stage for financing with – only public sector – public and private sectors (jointly) or only private sector	• Total project value created • Total project financing provided • Leveraging ratio of ADB funding

Integration of PPP diagnostics and resulting plans into CPS or COBPs

Number of PPP projects achieving financial closure

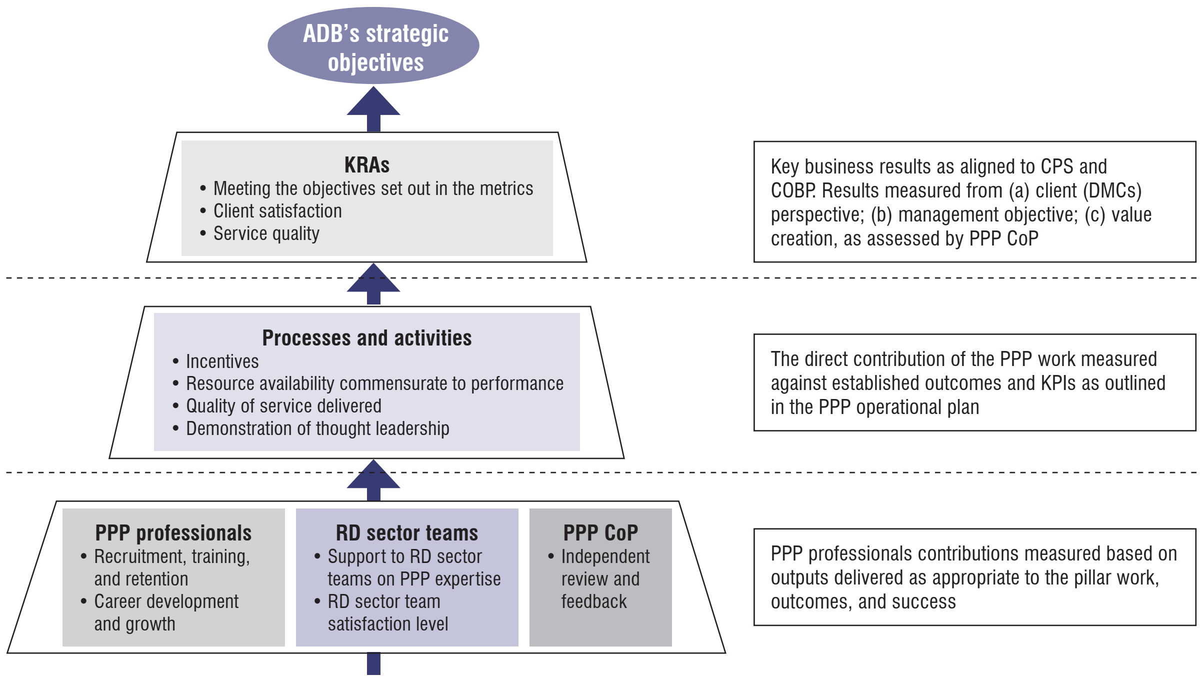
COBP = country operations business plan, CPS = country partnership strategy, DMC = developing member country, PPP= public–private partnership.
Source: Asian Development Bank.

need to be tied to a measurable output; for example, under Pillar 1, while capacity development and training is an important input, the number of public sector officials trained in itself should not be seen as a KPI, rather it should be linked to passing of enabling legislation or policy frameworks, and, ultimately, to the number of projects developed that are suitable for PPPs. The KPIs for ADB's PPP activities and support to DMCs are summarized in Figure 5. Regional departments will evolve their own region-specific methodology to measure the performance of support offered to its DMCs in the region (Figure 6 provides guiding principles). Appendix 7 provides the results framework for the operational plan.

E. Internal Capacity Development

45 ADB staff will have to be knowledgeable of the PPP potential and options, as well as of supporting concepts such as nonsovereign support, PSP, cofinancing, and guarantee

Figure 6 Process for Measuring Performance of ADB Support to Public–Private Partnerships



COBP = country operations business plan, CoP = community of practice, CPS = country partnership strategy, DMC = developing member country, KPI = key performance indicator, KRA = key result area, PPP= public–private partnership, RD = regional department.
Source: Asian Development Bank.

products rooted in the principles of commercially based project finance. Regional departments already have the necessary skills to undertake technical, environmental, and social evaluations as these are conducted for project preparatory TA work. However, for PPP projects, additional skills are needed to examine the financial feasibility, bankability, and legal framework for implementation; develop risk mitigation measures; prepare procurement and contract documentation for each PPP modality; define regulatory arrangements; and conduct monitoring and evaluation.

46. Regional departments will have to distinguish between levels of skills and knowledge concerning PPPs needed for (i) general screening, and constructive dialogue on the role and benefits of PPPs; (ii) preparation and administration of TA projects to provide "enabling environment" capacity, and preparation of project components and terms of reference aimed at developing detailed analysis of PPP options in a given sector; and (iii) provision of advisory services for specific PPP transactions. Regional department staff will need to be equipped with analytical tools for developing VFM assessments and building PSCs. These skills, needed during the PPP project cycle, might be complemented by PSOD in the short term, but will have to be developed by regional departments internally. To accurately gauge the skills in the regional departments needed for PPPs, a skills and training survey can be undertaken.

1. Training

47. Paramount in capacity development will be the need for general transaction screening and effective dialogue with DMCs on PPPs, preparation and administration of TA projects to provide necessary PPP capacity, and development of PPP transactions with an emphasis on project finance structuring and assessment skills. PPP projects closely follow project finance structuring principles. Project finance concepts in general hold great potential to strengthen ADB's overall project design, preparation, and closing processes, whether sovereign or nonsovereign. ADB's Human Resources Division currently offers training on project finance skills. This needs to be enhanced and expanded to cover basic, intermediate, and advanced skills; analytics; and commercial constructs; and to examine ways to apply these principles to all ADB operations. Such an approach will aid ADB in developing a common language and framework for breaking down project challenges into their fundamental elements and reconstructing these to more robust ends. These principles must be ingrained in ADB staff to create an institutional culture oriented toward PSD principles and, more importantly, to build a lasting institutional memory that inherently appreciates and leverages its experiences in creating successful PPP projects.

2. Public–Private Partnership Mentoring

48. To facilitate the transition of regional departments to more commercially oriented PPP transaction development, PPP experts in regional departments, supported by the PPP Community of Practice (CoP), will initially take a more active role in project concept formation, ideally prior to the concept paper stage. Regional departments will involve PPP experts in screening projects at concept clearance, at a minimum, and providing active consultation with project teams. For more complex PPP projects, PPP experts are engaged as key project team members. For particularly complex or challenging PPP projects, project teams can refer the project to the PPP CoP for vetting, inputs, and counseling.

3. Public–Private Partnership Community of Practice

49. The PPP CoP, with ADB's Regional and Sustainable Development Department as its secretariat, will contribute to knowledge management and capacity development of ADB staff on PPP approaches and techniques involving sovereign and nonsovereign operations. It will coordinate the preparation of PPP training programs together with Human Resources Division; organize PPP events and conferences; and invite PPP practitioners to share their experiences with policies, transactions, and other PPP-related issues with ADB staff. The PPP CoP will review lessons from successful (and failed) PPP transactions completed by ADB and the rest of the market, and share such information with ADB staff.

4. Public–Private Partnership Staff Resources

50. Extensive experience and knowledge in PPPs is needed to design and implement PPPs to their full potential in ADB operations. In-house data pools and experienced resources will need to be developed to support PPPs, preferably by developing a large base of full-time staff experienced in PPPs. While, to a certain extent, this knowledge pool will grow organically as more PPP transactions are concluded, the assistance of additional experienced PPP experts may be needed from external sources. Regional departments will examine the number of potential PPP transactions that may arise through the country partnership strategy and country operations business plan process and the degree to which hands-on involvement from ADB staff will be required in those projects to assure that appropriately skilled resources are available and

adequate to meet the needs of the DMCs. Depending on the potential for PPP transactions, some regional departments will require more full-time PPP experts than others.

51. PPP experts would ensure modalities in the formulation of strategies, providing related inputs to country partnership strategies, country operations business plans, analyses, strategies, and road maps. This would include policy dialogue with various public and private sector stakeholders to identify and address challenges to scale up PPPs, and identification of realistic yet innovative modalities and approaches that take into consideration specific country and sector PPP readiness. At the project level, PPP experts—as members of the project team for selected projects—would help ensure the quality of a regional department's PPP operations through the review of project design throughout the project cycle. PPP experts are also expected to develop and implement TA projects to help improve the overall enabling environment for PPPs.

52. In the initial stages of PPP screening, consultation, and mentoring, the PPP expert workload could be heavy. Time and resources should be budgeted to support these staff activities and to integrate participation in screening, planning, and reviews into the PPP expert's individual performance development plan. As more projects involving PPPs are developed, regional departments need to add PPP experts to their staffing complement to provide continuity of service and support.

F. Knowledge Management

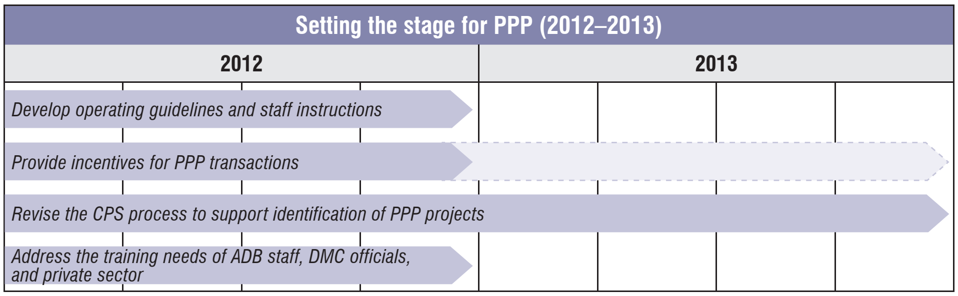
53. Acting as the platform to share knowledge on PPPs, the PPP CoP helps create a unified PPP approach among practitioners within ADB. It supports the development of principles to be applied to identify suitable PPP opportunities within the country partnership strategy, country operations business plan, and individual projects, and conducts peer review of prefeasibility project screening, TA projects, and funding transactions for PPP. Such support will provide direct capacity development through learning-by-doing in the context of projects presented to the PPP CoP for review. Initially, PPP practitioners' participation with the PPP CoP will be significant. Therefore, sufficient time and resources should be budgeted to support these reviews. Accordingly, PPP CoP participation should be recognized as part of PPP CoP member performance plans.

54. PPPs encompass a process of continual learning and improvement. The learning, as ADB embarks in a more proactive manner to promote and facilitate PPPs, will be documented for each phase of the project cycle. Case studies showcasing good practices will be developed as necessary through the PPP CoP. The CoP will review PPP project performance, both originated and/or supported by ADB or by third parties, to help inform the continuing evolution and refinement of ADB's PPP approach. It will also support the development of knowledge products that include sector-specific documentation focusing on preparation for bidding. The PPP CoP will disseminate knowledge and collaborate with other knowledge channels on PPPs.

G. Time Frame

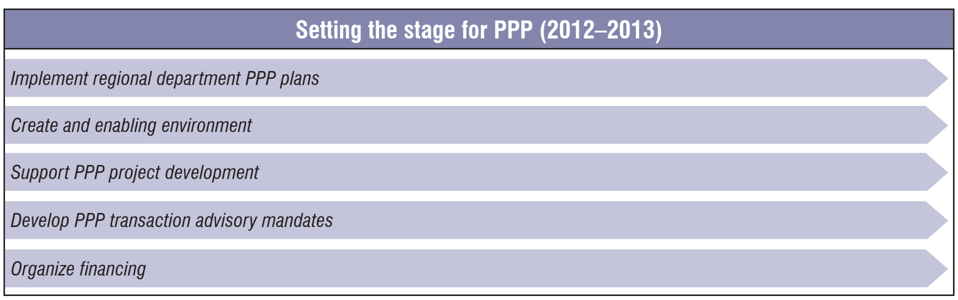
55. The plan will be implemented in two parts. The first part (to 2013) comprises activities to be implemented institutionally to establish process and practices to support PPP in ADB (Figure 7). This crucial work will shape how ADB moves forward in the business of supporting and expanding PPP initiatives within the organization. The regional departments will implement the second part in consultation with their respective DMCs (Figure 8). The major activities include preparing PPP implementation plans as part of the country partnership strategy and

Figure 7 Key Activities to Implement the Public–Private Partnership Operational Plan



CPS = country partnership strategy, DMC = developing member country, PPP= public–private partnership.
Source: Asian Development Bank.

Figure 8 Key Regional Department Activities to Implement the Public–Private Partnership Operational Plan



PPP= public–private partnership.
Source: Asian Development Bank.

country operations business plan, processing TA projects and/or sovereign loan(s) to support project development, and implementing transaction advisories for PPP projects in DMCs.

56. After completing the 2 years of operational plan execution, ADB will undertake an internal review its work in PPPs. Follow-up work for 2014–2020 may include

(i) enhanced funding to support PPPs;

(ii) fine-tuning the operations manuals and project administration instructions, as necessary;

(iii) continued support for addressing the training needs of various stakeholders;

(iv) consolidated project development work and support for project development; and

(v) enhanced PPP transaction advisory services.

H. Monitoring and Evaluation

57. Annual monitoring of targets will be supported by midyear directional assessments to assure the proper trajectory of ADB activities based on capital mobilized for PPPs and the

development impact of ADB involvement. Starting from 2012, ADB should systematically track performance measures required to identify, structure, negotiate, and deliver PPP transactions. This will permit ADB to more effectively manage its resources and inform its planning to accommodate the specific needs of PPP-linked activities. Adjustments would be required to link the time, investment, and results to the level of complexity of the proposed transactions and interventions. Measurements should be conducted at each step of the project development life cycle to ascertain the investment of time and resources required to support each phase of development. The regional departments and the PPP CoP will jointly evaluate the results.

Appendix 1
Characteristics of Public–Private Partnerships

1. **Public–private partnerships.** Public–private partnerships (PPPs) are generally characterized by five key elements: (i) duration; (ii) asset financing, life-cycle responsibility, and ownership; (iii) performance-based returns; (iv) output and quality of service specification; and (v) risk allocation to the private sector.

2. **Duration.** The relationship between the public partner and private partner for a planned project, which is usually medium to long term, requires a contract addressing different aspects. Continuous monitoring during the entire life of the contract would ensure efficiencies from long-term private sector–led asset management.

3. **Asset financing, life-cycle responsibility, and ownership.** The asset financing or the method of project funding, in part or full from the public or private sector, sometimes involves complex arrangements between the various participants, with the ownership of the assets often reverting to the public sector at the end of the arrangement. Since the private sector is responsible for maintaining the asset through its useful life, this is an incentive to build an asset that optimizes periodic life-cycle maintenance costs.

4. **Performance-based returns.** Emphasis is on the specification and delivery of services associated with the procured asset rather than the asset itself, so well-functioning PPP arrangements often specify that payment is contingent on the operator meeting a set of performance standards in service delivery. Among the most important benefits of PPP are the achievable efficiency gains and substantial risk allocation to the private sector rather than just access to private finance.

5. **Output and quality of service specification.** The roles and responsibilities of the private and public sectors differ. The private sector partner has the potential to participate in different project stages (design, construction and/or rehabilitation, operation, maintenance, and funding) depending on the need defined by the public sector. The public sector partner concentrates primarily on defining the outcomes to be attained in terms of public interest, quality of services provided, and pricing policy. The public sector may need to provide, on a case-by-case basis, required financial support (e.g., availability payments, minimum revenue guarantees, loan guarantees, and viability gap funding). When such public funding is available, whether to complement user fees, the contracts will directly link the release of such public funding to the actual delivery and availability of services. Performance must be monitored over the whole life of the contract to ensure efficiencies from long-term private asset management. Thus, the

public sector partner also takes responsibility for monitoring compliance with outcomes and managing contingent liabilities.

6. **Risk allocation to the private sector.** Risks generally borne by the public sector in traditional construction or turnkey contracts are distributed between the public and private partners. However, a PPP does not necessarily mean that the private partner assumes all the risks, or even the major share of risks linked to the project.

7. The precise distribution of risks is determined case by case according to the respective ability of the public and private sector partners concerned to assess, control, and cope with the risk. The most important principle of risk allocation arrangements in PPPs is that risks are disaggregated, quantified, and allocated to the party best able to manage each risk. Sectors in which PPPs have been completed worldwide include

(i) energy and power generation, transmission, distribution, and street lighting;

(ii) telecommunications;

(iii) transport, that is, ports, roads and highways, bridges, railways, airports, urban transport facilities like mass transit facilities, bus stations, and parking;

(iv) water and wastewater management, and desalinization plants;

(v) solid waste management and effluent treatment plants;

(vi) hospitals and health services;

(vii) school buildings, teaching facilities, and higher education institutes;

(viii) tourism infrastructure and facilities including those for meetings, conferences, and exhibitions;

(ix) other infrastructure and/or public sector services such as government buildings, low-income housing, stadiums, prisons, billing, and other information and communication technology systems; and

(x) prison and correction services.

Appendix 2
Project Development Process for Public–Private Partnerships

1. A good project development process is a critical factor in the successful implementation of a public–private partnership (PPP) project. The process involves several critical steps and requires multidisciplinary skills to make the process robust and the project bankable. It thus forms a critical part of activities of the Asian Development Bank (ADB) Public–Private Partnership Operational Plan, 2012–2020 under Pillar 3: Increased ADB support for creating project pipelines and undertaking project development (Appendix 6).

A. Project Development Phase

2. The primary objective of the project development phase is to ensure that the proposed project is properly positioned for commercial implementation. The project must be sufficiently defined to provide the government a basis for awarding clearances, to provide commercial investors a basis for assessing the viability and hence the attractiveness of investing in the project, and to provide a sufficiently rigorous and transparent basis to select a partner.

3. **The government perspective**. The key requirement for the government is the ability to demonstrate that the project is constructed, operated, and maintained in a demonstrably cost-effective manner and offers value for money. The government should also ensure that the project conforms to public standards, especially with respect to user charges, environmental and social standards, regulatory aspects, and applicable design and performance standards. Furthermore, where government support is required, the project must explicitly demonstrate the need and form of such support.

4. **The commercial perspective**. The key commercial concerns and requirements include

(i) definitiveness of the project concept and scope;

(ii) certainty of revenue streams;

(iii) project structure, especially with a view to ensuring greater investor interest in the project;

(iv) perceived risks of the project;

(v) extent of government support; and

(vi) rigor and comprehensiveness of the contractual framework.

5. Successful commercialization of infrastructure projects requires the resolution and balancing of the requirements of both the government and the private sector. To fully satisfy these requirements, documentation to be generated during project development must explicitly reflect these concerns and provide a sufficiently rigorous basis for its recommendations. The documentation and specific steps include a detailed feasibility and bankability assessment, environmental and social assessment, contractual framework, procurement process, and risk management plan.

1. Detailed Feasibility and Bankability Assessment

6. The detailed feasibility and bankability assessment (i.e., the business case) conducted during project development includes the following activities.

(i) **Feasibility assessment.** To raise commercial resources for infrastructure projects, the project must exhibit the requisite capacity to service investments. The feasibility study must establish the viability of the project to the extent that it is capable of sustaining commercial scrutiny.

(ii) **Project cost estimates.** Project cost estimates include

   (a) inflation indexation up to the year of commissioning;

   (b) interest during construction;

   (c) initial working capital deficits; and

   (d) other financing costs, including provisioning for reserve accounts or meeting other covenants as required by lenders.

(iii) **Revenue potential.** On the cash-flow side, the willingness of users to pay for the services needs to be demonstrated. The intent of the feasibility study should be to establish unambiguously the viability of the project on a pure cash-flow basis. The financial feasibility of the project should be analyzed using the discounted cash-flow analysis technique. Legal structures need to be developed to provide a framework for resource mobilization to access alternate sources of finance in a cost-effective manner. The framework design should take into account issues relating to fiscal constraints, project cash-flow profiles, and access to capital markets.

(iv) **Financing strategy.** An appropriate financing mix needs to be developed based on the determination of the proposed project's operating cash flow. This would address issues relating to debt–equity structures, maturity profile, and type of investment best suited for the project; sustainable cost of funds; construction financing; and the need to reinvest surplus-operating cash flows. In this exercise, project expenditure needs to be phased to match resource-raising ability and servicing requirements.

(v) **Credit structure.** The credit structure provides a framework for risk management, taking into account risks during construction and operation. Construction risks broadly include execution-related risks and financial risks. The execution risks are technical and logistical in nature. Financial risks need to be evaluated in the context of the construction estimates and the acquisition of land for the particular project. Financial risks primarily relate to the tasks of dovetailing the liquidity requirements of the project with the fund mobilization program. Operator risks relate to demand generation, operator ability, and debt-servicing ability over the operating life of the project.

(vi) **The need for asset quality.** As the recovery of the investment is predicted on the levy of user charges or availability of payments from the government, the asset created must be of quality as specified in the contract and that

(a) users are amenable to levies if there is direct correlation between the money they spend and the quality delivered; and

(b) no user charge will be collected if the physical condition of the asset deteriorates, service provision is erratic, or the service is not available as stipulated in the contract.

(vii) **Risk management.** The risk relating to asset quality can be mitigated only through the choice of a reputable contractor with a track record of timely delivery, who demonstrates pride in the asset created. The procurement process should thus remain independent of local requirements and lead to the transparent selection of the most competitive offer. Transparent procurement processes are preconditions for international investment and multilateral participation in the financing of a project.

(viii) **Timely execution.** The essence of commercialization entails timely execution of the project. Cascading costs relating to interest during construction and inflation would tender the project unviable. To ensure timely implementation, the following are important:

(a) comprehensive design engineering so that actual construction is fully planned and can be quickly executed,

(b) full funding for the project is made available on a priority basis, and

(c) the contract is awarded on a turnkey basis to mitigate completion risk and to ensure that the project is adequately bankable.

7. Thus, the detailed feasibility and bankability assessment (also called the "business case") is designed to provide a sufficiently rigorous and detailed basis to determine bankability; the nature and magnitude of government support, if any; and the technical basis for project implementation. Based on this, a detailed financial and resource mobilization process would be prepared.

2. Environmental and Social Assessment

8. Environmental and social concerns are significant in all infrastructure projects. In all sectors (e.g., toll roads), environmental and social measures tend to be a one-time cost in terms of carrying out construction, rehabilitating displaced personnel, and addressing safeguard issues. For water supply systems, measures relating to effluent treatment, sewage, and drainage are of a continuing nature. The capital cost and ongoing operation and maintenance cost need to be assessed at early stages of project development. Otherwise, the project would prove to be unviable and unacceptable in its design parameters.

9. Detailed environmental and social assessment studies are typically undertaken during project development, concurrent with preparation of the detailed feasibility assessment. The typical focus of the studies is to establish the impact of the project on environmental and social parameters and to evolve suitable strategies to minimize any impacts. The suggested measures must be incorporated into legal instruments that govern project implementation. This includes translating the obligations of different stakeholders with respect to environmental and social concerns to legally binding instruments.

3. Contractual Framework

10. At the heart of the PPP project structure is the contractual framework, which enables financing and implementation of the project. The framework allows such projects to raise project recourse resources where recoveries are predicted on project cash flows. The contractual framework documentation thus underpins the PPP approach to developing and implementing an infrastructure project on a commercial basis, wherein risks are appropriately allocated and shared among various stakeholders through legally binding instruments.

11. For example, when commercial lenders appraise a road project, assessment of viability is based on the potential traffic that could be generated if the project is implemented. Once the project is implemented and the projected traffic does not materialize, project lenders typically have no other recovery mechanism apart from covenants in the agreement that specifically address such a situation. Holding the road as security would have no meaning, as such assets have no resale value.

12. The contractual framework determines the level of risk for project investors and lenders, and consequently determines both the tenor and conditionalities on which resources can be raised for such projects.

13. During project development, agreements that comprise the contractual framework must be drafted to reflect the contractual conditions under which the project is proposed to be implemented, the allocation of responsibilities between the various participants in the project, recourse measures with respect to failure to comply or execute certain responsibilities, the allocation of risks associated with the project, environmental and social assessment, and any other conditions.

14. Of critical importance, the contractual framework must be developed as fully as possible prior to the selection of the private sector partner and/or operator. If this does not occur, the project may remain undefined with the allocation of responsibility open and subject to unnecessary time delays at a later time.

15. The development of contractual framework documentation is undertaken after a detailed review of the legal framework and the formulation of an appropriate institutional structure for project implementation, and on the basis of detailed interaction with each of the project stakeholders.

4. Procurement Process

16. Lack of transparency is one of the principal impediments to successful implementation of a PPP project. As a result, governments and multilateral lending agencies have increasingly introduced covenants with respect to procurement of goods and services, insisting on the adoption of transparent procurement procedures based on competitive bidding. Thus, during project development, one of the key activities is to develop an appropriate implementation process that ensures full compliance with requirements of government and financial institutions.

17. Typically, the detailed report on the implementation process comprises three outputs:

(i) **Detailed instruction for procurement procedures.** This includes detailed instructions for the process recommended for the selection of a suitable private sector developer and/or operator for the project. Specifically, it provides the prequalification notice, evaluation framework, recommendations for negotiation strategies, and detailed instruction to the bidders at each stage on procurement.

(ii) **Bidding documentation.** This comprises a comprehensive package for the project including all relevant documentation along with the explicit process of inviting qualified operators to submit detailed proposals, and the procedure and framework for evaluation and selection of the partner for the project.

(iii) **Evaluation.** This comprises detailed instructions for evaluators to assess the proposals provided.

18. The detailed process of implementation thus forms the key part of documentation that allows sponsors to take the project beyond the project development phase to the project implementation phase.

5. Risk Management Plan

19. Infrastructure projects are subject to an array of risks throughout the project cycle, and thus require the development of appropriate measures to mitigate such risks. The framework for risk mitigation in a typical private infrastructure and/or PPP project could be through

(i) a contractual framework,

(ii) insurance, or

(iii) diversification of the investor–lender–stakeholder base.

20. The risk identification and assessment process comprises a sequence of steps including risk identification, risk assessment, allocation of risks, and risk management along with mitigation measures. A risk management plan is needed for each project, addressing the risks identified throughout the project life cycle. Risks typically include

(i) political risk;

(ii) commercial risk;

(iii) technology risk;

(iv) environmental and social risk;

(v) financing and exchange risk;

(vi) risks relating to the legal framework;

(vii) force majeure risk; and

(viii) others, including workforce management.

B. Treatment of Risks in Public–Private Partnership Projects

21. Risks in any transaction cannot be eliminated and exist for all participants in the contract. However, risks can be managed to an acceptable level using the following protocol.

(i) **Identify the risk**. What event or actions would adversely affect the cost, performance, timing, or viability of a project (e.g., what would happen to the project if the rate of inflation were to significantly rise above that projected)?

(ii) **Determine the severity of the risk**. What is the specific cost, time delay, or reduction in performance if this happens?

(iii) **Allocate the risk**. Risk should be managed by the participant best able to manage that risk. Shifting risk to a participant not able to manage that particular risk costs more and creates even more risk for a project.

(iv) **Mitigate the risk**. Determine what must be done to reduce the likelihood of an adverse event (e.g., construct all structures above the 100-year flood elevation to reduce the likelihood of flood damage).

(v) **Price the risk**. Determine the cost of addressing the risk (e.g., the cost of flood insurance).

22. Risks are associated with different stages of the project development cycle (e.g., development, construction, and operation). The complex, highly skilled, and time-consuming process of PPP project development requires financial commitments. Irrespective of the stage of project development, the classic way to understand and allocate risks appropriately derives from the protocol described in para. 29 and the risk management cycle illustrated in Figure A2.

Figure A2 **Risk Management Cycle**

Source: Asian Development Bank.

23. **Risk identification.** At this stage, all risks relevant to the project are identified. Given that the project is being structured for private sector investment, it is critical that all those issues that can be influenced by the public sector are identified. These may include

(i) delay in implementation;
(ii) termination risk;
(iii) change in laws;
(iv) new impositions or taxes;
(v) alternative facilities;
(vi) other contingencies requiring government support and covenants; and
(vii) infrastructure risks, such as government assurances for land and right of access.

24. From an investor and/or lender perspective, key risks in a PPP project include
(i) direct project risk;
(ii) regulatory and institutional risk;
(iii) macroeconomic risk;
(iv) nationalization and appropriation (political risk);
(v) completion delays;
(vi) cost overruns;
(vii) demand forecast risks, e.g., volumes and toll rates and/or fees;
(viii) performance risks, e.g., technology and processes;
(ix) operation and maintenance risk;
(x) force majeure, e.g., earthquakes, floods, and natural disasters;
(xi) political and social risk; and
(xii) foreign exchange risk.

25. **Risk assessment.** Determine the likelihood of identified risks materializing and the magnitude of their consequences if they do materialize.

26. **Risk allocation.** Allocate responsibility for dealing with the consequences of each risk to one of the participants in the contract, or agreeing to deal with the risk through a specified mechanism that may involve sharing of risk.

27. **Risk quantification.** Calculate the monetary value of risks based on their likelihood, criticality, and outcome (Table A2).

28. **Risk mitigation.** Attempt to reduce the likelihood of the risk occurring and the degree of its consequences for the risk taker. Sometimes, “de-risking” certain aspects of the project enables optimal risk transfer (a point beyond which the efficiency gains of an optimal risk transfer are lost).

29. Efficient risk allocation and mitigation are central to bringing infrastructure projects to financial closure and to providing appropriate incentives during construction and operation. Projects may still be financeable if some risks are not allocated according to this principle, but costs and, ultimately, the unitary payments or tariffs will be higher. Sponsors and lenders expect higher rewards for assuming higher risks.

30. **Monitoring and review.** Monitor and review identified risks and new risks as the project develops and its environment changes, with new risks to be assessed, allocated, mitigated, and monitored. This process continues during the life of the project**.**

C. Typology of Risks in Public–Private Partnership Projects

31. The main sources of financial risks in major PPP projects are

(i) construction cost overruns induced by, for instance, government, client, management, contractor, or accident;

(ii) increased financing costs caused by changes in interest and exchange rates and by delays; and

(iii) lower-than-expected revenues, e.g., produced by changes in traffic volume and in payments per unit of traffic.

32. Although less significant, financial risks are also related to operation, maintenance, and management costs. From an economic point of view, the main risks are cost overruns, delays, and realized demand lower than assumed during project development.

33. Normally, people are risk averse and are prepared to pay something (by way of an insurance) to mitigate or eliminate risks. In practice, different levels of risks associated with different types of investment are reflected in different minimum rates of return required to persuade individuals to commit their money.

34. If private sector investment in infrastructure is to succeed on a sustainable basis, the public sector and contracting agencies must reduce both the perception and the reality of risk. Efficient risk management should be based on the principle that the party best able to manage a risk at least cost should mitigate the risk. Table A2 provides the structure of a typical risk management matrix (covering some of the risks).

Table A2 **Risk Management Matrix**

Risk Category	Specific Risks	Party Responsible	
		Private Sector	Public Sector
Site risks			
Design, construction, and commissioning			
Sponsor and financial			
Operating			
Market			
Network and interface			
Industrial relations and civil commotion			
Legislative and government policies			
Force majeure			
Asset ownership			

Source: Asian Development Bank.

D. Finalization of Contractual Framework and Execution of Contract Agreement

35. The project contractual agreement forms the core of the PPP project structure. While draft contracts are prepared at the stage of project development, all other agreements are finalized after selection of the operator.

36. During project development, the key requirements of the project are identified. They are then incorporated into the draft contractual documentation. During the selection process of a partner, each bidding partner (bidder) is provided with copies of the draft contracts. At the bidding stage, bidders are required to submit variations to the contracts, if any, with a view to standardizing the documents. Bidders would thus be required to submit their formal proposals on the basis of uniform contractual documents.

37. On the selection of the successful bidder, the contractual documents are finalized and executed based on the final negotiations. The key contractual agreements to be executed prior to achieving financial close[1] are

(i) the concession agreement,
(ii) the shareholder agreement,
(iii) tender agreement,
(iv) construction agreement, and
(v) operation and maintenance agreement.

E. Selection of the Partner and/or Operator

38. The selection of a suitable partner to implement the project is a critical activity in the PPP project development process. The choice of a suitable private sector operator determines

(i) the technical capabilities of the project; and
(ii) the extent of comfort that investors and/or lenders to the project have, especially during construction.

39. The basis for the selection of an operator, including the evaluation criteria is established during project development. The detailed process outlined in the implementation report thus forms the basis on which a suitable operator is selected.

40. The requirements of financial institutions, multilateral agencies, and other institutional investors underscore the importance of transparent international competitive bidding procedures in the selection of the operator. Projects where the operator and/or goods and services have not been procured in a transparent manner ordinarily have more difficulty achieving financial close. Where the bidder is selected, each bidder should be provided with all relevant project documentation prepared during the project development phase, including the evaluation framework. When a partner has already been selected on a noncompetitive basis, procurement of goods and services required for the project must be conducted using a transparent bidding basis.

[1] When all of a project's contracts and financing are complete, documentation has been executed, and conditions precedent are met.

F. Financial Close of the Project

41. A well-packaged commercially viable infrastructure project needs to demonstrate

(i) bankability,

(ii) conformity to environmental and social standards,

(iii) a contractual framework that is sufficiently comprehensive and allocates responsibilities to each of the stakeholders,

(iv) transparent procurement that ensures the project is implemented in the most efficient manner, and

(v) use of a detailed and comprehensive management perspective.

Appendix 3

Value for Money and Public Sector Comparators

A. Value for Money in Public–Private Partnership Projects

1. Value for money (VFM) in public–private partnership (PPP) projects is gained through the engagement of private sector efficiency, effectiveness, and economy and through the appropriate allocation of risks in the project. The assessment of the potential to secure VFM is a key element of the PPP assessment process. The conclusions on VFM potential will inform governments in developing member countries (DMCs) on whether to proceed with a PPP procurement, and, if so, the form of PPP that could be used.

2. A key factor in determining how VFM is to be used and applied is shaped by who takes the (fundamental) demand risk of the project. Many of the early-stage PPP projects in Asian Development Bank (ADB) DMCs have mostly focused on economic infrastructure projects like toll roads, airports, and ports. Since these projects are based on market demand, the end-users determine whether it is worth paying for the asset created and service delivered. In such projects, taxpayer money is rarely directly contributed to enhance project cash flows. Therefore, for many of these projects, value testing has not been undertaken. Moreover, due to lack of resources, many governments rely on the private sector to build these assets, for if a privately financed asset is not available, very little infrastructure may need to be financed and built. While assuming these market risks in the structure may be acceptable to domestic investors (and indeed their banks), this would be a key risk from the perspective of international sponsors and their project finance banks.

3. As DMCs continue to explore PPP in social infrastructure projects (like education and health), increasingly, the public sector would largely retain the demand risk in such projects. For example, demand for schools will be influenced not only by future population trends but also by pedagogic developments. Similarly, future demand for hospital services will be influenced by developments in treatment, and demand for prisons will be influenced by penal policy. In these circumstances, investors and lenders do not want to assume demand risk, as they would not be able to manage that risk. Therefore, a fundamental need is for public sector procuring agencies to value-test deals and ensure that these projects offer VFM over the life of the project.

4. The final assessment of whether PPP procurement represents improved VFM can only be made at the conclusion of the competitive tendering process. The assessment of the potential for PPP to deliver VFM has two integral components:

(i) identification of factors that will determine if a project delivers VFM, and

(ii) an assessment of the potential of the private sector to deliver VFM with regard to those factors.

5. The outcomes of the VFM assessment will help to inform not only the potential for PPP to deliver VFM, but also

(i) selection of the most appropriate form of PPP,

(ii) identification of the optimum scope of the PPP, and

(iii) identification of the parameters that should be used at the end of the procurement process to assess whether the preferred PPP procurement represents VFM.

B. Factors That Determine Value for Money in Public–Private Partnership Projects

6. The factors that determine whether a project delivers VFM will vary by type of project, sector, and DMC. Some factors will be common to a number of projects, and may relate to the strategic objectives of the DMC government. In general, PPPs can generate improved VFM for the procuring authority through a number of ways including

(i) reduced whole-life costs,

(ii) better allocation of risks,

(iii) streamlined and efficient project implementation,

(iv) improved quality of service, and

(v) potential to unlock additional revenue streams.

7. Governments and development finance institutions must establish whether a project is better suited for development in the public sector, private sector, or with PPP. Besides the obvious outcome of more clearly defined economic benefit, this also permits governments to convey the drivers of such decision making to stakeholders.

8. VFM analysis must be performed correctly on the appropriate and full scope of goods; services to be provided under a given project; and costs to be incurred, whether in the public domain or in conjunction with private developers. The emphasis of the analysis must be on the life-cycle costs of the project, covering development, construction, operation, and long-term maintenance, and how all of this is paid for under each modality. Often within the public sector, the operating costs for public services, development costs, or oversight costs are buried within general budget categories. In an objective VFM analysis, these costs must be disaggregated and allocated to a specific project.

9. Further, risks associated with costs and performance parameters must also be applied to develop reasonable public sector comparators. Governments must be honest about the true performance of public services, something that may be politically difficult. Compounding the more visceral challenges of such analysis is the chronic tendency for governments to succumb to "optimism bias," the tendency to be over-optimistic about the outcomes of planned actions. In the public sector, this is manifest in the form of underestimated project costs; unrealistic project implementation schedules; inflated abilities to implement or manage various activities; or overambitious scope and nature of project performance, particularly when these targeted outcomes are compared with the historical reality.

10. Overall, VFM analysis requires that the public sector either analyze its performance on a historical basis or provide the needed incremental investment in resources, management, and the like required to increase public performance to the standard against which PPP-based projects are intended to be held. Public sector data[2] should comprise objective, historical data regarding budgeted costs, historical cost overruns, operating performance (both cost and quality), maintenance budgeting (assessing the extent to which it is budgeted for and actually performed), and other standards to which PPP-based projects are being evaluated. Thus, the scope and depth of analysis is important to assure a valid comparison.

C. The Public–Private Partnership Operational Plan and Assessment of Value for Money Potential in Developing Member Countries

11. Public sector executing agencies in most DMCs have many years of valuable experience in implementing civil contracts and procuring projects through engineering, procurement, and construction contracts. Many of the DMCs have also received development partner funding to deliver different types of infrastructure projects across a number of sectors. Usually, information on aid-supported infrastructure projects is well documented within the DMC and with the funding or financing agencies.

12. The potential of the private sector to deliver VFM through PPP may be considered in the context of this experience and that of similar projects, particularly those that have been operating for a few years. Such experience may be accessed through either desk-based research or consultations with technical teams of executing agencies and potential private sector operators. However, such information may not be uniformly available across all ADB DMCs and therefore the originating regional department within ADB should aim to collect benchmark information from similar environments if such information is not easily available with the DMC in question.

13. Two potential information sources that the transaction team (comprising the ADB team, executing agency, and transaction advisors) could use to assess the potential of the private sector to deliver VFM in a project are precedent review and market sounding.

14. **Precedent review**. The key issues to be investigated within the precedent review exercise will vary from project to project. However, in general, experience of similar projects should be investigated and the views of the private sector established, particularly

(i) the scope of the project, including the balance between asset provision and service delivery;

(ii) the potential for cost-effective risk transfer, particularly in relation to demand risk and residual value risk;

(iii) the scope for user charges, third-party revenues, and alternative asset uses that might reduce the cost of the project to the government; and

(iv) the potential for VFM, measured in terms of the main sources of VFM identified at the end of the procurement of similar projects (within the DMC or from benchmarks collected from similar environments), and any evidence available to demonstrate that VFM has actually been achieved in these areas during construction and operation of the projects.

[2] Many of the DMCs have had their civil work and sometimes their key infrastructure built with international financial institution and bilateral support. Experience shows that collecting this data is not an insurmountable challenge.

15. For the initial pilot PPP projects, some of this information for international projects may be available from published reports and relevant contacts. For future PPP projects, establishing and maintaining a database of information on the pilot projects will be important to ensure that experience of the projects is taken into account in the development of future PPP projects.

16. **Market sounding**. The regional department supporting a PPP project and its counterpart in the DMC needs to be aware that a PPP project is only practicable where (i) investors, developers, and financiers are comfortable with (a) the payment and credit risk of the project and/or the DMC being considered and (b) the predictability of the legal and regulatory framework; and (ii) contractors are able to deliver the required service and are willing to accept sufficient risk transfer. Therefore, once the essential characteristics of a project are defined and an initial output specification produced, the nature and extent of market interest in a PPP solution should be established by means of a market sounding exercise.

17. Private sector interest may be assessed on the basis of previous market soundings or from earlier projects (both within the DMC or from benchmarks collected from similar operating environments). However, for large, innovative, or complex projects, a separate market sounding exercise should be conducted as part of the PPP assessment. The market sounding should focus on issues specific to the project in question. Several elements should be considered as part of the exercise, including the strength of the private sector market for the project, the private sector's scope for achieving economies of scale, and its relevant expertise. The most important factors will be the likely interest in the project and the capability of the market to undertake the project.

18. This exercise also involves holding discussions with potential lenders to the project and the understanding of key risks from the lender perspective. Appreciating lender interest is key as most PPP projects (that require substantive new capital investment) are procured on a limited recourse basis to lenders. Often, the way senior lenders price their debt and determine the cover ratios can have a significant impact on the potential to achieve VFM in a PPP project compared with one that uses conventional procurement.

Box A3 Developing a Public Sector Comparator Model (illustration)

Public Sector Comparator

A public sector comparator (PSC) provides the cost for the public sector to construct and operate the same project, with the same required outputs and levels of service. Development of a PSC requires

(i) a proposed project design that meets outputs,
(ii) estimates of construction costs,
(iii) estimates of financing costs, and
(iv) estimates of operating costs for the whole life of the project.

For example, the government wants to construct a new project under the following assumptions:

(i) The estimated construction cost is $100.
(ii) Operating costs begin at $30.00 and grow at 5% per year for 20 years.
(iii) The government's cost of capital is 10%.
(iv) The present value (at 10% discount rate) of the whole life of the project.
(v) Operating costs are $363.40.
(vi) The total present value (at 10%) of project cost is $463.40 (PSC).

continued on next page

Box A3 *(continued)*

Risk-Adjusted Public Sector Comparator

The risk-adjusted public sector comparator (RA–PSC) assesses the probabilities and size of the impacts of the risks that the public sector would assume in implementing the project. The risks, based on factual analysis of data on past public projects, include

(i) risk of construction cost overruns,
(ii) risk of delays in completion of the project,
(iii) risk of higher-than-planned operating costs, and
(iv) other relevant risks for the government.

For example, a workshop of experienced public sector stakeholders and public–private partnership (PPP) advisors (e.g., civil engineers, public budgeting officials, procurement specialists, legal specialists, consumer associations) estimates the following three main risks that this project would face:

(i) Construction cost overruns (likely to be \$60.00, the probability of that happening is 66%; therefore, the risk cost is 66% of \$60.00) = \$39.60
(ii) Completion delays (likely to be 2 years and cost impact \$20.00, probability of that happening is 75%; therefore, the risk cost is 75% of \$20.00) = \$15.00
(iii) Technology and operating inefficiencies (over 20 years, this is estimated to cost \$15.00, the probability of that happening is 33%; therefore, the risk cost is 20*[33% of \$15.00]) = \$99.00

Based on past public procurements of similar projects, the project team estimates the following as the most likely magnitude of the risk:

(i) PSC = \$463.30
(ii) Public sector risk cost (\$39.60 + \$15.00 + \$99.00) = \$153.60
(iii) Total RA-PSC (\$463.30 + \$153.60) = \$616.90

Private Sector Comparator

The PPP reference model (pre-tendering) and the winning PPP bid (post-tendering) require

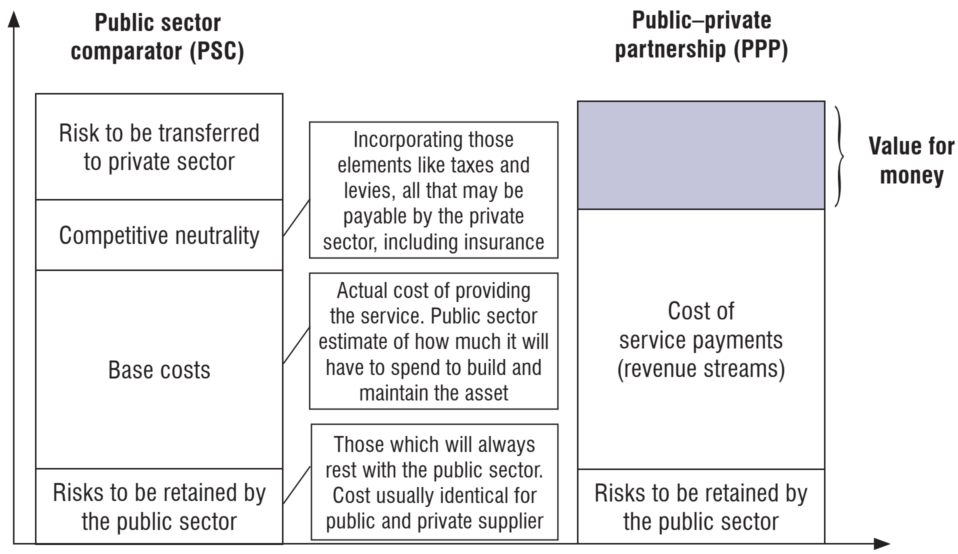
(i) estimates of probability and size of private sector management of construction, completion, and operation risks (lower than public); and
(ii) estimates of costs of private sector financing (higher than public).

The following is the total estimated value for money of a PPP:

(i) Demonstrated affordability (e.g., set by budget limit) by government agency = \$650.00
(ii) Winning PPP bid: starts at \$40.00 per year, escalating at 5% per year for 20 years
(iii) Net present value (at 10%) of winning bid = \$484.50
(iv) Value for money = RA-PSC (\$617.00) – PPP winning bid (\$485.40) = \$132.50 (or 21%)

Source: Asian Development Bank.

Figure A3 From Public Sector Comparator to Value for Money: Key Steps



Source: D. Grimsey and M. K. Lewis. 2004. *Public–Private Partnership: The Worldwide Revolution in Infrastructure Provision and Project Finance*. Northampton, MA: Edward Elgar Publishing.

19. To maximize the effectiveness of the market sounding process, private sector organizations need to be provided with a project prospectus and/or project information memorandum that sets out an indication of the likely scope and scale of the project, its service content, its anticipated key contractual terms, and preliminary risk allocation.

20. To illustrate the potential areas of similarities and differences between publicly procured and PPP projects, Table A3 provides a comparison of the development and procurement processes.

21 Public sector projects in certain countries and/or sectors within certain countries sometimes follow a turnkey design–build model and sometimes have extended warranty or operation support periods. Public sector projects rarely cover any substantial bundling (and resulting allocation of risk) of design, build, operation, and maintenance.

22. An important aspect of a VFM analysis is the discount rate used to evaluate each of the public and private options. Normally, the procuring authority uses the discounted cash-flow analysis to compare different cash-flow streams. As the cash-flow profiles of the public sector reference project (under public sector comparator) and the private sector bids will differ, discounted cash-flow analysis is normally used to compare them on a consistent basis. The risks and opportunity cost of capital for each sector is not the same. Public sector analysis may seek to apply the government's sovereign cost of debt or some similar rate, but this avoids the opportunity cost to government of pursuing a given project, allocating those resources, and the risks associated with the proposed undertaking. A risk-adjusted metric is therefore required; this however can be the source of serious debate and contention as changing the rate would likely have a material impact on the outcome of the analysis. Whatever the rate ultimately decided upon, the factors contributing to the decision and supporting it should be clearly documented.

Table A3 **Public Sector and Public–Private Partnership Model Project Development Comparison**

Public Model		Common Elements	Public–Private Partnership Model	
Activity	Comment		Activity	Comment
Planning	Planning commission in consultation with line ministries	Resource allocation Planning commission authority	Planning	Planning commission in consultation with line ministries
Project identification	Line ministry responsibility		Project identification	Line ministry (in consultation with PPP unit, if any)
Sanctioning	Line ministry approval based on plans given the budget Larger projects may require government authority (e.g., Cabinet)			Line ministry with concurrence of governing authority (e.g., Cabinet, senior PPP committee)
Design contracting	Bid out service for complex project OR Sector line ministry takes on less complex projects Funded from one-time capital budget allocation	National design standards	Predevelopment (i) asset specifications (ii) operating specifications (iii) performance specifications (iv) commercial specifications (v) stakeholder consultations	PPP unit and/or line ministry in consultation with government finance function Government may undertake preliminary design, and environmental and/or social studies either internally or through augmentation from outside consultants. Funded by either or a combination of annual budgets or a specially designated development fund Government may use opportunity for PPP to enhance design or performance standards beyond those applied in typical public sector projects.

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Table A3 *(continued)*

Public Model		Common Elements	Public–Private Partnership Model	
Activity	**Comment**		**Activity**	**Comment**
Land acquisition	Line ministry acquires land (in consultation with relevant government departments) Funded out of one-time capital budget allocation	Regulatory authority governing lands (national, state, provincial, or municipal)	Land acquisition	Government may pre-identify a site for development and/or allocate land rights for the project. Land is either government-acquired or left to the private sector or a combination of the two. Funded by government (with cost recovery from the private sector) or by private sector
Approvals	Line ministry responsible for obtaining licenses and approvals for project and for conducting any studies required to obtain such approvals	Regulatory authority of governing ministerial bodies (e.g., environment ministry)	Approvals	Private sector responsible for obtaining licenses and approvals in relation to construction, financing, and operation of the project Government may share responsibility for a subset of approvals (e.g., land).
Construction contracting	Public sector often responsible for change orders or cost variations Increased costs may require special and/or extraordinary budget approvals.		Bidding (whole project)	All specifications and requirements bundled into a single package
Operations contracting	Partial or full responsibility allocated to private contractors for operations OR Public sector operations under line ministry department In either case, operations funded by annual operating budget allocations (subject to approval annually)		Contracting with successful bidder	Negotiations on all required concessions, rights, and performance under a suite of contracts Successful bidder responsible for all operation and maintenance costs (whether minor or major), without additional compensation Payments are predetermined over the life of the contracts, often with predetermined adjustments for specific economic factors.

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Table A3 *(continued)*

Public Model		Common Elements	Public–Private Partnership Model	
Activity	Comment		Activity	Comment
Maintenance contracting	Partial or full responsibility allocated to private contractors for maintenance OR Public sector operations under line ministry department Maintenance classified as an operating budget item. Often, there is no requirement or ability (due to budgeting rules) to provide long-term funding for major maintenance. Budget subject to annual approval		Project implementation under a design–build–finance–operate format (or similar construct)	Awarded bidder responsible for designing, building, and financing asset and operating services; specific performance required on asset quality, completion Private party responsible for maintaining cost and schedule during construction and for meeting its operating costs during operation solely from service fees collected from users and/or paid by government under contract
Oversight and regulation	Line ministry responsible for implementing project to specification and budget (as amended during the project) User charges controlled by policy approved by legislative body In limited cases, user charges subject to approval by a regulatory commission	Budgeted subsidies on user charges (for purposes of affordability) and budgeted tax and/or government fiscal resource allocations to support ministries responsible for covering operation and maintenance costs	Oversight and regulation	Government provides oversight and monitoring to assure compliance with contracts. Tariffs subject to approval by the regulator (to the extent not provided for in advance in project contracts)

PPP = public–private partnership.
Source: Asian Development Bank.

23. VFM may also identify current weaknesses in the overall enabling environment for PPPs or private sector participation within a country. If indicated private sector costs for a project—whether construction, operation, or financing—are high, this may be an indication of a material risk premium being assessed by private investors and/or lenders. To the extent a government can provide clarity, certainty, predictability, objectivity, and transparency in its PPP project processes and dealings, a given PPP candidate project stands a better chance of having a more beneficial VFM analysis outcome.

24. Alternatively, the value analysis might point to issues around affordability based on the ideal scope and breadth of a proposed project. However, closer examination should be provided for adjusting the scope or specifications of the proposed project to determine whether more beneficial results occur from a smaller or more incremental approach to service provision. The implication here is that the VFM analysis would be an iterative process, based on differing project scopes, differing risk-sharing structures, and differing quality of performance.

25. VFM analysis is an important tool for informing government decision-makers and supporting development finance institutions on the true costs of each approach to the provision of services. It also can be used as a tool to help refine design of a given project to better suit the risk and financial constraints of the government. However, given the many areas of cost uncertainty and judgments on the value and likelihood of risk events, it cannot necessarily be applied as a definitive metric for pursuing a project under a public or PPP model.

Appendix 4
Project Development Fund

1. Lack of project preparation is a key contributor to failure of projects with private sector participation. Too often projects are put out to competitive bid lacking proper contracts; appropriate risk allocation; a sustainable revenue model; government support; key project inputs such as international standard studies for feasibility, environment, or social safeguards; uncertain resource assessments (e.g., water, wind, solar, and gas reserves); or properly secured land. These situations often arise due to governments balking at the costs of hiring professional consulting firms and advisors to undertake such preparatory work and/or believing that such work will require too much time. However, despite the up-front cost of preliminary project development, evidence shows this cost is more than offset by the comparative cost of delay or failure to realize important public services and infrastructure and/or the increased costs private sector participants must charge to overcome unmitigated risks.

2. To provide for the up-front cost of project preparation, emphasis is shifting to providing pools of development capital dedicated to project development, or project development facilities and/or funds (PDFs). PDFs are targeted at supplementing or completely paying for the up-front cost of preparing projects for competitive bidding and, in some cases, covering the costs to financial closure. PDFs can be provided in the form of grants or loans, or in combination—a loan that could be converted into a grant in the event of project failure. Typically, PDFs are designed to be revolving funds, where the cash outlay for project development from the PDF is recovered in some form from a successful bidder.

3. The design of a properly structured PDF goes beyond simple provision of money. It must be accompanied by terms and conditions for access, use, and return that serve to reinforce efficient performance that increases the likelihood of realizing a successful project and increases the sustainability of the seed funding for the PDF. Appropriate targeting of PDF use can yield tangible benefits for government and private sector participants, providing confidence to all participants with regard to the subject project.

4. A PDF can be an important tool for catalyzing professional development of complex infrastructure and services projects, and can be a key contributor to realizing investable, bankable projects.

A. Structural Design

5. To structure a PDF, consideration must be given to the following elements:

(i) size of the facility,

(ii) source of funding,

(iii) who the facility should serve,

(iv) qualifications to access the facility,

(v) how risks of the PDF should be shared and managed, and

(vi) how the funds should be managed and performance measured

1. Fund Size

6. Project development activities, when compared with the total cost of a given project, require a relatively small amount of funding. However, these monies—and the manner in which they are deployed—are perhaps the most critical spent on a project. Project development costs vary as a percentage of total project cost and on the basis of a project's complexity. Project development costs typically average about 5% of the total project cost. For larger-cost projects, this amount could drop to 1%–2% of total project cost; for smaller projects, the range could be 7%–10%. For public–private partnership (PPP) activities, which are highly reliant on project finance–related contract structures, the cost of legal and financial structuring is fairly consistent, regardless of the project cost. Per-project development cost, in whole dollar terms, can typically range from $1 million to $5 million. For particularly complex projects, these costs can reach over $10 million. If a PDF funding scope intends to include land acquisition costs, these numbers can rise significantly higher. Thus, for a national program seeking to mobilize dozens of project opportunities in a given year, annual funding for PDFs could require about $100 million.

7. **Up-front and annual contributions.** When estimating the required up-front and ongoing contribution to a PDF, consideration must be given to the initial start-up period of the PDF and initial success rates of projects under the fund. These considerations could significantly influence the amount of initial funding required, the amount of ongoing replenishment funding, and/or the nature of funds comprising the fund. Initially, a successful pipeline of projects will take time to develop. Further, not all initiatives supported by the PDF will result in successful projects. To be conservative, especially for newly developed institutional frameworks supporting project development, a learning curve must be assumed, with higher project failure rates at the beginning and greater success as experience is developed. Even if the fund intends to recover PDF costs from successful bidders, given that projects may take from 1 to 4 years to complete development and financing, PDF funding needs to account for the start-up period prior to potential fund recovery. In the event PDF cost-recovery charges do not include a gross-up to cover failed ventures, success rates of less than 100% will require annual PDF replenishments. Box A4.1 illustrates PDF operating and funding dynamics.

8. PDF size should consider the scope, nature, and maturity of a given national PPP framework. It may be advisable to start with a smaller initial PDF fund size and/or a more sector-specific focus (e.g., working with a limited number of sector line ministries). This would allow time to exercise the enabling PPP framework and/or build capacity and/or experience among project participants on how to most effectively use the PDF.

2. Fund Composition

9. Funding for PDFs can come from a number of sources: development finance institutions, government, or even the private sector. PDFs can comprise contingent grants, loans, and/or government contributions.

Box A4.1 Economics of Setting Up a Project Development Fund

Assumptions:

(i) Average per-project development cost: $3 million
(ii) Average per-project development time: 3 years
(iii) Development project ramp-up over time, starting with 5 projects per year and peaking at 30 projects per year
(iv) Success rate learning curve starting at 50% success, increasing to 95% over time
(v) Successful projects charged direct cost of development associated with the project, without time value of money charges or risk-allocation markup to account for failed development projects.

Outcomes:

(i) First 2 years require full funding
(ii) Net recoveries in first 7 years are lower due to learning curve
(iii) Self-financing of the PDF reaches 50% in year 5, 75% in year 10
(iv) Average fund contribution is $6 million–$7 million per year for the first 10 years, based on the assumptions; this requirement is highly dependent on the number of projects added each year.

Source: Asian Development Bank.

Table A4.1 Fund Operation Assumptions

Fund Year	Fund Inputs ($)	Fund Returns ($)	Net Fund Size ($)	Projects Started	Success Rate (%)	Projects Realized
1	5,000	–	5,000	5	0	0
2	7,000	–	7,000	7	0	0
3	6,500	2,500	9,000	9	50	3
4	7,150	3,850	11,000	11	55	4
5	6,600	5,400	12,000	12	60	5
6	5,850	7,150	13,000	13	65	7
7	6,600	8,400	15,000	15	70	8
8	8,250	9,750	18,000	18	75	10
9	8,000	12,000	20,000	20	80	12
10	6,700	15,300	22,000	22	85	15
11	6,000	18,000	24,000	24	90	18
12	5,980	20,020	26,000	26	91	20
13	5,920	22,080	28,000	28	92	22
14	5,820	24,180	30,000	30	93	24
15	3,680	26,320	30,000	30	94	26
16	1,500	28,500	30,000	30	95	29
17	1,500	28,500	30,000	30	95	29
18	1,500	28,500	30,000	30	95	29
19	1,500	28,500	30,000	30	95	29
20	1,500	28,500	30,000	30	95	29

Source: Asian Development Bank.

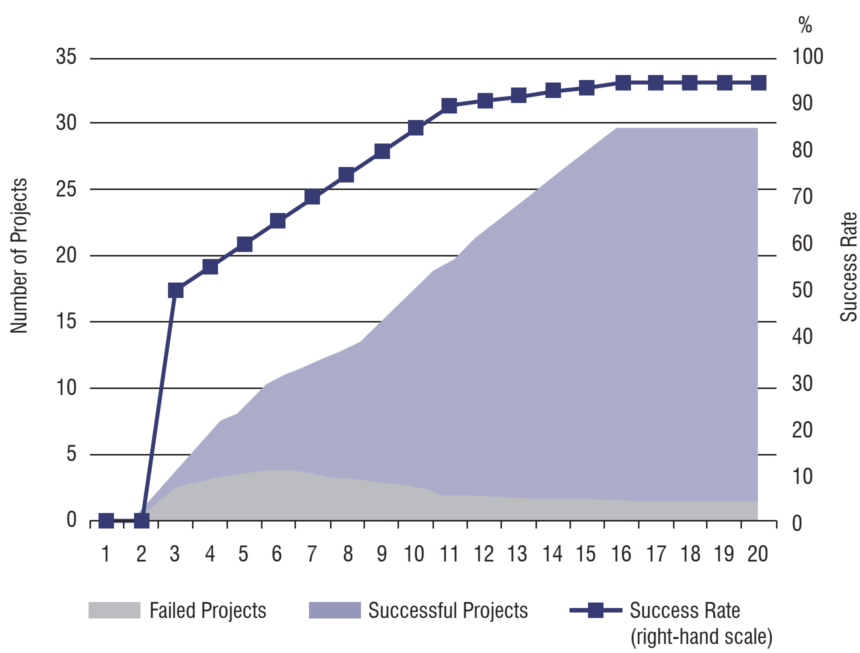
10. Given the high-risk nature of project development, a certain percentage of projects may fail. Therefore, loans cannot comprise the entirety of the PDF; potential losses must be accounted for through a combination of government equity-at-risk and/or the possibility of converting a portion of loans to grants.

11. On principle, government contributions to PDFs are necessary to assure built-in risk balancing and sharing, and a focus on the end-use efficiency of funds deployed. This also puts the onus on the government to assure the enabling environment for use of PDF funding is conducive for generating successful projects and, therefore, achieving PDF fund recovery. Technical assistance provided by development finance institutions can support the creation of appropriate enabling environments to help mitigate such policy risks.

3. Public or Private Sector Support

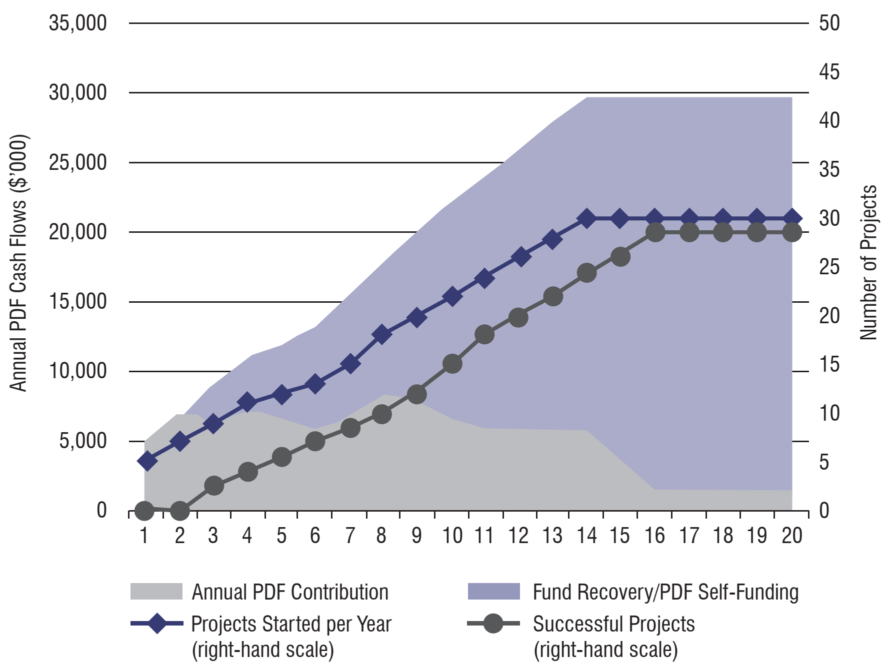
12. PDFs can be used to support development by public or private sector entities. In the public sector domain, PDFs could be applied to preliminary development activities undertaken by a government agency or entity as needed to prepare a project for international competitive bidding, and take the resulting project through at least to financial close. PDFs can be used to support private sector development of projects, particularly in the absence of an appropriately skilled, qualified, and/or authorized public sector entity. Regardless of the format of the PDF, qualifications for access need to be carefully considered and uniformly applied. Ideally, the beneficiary of a PDF allocation should be required to sign a formal agreement governing the use and terms for repayment or recovery of the fund. If the PDF is to be provided to the private sector, the private sector entity must share in the risk through substantial contributions of its funds

Figure A4.1 **Project Success or Failure Rate**



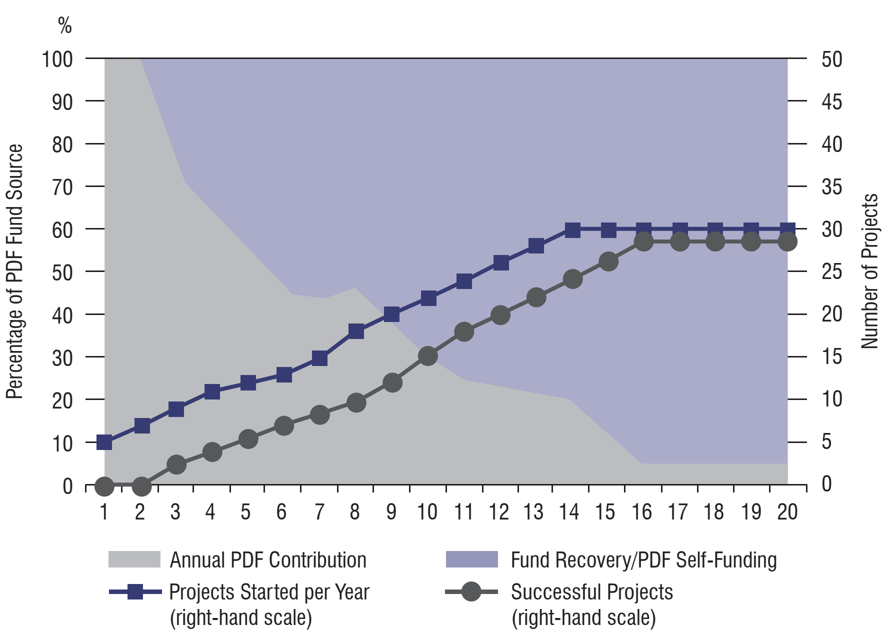
Source: Asian Development Bank.

Figure A4.2 Annual Project Development Cash Flows



PDF = project development fund.
Source: Asian Development Bank.

Figure A4.3 Percentage of Project Development Fund Self-Funding



PDF = project development fund.
Source: Asian Development Bank.

(e.g., a minimum of a matching contribution). Similarly, allocation of a PDF to the public sector should be structured so that it is not a mere budgetary supplement; performance parameters and a definitive plan for PDF use and management should be provided. While a public sector–oriented PDF may seem easier to implement than one in the private domain, the issues associated with project development are vastly similar across both sectors.

13. Whichever sector accesses the funds, the entities should be appropriately qualified to do the tasks intended, with systems and processes in place to increase the chance of success (Table A4.2).

Table A4.2 **Qualifications for Access to Project Development Funds**

Public Sector	Private Sector
Independence of project development entity (from other government functions)	Know the customer and/or integrity check of project participants
Ability to identify and confirm funds for intended purpose	Management capability, development capability
Sufficiency of skills required to undertake and/or manage development	Performance track record of each participant
Accountability for performance and fund utilization	Joint venture agreements, constitutional documents
Clear modality for project development, funding, and implementation (e.g., exit to private bidder, build–operate–transfer or build–operate–own models)	Capitalization of entities undertaking development, including proof of funds
Allocation of entity's own budget put at risk in parallel to the PDF allocation	Bonding capacity in relation to the project
	Business plan for the project
	Amount of own funding that will be put at risk in parallel to the PDF allocation

PDF = project development fund.
Source: Asian Development Bank

14. Private sector entities supporting PDFs require a suitable policy and support environment from the public sector. Privately based development is not a substitute for public sector inputs. For example, leaving land acquisition responsibilities solely to the private sector may lead to delays in completion and/or a greatly increased cost of land, and an attendant pass-through of such costs to users or to the treasury. Delays and increased costs could lead to more rapid depletion of PDF funds and an increased chance of project failure. Thus, regardless of PDF sector orientation, the roles of the public and private sectors must be clearly defined.

B. Operating Design Principles

15. PDFs are, by their nature, high risk; thus, their capital composition must take into account the realities of that risk. PDFs must be well structured, particularly to avoid moral hazard. Access to PDFs should not be taken as given. The project concept seeking development needs to be founded on sound principles and be in line with sector development plans. Applicants for funds should be required to pass reasonably intensive scrutiny prior to accessing the funds. At a minimum, applications should have a prefeasibility study completed, ideally accompanied by a business plan for the project, describing how the project will be paid for and sustained.

16. Key aspects of PDF design include qualifications for access, defined scope of activities covered, and documented terms and conditions of access.

1. Qualifications for Access

17. Given the high-risk nature of project development, projects and the entities seeking support from PDFs should be prequalified before being allocated funding. Elements of prequalification include

(i) need for the project, i.e., the project as part of a national development plan;

(ii) project suitability for a PPP, i.e., clear roles for the public and private sector and a definitive revenue model;

(iii) threshold project details, including

  (a) a preliminary business plan for the project, describing concept for funding, implementation, and operations; and

  (b) prefeasibility, including site, technology, costs, and environmental and social issues envisioned;

(iv) qualifications of entity seeking to access the PDF, including attributes and track record;

(v) willingness of the requesting party to agree to reasonable rights, terms, and conditions of the PDF (e.g., rights to audit, site and premises visit); and

(vi) estimated project development cost budgets for advisors and well-defined scope of services required to complete development.

18. Despite the inherent unknowns of a project at its earliest stages of development, terms of access to PDFs should be clear and transparent to all participants and applied as objectively as possible.

2. Defined Scope of Activities

19. PDFs are used to undertake the studies, structuring, and legal preliminaries required to define a project; assess its financial, technical, economic, and social viability; and prepare it for a transparent international competitive bidding process. Project development encompasses a wide range of activities. However, PDF funds should be used for purposes immediately relevant and applicable to developing the proposed project. The scope of use of PDF funds includes

(i) technical feasibility studies;

(ii) specialized studies such as traffic studies, resource assessments (e.g., water, wind, solar, and gas reserves), demand forecasts, market assessments, system modeling, and revenue forecasts;

(iii) preliminary engineering, design, and technical specifications;

(iv) operating specifications, both technical and commercial;

(v) project financial structuring, including financial modeling; preliminary consultations with private, bilateral, and multilateral financial institutions; and assessment of the need for and structuring of government support facilities;

(vi) surveys and plot record acquisition;

(vii) technical specifications (for bidding);

(viii) achievement of definitive resource allocations (e.g., water rights, fuel access);

(ix) environmental studies;

(x) resettlement and rehabilitation studies;

(xi) land survey and plot record acquisition;

(xii) social mitigation plan and cost;

(xiii) costing, including engineering, procurement, and construction, financing, and contingencies;

(xiv) economic assessments and value-for-money studies;

(xv) establishing special purpose vehicles;

(xvi) permits, approvals, and licenses (to the extent possible);

(xvii) acquisition of land and/or land rights for projects; and

(xviii) legal contract development (to the extent not already developed under the relevant government's PPP framework).

20. The scope of activities covered by a PDF should be predefined as part of the PDF's design and policy. Activities addressed should include actions required to properly define a project such that prospective bidders, the government, and civil society understand the costs and benefits of a given project. The scope of work under a PDF should include the preliminary design and performance criteria of the project, the boundary conditions of a project, interfaces and risk allocations among participants, revenue schemes, and affordability criteria. While the exact details and scope of development activities may vary from sector to sector and project to project, the base activities qualifying for coverage by the PDF should be identified up front. This will avoid the potential for accusations of misappropriation at later stages, particularly in the case of failure.

21. Relative cost limits should be set for each spending category, at least what the PDF will cover, and/or a list of exclusions. Examples of possible exclusions or limits include

(i) developer salaries and overhead;

(ii) developer transport costs;

(iii) developer corporate statutory costs (e.g., company registration, capitalization, visas);

(iv) costs associated with joint ventures and shareholder agreements;

(v) developer fundraising costs (especially equity);

(vi) taxes and duties payable by a developer; and

(vii) excessive use of consultants (e.g., having lawyers draft original documents rather than review documents).

22. Variations could be project-specific, particularly if a project is validly addressing a new or particularly challenging issue, but any such variation would need to be handled as an explicit exception and processed by the PDF fund manager accordingly. In general, limits on cost coverage forces the development party to share development risk by requiring it to apply its own resources in complement to the monies received from the PDF, whether that is a sector line ministry or a private sector beneficiary of a PDF.

23. The activities for project development scope, quality, time frame for delivery, and budget are important. A careful balance must be struck among these elements. A comprehensively scoped technical feasibility study performed by an unqualified consultant may be of little use in attracting investors and supporting financing for a project. An internationally experienced consulting firm whose scope of work (and/or budget) is too limited may create a product that does not address the full range of project issues or in sufficient detail. Thus, designers of PDFs must be realistic about the nature of the activities covered and how those products will be used.

3. Terms and Conditions of Access

24. PDF project funding should be considered the same as a loan, subject to specific terms and conditions documented in a legal agreement. The funds should be recoverable upon successful financial closure of the project. In the event of failure to complete the project, elements of risk sharing between the development party and the PDF should be considered to share the cost of failure.

25. Prospective elements of a PDF funding agreement could include

(i) time-bound metrics,

(ii) proof of expenditure,

(iii) limits and/or exclusions to expenditures,

(iv) right to audit,

(v) periodic reporting and performance assessment,

(vi) integrity checks and ongoing compliance requirements,

(vii) risk-sharing agreement,

(viii) terms of conversion to grant,

(ix) termination rights,

(x) dispute provisions, and

(xi) PDF funding recovery requirements from successful projects.

26. Design of these terms and conditions must strike a balance between legal, commercial, and technical practicalities.

C. Difficult Design Issues

27. PDF design is not necessarily straightforward. Consideration must be given to the realities of the political–economic situation in a country, the policy environment, and the scope and scale of project-related challenges. Challenging issues facing PDF design include the following:

(i) What happens if funds budgeted for a specific project run out, for example, at 90% completion and the likelihood of completion is reasonable?

(ii) At what point is a project declared unsuccessful? What are the funders' views of sunk costs? What happens to funds expended on an unsuccessful project?

(iii) How are funds recovered? Are there any charges for cost of funds, time value of money, or PDF portfolio risk?

(iv) Should the government, an independent entity, or development finance institutions manage the funds directly?

(v) What are the fund allocation modalities in the country where the PDF resides? If the PDF is set up in the public sector domain, what public finance accounting principles must be considered? Does this affect how the PDF vehicle will be designed?

28. Answers to these questions will evolve during consultations with PDF counterparts on a case-by-case basis depending on several factors, including the funding envelope available, the current state of market development and/or capacity within the country, and the risk tolerance of the funding agencies and administering agencies.

29. Use of a structured entity or trust-based account for a PDF allows for greater control and securing of funds. Specific rules and control of cash in and cash out can be provided. Structures that effectively serve to augment the budget for a given entity should be avoided.

1. Fund Allocation

30. Fund allocation modalities are highly dependent on their source, and how funds are arranged by and devolved within a given country. This is particularly the case for funds received from development finance institutions, which often fall under public sector financial management requirements. In certain countries, PDFs are managed and allocated centrally. In other countries, PDF funds are received by a central body (e.g., the ministry of finance) and onlent to sector-specific ministries for direct management. If the intention of a PDF is to catalyze development in multiple sectors, such sector-specific allocations need to be taken into account in PDF design. Even in centrally controlled fund environments, the means for allocation to multiple sectors will need to be considered; sector ministries may demand definitive support allocations. However, sector preparedness may differ greatly within a given country. Thus, qualifications for accessing a PDF will need to be carefully considered and agreed between funding entity and recipient, regardless of their location.

31 Caution should be exercised in structures that effectively augment government budgets. Such designs tend to be difficult to definitively control, and complications arise around recovery of funds. Often under public finance structures, cost recoveries are classified as government revenue and are effectively taken in as part of general remittances. Getting a timely and accurate recovery against the PDF account may encounter obstacles, particularly in a country experiencing a challenging fiscal environment and/or subject to certain public financial management controls or restrictions imposed as a result of fiscal stress. In general, such budget allocation structured PDFs should be avoided.

2. Independently Managed Project Development Funds

32. Given the complexities surrounding government-allocated funds, management by some form of independent entity or trust structure established to manage PDFs is preferable. Such an entity can have representation from government and from funding groups, but ideally should be independently managed by an appropriately qualified and relevantly skilled fund management entity. The term “fund manager” refers to more than financial and accounting expertise. The fund manager also needs to be populated with an experienced group of development professionals who can identify the elements of a qualifying project. This latter group is often de-emphasized

or even excluded from fund design, which is a mistake. If a trust structure is employed, then the mechanics of fund disbursement must be clearly and objectively defined. The trustee typically must act only on specific instructions or in response to well-defined criteria without latitude for judgment calls. Trust structures may require a PDF evaluation and/or management committee that issues instructions to the trustee. In such structures, the committee must comprise appropriately qualified and relevantly skilled managers.

3. Recovery of Funds

33. In the base concept of a PDF, the facility is typically assumed to be "revolving," i.e., the funds will be recovered from the recipient party, usually at financial close, and recycled back into the PDF. However, the following practicalities must be considered when designing the size and terms of the PDF:

(i) **Initial capitalization and funding horizon.** Project development can take from months to years to complete; during the ensuing period, additional projects will need to be funded each year. The PDF must be sized for maximum expected exposure prior to the commencement of fund recycling; this may amount to multiples of the annual expected development expenditure budget.

(ii) **Accounting for failed projects.** A certain percentage of projects will never be realized, yet funds allocated will need to be accounted for. This may require converting "lost" funds to a grant basis and effectively written off of the PDF's resources. Failures must be designed into and budgeted for in the PDF. Replenishments to the PDF may be required to account for funds lost due to unsuccessful projects.

(iii) **Recovery of funds from successful projects.** A number of recovery modalities are possible within a PDF; each has its own merits and detractions:

(a) dollar-for-dollar recovery of PDF monies allocated to a given project,

(b) time value of the money model (development cost plus interest), and

(c) development cost plus a risk premium to cover failures.

34. Given the risk associated with failed projects, one school of thought is that PDF funds recovered from successful projects should be charged some risk premium to make up for losses on other projects. From the developers' perspective, this is considered unfair; they do not wish to be held accountable for the failures of third parties in developing their projects and/or the shortcomings or inexperience of government in administering project development activities. Perhaps the party accessing funds for the failed project did not possess sufficient skills to undertake development and/or the government failed to properly prequalify that entity. Perhaps the project failures may be due to such issues as difficulties inherent in the government's handling of the failed project, the evolving nature of policies (especially newly implemented policies), or the failed project's initial concept. Accordingly, testing proposed PDF designs among stakeholder groups is important before making a firm commitment to the intended design. A time value of money concept has lesser but similar issues, particularly if the development period is considerably long due to factors already discussed. A nominal cost of funds assessed for project development expenditures is relatively more palatable and justifiable for all parties.

35. In the case where only PDF monies directly associated with a particular project are recovered from a successful bidder, then the PDF may need to be replenished periodically to account for failed project activities. This form of PDF and the implications for additional funding are illustrated in Box A4.1.

D. Cautionary Note

36. PDFs address a critical funding gap in catalyzing infrastructure development within Asian Development Bank developing member countries. However, PDFs are not a panacea. PDFs should not be implemented in the absence of an enabling environment for PPP. The tendency is to promote financial solutions as a means to solve problems facing sector development. While access to funding is required, there is a concomitant need to assure that an appropriate skills and qualifications framework exists within which to apply PDF funding. This will contribute to greater potential for effectively applying this limited capital resource to achieve development success.

E. PDFs in the Region

37. Boxes A4.2 and A4.3 provide examples of PDFs in India and Indonesia.

Box A4.2 **Project Development Fund in India**

The Government of India created the India Infrastructure Project Development Fund (IIPDF) as a revolving fund with basic financing of Rs1 billion. The fund is to support the development of credible and bankable public–private participation (PPP) projects that can be offered to the private sector.

The IIPDF will be available to government agencies for PPP projects for the purpose of meeting project development costs, which may include expenses incurred for feasibility studies, environmental impact studies, financial structuring, legal reviews, and development of project documentation including concession agreements and commercial assessment studies.

The IIPDF is not a source of grant funding. It will assist ordinarily up to 75% of the project development expenses of the government implementing agency. On successful completion of the bidding process, the project development expenditure would be recovered from the successful bidder.

To date, the IIPDF has funded 35 projects, providing Rs323 million for total project cost of approximately Rs425 million.

Source: Asian Development Bank.

Box A4.3 **Project Development Fund in Indonesia**

Lack of adequate preparation of public–private partnership (PPP) projects is one of the most critical impediments affecting infrastructure development in Indonesia. At the Indonesia Infrastructure Summit in January 2005, more than 90 projects were offered to the private sector. However, progress in actually implementing these projects has been disappointing. For example, only six potential investors showed interest in the toll road projects announced for prequalification; frequently, the number has been between zero and two. The absence of adequate and reliable technical and financial information on PPP projects, particularly any detailed analysis of the various risks affecting them, has been the main reason for this low interest and contributed to the government's unwillingness to provide any risk-sharing support.

With recent enhancements of the legal, regulatory, and institutional framework introduced within the broader context of the Asian Development Bank (ADB)–supported Infrastructure Reform Sector Development Program,[a] a more supportive environment for effective private sector participation in infrastructure development has been created. In particular, the Presidential Regulation (Perpres) 67/2005 on Private Sector Participation in Infrastructure Provision provides greater certainty to private investors by clearly defining rules and regulations. However, large-scale private sector participation will remain constrained in the absence of comprehensive and reliable information on PPP projects, and a clear attribution of project risks to parties that are most suitable to manage them. The government's risk management framework, as outlined in the Mini Infrastructure Reform Sector Development Program, Ministry of Finance Decree 38/2006, deals with the latter. To address the lack of adequate project preparation, which also hampers effective risk allocation, the government asked ADB to support the establishment of an infrastructure project development facility (PDF). The project has the following three components:

(i) PPP project preparation and transaction execution, including development of
   (a) a national component of the PDF to fund the preparation and bidding of large projects, mostly in power, toll roads, and transport; and
   (b) a regional component of the PDF to fund the preparation and bidding of smaller decentralized regional infrastructure projects;
(ii) technical advisory services to the PDF and capacity building for PPP project promotion and execution; and
(iii) procurement and administrative services to the PDF

[a] ADB. 2006. *Report and Recommendation of the President to the Board of Directors: Proposed Program Cluster, Loans, Technical Assistance Grant, and Administration of Grant from the Government of the Netherlands to the Republic of Indonesia for the Infrastructure Reform Sector Development Program.* Manila.

Source: Asian Development Bank.

Appendix 5

Transaction Advisory Work of the International Finance Corporation

1. **Core functions.** As part of the public–private partnership (PPP) transaction advisory work, the International Finance Corporation (IFC) performs the following functions:

(i) identifies bankable projects;

(ii) conducts due diligence;

(iii) prepares project contracts;

(iv) advises on the optimum financial structure;

(v) identifies qualified investors; and

(vi) sells, negotiates, and closes.

2. **Fee structure.** This is based on

(i) fees designed on a cost-recovery basis,

(ii) a retainer of 10%–30% payable by the government, plus

(iii) a success fee of 70%–90% payable by the successful investor.

3. **Managing a multidisciplinary team of experts**. As part of its transaction advisory role, IFC manages a number of experts and consultants working on a single mandate. Usually, IFC will form a multidisciplinary team of expert consultants, including

(i) engineers to advise on project design and construction costs;

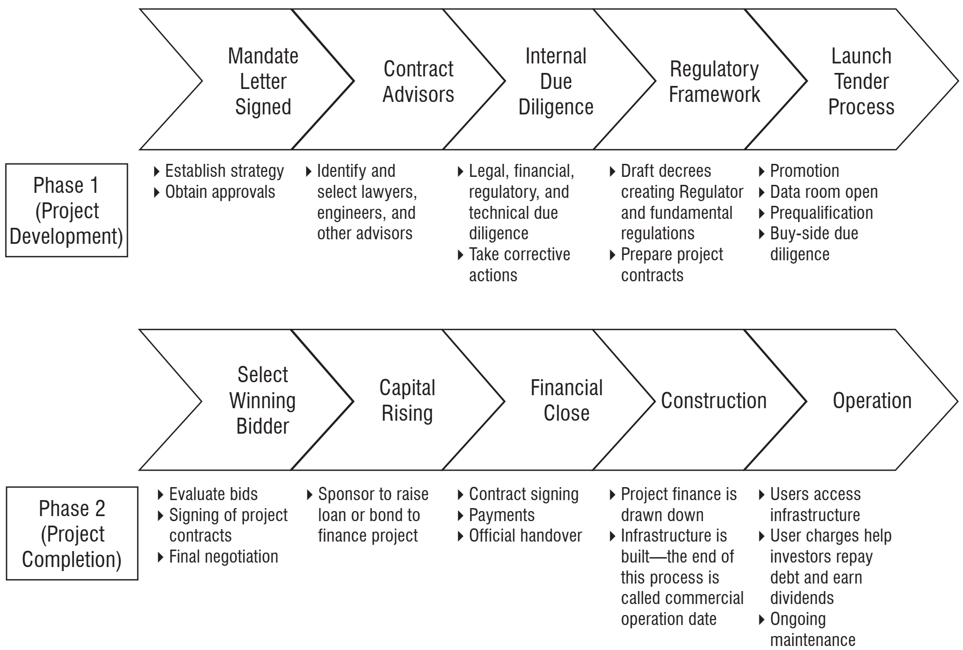
(ii) lawyers, typically from an international law firm, as well as local counsel, to draft project contracts once the commercial terms have been decided by the client agency and IFC;

(iii) environment consultants, required in most countries before a major construction project can proceed; and

(iv) accountants to address accounting and tax implications.

4. **Commercial and financial structuring.** IFC conducts a valuation to help determine which of several alternative transaction structures offers the highest rate of economic return. The essential tool used to conduct a valuation is a financial model, which reflects not only economic inputs but also the results of due diligence.

Figure A5 **Scope of Services**



Source: International Finance Corporation.

5. **Conducting due diligence.** IFC prepares the following due diligence materials to help prospective investors evaluate the investment:

(i) technical matters, such as engineering surveys, analysis of user charges, and operation and maintenance technical specifications; a schedule of penalties for noncompliance; and a plan for contract supervision and monitoring;

(ii) legal issues, such as the terms of the concession agreement and the regulatory environment; and

(iii) financial considerations such as sources of debt or equity and the likely economic returns to investors

6. **Project marketing.** IFC uses the following tools to market the deal:

(i) a “teaser,” a brief document that describes project economics and the investment opportunity;

(ii) an information memorandum or prospectus, a selling document that describes the concession in extensive detail;

(iii) a road show showcasing the transaction to investors in major financial centers;

(iv) due diligence materials posted to an electronic data room for examination by preselected bidders; and

(v) a bidders’ conference during which investors have the opportunity to conduct site visits and meet with regulators.

7. **Managing the procurement process.** IFC follows four steps:

(i) prequalification of bidders, where IFC invites interested parties to demonstrate

   (a) technical capacity to carry out the project,

   (b) qualifications and prior experience, and

   (c) financial capacity to carry out the project;

(ii) request for proposal, which sets out

   (a) data on the market, traffic flows, and so on;

   (b) availability, service, and other output requirements;

   (c) proposed pricing formula; and

   (d) a draft concession agreement;

(iii) the bid deadline, form of bid required, and the basis for evaluation; and

(iv) when a preferred bidder is selected, a signed letter of intent as the first step to concluding a final contract.

8. **Facilitating the financial close.** IFC normally oversees the negotiation process to finalize project contracts and ensure legal formalities are observed at close, including ensuring all the condition precedents are met.

Appendix 6
Integration of ADB Department Activities

Department	Planning			Implementation	Monitoring
	Pre-Country Partnership Strategy	Country Partnership Strategy	Country Operations Business Plan		
Regional Department	Pre-CPS advocacy of PPP Consultations with DMCs on needs, resources, and available solutions PSP and PPP solutions are a priority	Codify PPP and PSP projects in DMCs for the CPS period Identify annual PPP projects (in consultation with regional department sector and PPP resources) Allocate department resources, plan budgets to reflect country needs Design PPP and PSP projects jointly between sector divisions and PPP experts PPP experts provide project concept support (preconcept paper) to regional department divisions and resident missions Conduct PDF design and negotiation with DMCs (joint consultation with regional department divisions, resident missions, and PPP experts)		PPP and sector experts provide support for project concept, design, and implementation Allocate PDF funding to specific projects Design anticipated project finance structure to alert need for cofinancing and/or PSOD participation Implement PPP project including up-front skill support and financing	Quality assurance and control, early intervention Consultations with DMCs on impacts and outcomes of projects Active participation in outcome monitoring included in project design Feedback from project completion reports
PSOD	Liaise with private sector investors and lenders to advise regional departments and DMCs of the current market requirements and preferences Advise on the market status of commercial lender, capital market, and information of terms available Ensure availability and applicability of risk management products		Examine projects being proposed by regional departments for potential PSOD and/or commercial financing Participate in supporting bidders on projects with no recourse to the sovereign financing	Ensure early identification of funding requirements and provision of direct investment and funding Arrange commercial cofinancing and guarantees for sovereign and nonsovereign financing	Monitor performance of PPP projects, commercial cofinancing, and the market in general
PPP CoP	Conduct knowledge management, brainstorming, sharing of latest developments and concept refinements on PPP		Regional department consultation with PPP CoP on PPP concepts, sharing experience to improve project design, early buy-in	Vet proposed projects as peers for design quality, impact, risks	Monitor performance and implementation of ADB PPP projects and PPP projects in general in Asia

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Integration of ADB Department Activities *(continued)*

Department	Planning: Pre-Country Partnership Strategy	Planning: Country Partnership Strategy	Planning: Country Operations Business Plan	Implementation	Monitoring
OCO	Identify development finance institution and/or export credit agency views on DMC credits, information on terms available			Ensure early identification of funding requirements and opportunities for development finance institution cofinancing for sovereign financing	
ORM	Support regional departments as necessary in evaluating DMCs' risk management capability in implementing PPP			Assess risk of nonsovereign transactions	Provide support for nonsovereign account administration
IED, SES	Provide performance feedback on successes and failures of legacy PPP and PSP projects; make recommendations for areas of strengthening and improvement			Provide check of project concepts to assure lessons are applied consistently	Review ADB PPP projects for feedback into planning for project and bank resources development
OGC	Assist regional departments in reviewing the regulatory and legal environment in the DMC in which PPP advisory activities are anticipated Support, as necessary, regional departments to propose and implement necessary reforms to improve the regulatory and legal environment for PPP in DMCs			Support PPP advisory teams in regional departments to prepare and review PPP contracts Assist regional departments and/or PSOD to draft and execute necessary legal contracts and agreements	Provide legal support to regional departments and/or PSOD if needed
COSO	Leverage experience in each DMC to identify areas where improvements could be made to facilitate better, more robust PPP activities			Provide inputs on proper procurement for PPP projects Advise project teams on means to support development of a robust enabling environment for procurement	Support monitoring of results of PPP processes to identify lessons and outcomes achieved, providing feedback to the planning, concept, and execution phases
RSDD	Support, as secretariat, PPP CoP's knowledge management on PPP models and performance worldwide and especially from other development finance institution projects in ADB DMCs			Ensure opportunities for knowledge dissemination	Gather feedback from ADB projects for knowledge management products and knowledge sharing
SPD	Use feedback from operating units on anticipated funding requirements			Monitor demand for financing products, quantum, and nature of funding support	Assess performance against targets in DMCs Anticipate budget requirements
BPMSD	Develop training programs to impart skills required for project finance and PPP with assistance of PPP CoP or PSOD Refine human resources development plans to assure a critical mass of appropriately skilled professionals in coordination with PPP CoP				

BPMSD = Budget, Personnel, and Management Systems Department; CoP = community of practice; COSO = Central Operations Services Office; CPS = country partnership strategy; DMC = developing member country; IED = Independent Evaluation Department; OCO = Office of Cofinancing Operations; OGC = Office of General Counsel; ORM = Office of Risk Management; PDF = project development fund; PPP = public–private partnership; PSOD = Private Sector Operations Department; PSP = private sector participation; SES = special evaluation study; SPD = Strategy and Policy Department; RSDD = Regional and Sustainable Development Department.
Source: Asian Development Bank.

Appendix 7
Results and Monitoring Framework

Table A7.1 **Public–Private Partnership Operational Plan, 2012–2013**
(Template to be progressively used to capture achievement of PPP-related performance up to 2020)

Key Result Areas and Outcomes	**Outputs** (with ADB assistance)	**Outcome Indicators** (Targets for subsequent years using 2011 as the baseline)	Responsibility
Pillar 1. Increased ADB support for country advocacy and capacity development on the use of PPP[a]			
P1. Increased ADB support to enhance PPP readiness in DMCs Notes: (i) The type of capacity development will vary depending on the PPP readiness of the DMC. The scope captured herein will address the needs of all pillars. (ii) This interim outcome is intended to serve as an input to achievement of outcomes P2 and P3 and hence should be taken as a work in progress. (iii) In countries with significant PPP activities, provincial and sector PPP readiness may continue to increase, though the count of the country as a whole remains the same. Such regional departments may want to adopt a monitoring and reporting mechanism with the same subindicators for their internal use (Table A6).	**P1.1:** Country and sector ADB-assisted advocacy or capacity development programs and events conducted, as evidenced by (i) number and value of capacity development components (cost tables) in approved ADB loans or grants; (ii) number and value of capacity development budget as an initiative of DMCs to implement a national PPP strategy and business plan; and/or (iii) ADB staff time and consultancy person-months and value dedicated	**P1.1:** Number of DMCs (where ADB delivered advocacy and capacity development) with enhanced PPP readiness increased Target: Annual increase with respect to baseline number of countries at the end of 2011	Regional departments for country-specific or subregional sector events
	P1.2: Regional or subregional ADB-assisted advocacy or capacity development programs and events conducted (as evidenced by activities mentioned under P1.1)	**P1.2:** Number of DMCs (where ADB delivered advocacy and capacity development) with enhanced PPP readiness increased Target: Annual increase with respect to baseline number of countries at the end of 2011	Regional departments for subregional activities and events RSDD regional events

continued on next page

Table A7.1 *(continued)*

Key Result Areas and Outcomes	**Outputs** (with ADB assistance)	**Outcome Indicators** (Targets for subsequent years using 2011 as the baseline)	**Responsibility**
Pillar 2. Increased ADB support for developing an enabling PPP framework			
P2: Improved PPP-enabling frameworks in DMCs Notes: (i) Covers policy, legal, regulatory, and organizational frameworks (ii) Linked as input to achievement of outcomes under P3 and P4 (iii) In countries with significant PPP activities, provincial and sector PPP frameworks may continue to increase, although the count for country as a whole remains the same. Such regional departments may want to adopt a monitoring and reporting mechanism with the same subindicators for their internal use (Table A6).	**P2:** Countries adopt PPP policy, legislative, and regulatory sector and organizational reforms (national or subsovereign entity level within the country) substantially in line with ADB advice as evidenced by (i) number and value of projects or TA reports supporting new drafts or enhancements, improvements in existing provisions in PPP policy, legislative, and regulatory reforms including sector-specific guidelines or tool kits or standard documentation or PPP procurement practices or promulgation of supporting processes (such as Equator Principles for socially responsible and sound environmental management practices) as accepted by DMCs; (ii) establishment and/or improvement of organizational PPP infrastructure (e.g., PPP unit or center or other institutional setups to promote private sector participation in PPP); and/or (iii) ADB staff time and consultancy person-months and value dedicated. Note: ADB technical assistance and financial support for DMCs to establish and/or enhance PSD in general (e.g., improving, enhancing, and strengthening overall investment climate, financial and capital markets, accounting and credit standards, and sound corporate governance practices) are desirable for PSD but are not proposed to be included herein.	**P2:** Number of DMCs with improved PPP-enabling frameworks undertaken with ADB assistance increased Target: Annual increase with respect to baseline number of countries at the end of 2011	Regional departments

continued on next page

Table A7.1 *(continued)*

Key Result Areas and Outcomes	Outputs (with ADB assistance)	Outcome Indicators (Targets for subsequent years using 2011 as the baseline)	Responsibility
Pillar 3. Increased ADB support for creation of project pipelines and undertaking project development			
P3.1: Increased number of PPP projects developed for implementation under any PPP approach[b]	**P3.1.1:** DMCs agreeing to undertake implementation of PPP projects in priority sectors under a national PPP road map or CPSs and/or COBPs as evidenced by (i) inventory of potential brown and greenfield PPP assets and/or projects with project and/or sector selection criteria; and/or (ii) number of PPP project prefeasibility studies carried out for the inventory	**P3.1.1:** Number of DMCs being supported by ADB to develop PPP projects Target: Annual increase with respect to baseline number of countries at the end of 2011	Regional departments
	P3.1.2: Projects commencing project development as PPP projects	**P3.1.2:** Number of ADB-supported PPP projects commencing development Target: Annual increase in number of projects with respect to baseline at the end of 2011	Regional departments
	P3.1.3: PPP project awards concluded in the PPP project development[c] cycle as evidenced by mandates agreed with the client for providing (i) technical advisory services through staff time, and/or (ii) ADB financial support through consultancy person-months and value, and (iii) project bid evaluation report	**P3.1.3.1:** Number of ADB-supported PPP projects[d] having executed agreements for implementation with only public financing Target: Annual increase in number of projects with respect to baseline at the end of 2011 Note: Linked with outcome indicator P3.2.1	Regional departments
	Note: Intermediate progress toward achievement of the outcome indicators P3.1.2.1 and P3.1.2.2 can be captured by the following interim stage outputs: **P3.1.3.1:** Number of projects for which development as PPP projects is completed **P3.1.3.2:** Number of projects for which bidding as PPP projects is initiated by the client **P3.1.3.3:** Number of projects for which bidding as PPP projects is completed by the client (but award is yet to take place)	**P3.1.3.2:** Number of ADB-supported PPP projects[e] having executed agreements for implementation with public and private sector or only private sector finance Target: Annual increase in number of projects with respect to baseline at the end of 2011 Note: Linked with outcome indicator P3.2.1	Regional departments

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Table A7.1 *(continued)*

Key Result Areas and Outcomes	Outputs (with ADB assistance)	Outcome Indicators (Targets for subsequent years using 2011 as the baseline)	Responsibility
P3.2: Increased ADB financial resources utilized and recovered for developing PPP projects under any PPP approach	**P3.2:** Agreement on utilization and recovery of ADB financial assistance either from the private sector bidder on successful agreement executed with the private sector bidder (projects having some private financing) or reimbursed by the government (projects having only public financing)	**P3.2.1:** Amount of ADB funding (ordinary capital resources, grants, other resources, with break-up) deployed for project development Target: Annual increase in project development funding with respect to baseline at the end of 2012 Note: Linked with outcome indicators P3.2.2 and P4.2	Regional departments
		P3.2.2: Amount and/or extent (%) of ADB project development funding revolved for continued project development Target: Annual increase in revolving the project development funding with respect to baseline at the end of 2012	Regional departments
Pillar 4. ADB support for leveraging project financing for PPP project pipeline			
P4: Increased project value created by attracting private investment through leveraging of ADB funding support for PPP projects Note: The leveraging multiplier is estimated only if private sector investment is attracted in a project that may have public and ADB financing. It is not counted if it is a public-financed project with ADB support alone.	**P4.1:** Projects developed under outcome indicator P3.1.2.2 reach financial closure after execution of PPP agreements with or without ADB financing	**P4.1.1:** Total project value created with ADB facilitation Note: Linked with outcome indicator P4.2 Target: Annual increase in the project value created with respect to baseline at the end of 2011	Regional departments, PSOD
		P4.1.2: Total project financing provided by ADB Note: Linked with outcome indicator P4.2 Target: Annual utilization of ADB financing for PPP projects with respect to baseline at the end of 2012	Regional departments, PSOD

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Table A7.1 *(continued)*

Key Result Areas and Outcomes	Outputs (with ADB assistance)	Outcome Indicators (Targets for subsequent years using 2011 as the baseline)	Responsibility
	P4.2: Leveraging achieved using ADB financial resources	**P4.2:** Leveraging multiplier of ADB financing $= \frac{\text{(Project value created by ADB)}}{\text{(ADB project development financing + ADB project financing)}}$ Target: Annual increase in leveraging of ADB financing with respect to baseline at the end of 2011	Regional departments, PSOD

ADB = Asian Development Bank, COBP = country operations business plan, CPS = country partnership strategy, DMC = developing member country, PPP = public–private partnership, PSD = private sector development, PSOD = Private Sector Operations Department, RSDD = Regional and Sustainable Development Department.

[a] Advocacy will be needed more in DMCs having low PPP readiness and unaware of country and sector PPP potential. Capacity development can be undertaken for all other DMCs with medium to good PPP readiness, depending on the country- and sector-specific needs, across all pillars.

[b] ADB Public–Private Partnership Operational Plan, 2012–2020 definition: "A PPP refers to a contractual arrangement between public (national, state, provincial, or local) and private entities through which the skills, assets, and/or financial resources of each of the public and private sector are allocated in a complementary manner, thereby sharing the risks and rewards, to seek to provide optimal service delivery and good value to citizens."

[c] The PPP project pipeline will be distinct from the public sector or private sector project pipelines. The prefeasibility screening as outlined in the PPP operational plan is expected to act as a filter to determine the preliminary suitability of a potential PPP project, for development using either public financing alone or using a mix of public and private finance. PPP projects like performance-based service or management contracts with risk sharing are expected to have public finance, while lease, build–operate–transfer, and concession types of higher PPP forms are expected to have a mix of public and private financing as per the bankability of the project.

[d] Typically, performance-based service, management, or affermage contracts as explained in the PPP operational plan.

[e] Typically, lease, build–operate–transfer, and concessions (and their variants) as explained in the PPP operational plan.

Source: Asian Development Bank.

Table A7.2 **Indicators for Monitoring and Reporting Detailed Engagement**

Key Result Areas and Outcomes	**Outputs** (with ADB assistance)	**Outcome Indicators** (Targets for subsequent years using 2011 as the baseline)	**Responsibility**
Pillar 1. Increased ADB support for country advocacy and capacity development on the use of PPP			
P1: Increased ADB support to promote use of PPP arrangements	**P1.1:** Country and sector ADB-assisted advocacy or capacity development programs and events conducted	**Optional subindicators P1.1.1–P1.1.2:** (available for regional departments desiring to state them in addition to P1.1 considering that their depth of engagement is not captured nationally) **P1.1.1:** Number of subnational events (where ADB delivered advocacy and capacity development) with enhanced PPP readiness increased **P1.1.2:** Number of sector events (where ADB delivered advocacy and capacity development) with enhanced PPP readiness increased	Regional departments for country-specific or subregional sector events
Pillar 2. Increased ADB support for developing an enabling PPP framework			
P2: Improved PPP-enabling frameworks in DMCs	**P2:** Countries adopt PPP policy, legislative, sector, regulatory, and organizational reforms substantially (national or subsovereign entity level within the country) in line with ADB advice	**Optional subindicators:** (available for regional departments desiring to state them in addition to P2.1 considering that their depth of engagement is not captured nationally) **P2.1.1:** Number of subnational entities that have approved or accepted revised PPP-enabling frameworks or organizational arrangements with ADB assistance **P2.1.2:** Number of sector entities that have approved or accepted revised PPP-enabling frameworks or organizational arrangements with ADB assistance	Regional departments

ADB = Asian Development Bank, DMC = developing member country, PPP = public–private partnership.
Source: Asian Development Bank.

Public–Private Partnership Operational Plan 2012–2020
Realizing the Vision for Strategy 2020: The Transformational Role of Public–Private Partnerships in Asian Development Bank Operations

The Public–Private Partnership Operational Plan 2012–2020 provides a consistent analytical and operational framework for scaling up public–private partnerships (PPPs) in support of Strategy 2020. The PPP operations of the Asian Development Bank (ADB) are based on four pillars: (i) advocacy and capacity development, (ii) enabling environment, (iii) project development, and (iv) project financing. Applying PPP principles holistically to ADB operations holds the potential to vastly improve the quality of design and outputs of PPP projects in support of Strategy 2020 targets. It also provides ADB with an opportunity to significantly leverage its limited resources in attracting private sector investments and commercial financing to meet the Asia and Pacific region's huge and growing infrastructure investment needs.

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.

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