PPP Overview
Identification
Selection
Prioritization
and Preparation of a PPP Project
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<th>Description</th>
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<tbody>
<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
</tr>
<tr>
<td>ADSCR</td>
<td>annual debt service cover ratio</td>
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<td>ATP</td>
<td>ability to pay</td>
</tr>
<tr>
<td>BCR</td>
<td>benefit/cost ratio</td>
</tr>
<tr>
<td>BOI</td>
<td>Bureau of Investments</td>
</tr>
<tr>
<td>BOO</td>
<td>Build-Own-and-Operate</td>
</tr>
<tr>
<td>BOT</td>
<td>Build-Operate-and-Transfer</td>
</tr>
<tr>
<td>CAPM</td>
<td>Capital Asset Pricing Model</td>
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<tr>
<td>CIIP</td>
<td>Comprehensive and Integrated Infrastructure Program</td>
</tr>
<tr>
<td>CNC</td>
<td>Certificate of Non-Coverage</td>
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<tr>
<td>COA</td>
<td>Commission on Audit</td>
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<td>CPC</td>
<td>Cost Probability Calculator</td>
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<tr>
<td>DBCC</td>
<td>Development Budget Coordination Committee</td>
</tr>
<tr>
<td>DBM</td>
<td>Department of Budget and Management</td>
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<tr>
<td>DENR</td>
<td>Department of Environment and Natural Resources</td>
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<td>DepEd</td>
<td>Department of Education</td>
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<td>DILG</td>
<td>Department of the Interior and Local Government</td>
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<td>DOF</td>
<td>Department of Finance</td>
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<td>DOJ</td>
<td>Department of Justice</td>
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<td>DOTC</td>
<td>Department of Transportation and Communications</td>
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<td>DPWH</td>
<td>Department of Public Works and Highways</td>
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<tr>
<td>DSCR</td>
<td>debt service cover ratio</td>
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<td>ECA</td>
<td>Environmentally Critical Area</td>
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<td>ECC</td>
<td>Environmental Compliance Certificate</td>
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<td>Environmentally Critical Projects</td>
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<td>ECRSC</td>
<td>EIA Coverage and Requirements Screening Checklist</td>
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<td>EIA</td>
<td>Environmental Impact Assessment</td>
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<td>EIRR</td>
<td>Economic Internal Rate of Return</td>
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<td>EIS</td>
<td>Environmental Impact Statement</td>
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<td>EMB</td>
<td>Environmental Management Bureau</td>
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<td>EMP</td>
<td>Environmental Management Plan/Program</td>
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<td>FIRR</td>
<td>Financial Internal Rate of Return</td>
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<tr>
<td>FOA</td>
<td>forward obligational authority</td>
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<tr>
<td>FS</td>
<td>Feasibility Study</td>
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<tr>
<td>GCG</td>
<td>Governance Commission for GOCCs</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>GFI</td>
<td>Government Financial Institution</td>
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<td>GOCC</td>
<td>Government Owned and Controlled Corporation</td>
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<tr>
<td>GOP</td>
<td>Government of the Philippines</td>
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<tr>
<td>GW</td>
<td>Gateway</td>
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<tr>
<td>IA</td>
<td>Implementing Agency</td>
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<td>ICC</td>
<td>Investment Coordination Committee</td>
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<tr>
<td>IEE</td>
<td>Initial Environmental Examination</td>
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<tr>
<td>IPP</td>
<td>Investment Priorities Plan</td>
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<tr>
<td>IRR</td>
<td>Implementing Rules and Regulations</td>
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<td>IT</td>
<td>Information technology</td>
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<td>LDC</td>
<td>Local Development Council</td>
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<td>LGU</td>
<td>Local Government Unit</td>
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<td>LRT</td>
<td>Light Rail Transit</td>
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<td>LWUA</td>
<td>Local Water Utilities Administration</td>
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<tr>
<td>M&amp;E</td>
<td>Monitoring &amp; Evaluation</td>
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<tr>
<td>MC</td>
<td>Memorandum Circular</td>
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<tr>
<td>MCA</td>
<td>multi-criteria analysis</td>
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<tr>
<td>MRT</td>
<td>Metro Rail Transit</td>
</tr>
<tr>
<td>MWSS</td>
<td>Metropolitan Waterworks and Sewerage System</td>
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<tr>
<td>MYOA</td>
<td>Multi-Year Obligational Authority</td>
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<tr>
<td>NAIA</td>
<td>Ninoy Aquino International Airport</td>
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<tr>
<td>NEDA</td>
<td>National Economic and Development Authority</td>
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<td>NG</td>
<td>National Government</td>
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Introduction

Public-Private Partnership (PPP) is a strategy for procurement which involves a long-term contract between a government and a private entity for the provision of a public service. PPP projects require detailed preparation and planning, and active management of the procurement phase to attract private sector investment. They also require careful contract design to set performance standards and establish parameters to monitor and evaluate adherence to those performance standards. PPP involves proper allocation of risks between the private sector and the government. Breaking down the PPP process in defined steps (many of which also apply to traditional public sector projects) can greatly simplify the process (See Figure 1.1).

![Figure 1.1 Stages of the PPP Project Process](image)

The government may not have all the in-house resources to undertake the necessary steps in the PPP process, therefore PPP advisers dealing with the legal, technical, financial, environmental, and other specialties may be engaged during the project preparation process.

This Manual seeks to provide technical guidance to national government agencies (NGAs) in undertaking PPPs. It aims to provide a sourcebook of good PPP practice and to facilitate understanding of the key issues and procedures involved in the procurement of PPP arrangements.
What is in this Manual?

The Manual is divided into four volumes. Volumes 1 to 3 deal with a stage or stages of the PPP project process (see Table 1.1). Volume 4 contains a number of annexes and a compendium of external resources which provide additional technical information. Annexes specific to particular chapters are introduced generally at the beginning when the objectives are discussed.

In some instances, specific issues are discussed in more detail with text boxes because of their fundamental role in the design of PPP arrangements. Checklists are included at the end of each stage to remind the reader of the key tasks that have to be fulfilled before moving to the next stage.
## Table 1.1 Manual Content and the PPP Project Process

<table>
<thead>
<tr>
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<td><strong>Volume III:</strong> Contract Management</td>
<td><strong>Stage 3</strong></td>
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<td><em>Chapter 10:</em> Contract Management – Getting Organized</td>
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<td><strong>Stage 4</strong></td>
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<td><em>Annex 2:</em> Overview of Project Finance</td>
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<td><em>Annex 3:</em> Philippine Law on the Protection of Indigenous People’s Rights</td>
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<td><em>Annex 4:</em> Guidelines for Gender Mainstreaming in PPP Projects</td>
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<td><em>Annex 5:</em> Guidelines for Environmental Assessment and Monitoring of PPP Projects</td>
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<td><em>Annex 6:</em> Instruments Issued by Donors and Bilaterals in Support of PPP Projects</td>
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<td><em>Annex 7:</em> Generic Preferred Risk Allocation Matrix Adopted by National Economic and Development Authority (NEDA) for PPP Project Evaluation</td>
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<td><em>Annex 8:</em> Refinancing Gains</td>
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<td><em>Annex 9:</em> Compendium of External Resources</td>
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Who Should Use This Manual?

The Manual is primarily intended for public sector agencies which are in charge of PPP projects. Users may find themselves at different stages of decision-making in the PPP project cycle. The Implementing Agency (IA) is the main user of the manual but the oversight agencies, such as Public-Private Partnership (PPP) Center, Department of Budget and Management (DBM), Department of Finance (DOF), National Economic and Development Authority (NEDA), Department of Environment and Natural Resources (DENR) etc., may also find the manual useful in fulfilling their role in the PPP process.
How to Use this Manual?

The Manual is intended to be used as a:

- Source of information on the Philippine PPP Program, its institutional set-up, legal and regulatory framework and procedures for identifying, selecting, prioritizing, approving, tendering, negotiating, implementing, monitoring and evaluating PPP Projects;
- Guide to PPP project preparation; and
- Reference of procurement processes and implementation issues in PPPs.

The Manual has inherent limitations, as follows:

- In a rapidly changing environment, such as that characterized by infrastructure PPPs worldwide, new practices develop quickly, occasionally making existing ones obsolete;
- Despite the emphasis on global best practice, the legal framework in place in the Philippines has to be taken into account when designing a best-practice PPP arrangement; and
- This best practice does not in any way replace the need for an IA to obtain professional advice on legal, technical, financial, environmental and other matters.
CHAPTER 1
PPP Overview

1.1 Background

PPP can be broadly defined as a contractual agreement between the Government and a private firm targeted towards financing, designing, implementing and operating infrastructure facilities and services that were traditionally provided by the public sector. It embodies optimal risk allocation between the parties – minimizing cost while realizing project developmental objectives. Thus, the project is to be structured in such a way that the private sector gets a reasonable rate of return on its investment.

PPP offers monetary and non-monetary advantages for the public sector. It addresses the limited funding resources for local infrastructure or development projects of the public sector thereby allowing the allocation of public funds for other local priorities. It is a mechanism to distribute project risks to both public and private sectors. PPP is geared for both sectors to improve project implementation processes and efficiency in delivering services to the public. Most importantly, PPP should emphasize Value for Money (VfM) – focusing on reduced costs, better risk allocation, faster implementation, improved services and possible generation of additional revenue.

Elements of Public-Private Partnership

- Strategic mode of procurement
- A contractual agreement between the public sector and the private sector
- Shared risks and resources
- Value for Money
- Outcome orientation
- Acceleration of infrastructure provision and faster implementation

In many parts of the world, the demand for investment in public services (such as the provision of roads, urban transport, hospitals and schools) is huge – indicating that governments alone cannot fill the investment gap. Thus, many governments are attracted to PPPs as they harness private sector financing and expertise to improve the delivery of basic services and the management of facilities provided by the public sector. Besides addressing limited financing for public services, PPPs
(in particular those with long-term contracts) can bring significant benefits or value for money for governments, such as:

- Greater efficiency in the use of resources as risks are allocated to the party which is able to best manage the risk;
- The exposure of private capital gives the private sector an incentive to design and build assets or deliver services on time and within the agreed budget; and
- Greater accountability and level of quality assurance as the government faces scrutiny by lenders and investors in the project.

Regardless of the type of project (e.g. power generation, roads, or provision of schools or hospitals), the broad nature of the PPP is essentially determined by what the public or private parties assume within the partnership, e.g. rights, obligations, and risks. In this regard, two general forms of PPP structure are common: availability and concession-based PPPs.

1. **Availability PPPs** – a form of PPP wherein the public authority contracts with a private sector entity to provide a public good, service or product at a constant capacity to the IA for a given fee (capacity fee) and a separate charge for usage of the public good, product or service (usage fee). Fees or tariffs are regulated by contract to provide for recovery of debt service, fixed costs of operation and a return on equity. While there are no usage fees in this project, an example is the PPP for School Infrastructure Project (PSIP) Phase 1 wherein the private sector is responsible for making available classrooms (consisting of design, financing, construction and maintenance) for a contract fee with the Department of Education (DepEd).

2. **Concession PPPs** – a form of PPP wherein the government grants the private sector the right to build, operate and charge public users of the public good, infrastructure or service, a fee or tariff which is regulated by public regulators and the concession contract. Tariffs are structured to provide for recovery of debt service, fixed costs of operation, and return on equity. An example of a concession PPP is the Ninoy Aquino International Airport (NAIA) Expressway wherein the Department of Public Works and Highways (DPWH) granted the private sector the right to build and operate the expressway. Under the contract, the private sector was given the right to collect a toll (user charge) from the users of the expressway.

The above-mentioned PPP forms are much broader than the various contractual arrangements such as Build-Operate-and-Transfer, Build-Lease-and-Transfer, Rehabilitate-Operate-and-Transfer, etc. which can be considered as PPP arrangements reflecting the different appetites for risk and the role of the project proponent. A build-operate-and-transfer (BOT), or its variants, project can be structured as either a concession or availability agreement. From the examples above, the PSIP Phase 1 Project of DepED is structured as a Build-Lease-and-Transfer contract while the NAIA Expressway is a Build-Transfer-and-Operate contract. See Table 1.2 below for a detailed discussion of the various contractual arrangements and the role of the public and private sectors in these arrangements.

### 1.2 Existing Public-Private Partnership Framework and Overview of the Agency Role

#### 1.2.1 Public-Private Partnership as a Development Strategy

Guided by the principle of inclusive growth, the Philippine Development Plan 2011-2016 (PDP) espouses public-private partnerships as a cornerstone strategy to improve infrastructure and related development services, which in turn are expected to enable economic productivity and employment generation. Inadequate infrastructure has been, and continues to be, a binding constraint. Infrastructure investments as a percentage of gross domestic product (GDP) peaked...
in 1997 at 2.48%, but generally declined over the ensuing years to 1.56% in 2010. In contrast, our Asian neighbors such as Thailand and Malaysia averaged 4.0% of GDP and have been achieving higher economic growth rates.¹

A low level of investment, coupled with a low interest rate regime, is an indicator of potential investment opportunities in the economy. The PDP identifies the critical areas for stimulating PPP investments: improved project preparation and implementation; coordinated and integrated infrastructure development across sectors and between national and local government programs; and an improved institutional and regulatory environment of the infrastructure sector.

1.2.2  Enabling Environment

The basic legal framework for PPPs is established by the 1987 Constitution, Article II, Section 20, as well as in Republic Act (RA) No. 6957, as amended by RA 7718, or the BOT Law, and its Revised Implementing Rules and Regulations (IRR). The BOT Law and its Revised IRR is the primary legal basis of PPP in the Philippines. Accordingly, it is discussed at length herein.

A. The BOT Law

The BOT Law recognizes the indispensable role of the private sector as a driving force in national growth and development. It lays out the policy guidelines for the private sector to finance, construct, operate and maintain vital infrastructure and development facilities that are typically financed by the government. It grants authority for the private sector to recoup its investments, plus a reasonable return thereon, through the collection of tolls, fees and charges from facility users. It likewise provides the basis for the Philippines government to provide incentives and support (both financial and non-financial) to the private sector proponent.

The highlights of the Law are described below.

Definition of a PPP

The proposed amendment of the BOT Law defines a PPP as:

“A contractual agreement between a project proponent and an implementing agency for providing an infrastructure facility or service, in which the project proponent bears significant risk and/or management responsibility. In order to recover its investment plus a rate of return, the project proponent may be allowed to collect tolls, fees, rentals, and/or charges; engage in commercial development; or receive subsidy, viability gap funding and direct government payments, among others. It may be in the form of concession fees or availability payments.”

Authorized contracting government agencies

Under the BOT Law, all concerned departments, bureaus, offices, commissions, authorities, or agencies of the national government, including government owned and controlled corporations (GOCCs), government financial institutions (GFIs), state universities and colleges (SUCs), and local government units (LGUs) authorized by law or

¹ Philippine Development Plan 2011-2016.
by their respective charters to undertake infrastructure or development projects may act as IA and elect to pursue PPP projects under the BOT Law.

**Eligible types of projects**

The Revised IRR of the BOT Law enumerates the list of activities which may be undertaken under any of the recognized and valid BOT contractual arrangements (PPP modalities). These include, among others:
1. Highways, including expressways, roads, bridges, interchanges, tunnels, and related facilities
2. Railways or rail-based projects that may or may not be packaged with commercial development opportunities
3. Non-rail based mass transit facilities, navigable inland waterways and related facilities
4. Port infrastructures like piers, wharves, quays, storage, handling, ferry services and related facilities
5. Airports, air navigation, and related facilities
6. Power generation, transmission, sub-transmission, distribution, and related facilities;
7. Telecommunications, backbone network, terrestrial and satellite facilities and related service facilities
8. Information technology (IT) and data base infrastructure, including modernization of IT, geo-spatial resource mapping and cadastral survey for resource accounting and planning
9. Irrigation and related facilities
10. Water supply, sewerage, drainage, and related facilities
11. Education and health infrastructure
12. Land reclamation, dredging and other related development facilities
13. Industrial and tourism estates or townships, including ecotourism projects such as terrestrial and coastal/marine nature parks, among others and related infrastructure facilities and utilities
14. Government buildings, housing projects
15. Markets, slaughterhouses, and related facilities
16. Warehouses and post-harvest facilities
17. Public fishports and fishponds, including storage and processing facilities
18. Environmental and solid waste management related facilities such as, but not limited to, collection equipment, composting plants, landfill and tidal barriers, among others; and
19. Climate change mitigation and adaptation infrastructure projects and related facilities.

**Contractual arrangements under the BOT Law**

The following are the contractual arrangements which may be undertaken under the BOT Law: The enumeration of contractual arrangements in the BOT Law is not exhaustive. Other forms of contractual arrangements may qualify as a PPP under the BOT Law, provided that such arrangement is approved by the President. Other contractual modes recognized as PPPs are concession and management contracts.

**Types of Proposals**

Projects under the BOT Law may be implemented in any of the following modes of implementation.
## Table 1.2  PPP Arrangements under the BOT Law

<table>
<thead>
<tr>
<th>PPP Modality</th>
<th>Role of the Private Sector</th>
<th>Role of the Government</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Build-Operate-and-Transfer (BOT)</strong></td>
<td>Finances and constructs; operates and maintains facility for a fixed term; collects fees and charges to recover investments plus profit; transfers facility at the end of cooperation period (maximum of 50 years).</td>
<td>Provides franchise (if required) and regulates activities of BOT contractor; acquires ownership of facilities at the end of cooperation period.</td>
<td>Includes a supply-and-operate scheme, a contractual arrangement whereby the supplier of equipment and machinery for a given infrastructure facility, if the interest of the Government so requires, operates the facility.</td>
</tr>
<tr>
<td><strong>Build-and-Transfer (BT)</strong></td>
<td>Finances and constructs; turns over ownership of the facility to government after project completion.</td>
<td>Acquires ownership of facility after construction; compensates proponent at agreed amortization schedule.</td>
<td>May be employed in any project, including critical facilities which, for security or strategic reasons, must be operated by the Government.</td>
</tr>
<tr>
<td><strong>Build-Own-and-Operate (BOO)</strong></td>
<td>Finances, constructs and owns facility; operates and maintains facility in perpetuity (facility operator may be assigned); collects fees and charges to recover investments and profits.</td>
<td>Provides authorization and assistance in securing approval of BOO contract; possesses the option to buy the output/service provided by the BOO operator.</td>
<td>All BOO projects upon recommendation of the NEDA-Investment Coordination Committee (ICC) shall be approved by the President of the Philippines.</td>
</tr>
<tr>
<td><strong>Build-Lease-and-Transfer</strong></td>
<td>Finances and constructs; turns over project after completion; transfers ownership of facility after cooperation/lease period.</td>
<td>Compensates proponent by way of lease of facility at agreed term and schedule; owns facility after cooperation/lease period.</td>
<td></td>
</tr>
<tr>
<td><strong>Build-Transfer-and-Operate</strong></td>
<td>Finances and constructs on a turn-key basis; transfers title of facility after commissioning; operates the facility under an agreement.</td>
<td>Owns facility after commissioning.</td>
<td></td>
</tr>
</tbody>
</table>
PPP Modality | Role of the Private Sector | Role of the Government | Notes
---|---|---|---
Contract-Add-and-Operate | Adds to an existing facility; operates expanded project for an agreed franchise period. | Collects rental payment under agreed terms and schedule; regains control at the end of lease term. | There may or may not be a transfer arrangement with regard to the added facility provided by the project proponent.
Develop-Operate-and-Transfer | Builds and operates a new infrastructure; transfers property/facility at the end of the cooperation period. | Regains possession of property turned over to investor after cooperation period. | Project proponent enjoys some benefits the initial investment creates such as higher property or rent values; akin to BOT with the option to develop adjoining property.
Rehabilitate-Operate and-Transfer (ROT) | Refurbishes, operates, and maintains facility; facility is turned over after the franchise period. | Provides franchise to ROT company; regains legal title of property/facility after franchise period. | Also used to describe the purchase of facility from abroad, importing, refurbishing, erecting and consuming it within the host country.
Rehabilitate-Own and-Operate (ROO) | Refurbishes and owns facility; operates facility in perpetuity as long as there is no franchise violation. | Turns over facility and provides franchise to operate; may opt to share in the income of ROO company. | Period to operate is dependent on franchise agreement.

Source: Table 1.2: RA 7718 PPP Variants from Developing Public-Private Partnerships in Local Infrastructure and Developing Projects, A PPP Manual for LGUs Volume 1, PPP Center.

Solicited proposal – In a solicited proposal, the IA formally solicits the submission of bids from the public. The solicitation is done through the publication of an invitation for interested bidders to submit bids, and selection of the private proponent is done through a public competitive process.

Unsolicited proposal – In an unsolicited proposal, the private sector project proponent submits a project proposal to an IA without a formal solicitation from the government. An unsolicited proposal may be accepted for consideration and evaluation by the IA, provided it complies with the following conditions:

1. It involves a new concept or technology and/or it is not part of the list of priority projects in the Philippine Investment Program (PIP) [Medium Term Public Investment Program, Comprehensive and Integrated Infrastructure Program (CIIP)] and the Provincial/Local Investment Plans;
2. It does not include a Direct Government Guarantee, Equity or Subsidy;
3. It has to go to ICC for the determination of reasonable Financial Internal Rate of Return (FIRR) and approval to negotiate with the Original Proponent; and
4. After successful negotiation, proceed to publication and request for competitive proposals according to Swiss Challenge Rules.

The Revised IRR of the BOT Law defines Direct Government Guarantee, Equity or Subsidy as follows:

1. **Direct Government Guarantee** - refers to an agreement whereby the Philippine Government assumes responsibility for the repayment of debt directly incurred by the project proponent in implementing the project in case of a loan default (Section 1.3 j);

2. **Direct Government Subsidy** - refers to an agreement whereby the government will: (a) defray, pay for, or shoulder a portion of the project cost or the expenses and costs in operating or maintaining the project; (b) condone or postpone any payments due from the project proponent; (c) contribute any property or assets to the project; (d) in the case of LGUs, waive or grant special rates on real property taxes on the project during the term of the contractual arrangement; and/or (e) waive charges or fees relative to business permits or licenses that are to be obtained for the construction of the project - all without receiving payment or value from the project proponent and/or facility operator for such payment, contribution or support (Section 13.3 c);

3. **Direct Government Equity** – refers to the subscription by the government of shares of stock or other securities convertible to shares of stock of the project company, whether such subscription will be paid by money or assets (Section 13.3 d).

Once the foregoing conditions have been complied with, and the IA has officially decided to pursue the project proposal with the project proponent, it shall grant the proponent an “original proponent” status. This status grants the original proponent the right to exclusively negotiate the project specifications and contract terms with the IA. The negotiated project specifications and contract terms approved by the relevant approving authority shall then become the basis for the public tender.

The public tender in an unsolicited mode is different from that of a solicited mode in the sense that it is a Swiss Challenge tender. Under the Swiss Challenge, the project specifications that will be the basis for tender will be those negotiated between the original proponent and the IA. Other bidders will be asked to submit a competitive price proposal. The original proponent is given 30 days to match the best price bid; otherwise the contract will be awarded to the challenger.

**Direct negotiation** – Direct negotiation with a private proponent, on the other hand, may be resorted to by an IA in case of a single bidder scenario in any of the following circumstances:

If, after advertisement, only one contractor applies for pre-qualification and it meets the pre-qualification requirements, after which it is required to submit a bid/proposal which is subsequently found by the IA to be complying:

1. If, after advertisement, more than one contractor applied for pre-qualification but only one meets the pre-qualification requirements, after which it submits bid/proposal which is found by the IA to be complying;

2. If, after pre-qualification of more than one contractor, only one submits a bid which is found by the IA to be complying; or

3. If, after pre-qualification, more than one contractor submits but only one is found by the IA to be complying.

---

2 Section 9.1 of the Revised IRR of the BOT Law.
### Approving Body

Table 1.3 below lists the various approval bodies for types and size of projects:

<table>
<thead>
<tr>
<th>Approving Body</th>
<th>Project Type / Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Economic and Development Authority Board</td>
<td>• National projects costing more than PhP300 million upon ICC recommendation</td>
</tr>
<tr>
<td></td>
<td>• National negotiated projects regardless of amount upon ICC recommendation</td>
</tr>
<tr>
<td>Investment Coordination Committee</td>
<td>• National unsolicited proposal projects Regardless of cost</td>
</tr>
<tr>
<td></td>
<td>• National projects costing below PhP300 million</td>
</tr>
<tr>
<td></td>
<td>• National projects costing above PhP300 million for NEDA Board approval</td>
</tr>
<tr>
<td></td>
<td>• National negotiated projects Regardless of amount for NEDA Board approval</td>
</tr>
<tr>
<td></td>
<td>• Local projects costing above PhP200 million</td>
</tr>
<tr>
<td>Regional Development Council</td>
<td>• Local projects costing above PhP50 up to PhP200 million</td>
</tr>
<tr>
<td>City Development Council</td>
<td>• Local projects costing up to PhP50 million</td>
</tr>
<tr>
<td>Pro vincial Development Council</td>
<td>• Local projects costing PhP20 up to PhP50 million</td>
</tr>
<tr>
<td>Municipal Development Council</td>
<td>• Local projects costing PhP20 million</td>
</tr>
</tbody>
</table>

BOO projects and other variants not specified in the BOT Law and its Revised IRR shall be approved by the President of the Philippines.

**Investment Incentives**

As provided for by the BOT Law, all PPP projects in excess of PhP1 billion are entitled to incentives provided for under the Omnibus Investment Code (OIC), upon registration with the Bureau of Investments (BOI). Projects costing less than PhP1 billion may be extended incentives as provided under the OIC upon registration with BOI provided that the contractual arrangement is authorized in the Revised IRR of the BOT Law and the activity or sector is included in the Investment Priorities Plan. Technical Note 1 appended to this volume contains further details on incentives provided under the Omnibus Investment Code.

**B. The Local Government Code**

The implementation of PPP projects at the local level is facilitated by the Local Government Code of the Philippines enacted in 1991 (RA 7160)\(^3\). The Code vests upon the LGU wide latitude and prerogative to enter into contracts involving its properties, including joint ventures. This prerogative should however be used along, and harmonized, with other relevant laws such as the BOT Law and legal pronouncements. Department of Interior and Local Government Memorandum Circular (MC) No. 2011-16, in particular, recognizes the need to facilitate the “localization of the mandated powers and functions of the PPP Center” and, thus, enjoins all Local Chief Executives to establish a PPP Sub-Committee in the Local Development Council that would, among others, “assist the Local Development Council (LDC) in the formulation of action plans and strategies related to the implementation of PPP programs and projects.”\(^4\)

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\(^3\) See Section 22 on Corporate Powers of LGUs and Section 302 on Financing, Construction, Maintenance, Operation, and Management of Infrastructure Projects by the Private Sector

\(^4\) PPP Center’s Volume 1 of the LGU Manual for PPP Project Development, 2012
1.2.3 Overview of Government Agency Roles

The Administrative Code of the Philippines provides the basic mandates of the government agencies and instrumentalities across government’s three branches: executive, legislative and judiciary.

At the executive level, there are many institutional PPP stakeholders and they can be grouped according to the following functions:
1. Policy formulation;
2. Policy implementation facilitation;
3. Quality, technical and economic regulation;
4. Project development and implementation;
5. Appraisal and approval; and
6. Monitoring and evaluation.

In addition to specific agency mandates, there are also inter-agency committees, notably, standing committees of the NEDA Board that perform oversight functions on policy coordination and implementation. The key institutions at the executive level are discussed briefly in Table 1.4, below.

<table>
<thead>
<tr>
<th>NGAs and Committees</th>
<th>Brief Description of Current PPP Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEDA</td>
<td>Leads and coordinates agency contributions to the formulation of the Philippine Development Plan, PIP and CIIP. Evaluates and validates feasibility studies, prepares project evaluation reports (PER) and, as discussed in detail within this Section, NEDA is also mandated to monitor and evaluate projects vis-à-vis the parameters or conditions of approval, feasibility indicators and implementation issues that can feed to policy formulation. NEDA performs technical secretariat to the NEDA Board and its Committees, specifically the ICC and the Infrastructure Committee; as well as to the BOT Law IRR Committee, which essentially tasks it with the review and drafting of the amendments. Chairs the ICC Cabinet Committee.</td>
</tr>
<tr>
<td>PPP Center ¹</td>
<td>Provides technical assistance to IAs and their executing departments in the areas of project packaging, feasibility studies; manages the Project Development and Monitoring Facility (PDMF); serves as information repository of PPP contracts; involved in capacity building of IAs; reports annually to the President regarding the status of the PPP program; and reports to Congress on salient features of PPP Contracts. New functions are in the areas of Knowledge Management, Policy Formulation and Monitoring and Coordination of PPP Projects.</td>
</tr>
<tr>
<td>ICC of the NEDA Board</td>
<td>Sets policies and guidelines on public and PPP investment decisions. Approves national agency PPP projects up to PhP 300 million, LGU projects costing more than PhP200 million; endorses to NEDA Board projects that are larger than that threshold and all negotiated national projects regardless of amount. Approves unsolicited proposals for tender, irrespective of project cost.</td>
</tr>
</tbody>
</table>

¹ Based on EO 8 and its amendment and the revised BOT Law IRR (April 2012 draft).
<table>
<thead>
<tr>
<th>NGAs and Committees</th>
<th>Brief Description of Current PPP Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPP Governing Board</td>
<td>Overall policy making body for all PPP related matters, including the PDMF. Sets the strategic direction of the PPP program and creates an enabling policy and institutional environment for PPP.</td>
</tr>
<tr>
<td>PDMF Committee</td>
<td>Considers and approves applications for PDMF funding. Formulates, prescribes and recommends policies, procedures and guidelines for the use of PDMF funds for the development of PPP projects and recovery of costs charged to the PDMF.</td>
</tr>
<tr>
<td>Governance Commission for GOCCs (GCG)</td>
<td>Monitors and reviews the performance of GOCCs regarding their operations (including the achievements of their PPP projects) and functions (such as the regulatory and commercial functions of the GOCC in a PPP project).</td>
</tr>
<tr>
<td>Infrastructure Committee</td>
<td>Sets infrastructure policies consistent with national development goals and objectives and coordinates preparation of infrastructure program(s).</td>
</tr>
<tr>
<td>Department of Justice (DOJ)</td>
<td>The role of the DOJ will be limited to those instances where the Secretary of Justice (SOJ) sits in the board, in an <em>ex officio</em> capacity or otherwise, of the IA.</td>
</tr>
<tr>
<td></td>
<td>In cases where the IA, other than a GOCC or any other government agency or instrumentality whose charter specifically designates the Office of the Government Corporate Counsel (OGCC) as its principal law agency, requests for clarification as to whether or not it can undertake the selected project, under its charter or any other law, the DOJ may provide legal services, such as issuance of a legal opinion, to the IA.6</td>
</tr>
<tr>
<td></td>
<td>In cases where there is a dispute over right-of-way (ROW) authority between the IA and another government department, agency, bureau, and instrumentality of the National Government, the DOJ shall settle the dispute, if the same involves only a question of law. If the dispute involves questions of law and fact, the DOJ shall settle the same, provided one of the government parties thereto has designated, pursuant to its charter, a law agency other than the Office of the Solicitor General (OSG).7</td>
</tr>
</tbody>
</table>

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6 Sec. 3 (7), Chapter 1, Title III, Book IV, Executive Order No. 292, otherwise known as the Administrative Code of the Philippines.
7 Sec. 67, and Sec. 68 (2), Chapter 14, General Provisions, Book IV, Administrative Code.
<table>
<thead>
<tr>
<th>NGAs and Committees</th>
<th>Brief Description of Current PPP Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office of the Solicitor General (OSG)/OGCC</td>
<td>In case of ROW authority dispute:</td>
</tr>
<tr>
<td></td>
<td>a. In cases where there is a dispute over ROW authority between the IA and another government department, agency, bureau, and instrumentality of the NG, the OSG shall settle the dispute, if the same involves both questions of law and of fact only, provided both disputing parties have designated the OSG as its principal law agency, pursuant to law or its charter.¹</td>
</tr>
<tr>
<td></td>
<td>b. In cases where ROW authority is undertaken by the IA or the DPWH, as the case may be, and there is pending or ongoing litigation, the OSG shall represent the IA in these and related proceedings.²</td>
</tr>
<tr>
<td></td>
<td>c. In cases where ROW authority is undertaken by the IA, which is a GOCC or any other government agency or instrumentality, whose charter specifically designates the OGCC as its principal law agency, as the case may be, and there is pending or ongoing litigation, the OGCC shall represent the IA in these and related proceedings.³</td>
</tr>
<tr>
<td></td>
<td>In contract drafting and negotiation, generally, assist implementing agencies review contracts prior to approval of IA heads.</td>
</tr>
<tr>
<td></td>
<td>a. The OSG, upon request of the IA, other than a GOCC or any other government agency or instrumentality whose charter specifically designates the OGCC as its principal law agency, may issue rules and guidelines governing the preparation of contracts, making investments, undertaking of transactions, and drafting of forms or other writings.⁴ The Revised IRR of the BOT Law provides for review of the project contract by the OSG.</td>
</tr>
<tr>
<td></td>
<td>b. When the IA is a GOCC or any other government agency or instrumentality whose charter specifically designates the OGCC as its principal law agency, requests for an opinion as to any matter regarding the preparation of the contract, including any question as to the specific contractual provision, the OGCC may issue a legal opinion.⁵ The OGCC may also review and if necessary, recommend revisions or modifications of the contracts referred by the IA.⁶</td>
</tr>
<tr>
<td></td>
<td>In the event of breach of contract:</td>
</tr>
<tr>
<td></td>
<td>a. The OSG may investigate, initiate court action, or in any manner proceed against any person, corporation, or firm for the enforcement of any contract in favor of the NG.⁷</td>
</tr>
<tr>
<td></td>
<td>b. When the IA is a GOCC or any other government agency or instrumentality whose charter specifically designates the OGCC as its principal law agency, requests for an opinion as to any matter regarding the preparation of the contract, including any question as to the specific contractual provision, the IA’s respective legal departments may investigate, subject the administrative supervision and control by the OGCC.⁸</td>
</tr>
<tr>
<td></td>
<td>In dispute resolution:</td>
</tr>
<tr>
<td></td>
<td>a. The OSG shall represent the IA, other than a GOCC or any other government agency or instrumentality whose charter specifically designates the OGCC as its principal law agency, and its officers, in all civil actions in the Supreme Court, the Court of Appeals, and all other courts or tribunals.⁹ The OSG shall also represent the Republic of the Philippines, upon instructions of the President, in international litigations or negotiations where the legal position of the Republic must be defended or presented.¹⁰</td>
</tr>
<tr>
<td></td>
<td>b. The OGCC shall represent the IA, which is a GOCC or any other government agency or instrumentality whose charter specifically designates the OGCC as its principal law agency, in the litigation of appropriate cases brought before the courts or quasi-judicial bodies in the Philippines or abroad.¹¹</td>
</tr>
</tbody>
</table>

¹ Administrative Code, Book IV, General Provisions, Chapter 14, Sec. 68 (1). |
² Administrative Code, Book IV, Title III, Chapter 12, Sec. 35 (5). |
³ Administrative Code, Book IV, Title III, Chapter III, Sec. 10. |
⁴ Supra note 1. |
⁵ OGCC Rules and Regulations, Rule 6, in relation to Administrative Code, Book IV, Title III, Chapter 3, Sec. 10. |
⁶ Ibid. |
⁷ Administrative Code, Book IV, Title III, Chapter 12, Sec. 35(2). |
⁸ OGCC Rules and Regulations, Rule 3, Section 1.4, in relation to Administrative Code, Book IV, Title III, Chapter 3, Sec. 10. |
⁹ Administrative Code, Book IV, Title III, Chapter 12, Sec. 35(1). |
¹⁰ Administrative Code, Book IV, Title III, Chapter 12, Sec. 35(10). |
¹¹ OGCC Rules and Regulations, Rule 3, Section 1.1 (a), in relation to Administrative Code, Book IV, Title III, Chapter 3, Sec. 10.
<table>
<thead>
<tr>
<th>NGAs and Committees</th>
<th>Brief Description of Current PPP Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOF</td>
<td>Reviews project contract, manages government undertakings (direct and contingent), identifies the official development assistance (ODA) source, manages and monitors contingent liabilities. DOF co-chairs the ICC Cabinet Committee.</td>
</tr>
<tr>
<td>DBM</td>
<td>Prepares the national expenditure plan for approval of Congress into a General Appropriations Act. It determines the aggregate magnitude of the budget and allocation across government entities in close consultation among planning and fiscal agencies of the government. For PPP projects with an ODA component, DBM issues, after the approval of the NEDA ICC, a forward obligational authority (FOA). The FOA serves as the instrument authorizing DOF to negotiate with the international financing institution. DBM issues multi-year obligational authority (MYOA) in projects involving multi-year contracts.</td>
</tr>
<tr>
<td>Implementing agencies (line departments, GOCCs, LGUs)</td>
<td>Undertake sector planning and programming of investments. Identify and prioritize the PPP projects, prepare project studies, procurement and contract award and management. Generally, the IA budget shoulders any cost contribution toward the preparation of the project for approval and tender, except when the project preparation is undertaken with PDMF funds and is successfully tendered. In addition, the implementing agency is responsible for project monitoring and evaluation. Some of the IAs have economic regulatory functions, that is, setting and approval of performance standards and tariffs: examples include: Philippine Ports Authority (PPA), Department of Transportation and Communications (DOTC) for Metro Manila LRT 3, Metropolitan Waterworks and Sewerage System (MWSS) and LGUs.</td>
</tr>
<tr>
<td>Regulatory Agencies (resource, quality)</td>
<td>NWRB: Water resource / allocation Department of Health: Water quality; it determines the Philippine national standard for drinking water and monitors compliance of water utilities Environment Management Bureau: Environment, Health and Safety</td>
</tr>
<tr>
<td>Commission on Audit</td>
<td>Constitutional body tasked with general audit of government agencies, including audits of government agency’s financial statements and notes to financial statements which form an integral part of the aforementioned financial statements. Role on PPPs not clearly defined yet.</td>
</tr>
<tr>
<td>Department of Trade and Industry - Bureau of Investment (BOI)</td>
<td>Sets the investment incentives that are applicable to the investment in infrastructure. Prepares the guidelines for the Omnibus Investment Code (OIC) and the annual Investment Priorities Plan (IPP). According to the BOT Law, PPP projects costing at least PhP1 billion can avail of the OIC incentives upon registration with BOI, whether solicited or unsolicited proposal. Projects costing less than PhP1 billion may also avail of incentives provided they are covered under the priority activities of the current IPP.</td>
</tr>
<tr>
<td>Department of Trade and Industry</td>
<td>Executive Order 8 Section 3 transfers the functions of the BOT Center (now the PPP Center) with respect to promotion and marketing BOT/PPP projects.</td>
</tr>
</tbody>
</table>
Although not directly involved in the development, implementation and regulation of PPP projects, the Philippine judiciary also plays an important role in the government’s PPP program. Judicial process has been prominent in the resolution of procurement related disputes, including those under the BOT Law, particularly for controversies involving violation of the bidding rules, the Constitution or the laws, or those that are grossly disadvantageous to the government.

To ensure the expeditious and efficient implementation and completion of government infrastructure projects and other development projects to avoid unnecessary increases in construction, maintenance and/or repair costs and to immediately enjoy the social and economic benefits, RA No. 8975 was passed. One of the key provisions of this law is to prohibit courts, except the Supreme Court, from issuing temporary restraining orders (TROs), preliminary injunctions and preliminary mandatory injunctions against the government to restrain, prohibit or compel the following acts:

1. Acquisition, clearance and development of the right-of-way and/or site or location of any national government project;
2. Bidding or awarding of contract/project of the national government;
3. Commencement, prosecution, execution, implementation, operation of any such contract or project;
4. Termination or rescission of any such contract/project; and
5. The undertaking or authorization of any other lawful activity necessary for such contract/project.

This prohibition shall apply in all cases, disputes or controversies instituted by a private party, including but not limited to cases filed by bidders or those claiming to have rights through such bidders involving such contract/project.

Nonetheless, if the matter is of extreme urgency involving a constitutional issue, and unless a TRO is issued grave injustice and irreparable injury will arise, then a lower court may issue the same.

At the legislative level, the main involvement of Congress is in the formulation of laws. However it also has oversight function, to ensure that laws are properly implemented, and on a case to case basis may monitor the execution of laws. For example, in the case of the BOT Law, it requires the PPP Center to periodically submit monitoring reports and copies of PPP contracts.
CHAPTER 2
Identification, Selection and Prioritization of Public-Private Partnership Projects

2.1 Introduction

IAs such as departments or charters (including GOCCs, SUCs, etc.) authorized by law to contract for, and undertake, infrastructure or development projects are required to prepare their infrastructure or development programs aligned with the PDP.

Priority projects – including a list of PPP projects as required by Section 2.3 of the Revised IRR of the BOT Law – are then identified and considered for inclusion by NEDA in the PIP and the CIIP. NEDA, working closely with DBM, eventually assembles a national list of its prioritized infrastructure projects which make up the PIP and CIIP. The CIIP, in particular, contains a list of infrastructure projects that meet the goals and objectives set forth in the PDP. It includes projects appropriate for a purely private investment, public-private partnership (PPP), joint venture, and traditional procurement (i.e., through budgetary allocation, ODA loan, GOCC internally generated funds, GOCC-ODA Loan, GFIs, and LGUs). The PDP, PIP and CIIP, which are rolling, may be updated, or revised occasionally, throughout the President’s term, with projects added or removed as priorities change.

In the process of providing the list of projects to be included in the PIP and CIIP, IAs are usually confronted with the challenge of identifying the projects that are suitable for PPP from those that are best implemented through traditional public procurement. Resource constraints make it difficult to undertake an intensive investment appraisal to adequately identify PPP projects. Even if a feasibility study (FS) is done, some projects originally selected for inclusion as PPPs in the PIP and CIIP may subsequently prove to be unsuitable for this kind of implementation for a number of reasons, such as: (a) commercial sustainability may not be reliably predicted, (b) level of government support may be too difficult to ascertain, or (c) interest may be lacking on the part of the potential developers or their banks. Such projects might have to be implemented through traditional public procurement, thereby requiring a reforecast of total expenditure if these are...
critically important to the PDP. A less demanding procedure in cost, time, and data requirements is therefore needed to select candidate PPP projects.

This chapter introduces a methodology within the national planning process for the identification, selection and prioritization of public-private partnership (PPP) projects using multi-criteria analysis (MCA), and eventually validating the selection through a prefeasibility study (PFS) which includes a social cost benefit analysis (SCBA). The use of these two tools is meant to ensure the development of a robust pipeline of PPP projects for tender, and initiate a systematic process in selecting and prioritizing for project preparation and eventual inclusion in the PIP, the CIIP and the national budget. Note however, while MCA is useful at an early stage in pipeline development when preliminary decisions have to be made based on scant information, it is not a substitute for detailed project analysis.

Also detailed in this chapter is the development of the MCA screen and its application. A broad outline of what constitutes a PFS is presented at the latter part of the chapter to provide a complete view of the identification, selection and prioritization process for PPP projects. The various PFS-related analyses – such as the technical analysis, financial analysis, and SCBA – however, are discussed in detail in Chapter 3 of the Manual as part of Project Preparation.

2.2 Process

At the time when NGAs are preparing their list of projects for inclusion in the CIIP/PIP, a two-step process is applied to the list of projects to appropriately identify, select and prioritize (at an early stage) the projects that can be implemented through a PPP arrangement:

Step 1. Identification and Selection: Initial Screen using Multi-Criteria Analysis and Preliminary Social Cost Benefit Analysis

This initial screen serves as a tool to identify projects that can be undertaken through PPP with some degree of certainty before it is necessary to spend a significant amount of money on their development. The MCA screen described here also reduces the number of PPP candidate projects that need to be exposed to a validating PFS. Only projects that pass this initial screen may then be the subject of a PFS using standard financial and economic analysis. Elements of the MCA are discussed in section 3 of this chapter.

Step 2. Prioritization of Projects: Using PFS including SCBA Outcomes

The PFS is the second tool which aims to provide a more formal judgment regarding the likelihood of each project being commercially sustainable (with or without government financial support) and meeting the requisite economic rate of return (EIRR) as defined by the ICC. On 1 January 2012, the minimum (or hurdle) rate EIRR was predetermined by ICC at 15%. Projects that formally meet both conditions and are judged to fall within the budgetary envelope of the IA may be regarded as strong candidates for PPP implementation and may find their way into the budget, PIP and CIIP. Section 4 of this chapter presents a broad outline of the PFS.

Potential PPP projects that pass the two-step process, and are approved by the Development Budget Coordination Committee (DBCC) and the Department of Budget Management (DBM) for inclusion in the budget are automatically included in the PIP, CIIP and are eligible for full FS.22

22 Guidelines for the Identification, Selection and Prioritization of PPP Projects, February 22, 2013
Figure 1.2 provides a diagram of this process and the gateway decisions in identifying, selecting and prioritizing PPP projects.

![Figure 1.2 Identification, Selection and Prioritization of PPP Projects](image)

The process can also be applied at the subsector, or the sector level. If done at the subsector level, the IA, for example DOTC, reviews the work done by the various subsector units (e.g. rail, ports and airports), makes final selections and prioritizes its PPP candidates according to results of the EIRR. Projects will be prioritized based on the overall demand for new infrastructure products or services identified in the PDP and prioritized by PPP service category. Within each PPP subsector, projects will be prioritized by projects achieving the highest EIRR.

### 2.3 The Multi-Criteria Analysis Screen

The main objective of an MCA screen is to determine the potential of a project to be undertaken as a PPP and to eliminate projects that fail to meet minimum criteria for exposure to a validating PFS. Below are some principles and considerations in developing an MCA screen:

1. The MCA is most appropriate in comparing projects of the same type such as those that are found in the long list of projects of national government agencies.
2. The MCA is regarded as a device that enables the IA to screen out projects that may be suitable for PPP. It needs to be tailored to each sector’s own project dynamics, particularly on project revenues.
3. Failure to pass the MCA screen does not mean that the project is not viable, or worthy of pursuing. The assessment is purely from the viability of pursuing the project as a PPP. The IAs therefore can undertake further analysis to

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23 For example, it is easier to compare projects within sub-sectors e.g. a port project with other port projects, as they would have the same revenue structure rather than comparing a port project with a hospital or school project.
determine the project’s feasibility for traditional public procurement or ODA financing. Projects that initially failed the MCA can be reconsidered as a PPP if elements or circumstances that made it fail the screen change.

2.3.1 Multi-Criteria Analysis Screen Procedure

Refer to Figure 1.2, which provides a diagram of the MCA process and the gateway decision in identifying, selecting and prioritizing PPP projects. The process is described in detail below.

1. Once NEDA calls for or issues the guidelines for the preparation of the PIP and CIIP, the IA prepares a list of potential projects ensuring that the projects are aligned with the strategic objectives of the PDP. IAs should at least have undertaken a scoping study (see Volume 4, Annex 1) to get some idea of each project’s objectives, functions, probable PPP arrangement, payment structure, social safeguard issues, development benefits and how it will fit into the legal and regulatory framework.

2. MCA Initial Screen

Projects in the IA’s list are initially subjected to threshold criteria describing basic requirements essential to PPPs to eliminate unsuitable candidate PPP projects before they are subjected to an MCA screen. Six threshold criteria are listed in Table 1.5.

Decision point: A project that fails any one of the threshold criteria is deemed unacceptable as a PPP project and is not subjected to further MCA evaluation screening. The project may be considered for public procurement.

<table>
<thead>
<tr>
<th>Threshold Criteria</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Project is a strategic priority that is aligned with the Government’s PDP.</td>
<td></td>
</tr>
<tr>
<td>2. Project is of sufficient scale to justify PPP transaction costs (i.e., project cost &gt; $X million). (^{24})</td>
<td></td>
</tr>
<tr>
<td>3. Project has strong stakeholder support based on preliminary public consultation.</td>
<td></td>
</tr>
<tr>
<td>4. Government commitment and willingness to provide support for project preparation (with a written confirmation from the Head of Agency).</td>
<td></td>
</tr>
<tr>
<td>5. Project is not likely to have social safeguard concerns, or if there are any, they can be mitigated, remedied or managed (e.g., gender, other vulnerable groups and environment issues).</td>
<td></td>
</tr>
<tr>
<td>6. Project has a clearly defined objective and output specifications (i.e. requirements are expressed in the form of outputs such as availability of power, kilometers of roads or price of water).</td>
<td></td>
</tr>
</tbody>
</table>

3. Full marks should only be given if the subject project fully meets the threshold criteria, with no risks and weaknesses. Conversely, the score should be reduced proportionate to the extent of non-conformities, risks and omissions.

Suggested guidelines for scoring each of the criteria, is outlined below in Table 1.6.

Decision point: Projects that score greater or equal to “15” pass the MCA initial screen and are further subjected to a Full MCA screening process.

\(^{24}\) This can be managed by exception. As long as there is a strong rationale for a project below the scale threshold, an exception can be granted. This criterion is included as a pass/fail to bring about an initial discussion on value-for-money as the transaction costs for a PPP are high.
4. An MCA Full Screen will need to be developed by identifying variables or attributes derived from the broader characteristics ("Drivers") of a successful PPP. Table 1.7, further below, identifies several drivers and their corresponding variables believed to be characteristic of all successful PPPs.

5. The use of scoring and weighting criteria may assist in the selection of projects based on the full MCA screen. Each Driver can be scored, based on a tailored scoring guideline, to help pass the MCA initial screening process. The scoring of the response content will be based on the reviewer’s determination of the degree of the subject project’s achievement of the requirements for each of the Project criteria required for the initial MCA screening.

6. By their nature, not all criteria lend themselves to objective measurement and their assessment will depend on the review personnel undertaking the MCA screening based on the initial briefing and their understanding of the projects received.

7. For the MCA full screening process, it may be appropriate to ascribe weights for Drivers and the criteria category that influence the PPP Drivers. The weights to be applied to criteria categories will need to be agreed and communicated to the IA. There are 6 Drivers identified in Table 1.7 – each may be ascribed a certain weight out of 100 (for example, Market Acceptability could have a 20% overall weight based on its two criteria sharing a 50% weight). For example, the weight allocation for the full screen could be as follows:

<table>
<thead>
<tr>
<th>Drivers (Weights)</th>
<th>Criteria (Variables)</th>
<th>Relative Weight of the Criteria / Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Desirability (20%)</td>
<td>• Qualitative Criterion</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>• Qualitative Criterion</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>• Qualitative Criterion</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>• EIRR in the judgment of the reviewer is likely to be greater than defined hurdle rate.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Others</td>
<td></td>
</tr>
<tr>
<td>Market Acceptability (20%)</td>
<td>• Existence of market appetite from PPP proponents</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>• Existence of a strong debt funding market locally and / or availability of international funding for local projects</td>
<td>50%</td>
</tr>
</tbody>
</table>
### Drivers (Weights)

<table>
<thead>
<tr>
<th>Criteria (Variables)</th>
<th>Relative Weight of the Criteria / Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manageable Life Cycle Costs (15%)</td>
<td></td>
</tr>
<tr>
<td>• Land is acquired, or acquisition is substantially complete, for the project and the proposed site is functionally convenient to the project’s objectives;</td>
<td>30%</td>
</tr>
<tr>
<td>• Site offers manageable challenges for the Engineering, Procurement and Construction contractor during construction;</td>
<td>30%</td>
</tr>
<tr>
<td>• Manageable environment, health and safety, gender, resettlement or other vulnerable person issues are foreseen that should not impact adversely on project cost during construction or operations; and</td>
<td>20%</td>
</tr>
<tr>
<td>• Operations &amp; Maintenance (O&amp;M) costs are high but responsive to improved technology and management, OR, otherwise O&amp;M costs for this type of project are stable and predictable.</td>
<td>20%</td>
</tr>
<tr>
<td>Predictable and Stable Revenues** (15%)</td>
<td></td>
</tr>
<tr>
<td>• For “Concession PPPs,” Revenues are backed by a GPH support package for demand and tariff adjustments, either in the form of Viability Gap Funding (VGF), Output Based Aid (OBA), minimum revenue guarantee or other such instrument;</td>
<td>40%</td>
</tr>
<tr>
<td>• For “Availability PPPs,” revenue is predictable due to payment based on take-or-pay.</td>
<td></td>
</tr>
<tr>
<td>• Demand for service is inelastic relative to its price given the nature of the project where there is no immediately viable alternative for the service. This variable is particularly relevant to concession PPPs; whereas Availability PPPs automatically score highly on this variable.</td>
<td>40%</td>
</tr>
<tr>
<td>• A do-minimum scenario (e.g., address a gap or need using administrative action rather than undertaking the proposed project) has been considered and the conclusion is that the demand for the service cannot be accommodated in this manner.</td>
<td>20%</td>
</tr>
<tr>
<td>Appropriate Risk Sharing (20%)</td>
<td></td>
</tr>
<tr>
<td>• Acceptability of appropriate risk sharing mechanism</td>
<td>100%</td>
</tr>
<tr>
<td>Fit into Legal and Regulatory Framework (10%)</td>
<td></td>
</tr>
<tr>
<td>• Regulatory and institutional frameworks are in place and would require limited reform for the project to be successfully implemented, or projects can potentially be regulated by contract.</td>
<td>100%</td>
</tr>
</tbody>
</table>

8. Once established, the weights should not be changed regularly.

9. While the weights and scoring arrangements provide a methodology for ensuring proper consideration of each PPP project opportunity, the evaluation must also take into account interaction between aspects which go beyond the basis of the scoring system and reflect an assessment of which project best satisfies the government agency / IA objectives and evaluation criteria, taken as a whole.

The MCA full screen should essentially be developed by IA staff with expertise in their respective sectors/subsectors along with the PPP Center which has the insight on what makes a project commercially viable. The PPP Center will provide guidance to IAs and ensure quality control in implementing the MCA full screen. The screen will be reviewed annually to make adjustments and keep the screen relevant for established procedures. However, once the screen is developed and the scoring and weighting rules are established during the analysis period, no changes should be made throughout the period of evaluation.

Gateway 1 (GW1) Decision Point: Projects that pass the MCA full screen and judged to be within the budgetary envelope of the IA are prioritized by the Head of Agency as strong candidates for PFS. See Figure 1.3 for full screening process as part of the selection and prioritization process.

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** The level of revenues will depend on other factors like regulatory decisions. The key objective is to gauge if there is potential to generate revenues from users of the infrastructure, or an availability payment from the Government.
2.4 Prefeasibility Study including Social Cost Benefit Analysis

Projects that passed the MCA full screen should then be prioritized by examining the commercial viability (which is key to attracting private sector interest) and/or the social/economic desirability (crucial to government’s decision in supporting development and implementation) of the project. IAs can undertake an initial prioritization exercise using a PFS in their project planning and preparation process. IAs can use internal resources to undertake a PFS or apply for funding from the PDMF or other such funding sources.

A distinction should be made between the PFS and the FS:
Prefeasibility Study – is a preliminary assessment of likely project viability, including basic project analysis within orders of magnitude for financial and economic analysis, but which must also include an overview of the technical, social and institutional merits of the project and which ensures a solid basis for undertaking a feasibility study.

Feasibility Study – is a full analysis and evaluation of a project based on the PFS (verifying the PFS or modifying it) with extensive fieldwork-based investigation of the technical, financial, economic, social and institutional merits of the project, as well as more definite estimates of financial returns and the economic impact of a project’s implementation. Feasibility studies also include a full justification for undertaking the project as a PPP based on VfM analysis (discussed in Chapter 3 Section 3.10), as well as the results of market-scoping interactions with developers and lenders to discuss the project’s purpose, payment mechanism, project structure and other key elements.

2.4.1 Prefeasibility Outline

Since most of the analyses included in the PFS are also in the FS, details of how these analyses are undertaken are cross-referenced to Chapter 3 where the methodology for the analyses are discussed in detail. An outline of what constitutes a PFS is described below.

1. Key elements of a PFS include:
   a. **Preliminary technical analysis** is undertaken to define whether a technical solution is available and identify the project’s expected input and output based specification. Chapter 3 Section 3.4 describes the process for undertaking the technical analysis.
   b. **Preliminary financial analysis** is undertaken to assess the likely financial viability of a project and its ability to meet debt-service obligations and an acceptable return to the investor. The preliminary financial analysis will take into consideration:
      - The likely project cost and operating expenditures based on the results of the scoping level technical study, within an acceptable range;
      - The expected long-term project revenue requirements and options (e.g., user and usage charges, if any, and projected secondary revenue sources, if any) based on the analysis of demand for the outputs of the project and affordability;
      - The expected level and mix of debt and equity funding requirements and potential exposure to long-term interest rate movements and exchange rate volatility (if debt is to be sourced in a foreign currency);
      - Assessment of potential government support (e.g., VGF, OBA, minimum revenue guarantee, etc.) where there is a viability gap between the project’s revenue requirement and the revenues that can be raised.
The net present value (NPV) and the FIRR of the project are then computed using the projected revenue (including potential government support) and cost streams over the life of the project using the weighted average cost of capital (WACC) as the discount rate. An NPV for a project greater than zero and a resulting FIRR exceeding a computed WACC is considered financially viable. The standard procedure for financial analysis is included in the ICC Project Evaluation Guidelines and Procedures. This is also discussed in the Manual under Chapter 3 Section 3.8.

c. **Social Cost Benefit Analysis** (also known as socio-economic analysis) is undertaken to assess the project’s desirability in terms of its net contribution to the economic and social welfare of the country as a whole. Economic costs and benefits are identified and valued by adjusting the financial costs and benefits to reflect economic values using shadow prices. Externalities—benefits and costs that go beyond the limits of the project—should be identified, expressed in monetary terms to the extent possible and reflected in the analysis. A project is deemed economically desirable if the EIRR, defined as the discount rate which equates the net present social value (NPSV) of the benefits and costs of the project, is zero and the benefit-cost ratio is one. The NPSV is the discounted value (using the prescribed discount rate) of the net economic benefit accruing to the project. The standard procedure for undertaking an economic analysis is included in Chapter 3 Section 3.9 of this Manual and the ICC Project Evaluation Guidelines and Procedures.

d. **Risk analysis** is done to identify and value risks and confirm the most cost-effective risk allocation between project parties (public and private). Chapter 3 Section 3.11 provides more information on this type of analysis.

e. **Institutional review** is done if the project is an Availability PPP. If the project is structured as a concession PPP, an affordability review (utilizing WTP surveys) is undertaken.

f. **Stakeholder consultation** is done to identify key stakeholders’ needs which should be incorporated in the design of the project.

g. **Preliminary VfM analysis** is done to determine whether the project should be delivered as a PPP. This analysis typically looks at the risk-adjusted costs of adopting the PPP option versus the costs of using traditional public procurement.

h. **Preliminary environmental and social impact assessment**, including gender impact assessment and an assessment of the likely impact of the project on vulnerable groups, such as on women and children, is also undertaken. See Chapter 3 Sections 3.5 and 3.6 for an outline for undertaking these assessments.

2. **Decision point**: Projects that demonstrate a positive FIRR (with or without financial government support) and an EIRR hurdle rate as defined by the ICC from time to time can be considered priority PPP projects for a full FS.

3. **Gateway Decision 2**: The Head of Agency recommends the project to the DBCC for national budget inclusion and PPP implementation. The PPP Center reviews the PFS for assumptions, financial analysis, VGF requirement and provides recommendation to the DBCC.

4. **Gateway Decision 3**: DBCC endorses the project to DBM for inclusion in the budget and the IA endorses the project to NEDA for inclusion in the CIIP and PIP.
Figure 1.3  Stage 1 Processes: Project Identification, Selection and Prioritization

<table>
<thead>
<tr>
<th>Process</th>
<th>Decision Points / Gateways</th>
<th>Responsible Party / Interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projects for implementation</td>
<td>Consistent with PDP</td>
<td>IAs</td>
</tr>
</tbody>
</table>
| MCA Initial Screen | **Pass:** At least a “15” score on Initial Screen - Project subjected to MCA Full Screen  
**Fail:** Identify as possible ODA / GAA | IAs |
| MCA Full Screen | **Pass:** At least a “50%” score can potentially be identified as a PPP  
**Fail:** Identify as possible ODA / GAA or can be reconsidered as a PPP if factors elements or circumstances that fail the screen change | IAs with PPP Center guidance on development and implementation of MCA screen |
| **GW1:** Is project selected for Pre-PPP? | **Yes:** Prioritized for project  
**No:** Project does not proceed at this time | IAs - Head of Agency decision based on IA's budgetatry envelope |
| Pre-FS | **Yes:** Positive FIRR and EIRR>=15%  
**No:** Negative FIRR but EIRR>=15% - Consider project for ODA / GAA; Negative FIRR and EIRR<15% - Project does not proceed at this time | IAs |
| **GW2:** Is project selected for budget? | **Yes:** Sent to DBCC, DBM for review  
**No:** Project does not proceed at this time | IAs - Head of Agency - recommends project for budget inclusion and PPP implementation;  
PPP Center - reviews for assumptions, financial modelling;  
VGF requirement - recommendation to DBCC |
| **GW3:** Is project selected for budget? | **Yes:** Inclusion in the budget and in CIIP and PIP  
**No:** Project does not proceed at this time | DBCC endorses project to DBM for inclusion in the budget; IA endorses project to NEDA for inclusion in CIIP and PIP |
| Cleared for FS | | |

Stage 2  
Project Preparation and Approval (Preparation of FS, ICC/NEDA Board Project Approval)
## 2.5 Stage 1 Checklist

<table>
<thead>
<tr>
<th>Tools</th>
<th>Documents / Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCA Screen</td>
<td>- MCA Screen Results</td>
</tr>
<tr>
<td></td>
<td>- List of potential PPP projects for Pre-FS</td>
</tr>
<tr>
<td>Prefeasibility Study</td>
<td>- Feasibility Study Report</td>
</tr>
<tr>
<td></td>
<td>- Preliminary Technical Study</td>
</tr>
<tr>
<td></td>
<td>- Partial Financial Analysis</td>
</tr>
<tr>
<td></td>
<td>- SCBA</td>
</tr>
<tr>
<td></td>
<td>- Risk Analysis</td>
</tr>
<tr>
<td></td>
<td>- Institutional Review</td>
</tr>
<tr>
<td></td>
<td>- Stakeholder Consultation</td>
</tr>
<tr>
<td></td>
<td>- Partial Value for Money Analysis</td>
</tr>
<tr>
<td></td>
<td>- Preliminary Environmental and Social Impact Assessment</td>
</tr>
<tr>
<td></td>
<td>- List of PPP Projects for inclusion in the CIIP/PIP</td>
</tr>
</tbody>
</table>
CHAPTER 3
Project Preparation

3.1 Introduction to Project Preparation

Undertaking proper preparation of PPP projects is important to ensure:

(a) Candidate projects are technically, economically and financially viable and have no major risks or negative social and environmental impacts;
(b) The scope and content for any financial support from the IA for projects is identified, with options analysed and impact on its budget ascertained;
(c) Proper preparation of bid documentation that will increase likelihood of a successful and competitive PPP tender; and
(d) Prioritization of projects within the Philippine Development Plan.

The previous chapter discussed the steps involved in Stage 1 of the PPP project process concerning the initial identification, selection and prioritization of potential PPP projects. This chapter focuses on the different steps involved in Stage 2 of the process, i.e., project preparation (see Figure 1.4). The ultimate purpose of a PPP project preparation is to recommend the proposed PPP project to the ICC for tendering and subsequent implementation. It involves the development of a complete project feasibility study and other documentary requirements that will enable the ICC to review the merits of the project (e.g., ICC project evaluation forms) as well as assist the IA in the preparation of tender documentation.

For National Projects with project costs more than PhP 300 million, the project’s documentation is submitted to the ICC Technical Board (Gateway Decision 4) for review and endorsement to the ICC Cabinet Committee which endorses to the NEDA Board. The NEDA Board (Gateway Decision 5) reviews the project and upon approval, clears it for tender. Figure 1.4 presents the process for Stage 2.

For Projects costing up to PhP 300 million, the NEDA Board is the approving body for Gateway Decision 6.
There are two key aspects of the project preparation stage:

1. Ensuring the IA is prepared and organized to manage the process.
2. Completing a full project feasibility assessment to ensure sound project development.

This chapter provides a guide on these two key aspects:

1. Section 1 provides an overview of the essential elements in the management of the process; and
2. Section 2 deals with the project assessment which discusses the key components of a well-prepared PPP project. A more detailed technical treatment of the analyses and some useful references can be found in Volume 4.

3.2 Organizing and Managing the Public Private Partnership Project Preparation

A full project preparation team for each PPP project can be assembled once the project has been endorsed by the Head of Agency and included in the PIP and the CIIP. Assessing the project in terms of its feasibility involves a variety of skills. The effort therefore may include not only technical staff of the IA but also external advisers that augment the necessary specialist skills available internally. Skills may be drawn from other government agencies such as the PPP Center, which also provides assistance to IAs in developing PPP projects.
In the course of preparing the project, issues might be encountered with a number of stakeholders. The project preparation should therefore include establishing a governance structure that will promote project ownership, accountability and efficient management of issues dealing with multiple stakeholders.

The key steps to getting organized include:

1. Set up of project team and governance structure;
2. Engage external advisers; and
3. Project Management including developing project timelines and a project risk matrix.

### 3.2.1 Project Governance and Engaging Key Project Preparation Players

Assigning a point person to be responsible for the PPP process is the first step in establishing the project governance structure. For PPP projects, Section 14.3 of the Revised IRR of the BOT Law encourages the creation of PPP units for planning, overseeing, and monitoring PPP projects. The law requires that the PPP Unit should be headed by a senior official of the agency and designates a PPP Project Development Officer responsible for overseeing the PPP project throughout its life cycle.

It is recommended that the IA convenes a high-level overarching Project Steering Committee to oversee the PPP process. It should deal with decisions on key issues relating to the different phases of the project, particularly from the pre-effective phase up to and including the turnover phase as well as issues of public concern, contract monitoring and community and media relations issues. The IA's Head of Agency or his/her nominee (referred to as the Project Director) should lead the Project Steering Committee. Two representatives from the project proponent are given a seat at the Project Steering Committee once the project is awarded. The IA's PPP Unit should support the Project Steering Committee. Different sub-committees are convened to report to the Project Steering Committee during the different stages of the PPP process. A typical arrangement is depicted in Figure 1.5 with suggested sub-committees:

- **Project Study Committee** – Directs the development of the project and deals with key issues on project preparation, including the content of the key PPP documentation.
- **Special/Pre-Qualification Bids and Awards Committee** – Selection/recruitment of the transaction adviser and external adviser. At Stage 3 of the PPP process (tender stage), the committee conducts the tendering and subsequent negotiation of the project.
- **Contract Management Committee** – Undertakes necessary M&E activities and reports to the Project Steering Committee.
- **Construction Committee** – Involved in ensuring design construction standards are met and monitors the condition of the project assets. Interacts closely with the Contract Management Committee at Stage 4 of the PPP process (implementation, operations and hand-over).
The various committees could have the following composition:

### Table 1.8 Committee Composition

<table>
<thead>
<tr>
<th>Committees</th>
<th>PPP Process Stage</th>
<th>IA Head of Agency</th>
<th>IA’s PPP Unit</th>
<th>PPP Center</th>
<th>Other Agencies</th>
<th>Private Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Steering Committee</td>
<td>1-4</td>
<td>✓ - Head of Agency or his/her nominee, referred to as the Project Director</td>
<td>✓</td>
<td>✓</td>
<td>✓ - Oversight Agencies (NEDA, DOF, Sector Regulator) as deemed necessary</td>
<td>✓ – at the later stage once the project is awarded</td>
</tr>
<tr>
<td>Project Study Committee</td>
<td>2 and 3</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Special or Pre-qualification, Bids and Awards Committee (SBAC or PBAC)</td>
<td>2 and 3</td>
<td>✓</td>
<td>✓ (observer capacity)</td>
<td>✓ – for PPPs under the solicited track only: COA, DILG for LGU projects (observer capacity)</td>
<td>✓ – at the tender stage for PPPs under the solicited track only: representative from contractors and users’ association (observer capacity)</td>
<td></td>
</tr>
<tr>
<td>Project Contract Management Committee</td>
<td>3 and 4</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓ - Oversight Agencies (NEDA, DOF, Sector Regulator) as deemed necessary</td>
<td>✓</td>
</tr>
<tr>
<td>Project Construction Committee</td>
<td>4</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: Stage 1 - Identification, Selection and Prioritization; Stage 2 - Preparation, Evaluation, and Approval; Stage 3 - Tendering and Negotiation; and Stage 4 - Implementation, Operations and Handover
The sub-committees will comprise of different staff and skills relevant to each particular project. They could comprise varying combinations of public sector staff and external advisers depending on the needs of the specific project.

The IA’s PPP Unit should have a sitting member in each of the sub-committees to ensure that the IA is aware of all discussions and decisions. It is also acceptable to have interlocking membership, or members can transition from one committee to another as the project life cycle progresses. For example, the technical members of the Project Study Committee could support the PBAC at Stage 3, or the legal expert in the PBAC might be part of the Contract Management Committee.

Further discussion can be found on the various committees’ tasks in Section 3.2.2 below (Project Study Committee), in Chapter 5, Section 5.5 (Project Steering Committee), in Chapters 10 and 11 (Contract Management Committee) and in Chapter 11 (Project Construction Committee).

3.2.2 Typical Players in PPP Project Preparation

The following are typically players in the PPP project preparation process:

1. IA’s PPP Unit/Project Team conceptualizes the project, may undertake pre-feasibility study and SCBA.
2. Project Study Committee oversees the project preparation stage and comprises of the IA’s Project Development Officer and representatives from oversight agencies such as the PPP Center whose mandate is to ensure consistency in the quality of the project preparation outputs.
3. Special Bids and Awards Committee for the selection/recruitment of the Transaction Advisor and external advisers. At the tender stage, the committee conducts the tender and subsequent negotiation. A Technical Working Group provides support to the Special Bids and Awards Committee.
4. PPP Center reviews the quality and completeness of the project preparation process and outputs. It also provides project-specific assistance to IAs in developing PPP projects.
5. NEDA-ICC PPP TWG composed of NEDA, DOF, DENR-EMB, and the PPPC, as well as other agencies as necessary, and appraises PPP projects for approval of the ICC Cabinet Committee.
6. NEDA-ICC Board approves the project structure and risk allocation.
7. NEDA Board approves the project for tender.
8. Transaction Adviser leads the preparation of the FS and the necessary transaction documents. At the contract tendering stage, the transaction adviser provides assistance to the IA in the tendering process, including bid evaluation and award of PPP projects. Given the internal capacity constraints, external transaction advisers are usually mobilized.
9. Advisers/Consultants are mobilized to bridge the gaps in in-house knowledge and skills. Their primary role is to give the Project Study Committee appropriate advice in their area of expertise. Other external advisers likely to be required for a PPP project are listed in Table 1.9.

Creating an appropriately experienced and technically relevant Transaction Advisory Team is important. Table 1.9 following suggests some of the expertise that the IA may bring into the Team. Note however that not all of these advisers would be required for every project, and that for some projects, advisory services not listed here, may be required.
### Table 1.9 External Advisers in a typical PPP Project

<table>
<thead>
<tr>
<th>Type of Adviser</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction Adviser</td>
<td>Preparation of the FS and transaction documents, assists the IA to coordinate the work of all other advisers, provides assistance on bid evaluation and award of PPP projects.</td>
</tr>
<tr>
<td>Technical Adviser</td>
<td>Provide advice on the technical aspects of the feasibility study, drafting of the appropriate minimum performance standards and specifications, evaluation of the technical components of bids, and the audit or inspections of systems during the testing and implementation phase.</td>
</tr>
<tr>
<td>Legal Adviser</td>
<td>Assessment of requisite powers and legal feasibility of the project, development of legal aspects of a contract, legal due diligence on bids, and provide legal advice on processes throughout the procurement stage to safeguard the integrity of the procurement process.</td>
</tr>
<tr>
<td>Financial Adviser</td>
<td>Development of the financial aspects of the project including project payment mechanisms, undertake financial due diligence of financial bids, evaluate and advise on the financial proposal throughout the procurement stage and clarify financial and commercial issues.</td>
</tr>
<tr>
<td>Environmental / Social Adviser(s)</td>
<td>Identify project impact on the environment/ vulnerable groups, ensure gender equality and recommend mitigating measures to minimize adverse impacts.</td>
</tr>
<tr>
<td>Communication Adviser</td>
<td>Provide advice on the communications strategy of the project, stakeholder management and the consultation process.</td>
</tr>
</tbody>
</table>

### 3.2.3 Project Management

Project Management is the responsibility of the IA with the assistance of the PPP Center and other relevant agencies and external advisers. Effective project management, along with good governance, is essential in managing a successful PPP process. Good practices in project management include:

1. Identifying key project activities and critical paths;
2. Developing a detailed project plan and timetable; and
3. Establishing a project risk management process that identifies (a) who is responsible for which tasks, (b) potential risks and (c) how risks can be mitigated. A project risk management matrix for the project preparation process can be used (not to be confused with the risk allocation matrix of the project itself).

### 3.2.4 Funding for Project Preparation

Project preparation requires resources to undertake activities, specifically in mobilizing external consultants or advisers. The costs of project preparation and tendering should be estimated appropriately. These costs typically would depend on the investment cost of the project (Box 1.1). It can be disproportionately high for very small projects thus some small one-off projects may generally be less suitable to be undertaken as a PPP.

### Box 1.1 Costs of Project Preparation and Tendering

Costs of project preparation and tendering may typically be around:
- 3-4 percent of investment costs for projects costing less than US$100 million
- 2-3 percent for projects costing more than US$100 million
- 2 percent for projects costing more than $500 million

IAAs have at their disposal their own project preparation funds. For NGAs, funds can be sourced in their budgets, the Project Development and Monitoring Facility (see Box 1.2) and in some cases, from grants from donor organizations.

**Box 1.2 The Project Development and Monitoring Facility**

The Project Development and Monitoring Facility (PDMF) is a revolving pool of funds from the Philippine Government and the Government of Australia under a Capacity Building Technical Assistance project from the Asian Development Bank (ADB). It is managed and administered by the PPP Center. Its purpose is to enable implementing agencies (IAAs) to procure external consultants to prepare high quality feasibility analysis and assist in structuring, tendering and negotiating PPP transactions.

The PDMF can be used for infrastructure and development projects that are part of the Government Development Plans and Programs such as airports, highways and expressways, railways, agriculture, health facilities, education, ports, power and renewable energy, water supply and environmental service facilities.

To ensure that the quality of knowledge it procures meets a defined standard, the PDMF has created a panel of experts (composed of pre-qualified consultants/transaction advisers), who are considered eligible to bid on PDMF projects. The PPP Center chairs the Project Steering Committees of PDMF-funded projects.

The revolving nature of the PDMF means funds are recovered. The costs of the activities which PDMF funds are recovered either from the successful PPP project bidder or the IA. For unsuccessful bids (wherein factors leading to this outcome are beyond the control of the IAAs), the costs are reimbursed.

3.3 **Project Assessment**

Proper project preparation of a PPP project entails a detailed assessment of:

1. Project factors such as its scope and requirements and its economic justification. This includes an assessment of the project’s institutional, technical, environmental and social issues;
2. Project affordability which involves identifying costs in more detail, possible sources of project revenues and determining government support that may be required;
3. Project risk allocation which involves identifying risks in detail, recommending risk allocation between the public and the private sector and risk mitigation measures;
4. The market to determine potential interest from project investors, funders and contractors; and
5. Value for money to underpin the rationale of the project to be delivered as a PPP.

These tasks are relevant in assessing the merits of the project for tender and implementation and provide the project information that should be made available to the private sector. The credibility of the process therefore rests heavily on undertaking the project preparation activities properly.

3.3.1 **Components of a Properly Prepared Public-Private Partnership Project**

A well prepared PPP project may consist of up to 8 components:

1. **Technical Analysis** to determine that the project’s design and output requirements, or minimum performance standards and specifications, are technically feasible. The assessment also involves identifying likely required capital and operating costs. The work will require technical ground surveys e.g. ground, geographical, hydrological and archeological surveys. Preliminary technical evaluation of a particular infrastructure facility is usually initiated at the project identification, selection and prioritization stage of the PPP process. Undertaking this properly will make it easier to assess the project from a number of perspectives, such as from the financial point of view to determine the.
revenue requirements relevant to determining the project affordability and from the economy as a whole (through the SCBA) to determine the different technical configurations of a project that will yield the greatest economic benefit to the country. The assessment is also an important component in the analysis of environmental and social impacts in the delivery of the project.

2. **Demand/Market Study** refers to forecast potential demand of the product or service that the project is expected to deliver. Forecasts should be derived for short, medium and long term (5, 10, 15+ years) and should provide for different growth scenarios. The ability or willingness of potential users to pay for the product or service should also be estimated.

3. **SCBA** underpins the rationale for undertaking the project based on the economic and social benefits to the country. Economic model outputs should include at a minimum EIRR, Economic Net Present Value and ratio of the present value (PV) of economic benefits compared to the PV of economic cost. Social benefits can include employment, and especially employment in areas of low employment opportunity.

4. **Social and Gender Impact Analysis** identifies all social impacts, including gender and resettlement activity, proposed mitigation measures and their related costs. Social and Gender Impact Analysis should conform to Philippine social impact policies including that which relates to indigenous peoples if relevant.

5. **Environmental Impact Assessment Study** identifies potential environmental risks or adverse impacts and how these can be mitigated to ensure compliance with the requirements of environmental policies enforced. Environmental studies should conform to Philippine environmental regulations.

6. **Risk Assessment** determines the inherent risks in the project and how these are best dealt with (allocation to the party which can best manage the risk).

7. **Financial Analysis** examines the viability, profitability and bankability of a project based on key financial indicators such as the FIRR, Financial Net Present Value, and debt service cover ratio (DSCR). The analysis entails the use of a financial model to simulate various financial scenarios to determine the tariff structure, tariff path and escalation; expected level and conditions of debt and equity funding required; exposure to interest rate and exchange rate movements; and need for government financial support if the FIRR fails to meet the financial hurdle where EIRR indicates economic viability.

8. **Value for Money Analysis** determines the appropriateness of undertaking the project as a PPP. It entails comparing (on a like-for-like basis) the proposed PPP with a Public Sector Comparator (PSC) that reflects the estimated cost of the government undertaking the project itself.

A Market Sounding activity should be undertaken as part of the project preparation process when there is sufficient data that would permit a substantive discussion with the private sector, including both potential contractors and investors. The feedback from the market sounding is integrated into the project structure and eventually as an input to revisions to the FS and procurement process.
3.4 The Technical Analysis

3.4.1 Project Scope and Rationale

Project scope can vary considerably, depending upon the type of project being proposed. It is important that the project scope is clearly defined early in the project preparation stage, with the objective of attracting private investment. The following are points that can be considered in determining the scope of the project:

1. **Breaking down the project investments into components.** If a project is composed of many different components, the large benefits of one component of an investment may hide the insubstantial benefits of another component. For example, in the case of port expansion, the economic analyses should consider the separate analysis of each new berth, to see how many berths are in fact economically justified.

2. **Project rationale and 'packaging'.** For example, where a water distribution network might be constructed through traditional means of public procurement, the source development and water treatment plant could be packaged separately for PPP, under a bulk supply agreement. Or in the case of rail transport, the government may procure the rolling stock but the provision, operation and maintenance of tracks and signalling systems can be packaged as a PPP.

3. **Allowances for contingencies.** For example, in estimating the costs of a water supply system, allowance should be made for insufficient yield of a groundwater source (which cannot be accurately predicted until the production well is dug), in which case another production well might have to be developed. There are no hard and fast rules but some consultants opt to include contingency for another production well.
3.4.2 Project Conceptual Design

Once a project has been proposed for PPP, a technical evaluation is necessary to confirm that the project is viable in general planning, engineering, and social safeguard terms and to provide an estimate of the construction, operation, and maintenance cost for the economic and financial evaluations. At this stage, major risks in relation to engineering and cost issues should also be identified. The following are the key components of a conceptual design:

1. **Identification of Design Standards.** The first step is to determine the relevant design standards (along with the project’s primary design criteria) that are compatible with the project’s objectives and location. These design standards and criteria must be prepared to fulfil key performance indicators or minimum performance standards and specifications that will be part of the PPP contract. An example for roads would be the level of roughness index on the pavement, for hospitals and schools it would relate to the space allowable to ensure safety and proper delivery of services, for water supply the specifications would be a level of pressure to maintain 24/7 delivery of water. These standards usually are specific to the sector’s technical regulation.

2. **Review of Alternatives.** Examine alternative sites, and alternative layouts at each site, so that a number of feasible implementation options for the PPP project could be identified that would provide the basic operational requirements. This process should identify:
   a. Any critical areas where physical limitations on available sites could restrict the design layout;
   b. Secondary facilities or components that are necessary (e.g. due to safety and environmental protection) but may have no impact on the ability of the project to satisfy the primary operational requirements. These secondary facilities should be identified at this stage in the scheme’s development so that any necessary land and budget provision can be recognised early on. For example, a wastewater treatment plant, which is expected to generate large volumes of treated water, will need an on-site power plant to ensure the availability of power. For such issues, a comprehensive site assessment will be required including geography, topography, geology, hydrology, etc.; and
   c. Issues concerned with Right-of-Way Acquisition (ROWA). As ROWA can be both a high cost and politically sensitive issue, exploring all the viable alternatives is critical at this stage.

3. **Geotechnical desk study.** Undertake a geotechnical desk study to identify general ground conditions in each alternative implementation area. The study would also identify critical areas that should be avoided due to either unsuitable ground conditions or where construction costs are likely to be high. The importance of adequate geotechnical studies cannot be overemphasized. A relatively small amount, spent at this stage, can often be more than compensated by accurate capital costs estimation leading to prevention of a cost overrun.

4. **Identification of civil works and structures.** Determine all major civil works and structures for each alternative site, together with relevant design codes. For each structure, a preliminary design should be prepared and evaluated to confirm viability.

5. **Estimates of construction and operational costs.** While full geotechnical, hydrological, structural, drainage and other technical studies are not required at this stage, sufficient technical work for the prefeasibility study must be undertaken to be able to cost the project (including alternatives) to within ± 20%. A cost estimate should be prepared for each implementation option that clearly identifies all major elements including engineering works, environmental mitigation works, service diversion costs, accommodation works, land costs, and social safeguard costs as shown in the transport infrastructure example shown in Table 1.9. A preliminary engineering design should be undertaken to determine project cost component estimates. The following are some principles in estimating costs:
a. Estimates should be based on the actual cost of recently completed projects and other cost databases that may be available.
b. Ensure that cost data obtained from different sources is converted to the required base year needed for the economic and financial analyses using appropriate inflation indices.
c. The operational and maintenance costs should be identified for each element of an implementation alternative. Some maintenance costs will be routine in nature, while others will need to be estimated on a periodical basis.
d. Preliminary cost estimates must also be accompanied by an outline implementation program reflecting the timing and interrelationships of all of the major components of the project.
e. The technical specification must conform to the least cost solution to meet the projected demand (phased if necessary) and other objectives.

6. **Selection of preferred technical design for PPP.** A comparative evaluation of all facility development options (including the ‘Do-Minimum’ scenario, where applicable) should be carried out for each such alternative, taking into account all operational, cost, environmental, and engineering issues. This evaluation should be summarised in tabular form that clearly shows the relative differences between each alternative.

7. **New Technology.** The study should also consider any benefits that may be gained from the use of new technology, including e-commerce, improved management systems and higher levels of skills. It should also identify any possible technological threats, such as unproven technology or designs.
### Table 1.10 Components of Project Cost

<table>
<thead>
<tr>
<th>Project Components</th>
<th>Cost (PhP M)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. LAND ACQUISITION, RESETTLEMENT, AND ENVIRONMENTAL COSTS</strong></td>
<td></td>
</tr>
<tr>
<td><strong>2. BREAKOUT OF COSTS RELATED TO ENGINEERING, PROCUREMENT, CONSTRUCTION</strong></td>
<td></td>
</tr>
<tr>
<td>a. Cost of detailed engineering design</td>
<td></td>
</tr>
<tr>
<td>b. Construction Cost, Equipment and Related Costs</td>
<td></td>
</tr>
<tr>
<td>For Ports, costs will include:</td>
<td></td>
</tr>
<tr>
<td>• Port Infrastructure (berths, storage areas, etc) and Superstructure (terminal,</td>
<td></td>
</tr>
<tr>
<td>• Port Access (Roads, Railways, Channels, Breakwaters, Navigation, etc)</td>
<td></td>
</tr>
<tr>
<td>• Other Port Facilities and Equipment</td>
<td></td>
</tr>
<tr>
<td>• Public Utilities</td>
<td></td>
</tr>
<tr>
<td>For Airport, costs will include:</td>
<td></td>
</tr>
<tr>
<td>• Airport Infrastructure (runway, apron, taxiway, etc)</td>
<td></td>
</tr>
<tr>
<td>• Terminals (passenger and cargo)</td>
<td></td>
</tr>
<tr>
<td>• Airport Access (Air Traffic Control, Telecommunication, Roads, Railways, etc)</td>
<td></td>
</tr>
<tr>
<td>• Other Airport Facilities (incl. fuel supply system) and Equipment</td>
<td></td>
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<tr>
<td>• Public Utilities</td>
<td></td>
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<tr>
<td>For Railways, costs will include:</td>
<td></td>
</tr>
<tr>
<td>• Railway Track and Stations</td>
<td></td>
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<tr>
<td>• Rolling Stock</td>
<td></td>
</tr>
<tr>
<td>• Access to Railway Stations (Roads, Bridges)</td>
<td></td>
</tr>
<tr>
<td>• Other Railway Facilities (signalling, telecommunication, electricity, etc)</td>
<td></td>
</tr>
<tr>
<td>• Public Utilities</td>
<td></td>
</tr>
<tr>
<td>For Ferry Ports, costs will include:</td>
<td></td>
</tr>
<tr>
<td>• Ferry Port Infrastructure (berths, etc) and Superstructure (Terminal, etc)</td>
<td></td>
</tr>
<tr>
<td>• Ferry Ships</td>
<td></td>
</tr>
<tr>
<td>• Ferry Access (Roads, Railways, Channels, Breakwaters, Navigation, etc)</td>
<td></td>
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<tr>
<td>• Other Transport Facilities and Equipment</td>
<td></td>
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<tr>
<td>• Public Utilities</td>
<td></td>
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<tr>
<td>For Highways, costs will include:</td>
<td></td>
</tr>
<tr>
<td>• Road infrastructure</td>
<td></td>
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<tr>
<td>• Toll booths and associated toll collection equipment</td>
<td></td>
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<tr>
<td>• Bridges and tunnels</td>
<td></td>
</tr>
<tr>
<td>• Other Transport Facilities and Equipment (including Intelligent Transport</td>
<td></td>
</tr>
<tr>
<td>• Systems, etc)</td>
<td></td>
</tr>
<tr>
<td>• Public Utilities</td>
<td></td>
</tr>
<tr>
<td>c. Cost of Project Supervision</td>
<td></td>
</tr>
<tr>
<td>d. Contingency (Physical and Price)</td>
<td></td>
</tr>
<tr>
<td>e. Tax, if any</td>
<td></td>
</tr>
<tr>
<td><strong>3. TOTAL ENGINEERING, PROCUREMENT, CONSTRUCTION COSTS</strong></td>
<td></td>
</tr>
<tr>
<td><strong>4. FINANCIAL COSTS EXCLUDING Interest During Construction</strong></td>
<td></td>
</tr>
<tr>
<td>• Arrangement fee</td>
<td></td>
</tr>
<tr>
<td>• Underwriter fee</td>
<td></td>
</tr>
<tr>
<td>• Total Financial Cost</td>
<td></td>
</tr>
<tr>
<td><strong>5. INTEREST DURING CONSTRUCTION</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL PROJECT INVESTMENT COST (Items 1+5)</td>
<td></td>
</tr>
</tbody>
</table>
3.5 Environmental Impact Assessment

3.5.1 Overview

One of the major components of a well-prepared PPP Project is an environmental impact assessment (EIA). Aside from it being a regulatory requirement, EIA is a management tool that enhances planning and guides decision-making by integrating environmental concerns, including climate change and disaster risks, into the planning process of projects. Through the EIA process, adverse environmental impacts of proposed actions are considerably reduced due to an iterative review process of project siting, design and other alternatives, and the subsequent formulation of environmental management and monitoring plans.

EIA is a process that involves predicting and evaluating the likely environmental impacts of a project, including cumulative impacts on the environment, during construction, commissioning, operation and abandonment. It also includes designing appropriate preventive, mitigating and enhancement measures addressing these consequences to protect the environment and the community’s welfare.

As required under the Philippine Environmental Impact Statement (PEIS) System (Presidential Decree 1586), proposed projects, including government projects, are not allowed to start any site activity unless the Department of Environment and Natural Resources (DENR) issues an Environmental Compliance Certificate (ECC). An ECC is issued based on the review of the project EIA report submitted to DENR - Environmental Management Bureau (DENR-EMB). Projects are classified as environmentally critical projects (ECP) or non-ECP according to certain parameters and/or whether such project is located in an environmentally critical area (ECA) or non-ECA.

It is the responsibility of the IA to ensure that the appropriate EIA is conducted for PPP projects, either through the IA itself or through its private partner.

Volume 4, Annex 5 of this Manual provides more detailed information on the requirements and procedures for the conduct of EIA and securing the ECC for PPP projects. IAs may refer to the DENR website for the full detail of the processes and procedures of the Philippine EIS System.

3.5.2 Environmental Impact Assessment within the PPP Project Cycle

The EIA is started as early as the project identification stage of PPP Projects. This will ensure that the potential environmental impacts of the project are identified at the onset and appropriate measures to reduce and mitigate the negative impacts are considered in the project design and implementation.

Table 1.11 provides a summary of where in the PPP project cycle the PEIS stages and steps are undertaken. These stages in the PEIS System are further described in Volume 4, Annex 5 of this Manual.

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26 Refer also to Volume 4, Annex 5
27 Under Presidential Decree No. 1586, Philippine Environmental Impact Statement (PEIS) System, which is implemented by the DENR, through the Environmental Management Bureau (EMB)
### Table 1.11  EIA Stages and Steps during the PPP Project Cycle

<table>
<thead>
<tr>
<th>PPP Project Cycle</th>
<th>Philippine Environmental Impact Statement (PEIS) Stages/Steps</th>
</tr>
</thead>
</table>
| Project identification (Project Concept/Pre-feasibility studies) | • Conduct screening to determine if project is covered by PEIS system using the EIA Coverage and Requirements Screening Checklist (ECRSC)\(^{28}\)  
  • Undertake initial rapid site and impact assessment to determine criticality of project  
| Preliminary Design and Feasibility studies  | • Conduct scoping of environmental issues  
  • Conduct detailed Environmental Impact Assessment  
  • Prepare Environmental Management Plan/Program (EMP)  
  • Provide inputs on costs and benefits into the FS  
  • Provide inputs on the project option on siting and design  
  • Submission of EIA document to DENR for Environmental Compliance Certificate (ECC)  
  • DENR issuance of ECC with detailed conditionalities  
| Detailed Engineering Design                | • ECC requirements, detailed mitigation measures and technology are included in engineering design  
  • Additional baseline environmental monitoring data are gathered as specified in ECC  
| Project Construction & Supervision         | • Implementation of environmental mitigation measures and EMP  
  • Monitoring, validation and evaluation or audit of ECC compliance  
| Project Operation and Maintenance          | • Continuing implementation and updating of mitigation measures and EMP  
  • Monitoring, validation and evaluation or audit of ECC compliance Environmental impact reporting  

Source: EMB, 2007, ADB, 2003 (with modifications)

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3.5.3 PPP Projects Covered by the Philippine EIS System

The DENR provides a comprehensive list of projects that are covered by the PEIS System.29 PPP-eligible types of projects included in the DENR list that are considered as environmentally critical and are thus covered by the PEIS System, are summarized in Table 1.12.

These project types shall undergo comprehensive EIA, which should be documented in a detailed EIS report.

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Project Size Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. MAJOR DAMS</td>
<td>Reservoir flooded area OR Water storage capacity ≥25,000 hectares OR ≥20 million cu m</td>
</tr>
<tr>
<td>2. MAJOR RECLAMATION PROJECTS</td>
<td>Area reclaimed ≥50 hectares</td>
</tr>
<tr>
<td>3. MAJOR ROADS &amp; BRIDGES</td>
<td>Length ≥10.0 kilometers (km)</td>
</tr>
<tr>
<td>a. Bridges and viaducts, new construction</td>
<td>Length Regardless of length and width</td>
</tr>
<tr>
<td>b. On-grade railway system, new</td>
<td>Length with no critical slope or length with critical slope ≥20.0 km OR ≥10.0 km</td>
</tr>
<tr>
<td>c. Roads, new construction, widening (including RO-RO facilities)</td>
<td>Length with no critical slope or length with critical slope</td>
</tr>
<tr>
<td>d. Tunnels and sub-grade roads and railways</td>
<td>Length ≥1.0 km</td>
</tr>
<tr>
<td>4. MAJOR POWER PLANTS (Under PP 2146: fossil-fueled, nuclear fueled, hydroelectric or geothermal)</td>
<td>Total power production capacity ≥100 MW</td>
</tr>
<tr>
<td>a. Fuel Cell</td>
<td>Total power production capacity ≥100 MW</td>
</tr>
<tr>
<td>b. Gas-fired thermal power plants</td>
<td>Total power production capacity ≥50 MW</td>
</tr>
<tr>
<td>c. Geothermal facilities</td>
<td>Total power production capacity ≥50 MW</td>
</tr>
<tr>
<td>d. Hydropower facilities</td>
<td>Water impounding capacity ≥20 million cu m</td>
</tr>
<tr>
<td>e. Other thermal power plants (e.g., diesel, bunker, coal, etc)</td>
<td>Total power production capacity ≥30 MW</td>
</tr>
<tr>
<td>5. OTHER POWER PLANTS NOT LISTED IN PP 2146</td>
<td>Total power production capacity ≥100MW</td>
</tr>
<tr>
<td>a. Renewable energy projects such as ocean, solar, wind, tidal power except waste to energy and biogas project</td>
<td>Total power production capacity ≥100MW</td>
</tr>
<tr>
<td>b. Substations /switchyard</td>
<td>Power output ≥50.0MW</td>
</tr>
<tr>
<td>c. Waste to energy projects including biogas projects</td>
<td>Total power production capacity ≥50.0MW</td>
</tr>
</tbody>
</table>

There are other PPP-eligible projects, which because of their size or capacity may be classified as non-environmentally critical projects (non-ECPs). These projects, however, when located in environmentally critical areas (ECA)30 shall likewise need to comply with the requirements of the PEIS System. Annex 5 provides a list of selected non-ECP PPP-eligible project types and their corresponding project size parameters, which can fall under this category. A detailed project list, the corresponding project size parameters and the type of EIA reports needed may be found in Annex 2-1b of the DENR Revised Procedural Manual for DAO 30, series of 2003.

30 Environmentally Critical Projects (ECP) are projects or programs that have high potential for significant negative environmental impact. Presidential Decree 2146, s 1981 and Presidential Proclamation 803, series of 1996, provides a list of ECPs, which are further clarified in the DENR Revised Procedural Manual for DENR Administrative Order No. 30, series of 2003.
31 A list of environmentally critical areas (ECA) as declared through Presidential Proclamation 2146 can be found in the EMB Revised Procedural Manual for DAO 03, series of 2003. The DENR-EMB may update the technical descriptions of ECAs.
3.5.4 EIA Reports for PPP Projects

Typically, depending on the project category, there are three types of EIA reports that are produced by the proponent and submitted to EMB to serve as the application for an ECC:

1. Environmental Impact Statement (EIS), which documents the comprehensive EIA study conducted for the specific project. The document contains the details of the study and includes an Environmental Management Plan/Program that the proponent will fund and implement to protect the environment. The complete document also includes all other related studies that were required during the scoping stage. This document is required for major ECPs and for some non-ECPs located in ECAs that have project size or threshold that are considered to result in significant potential environmental impacts.

2. Initial Environmental Examination (IEE) Report or Checklist Report, which are both similar to an EIS, but with reduced details and depth of assessment and discussion. The Checklist Report is provided by EMB for some commonly submitted project types. This document is required for minor ECPs and for some non-ECPs located in ECAs that have project size or thresholds that are considered to result in relatively minimal environmental impacts.

3. Project Description (PD) is the document required for non-ECPs that have minimal environmental impacts. This document is submitted for the issuance of a Certificate of Non-Coverage (CNC).

All of these types of reports have proformas that can be found in the EMB Revised Procedural Manual for DAO 30, series of 2003 and in the EMB Technical Guidelines incorporating Disaster Risk Reduction and Climate Change Adaptation into the Philippine EIS System (EMB Memorandum Circular No 2011-005).

3.6 Social and Gender Impact Analysis

Social impacts in a PPP project may include temporary or permanent displacement of people and assets and adverse or positive effects on local communities including the indigenous peoples. The IAs should thoroughly screen affected persons and ensure that the PPP project complies with the relevant provisions of the Indigenous Peoples Rights Act and uphold the principle derived from the Bill of Rights of the Constitution of the Republic of the Philippines, which states that “Private property shall not be taken for public use without just compensation (In Article II, Section 9)”; and that “No person shall be deprived of life, liberty, or property without due process of law, nor shall any person be denied the equal protection of the laws (Article II, Section I).” A number of applicable laws and policies pertaining to land acquisition and just compensation are found in Annex 3.

The following are suggested steps to screening and determining impacts on affected persons:

1. Provide information on the project design, specifically the activities or components of the project that would involve the acquisition of assets such as land for right-of-way, structures and other improvements, and

2. Complete a checklist pertaining to project-affected persons and assets and determine if the project affected persons will need to be involuntarily resettled or are considered Indigenous Peoples.

3. If a negative social impact is identified/confirmed, the following are prepared:
   a. Resettlement plan should be undertaken, specifically outlining measures to mitigate the effects of involuntary resettlement such as just compensation, financial assistance, rehabilitation support, institutional arrangements

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12 The proponent is either the Implementing Agency or their private partner, or both depending on their agreement

13 Refer also to Volume 4, Annexes 3 and 4.
for implementation of the resettlement action plan, relocation sites, budgetary requirement for the resettlement, 
address grievances and redress mechanisms, etc.).

b. For indigenous people, an Indigenous People Plan showing proper engagement with indigenous peoples.

4. Include cost estimates for compensation and relocation of displaced persons in the project costs. Cost estimates 
should make adequate provisions for contingencies.

As part of the social assessment, a gender-responsiveness analysis should be undertaken to ensure that the project considers 
and addresses the needs of both women and men, and the decision-making process and subsequent implementation of 
the project puts high priority on gender equality goals (see Box 1.4 for an example for infrastructure sector). An example 
of a procedure for gender analysis for a road project is outlined in Box 1.5.

In undertaking both the social and gender-responsiveness analysis, a number of tools are used:

1. Census to collect detailed information on affected households and properties in the project area. It serves to 
generate (i) an inventory of all those affected including assets such as land, crops, trees, and structures/building, 
and (ii) a list of all affected persons/families taking into account the social and economic impacts of land acquisition 
and resettlement.

2. Socioeconomic survey to get an overall picture and awareness of the general characteristics of the affected area 
and profile of affected households.

3. Detailed measurement survey to provide a precise inventory of affected assets such as land to be acquired for the 
project, housing structures including its dimensions and construction materials used, and businesses and potential 
income losses, trees and crops, public infrastructure and other infrastructures (e.g. historical monuments, etc.).

<table>
<thead>
<tr>
<th>Table 1.13  Checklist for Project-Affected Persons</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Involuntary Resettlement</strong></td>
</tr>
<tr>
<td>☐ Land acquisition necessary (size and use of land prior to construction)</td>
</tr>
<tr>
<td>☐ Households (HH)/Persons will be displaced (no. of households, persons)</td>
</tr>
<tr>
<td>☐ Presence of informal settlers</td>
</tr>
<tr>
<td>☐ Formal Structure acquired/damaged (no. and size of built structures)</td>
</tr>
<tr>
<td>☐ Informal structure removed (no. and size of built structures classified according to use)</td>
</tr>
<tr>
<td>☐ Persons losing means of livelihood (total no. of HHs, persons)</td>
</tr>
<tr>
<td>☐ Basic services will be inaccessible</td>
</tr>
<tr>
<td>☐ Crops/trees likely to be damaged/lost (no. of households specified by type e.g. tenants, and informal settlers; type and no of crops/trees)</td>
</tr>
<tr>
<td>☐ Cultural property affected (no., size, and type of cultural property)</td>
</tr>
<tr>
<td><strong>Indigenous People</strong></td>
</tr>
<tr>
<td>☐ Indigenous people displaced (no. HHs, persons)</td>
</tr>
<tr>
<td>☐ Ancestral domain affected (size of domain)</td>
</tr>
<tr>
<td>☐ Name of affected ethnic group(s)</td>
</tr>
<tr>
<td>☐ Crops/trees likely to be damaged/lost (no. of households; type and no. of crops/trees)</td>
</tr>
</tbody>
</table>
Box 1.4  Gender Equality Results for Infrastructure Sector

- More time for rest and productive activities due to shorter travel time to and from markets, basic services facilities, or sources of water and fuel;
- Improved women’s access to safe and affordable public transport services and infrastructure;
- Greater inputs of women to the design and operation of the infrastructure;
- Increased capacity of women and their organizations to influence decisions about the design, operation, and maintenance of public services and facilities;
- Increase employment of women at all levels (actual construction, technical, and management) in infrastructure projects or services;
- Increased numbers of women employed in nontraditional occupations; and
- Improved capacity of infrastructure agencies to plan, design, implement, and monitor programs and projects that address gender issues and the concerns of different groups of women users or women resettled involuntarily

Source: NEDA Harmonized Gender and Development Guidelines, December 2010

Box 1.5  Standard Gender Analyses in Roads

The gender analysis applied in road infrastructure and transport contexts serves to understand and take stock of gender relations, or relations between women and men on the basis of their interests in using road infrastructure and transport services. The analysis should provide a set of well substantiated recommendations, capable of ensuring that the project helps to achieve gender equality in the area where it is being implemented. The procedures for undertaking the analysis include:

**Step 1.** Collect data and other information about men and women, and girls and boys living in the communities where the road infrastructure is to be implemented.

**Step 2.** Analyze data on and around road use (who uses the road on a regular basis), income and employment (to determine who is employed within the road limits) and women’s participation (data on women councilors and women-headed households will determine groups that can be consulted in terms of project implementation, road design and labor participation).

**Step 3.** Conduct focus group discussions with women and men to determine (i) local development and gender issues, (ii) core problems of the community, and (iii) recommendations on how the proposed road infrastructure project can help in solving or providing solutions to the core problem of the community.

**Step 4.** Utilize other gender analysis tools such as the Time Use Tool. This tool is used to look at what women and men do at given times of the day. It provides a snapshot of the gender division of labor and gender roles in a community.

**Step 5.** Include the information gathered from a gender analysis in the technical design and project provisions on gender and development (a standard section in DPWH FS).

Source: DPWH Toolkit for Making Road Infrastructure Projects Gender Responsive, August 2011
3.7 Demand Forecasts

Demand forecasting is a critical component in preparing a PPP project as it influences fundamental project decisions such as design, feasibility and management. Biased forecasts also provide an opportunity for the private sector proponent to complain about the underestimation, or overestimation, of the initial demand forecasts provided by the government sponsor. This can end up in costly renegotiation or contractual disputes: an overly optimistic forecast will almost always lead to financial consequences (including on government finances), impacting the viability and successful implementation of the project. It is therefore important for IAs to prepare a robust demand forecast at the project preparation stage.

Forecasting is never precise but an unbiased estimation of demand based on a reasonable amount of research is necessary, since the projections form the basis for quantifying and projecting likely project revenues over the life of the project. Generally, investors face considerable revenue risk if their demand projections do not materialize. The derivation of accurate demand forecasts is an important element of the due diligence process required to prepare PPP projects. Box 1.6 provides an example of demand forecasting for roads.

<table>
<thead>
<tr>
<th>Box 1.6 Demand Forecasting in Roads</th>
</tr>
</thead>
<tbody>
<tr>
<td>As a rough guide, below is an outline procedure in demand forecasting, using roads as an example:</td>
</tr>
<tr>
<td>• Determine factors that may influence the future demand for the service that the PPP project is expected to provide over the life of the project. This can be factors due to the (i) general changes in population, economic activity, land use and other factors that drive the use of the outputs of the project (e.g. this could include car ownership, prices of fuel, etc.), and (ii) increases in these factors due to expected improvements made by the PPP project itself (e.g. this may also include the changes in traffic in other parts of the network and of different transport modes; for transport PPPs, the use of origin-destination surveys are important tools in determining traffic flows and demand).</td>
</tr>
<tr>
<td>• Estimated future demand could be based on:</td>
</tr>
<tr>
<td>» An extrapolation of past trends of traffic demand growth that the PPP project will deliver over the life of the project. This presupposes that past trends will continue.</td>
</tr>
<tr>
<td>» Projections of underlying factors that drive traffic demand for the service that the PPP project will deliver over the life of the project.</td>
</tr>
<tr>
<td>» Other forecasting methods that may involve more sophisticated demand modelling (e.g. for road projects, this may include modelling the whole transport network and the different modes of transport).</td>
</tr>
<tr>
<td>• Estimate a range of demand scenarios to show different possible outcomes (e.g. a most-likely, an optimistic and a worst-case scenario), taking into account different factors that can influence demand (e.g. political factors, resistance to changes in toll increases or user charges).</td>
</tr>
<tr>
<td>• Forecasts should be derived for short, medium and long term (5, 10 and 20+ years).</td>
</tr>
<tr>
<td>• Perform integrity checks such as:</td>
</tr>
<tr>
<td>» Sensitivity analysis on key demand factors where there is some degree of uncertainty. For example, for road infrastructure this could include future population growth and land use (which drives origin-destination flows), employment and competition from other roads and modes of transportation.</td>
</tr>
<tr>
<td>» Compare with the results of similar projects or trends in forecasting results of the sector.</td>
</tr>
<tr>
<td>» Review forecasting methodology.</td>
</tr>
</tbody>
</table>

It is important to note that part of the demand may not materialize if user charges or tariffs are too expensive for potential users of the service. An important part of the demand analysis (especially for concession PPPs) therefore includes estimating the ability or willingness of potential users to pay for the service. These tools are important as they provide a basis for setting tariffs and the PPP project’s social acceptability. Regulators of services also will need to assess the impact of tariffs on users, especially on poor consumers.
WTP surveys can be undertaken wherein potential users are asked (i) how much they are currently paying for a similar service that will be provided by the PPP project, and (ii) how much they would be willing to pay for a different or improved service level or a new service. Another approach is to present users with a hypothetical scenario wherein they are offered varying degrees of improved service at various prices. This determines what kind of service users want and are willing to pay for.

An ability to pay analysis involves determining the maximum price or fee users will be able to pay. This rests on the principle whereby individuals are charged according to their income. The analysis is especially important when part of the project’s objective is to target lower income households who may not be able to avail of the service at the projected unit cost. A lifeline or blocked tariff structure can apply, such as in the case of electric utilities and the Metro Manila water concessionaires, wherein the Electricity Regulatory Commission and the MWSS Regulatory Office set a nominal price for the first block of minimum kilowatt hours or cubic meters consumed. Heavy users – such as the industrial sector – are charged higher per-unit prices. Income surveys such as Annual Poverty Incidence Surveys and Family Income and Expenditure Surveys can provide a useful guide to what fee or price would be acceptable to lower income groups.

### 3.8 Financial Analysis

Every potential PPP project must be evaluated to determine whether it is likely to be financially viable. Unless there is a reasonable degree of certainty that a PPP project is financially sustainable, private investors will not be prepared to bid for the rights to develop the project. A financially viable project should be capable of delivering a financial internal rate of return (FIRR) of at least the estimated weighted average cost of capital (see Technical Note 2 which is appended to this volume), and somewhat higher if the project has demand risk. Investors who inadvertently invest in a non-viable project would soon run into financial difficulties, either in the construction phase of the project or during its operations phase. Consequences for the IA of promoting a non-financially viable PPP project include (i) failure to attract any credible bids, (ii) failure to achieve financial closure, disruption of service to the public and (iii) the possibility of the IA having to intervene and provide financial support to the project.

For a PPP project to succeed it is essential that the financial evaluation is undertaken properly. When considering an infrastructure project and other development projects for PPP implementation, the relevant IA needs to adopt a private sector perspective, and assess the project as a business aside from its public service objectives. Only if it is viable or can be made viable based on allowable government contribution or financial support, will it potentially attract private investment.

As financial evaluation is so fundamental, the financial prospects of alternative facilities must be considered early in the process of selection of potential PPP projects. In practice, the financial analysis will go through several iterations, with the depth of supporting studies growing as the project moves from initial screening through due diligence to the tendering and subsequent contract negotiations phases.

A financial analysis will provide answers to three important questions:

1. **Is the project financially viable?** That is, are the potential revenues to be generated by the PPP project capable of covering all costs, debt, and generating a reasonable profit to the investors? Only if the answer to this question is clearly “Yes” should the project move to the tendering phase;

2. **Is the proposed financing structure robust?** Innovative financing techniques are unable to transform the
3. **Is the IA getting a fair price for the transaction?** The profit to the private sector should be reasonable, therefore it should not be excessive. Any surplus value should be shared between the IA and consumers, rather than being all captured by the private sector.

The process for the financial analysis can be depicted as in Figure 1.6 below:

![Figure 1.6 Financial Analysis](http://toolkit.pppinindia.com/sold-waste-management/module2-ffaapdd-fvapdd.php?links=ffaapdd1g)

### 3.8.1 The Financial Model

The financial model is the central tool used throughout the financial evaluation. It is generally tailored to the particular characteristics of the project and constructed in a standard spreadsheet program (such as Excel). Unless there are skills in-house, this would usually be done by the project’s Transaction Adviser. The model will use the information gained from demand forecasts and technical assessment and cost estimates, including the type of PPP arrangement. The worksheets of the financial model for a PPP may include the following:

1. **Summary** worksheet showing key assumptions of the model, and presenting key performance measures. Most inputs to the model are made on the Summary worksheet.
2. **Invest 1** worksheet, which shows the capital investment required for the project, and associated maintenance expense;
3. **Invest 2** worksheet, as an expansion of Invest 1, showing capital expenditure and maintenance cost for each year of the concession;
4. **Demand Revenue** worksheet, which calculates the revenue for the project for each year of the concession. Revenue is built up from forecasts of traffic volume multiplied by the tariff;
5. **Costs** worksheet shows the Operations and Maintenance costs for each year of the concession, based on data from Invest 2 and Demand Revenue;
6. **Depreciation** worksheet, which calculates asset depreciation for each year of the concession;

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34 This section discusses financial modelling. It is augmented by Volume 4, Annex 2, Overview of Project Finance.
7. **Debt** worksheet, which outlines the raising and repayment of the project loans. Financial structure performance measures are shown on this worksheet, summarizing the key operating parameters of the project throughout the concession period, i.e., the debt service cover ratio (ADSCR) and the loan life DSCR;

8. **Profit and Loss** worksheet presents the financial performance or profitability for the project for each year of the concession, drawing on data from Demand Revenue, Costs, Depreciation, and Debt;

9. **Balance Sheet** worksheet, which presents the financial position for the project for each year of the concession;

10. **Cash Flow** worksheet, which summarises the inflows and outflows of cash for the project for each year of the concession. The Cash Flow statement is the basis for the calculation of NPV and FIRR of the project.

### 3.8.2 The Inputs

A typical PPP project will consist of an initial construction phase followed by an extended operations phase, linked by a set of assumptions which detail forecast escalation rates during construction, inflationary impact on project costs during operations, scope and timing of tariff increases, dividend payments and other such matters. The financial model must capture the cash flows from both phases to assess whether the future net cash flow from the proposed project justifies the initial investment of capital.

The following items are key inputs to the PPP financial model, based on an example for roads:

1. **Initial Project Costs.** These include expenses associated with surveys, design, procurement, engineering, construction, land, etc., by the year incurred. Projects may be developed in different ways, so it is important to be clear on exactly what assets are obtained with the initial capital expenditure. Subsequent revenues and costs must be consistent with the asset base that has been installed. Project costs are input in base year values (i.e. this is when the analysis is undertaken) but price contingency will be added for each construction year, with revenues and costs inflated by an appropriate index.

2. **Demand forecasts.** Demand forecasts input to the financial model should be the product of a thorough user survey. The study should address such issues as willingness to pay and competition from other roads and modes of transportation.

3. **Tariff Path.** Tariffs (a Toll Rate in the case of roads) are a key determinant of project revenue. The forecasted use of the road should be based on the estimated demand for the service at the forecasted tariff, thereby taking demand elasticity into account. Although tariffs are regulated, increases usually are allowed throughout the life of the project. The tariff path derived should be sufficient to achieve full cost recovery during the life of the project. Total revenue is then derived from the expected use of the road at that tariff level. At full cost recovery, revenues should cover initial and deferred capital investment as permitted by law, operation and maintenance costs, debt service, plus a reasonable investment return to private investors. Where current tariffs set the total revenue below cost recovery levels, a tariff adjustment path should be set so that full cost recovery is achieved within a reasonable time. If the market is unable or unwilling to sustain the project at this level, the project will not be sustainable as a PPP unless the IA is prepared to provide direct support in the form of a capital investment grant (viability gap funding) or an operating subsidy.

4. **Operating and Maintenance Costs.** O&M expenditures are outflows of cash needed to operate the service and maintain the assets over the term of the concession. Maintenance costs should include both routine and periodic (preventive) maintenance. Future projections will be made from base year estimates, inflated by means of an
appropriate index related to underlying cost drivers. Cost drivers should be identified for individual cost items rather than applying a general inflation index to all costs. For example, cement or asphalt would need to be used for maintenance which would become more frequent as an increase in traffic puts more stress on the road pavement. Costs can be calculated by building up direct, indirect and overhead costs based on historic data or, more usually, as a percentage of project costs or revenue.

5. **Depreciation.** This is the allocation of asset cost over the life of the assets. Depreciation is not a cash item, but it is an allowable tax deduction. Depreciation should be calculated on the basis of asset life assumptions under national regulations.

6. **Debt service arrangements and costs.** Such arrangements include a number of items such as the types and amounts of debt (if originating from more than one lender), interest rates, associated fees payable to lenders and guarantors. Also included are the interest and principal payments, taking repayment and grace periods into account.

7. **Taxation.** The corporate tax and all other applicable taxes are used, including any incentives applicable to PPP projects.

8. **Government Support Required.** The allowable government support as defined by the Revised IRR of the BOT Law.

9. **Currencies.** Although not common for IA projects, the financial model should be able to deal with foreign and local currencies and their assumed relative parities over time for conversion purposes. A foreign investor will assess the USD return in dividends on a PPP project, but an IA investor will look for a Peso return. Normally investors and/or their lenders do not want to bear currency risk.

10. **Inflation.** Cash flows in the model are entered in nominal amounts. In forecasting for the future costs and revenues, these values would need to account for inflation and would need to include estimates of domestic inflation rates. Targeted indices, closely aligned with the project’s cost structure should be used for this purpose, rather than relying on a broad-based index such as the consumer price index.

All projects face the challenge of forecasting and this should be borne in mind at both the modelling stage and risk assessment stage where inaccuracies in demand forecasts may substantially outweigh uncertainties in other model inputs/assumptions.

### 3.8.3 Financial Performance Measures

A typical infrastructure PPP project cost and revenue cash flow will have a big up-front capital cost and lower revenues in the initial years but with revenues increasing in the latter period of its life cycle (see Figure 1.7).
The project’s financial viability will usually be measured in terms of its NPV or FIRR. These measures are analysed by expressing the project’s costs and revenues over the life of the project in terms of today’s money (i.e. in present values). This is essential in making meaningful comparisons of the costs and revenues that occur at different times. This takes into account the time value of money, which values future cash flows at a predetermined discount rate. The NPV calculation applies a discount rate to the future cash flows to convert them into present values. The IRR, on the other hand, calculates the rate that equates the present value of revenues to the present value of the costs of the project. These two concepts are discussed below:

1. The NPV of a project is defined as the sum of its net cash flows over time discounted at some predetermined discount factor. It is the difference between the time value amount of inflows against outflows.

   It is important to note that the net cash flows realized over the first years of a project (i.e., during construction and, possibly, the early years of operation) are usually negative and become positive sometime later. The NPV is computed as:

   \[
   NPV = - Initial\ Investment + dCF_{year\ 1} + dCF_{year\ 2} + \ldots + dCF_{last\ year\ of\ project}
   \]

   Where CF = net cash flow (i.e. inflows - outflows)

   \[
   d = \text{the discount factor expressed as } \frac{1}{(1+i)^t}, \text{ where } i = \text{discount rate and } t = \text{the time of the cash flow (i.e. in } dCF_{year\ 1}, \ t=1)
   \]

   The use of a discount factor means that:
   • Negative values in the early years will be weighed more heavily than the positive ones in the later years.
   • The time horizon is crucial for the determination of the NPV
   • The choice of the discount factor (specifically the discount rate) influences the NPV: the larger the discount factor, the smaller the NPV.
The evaluation criteria for NPV are:
If NPV >= 0, then the project, at the selected discount rate, generates a net benefit, indicating that investors can at least recover their investment over the project life.
If NPV < 0, at the selected discount rate, the project generates a net loss and investors are not likely to recover their investments.

Projects with positive NPV should be considered. Whereas projects that have a negative NPV (i.e. the costs are greater than the benefits), should be rejected in their current form or aspects of the project would need to be examined carefully to determine if it can be redesigned to increase project benefits or reduce costs so that the NPV is positive.

2. The FIRR of a particular project is defined as the discount rate that results in the NPV of the project’s cash flows being equal to zero (0). Most commonly used data management software automatically calculates the value of this indicator.

The FIRR is the yield on the investment. It is compared with the investor’s required rate of return (often called the cost of capital) to determine whether it would be worth investing in the project and forgo investing in another project or the next best alternative investment that would give the required rate of return. In this sense the investor’s required return can be considered the project’s opportunity cost of capital.

The evaluation criteria for the FIRR are:
If the project FIRR > i, it means the project offers a high return and could be attractive to an investor.
If the project FIRR < i, an investor may not be interested in pursuing the project.

The computation of the NPV and the FIRR can take into account two perspectives:
   a. The Project NPV/FIRR measures the returns to all investors (both equity and debt holders) of the project. Thus in the computation, the cash flow includes a portion of the project revenues that flow to debt holders.
   b. The Equity NPV/FIRR measures the returns for shareholders (or equity holders) of the project after the debt has been paid off. The computation is based on all the gross inflows (revenues from all sources) less all outflows (operating expenses, maintenance plus interest payments and principal repayments).

Different perspectives mean different “i”s would need to apply for each type:
   a. For the Project NPV/FIRR the appropriate “i” is the Weighted Average Cost of Capital (WACC). This is the weighted average of the cost of equity capital and the cost of debt wherein the weights are determined by the proportions of debt and equity in the capital structure of the project company. The formula for the calculation of WACC is as follows:
\[ WACC = \left( \frac{E \times i}{V} \right) + \frac{D}{V} \times Rd \times \left( 1 - Tc \right) \]

Where:
- \( i \) = cost of equity
- \( Rd \) = cost of debt
- \( E \) = market value of the firm’s equity
- \( D \) = market value of the firm’s debt
- \( V = E + D \)
- \( E/V \) = percentage of financing that is equity
- \( D/V \) = percentage of financing that is debt
- \( Tc \) = corporate tax rate

b. For the Equity NPV/FIRR the appropriate discount rate/opportunity cost of capital is the “\( i \)” which is the cost of equity. How is \( i \) determined? The simplest way is to ask commercial banks or the PPP Center on the current equity return of certain projects, for example road projects, water supply systems, etc.

Risk and investor’s required return are directly related: the lower the risk, the lower is the investor’s target return on a project. Therefore, in assessing a ‘fair’ return to the private sector, it is critical that the IA understands this risk/profit relationship in general, and in particular as it relates to the project. The more the risks in a project can be allocated to the best party able to bear and mitigate them; the lower will be the private sector’s demands for a specific return and the cheaper will be the cost of the services provided under the project.

It is important to be clear that in trying to avoid ‘excessive’ returns, the IA is not taking on unreasonable risks, nor negating legitimate commercial interest in the project. The IA must therefore be sufficiently flexible and agree to higher returns if the project or other relevant circumstances demand it. This balance should be appreciated as a delicate issue on which adequate consideration should be included in the pre-feasibility study.

3.8.4 Financial Model Outputs

Once the worksheets for the financial model are completely and correctly filled in, the model automatically produces the financial statements for the project: (i) Profit and Loss Statement, Balance Sheet, and Cash Flow Statement.

Financial performance and position is shown for each year of the project. Key performance indicators are also reported, as well as the overall project assessment measures, NPV and FIRR. The output from the model should be evaluated critically, to ensure that the results that are shown appear both accurate and reasonable:

1. The balance sheet should be examined to ensure that it balances in every year, and that there is no unusual build-up of asset or liability balances. There should be no negative accounts on the asset side.
2. The profit and loss statement should be examined to ensure that revenue and cost growth appears reasonable, and profitability makes sense in terms of the business fundamentals.
3. The operating margin ratio measures the fundamental ability of the project to generate profits on the basis of the project’s inherent operational characteristics. Movement in this ratio should be studied for the full life of the concession as a test on the reasonableness of model input assumptions. Any tendency for profitability to grow each year should be questioned to ensure there is an underlying business reason why this should be so.

3.8.5 Financial Structure

Financial structure refers to the way that a PPP project is financed, using a mix of equity, debt, and government assistance. In principle, any financial losses that the project suffers will first be borne by the equity investors, i.e. debt will get paid first. Only when the project defaults on its debt repayments do the lenders begin to suffer. Equity investment therefore always bears a higher risk than debt and so equity investors expect a higher return for the risk. This indicates that equity will be more expensive than debt and thus the more debt the project can raise, the lower will be the cost of funding the project. The amount of debt relative to equity that a project can raise will largely depend on the perceived project risks.

Although there is continual innovation in financing techniques, there are principles in assessing the appropriateness of the financial structure of a project. Changes to financial structure will not turn an unprofitable business into a profitable one, but it is possible for a poor financial structure to cause problems for a business that, otherwise, would have been sound. The following are a few measures and guidelines in determining the appropriateness of the project’s financial structure:

**Debt and Equity Ratios.** The sources of finance for a PPP project include the following:

1. Equity from the project promoters;
2. Equity from other investors (e.g. insurers, pension funds, mutual funds or private shareholders);
3. Government equity, or debt or other support expected to be recovered from project cash flows; and
4. Loan capital derived from:
   - domestic and/or foreign banks
   - bonds
   - development or donor agencies.

The financial structure of the project company is reported each year in the company’s Balance Sheet. The Debt and Equity ratios measure the proportion of debt (equity) in the company’s capital structure. The ratios are calculated as follows:

\[
\text{Debt ratio} = \frac{D}{D + E} \\
\text{Equity ratio} = \frac{E}{D + E}
\]

Where,
- \(D\) = the total amount of debt on the Balance Sheet, and
- \(E\) = the total equity

PPP projects normally use a large proportion of debt (as much as 70-90 percent) of the capital structure. The debt ratio is also referred to as “gearing” or “leverage.” The use of debt provides a positive leverage effect that magnifies equity returns. When return to equity is plotted against pre-tax project return for three different capital structures: zero debt, 50% debt and 75% debt; the high debt structure produces the highest returns to equity, as long as project returns are above a critical
point. For project returns below this point, high leverage causes lower returns to equity. However, even if the expected project return is above the critical point, the returns to equity are more risky under a high debt structure.

A project will be more attractive to potential bidders if it is structured such that barriers to accessing financing sources are minimized. Lenders will often want “step-in” rights to allow them the option to take over the operation of the facility if the project company defaults. As bidders will often not finalize their financing arrangements until after the bidding process, government is often unaware of the full extent of lender requirements until concession terms have been set. This situation is difficult to avoid entirely. It is possible to insist that all bidders lock-in their financing prior to submission of their bids, but this stipulation risks deterring bidders from preparing a bid, particularly when the project is new or risky. Preliminary discussions with lenders as part of a market sounding process before tendering, provides valuable information on how to structure the transaction.

**Annual Debt Service Cover Ratio.** The ADSCR measures the expected ability of the project to meet its debt service obligations in each year. This is calculated using the year-on-year forecast of the cash flow available for debt service. Because the future cash flows are not known with certainty, lenders will want to see some cash flow safety margin above the bare minimum required to service debt. It is common for lenders to insist on a minimum ADSCR of around 1.5 for infrastructure projects. This minimum ratio must be met for each year of the loan, and this is often a problem in the early years of a project. Any shortfall must be met by a combination of other, more expensive debt financing or equity injections.

Lenders will closely examine the assumptions underlying the financial projections, and will tend to be conservative in what they will accept. Financial analysts should be aware that some best case scenarios may rely on optimistic financing assumptions that lenders might not accept. If the cover ratios are not met, the company can encounter financial difficulties.

The financial model calculates the ADSCR and the Debt/Equity ratios. For a project with poor early profitability, these ratios may indicate that additional equity is required. If so the model should be re-run with the additional equity, and this process should be repeated until the financing ratios are acceptable.

**3.8.6 Scenarios and Sensitivities**

The output from a financial model shows the results of employing a particular set of assumptions regarding a project. As the financial model is used to decide on the best structure for the transaction, the modeller will usually wish to consider a number of different scenarios. For a toll road for example, a scenario might involve using the current toll rate schedule, and an alternative scenario might use a toll rate that would reflect full cost recovery. Other scenarios might model alternatives in the physical configuration of the facilities (e.g. number of lanes, roughness index), alternative asset replacement and maintenance programs, or the length of concession period.

Scenarios are used to model the project under alternative settings. Each scenario will be based on forecasts of future events that are uncertain and beyond anyone’s control, such as future traffic volumes. The model uses the most likely

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25 Generally infrastructure projects are able to operate with higher leverages because they are structured with a variety of limited guarantees that make this possible.
values for forecast variables (though actual results will likely vary from the forecast). The effect of this variance (i.e. possible difference between the forecast and the actual results) is modelled by a sensitivity analysis. This involves varying individual assumptions, or by considering simultaneous changes in a number of variables (see Box 1.7 for examples), and determining the impact of these changes on the IRR/NPV. It is also informative to turn this calculation around, and calculate the “switching value” for each variable. The switching value is the percentage change in a variable that would be required to turn the project NPV negative. Switching values are particularly informative for projects that are only marginally financially viable.

The following sensitivities could be run:

1. 20% reduction in consumption or demand
2. 20% increase in consumption or demand
3. 20% increase in costs
4. Increase in the discount rate

The analysis is helpful in identifying the changes in base assumptions, which would result in a different evaluation decision being reached. It can also be used to determine the range of values or various scenarios wherein it makes sense to pursue the project.

As the number of scenarios and sensitivities grows, it becomes particularly important to maintain strict discipline in the use of the model. As a matter of good housekeeping, file names of model runs (outputs) should describe the scenario and, only one input worksheet (with all input fields clearly identified) should be maintained. If a scenario is presented in a report, the backup documentation for the report should contain the full file name and a printout of the input and output pages (the “Summary” page in the specimen model).

### 3.8.7 Financial Appraisal Results

The conclusions of the financial appraisal will be based on many runs of the financial model. Returns to project, equity, and the IA, if applicable, under different scenarios, with sensitivities to key variables (see Box 1.7), all need to be taken into account. The financial appraisal report must state (i) whether the project is capable of generating adequate returns to the private investor, and (ii) whether the project cash flows are capable of servicing the necessary debt.

When financial results are marginal, project financing may involve credit enhancements to improve the risk and return profile of a project (provided that it is economically viable) to attract financing so that it will proceed to financial closure. Credit enhancements may take the form of:

1. Support from investors and subcontractors (the equity holders) of the project through the use of limited guarantees such as setting up escrow accounts of project revenues or the use of a loan from equity holders (called “subordinated loan” as payment of these loans are lower in priority vis-à-vis the loans originating from the lenders of the project) to the project company from the outset. Another form is a contingent credit line for the project company that can be tapped should the project revenue be insufficient to service the debt of “senior loans.”
2. Support from the government (e.g. capital grants, off-take agreement, revenue guarantee or tax holiday) can improve the predictability of project cash flows and reduce the levels of risk, as perceived and analysed by the PPP concessionaire and especially by its lenders. A more detailed treatment of government support is found in Section 3.13 of this Manual.

Many PPPs require both public and private investment. For example, an IA may opt to build the breakwater in a port project, or the rail infrastructure in a rail project, and let the private proponent develop the commercial operations of the infrastructure, thereby improving financial returns to private capital. Or more commonly, such as in road PPPs, the IA pays for right of way and the rest of the investments are paid by the private sector. A big part of getting the project structure right is setting the best mix of public and private investment. The financial model will have been run under scenarios that vary the risk allocations and variations of the PPP arrangements (thus there can be feedback between this analysis and the assessment on risk allocation). The conclusions to the financial appraisal will present these options to government. For each scenario that is of interest, assuming a certain amount of credit enhancement support is provided, it should be clear that the project is financially feasible under a reasonable set of assumptions. The decision to adopt a particular structure and to proceed to tendering will depend on many considerations, the financial appraisal being one of them.

### 3.9 Economic Analysis

Economic analysis is similar to financial analysis in the sense that both evaluate the PPP project’s net benefit. The two analyses however differ in perspective: financial analysis estimates the net benefit of the project that accrues to the project’s main stakeholders (such as the private sector sponsor and project lenders) while economic analysis evaluates the net benefits accruing to the economy or society as a whole.

Through the lens of an economy or society, resources are scarce and thus decisions among alternative choices needs to be made to put these scarce resources to their best possible use. By analyzing the cost related to the project’s next best alternative (“opportunity cost” – see Box 1.8 on key concepts), economic analysis makes it possible to determine which projects among different alternatives contribute most to the improvement of a country’s or society’s overall welfare.
Box 1.8  Key Concepts

**Opportunity Cost** is the cost of the next best alternative after choosing from a set of mutually exclusive choices. It is the value of something that is given up. For example, choosing to implement Project A takes some resources away from Project B (the existing and next best alternative). Resources include personnel, building space, capital, and equipment, among others. Since these resources are reallocated from Project B to A, the reduction in the output of Project B due to this reallocation represents the opportunity cost of Project A. The reduction in output of Project B represents the cost and the output generated by Project A is the benefit.

**Shadow prices** are defined as the opportunity costs consumed or produced by a project (Potts, 2002). Moving a resource input to a project necessarily loses the value it could have generated elsewhere in the economy as a result of the reallocation. Shadow prices are calculated taking into consideration the opportunity costs of the resource. It is the increase in social welfare brought by a one unit increase in the production of a good or a service arising from the project or the social opportunity cost (in terms of social welfare forgone) by devoting one unit of an input to the project.

**Externalities** are the impacts on a bystander that are not taken into account by the market prices. Externalities can either be negative or positive. An example of negative externalities is when a steel factory emits wastes into the river and into the atmosphere. Dirty water and polluted air can jeopardize health. Health costs and clean-up costs are typically not incurred by the steel factory and hence the private costs and social costs diverge. Social costs are the sum of private costs and externality costs.

The following are some key questions that an economic analysis will need to answer:

1. What are the benefits to the economy or society if the project is undertaken? What will happen if it is not? What will be the impact of the project on various groups in the society? What will the project add to the provision of goods or services in the country? This pertains to identifying the net incremental benefits of the project or identifying project costs and benefits, the ‘with’ and ‘without’ project situation.

2. Is the project the best alternative to achieving the objectives it is trying to achieve? Is there a probable, mutually exclusive, alternative to the project? How different are the costs and benefits of these alternatives vis-à-vis the project? This relates to a close examination of the alternatives. The analysis may also involve alternative aspects of the project, such as different technical specifications, location, financial arrangements, or differences in the scale or timing of the project. This helps the IA determine the best way to accomplish the project objectives.

3. Is the project economically feasible? Is the project worth undertaking? This pertains to assessing the project’s ‘return’ similar to the financial measures to gauge viability but from the perspective of the economy or society. In order to undertake this assessment, the project’s financial costs and benefits must be valued in economic prices, which reflect the true worth of the goods and services to the economy. Economic prices are obtained by first expressing the project’s net incremental benefits (which are expressed in nominal financial prices) in “real terms” and then adjusting the real financial prices using “shadow” prices (see Box 1.8 above on key concepts). The project’s economic costs and benefits should also take into account externalities (see Box 1.8 above on key concepts) such as pollution, environmental degradation, etc.

### 3.9.1 Steps in Economic analysis

Economic analysis is most useful when applied in the early stages of project development. It is used to identify mediocre projects and project components, thereby making it possible for the IA to select and prioritize the implementation of only those projects which can substantially contribute to the overall welfare of the economy or society. This is done by undertaking an Economic Cost-Benefit Analysis or commonly known as SCBA.

36 The steps and concept boxes are largely drawn from the revised Economic Analysis chapter of the LGU PPP Manual.

37 It can be undertaken at the end of the project cycle but this means, at this stage, some costs are already sunk (i.e. land allocated to the building could have been rented out). Economic analysis can then only aid in the decision whether to carry on with project or not and thus contribute to “learning” by government managers about the types of projects that are worthwhile.
The basic steps in undertaking SCBA are described below in detail:

1. **Define the project’s objectives and its set of alternatives.** At very least, there are two alternatives: a “with” the project and “without” the project. The “without” project scenario weighs the advantages/disadvantages of a minimal intervention to solve a particular problem. For example, if the PPP road project’s objective is to address road congestion in an area, the objective may be achieved by traffic management such as a number-coding scheme that limits the number of cars plying the road on certain days (e.g., car license plates ending in a certain number, such as “1,” cannot be on the road on Mondays; those with license plates ending in “2” cannot be on the road on Tuesdays and so on). This kind of administrative intervention, where such an intervention is possible, may solve the congestion problem and defer the need to build a new roadway for a period of time. It also has the advantage of costing very little relative to the building of a new road.

2. **Identify and quantify the costs and benefits.** In economic analysis, PPP projects are evaluated in terms of their contribution to welfare of the society, such as improvement to the standard of living. A crude way of measuring such improvements in monetary terms could include improvements in income and savings. The costs and benefits associated with the implementation of the project should then reflect the reduction from, and additions to, incomes or savings. Based on NEDA’s ICC guidelines, the following are key categories of costs and benefits that should be reflected in an economic analysis:

   **Economic costs** of inputs of the PPP project that entail the use of real resources - classified as either capital costs and operating and maintenance costs.
   - Capital costs include land, detailed engineering and design, preparatory installation work, cost of equipment, raw materials and supplies for construction, cost of buildings and auxiliary installations, engineering and administrative cost during construction, and organization cost.
   - Operating and maintenance costs include raw materials and other supplies; energy and fuels; labor; rent and insurance; and depletion of natural resources.

   A monetary estimate of these costs should be available at the financial analysis stage, but these are expressed in market prices at which they are bought. In economic analysis these would need to reflect their real economic value and this can be done with the use of shadow prices or conversion factors which will be applied in the next step. The components of the financial analysis therefore are good for identifying costs and benefits to be able to get a proper assessment of the contribution of the project to the economy.

   **Incremental Benefits** from a project can be an addition to output and/or savings in the use of resources. In the case of a road PPP, economic benefits mainly include lower vehicle operating costs and time savings for road users (i.e., reduced time spent on travelling to destination).

   **Externalities and Secondary Benefits.** Externalities are the effects of one’s action or activities on a bystander. In most cases, the impacts of NGA projects, either positive or negative, go outside its scope. Financial analysis does not take into account these external effects since market prices do not reflect externalities. However, externalities are considered in economic analysis especially if they involve substantial economic costs or benefits. For example, for a road PPP, the benefits of the project may also accrue to road users who continue to use other substitute routes
vis-à-vis the road PPP. As some of the traffic in these substitute routes is diverted to the road PPP, the remaining users of the substitute routes will gain (via time and money spent in commuting) as there is less congestion on the route.

Secondary benefits are the beneficial impacts on other activities that have technologically forward and backward linkages with the project.

Backward linkages are when the project has to depend on other activities that are not directly related to it and forward linkages are when the project produces raw materials or inputs to another activity or project.

3. **Valuation of the costs and benefits.** In economic analysis, market prices of goods and services must be adjusted to reflect real economic values. Market prices may be distorted due to taxes, subsidies, quotas, regulatory measures, or monopolistic practices, and thus may not reflect the true costs and benefits. These should not be included in the value of the various costs and benefit estimates of the project. The adjustment technique involves the use of shadow prices (used to compute a conversion factor) to reflect the real value of these goods and services from the viewpoint of the economy. These parameters are computed by and available from NEDA. The valuation of the economic costs and benefits involves:
   a. Expressing the cash flow of nominal (i.e. current) financial prices of the incremental costs and benefits of the project in real terms (i.e. prices expressed relative to the general price level; this involves dividing the nominal price by the index of the price level at some point in time). At this stage, the cash flow of incremental costs and benefits is expressed in real financial terms.
   b. Apply the conversion factors on the real financial cash flow to estimate the economic net flows.

4. For consistency and uniformity with the national procedure, the user of this manual is encouraged to follow NEDA’s ICC Guidelines on valuation of costs and benefits.

5. **Quantitatively estimate the impacts over the life of the project.** Estimate the incremental economic costs and benefits of the project over the life of the project alternative. The economic life of an alternative is the period of time during which it provides a positive benefit. The specific factors limiting the duration of economic life are:
   a. The economic life or period over which a need for the asset(s) is anticipated. Economic life of equipment ranges from 3-20 years. For purposes of illustration, this manual will use 20 years. 
   b. The physical life or period over which the asset(s) may be expected to last physically. Physical life can be approximated to 50 years for salvage value estimates for new permanent constructions.
   c. The technological life or period before obsolescence would dictate replacement of the existing (or prospective) asset(s).

6. **Measure the economic desirability of the project.** Since the economic costs and benefits accrue to different periods, these would need to be expressed in terms of present values to make meaningful comparisons of the costs and benefits that occur at different times. Measuring economic desirability therefore also makes use of the concept of net present value and an internal rate of return. But since the cash flows are expressed in economic values, i.e. costs and benefits are seen through the lens of the economy or society as a whole, a distinction would need to be made. In the economic analysis, these measures of feasibility are known as:

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38 This section is drawn from NEDA ICC Rationale, Functions, and Guidelines available online at: <http://www.neda.gov.ph/progs_prj/ICC/projectEvaluationProceduresAndGuidelines.htm>


41 See <http://www.sco.ca.gov/Files-ARD-Local/1LocRep/districts_uas_uasappa.pdf> for a sample listing of suggested useful life of fixed assets.
• Net Present Social Value (NPSV) - the discounted net economic benefit (i.e. computed as economic benefit less the economic cost) accruing to the project.
• Economic Internal Rate of Return (EIRR) – the discount rate that equates the NPSV of the benefits and costs of the project to zero (0)

For NPSV, the discount rate “i” used is the social discount rate, opportunity cost of capital viewed from the point of view of the society. The discount rate set by the ICC in January 1, 2012 is 15%. This also serves as the minimum (or hurdle) rate for the EIRR. Benefit-cost ratio (BCR) is calculated as the economic present value of benefits divided by the economic present value of costs. Benefits and costs are summed and discounted separately and then divided.

7. Conduct a sensitivity analysis. Prior to making a recommendation, project alternatives will be subjected to general sensitivity and risk analysis to determine the impact of variations in costs and benefits on the economic return on project investment and/or determine the robustness of the investment. Sensitivities may be conducted on the NPV using the following:
   1. 10% increase in cost and 10% decrease in benefits
   2. 10% decrease in cost and 10% increase in benefits
   3. 20% increase in cost and 20% decrease in benefits
   4. 20% decrease in cost and 20% increase in benefits

8. Making a recommendation. Table 1.14 following contains the evaluation criteria used to make a decision on implementing the PPP project:

<table>
<thead>
<tr>
<th>Evaluation Criteria Outcome</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPSV &gt; 0</td>
<td>The project should be considered for implementation as it exhibits a net positive benefit to the economy or society as a whole.</td>
</tr>
<tr>
<td>EIRR &gt; social discount rate (15%)</td>
<td></td>
</tr>
<tr>
<td>BCR &gt; 0</td>
<td></td>
</tr>
<tr>
<td>NPSV &lt; 0</td>
<td>The project should not be considered as it fails to return a greater benefit than its cost to the economy or society as a whole. In this case, the alternative with the highest NPSV would normally be recommended but after sensitivity analysis has been taken into account. The chosen alternative should represent a more efficient allocation of resources.</td>
</tr>
<tr>
<td>EIRR &lt; social discount rate (15%)</td>
<td></td>
</tr>
<tr>
<td>BCR &gt; 0</td>
<td></td>
</tr>
</tbody>
</table>

3.10 Introduction to Value for Money Analysis: Basic Principles

Even if, after the initial assessment of the project’s scope and technical, financial and economic viability, a project can be delivered as a PPP, should it be? Comparing the public sector delivery of an infrastructure or service project vs. through PPP is one way to assess whether a PPP will bring VfM.

The VfM analysis is applied at the project development stage to determine the appropriateness of undertaking it as a PPP. If a project is to be taken forward as a PPP, it must be demonstrated that it will deliver better VfM than the traditional method of delivery through government procurement and that the government’s resources are managed with due regard for economy, efficiency and effectiveness.
The analysis entails comparing (on a like-for-like basis) the proposed PPP project with a reference project that reflects the estimated cost of the government undertaking the project itself. This is done through the use of a Public Sector Comparator (PSC). A PSC is an estimate of the hypothetical cost of a reference project to the government if it was to be undertaken under a traditional public procurement method. It is used to make a case for a decision to deliver a project as a PPP: if the comparative cost of undertaking a PPP is lower than the PSC, the PPP arrangement provides VfM.

Construction and application of a PSC is expected to become an integral component in undertaking a PPP project in the Philippines. That said however, the PSC is only as robust as the data that goes into it, and obtaining robust data for the Philippines will require a staged approach to data capture and collection over a reasonable period of time. The PSC performs the following central roles:

1. Promotes full cost pricing at an early stage in the procurement process;
2. Acts as a key management tool during the procurement process, assists the procurement team to manage the process by focusing attention on the output specification, and risk allocation and development of a comprehensive costing of the project;
3. Provides a reliable means of demonstrating VfM;
4. Provides a consistent benchmark and evaluation tool; and
5. Encourages bidding competition by creating confidence in the financial rigor and probity of the evaluation process.

3.10.1 Calculation of the Public Sector Comparator

The PSC estimates the hypothetical risk-adjusted cost if a project were to be financed, owned and implemented by government. The key attributes of a PSC include:

1. It is a forecast of the cost to the government of delivering the proposed PPP project’s required output specification (infrastructure and services) under the most efficient form of government delivery;
2. It is expressed in terms of net present value;
3. It is based on hard, verifiable data;
4. It is based on the whole-of-life cost of providing the services and maintaining the infrastructure to the standard prescribed for the PPP; and
5. It is risk-adjusted.

The following are commonly used steps in computing a PSC:

1. Determine the output specification or minimum performance standards and specifications for the project.
2. Identify a Reference Project that represents the most efficient form of public sector delivery that could be employed to satisfy all elements of the output specification or minimum performance standards and specifications, based on current best practice (see Section VII).
3. Derive the four core elements of the PSC:
   a. Raw PSC
   b. Competitive Neutrality
   c. Transferred Risk
   d. Retained Risk
4. Calculate the PSC:
   \[
PSC = \text{Raw PSC} + \text{Competitive Neutrality} + \text{Transferred Risk} + \text{Retained Risk}
   \]

Below are brief descriptions of the elements needed to define and calculate the PSC.

1. **The Reference Project** (RP) represents the most efficient means of delivering the output specification by the public sector and is defined and budgeted to provide the same level and quality of service expected of the private sector. It will be the benchmark against which the PPP project option will be measured and thus would need to have all elements of the output specification included to ensure appropriate like-with-like comparison. In effect, the RP represents a hypothetical conforming bid from government and is also the method by which the project would be delivered if the public private partnership project option proves to be unacceptable.

2. **Raw PSC.** The Raw PSC provides a base costing under the public procurement method where the underlying asset or service is owned by the public sector. This includes all capital and operating costs, both direct and indirect, associated with building, owning, maintaining and delivering the service (or underlying asset) over the same period as the term under the PPP proposal and to a defined performance standard as required under the output specification. The Raw PSC should not include any valuation of risks to which government remains exposed (see Transferable and Retained Risk following). In many cases, the public procurement method may involve an element of design and construction outsourcing or other forms of private contractor management.

3. **Competitive Neutrality.** The PSC should be computed to assume ‘competitive neutrality’ in that there should be no net financial advantage of public ownership. This means that the PSC’s value should not include factors of competitive advantage that accrue to a government business by virtue of its public sector ownership. Competitive advantages from public sector ownership include lower cost of borrowing, taxes (e.g. land tax) and other fees and charges that are only levied on or paid by private enterprises.

4. **Transferable Risk.** The expected value of risks to be assumed by the PPP needs to be included in a PSC since under a traditional public procurement option, the government would retain that risk.

5. **Retained Risk.** Any risk not to be transferred to a bidder under PPP is retained by government. The cost of Retained Risk should be included to provide a comprehensive measure of the full cost to government in a PSC. For projects where Retained Risk is included in the PSC, its value will need to be added to each of the private bids to allow a meaningful comparison.

For example, if a private bid is submitted for P100 million and the value of Retained Risk to government is assessed as P10 million, the full cost to government of accepting the bid is P110 million. It is this P110 million figure that needs to be compared with the PSC.

Each of the PSC components must be objectively assessed to measure the true cost to government.

**3.10.2 When to Use a Public Sector Comparator**

The PSC can play a role in the formal evaluation process for all PPP projects in the Philippines. This requires the construction and use of a PSC.
A preliminary PSC is used to make a case for a decision within the government agency to deliver a project as a PPP. The resulting PSC is then compared against the estimated cost of undertaking the proposed PPP modality. If the estimated overall cost of undertaking a PPP project (which also includes the risks that are retained or shouldered by the Government in such an arrangement) is lower than the PSC, then the PPP arrangement may provide VfM and is worthy of further analysis (See Figure 1.8).

**Figure 1.8** Comparison Between PSC and PPP

<table>
<thead>
<tr>
<th>Expected Cost</th>
<th>PSC</th>
<th>PPP</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transferable Risk</td>
<td></td>
<td>Value for Money</td>
</tr>
<tr>
<td>Competitive Neutrality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPV Raw PSC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retained Risk</td>
<td></td>
<td>NPV of the PPP Cashflow</td>
</tr>
</tbody>
</table>

Legend

PPP = Public-Private Partnership
PSC = Public Sector Comparator
NPV = Net Present Value

Legend adopted from:
(i) Infrastructure UK (Value for Money in PPP Projects: An Introduction, presentation by E. Farquharson, March 2011),
(ii) World Bank Institute (Value for Money and the Public Sector Comparator, presentation at the PPP Workshop, China, June 2009) and
(iii) European Commission Twinning Light Project (Croatia-Greece), PPP Guide for Central and Local Public Sector Bodies in Relation to the Procedures in the Agency for Public-Private Partnership.

3.10.3 Limitations of the Use of a Public Sector Comparator

Given the quantitative nature of developing and utilizing a PSC, the VfM analysis is only as good as the available data and other factors e.g. quantifying costs and benefits, the existence of a public sector reference project, etc. However using some form of VfM analysis is useful in that it compels IAs to think about the project risks and its accompanying costs and how these could be best managed. The PSC should be treated as only one aspect of the project appraisal and should be used in conjunction with financial and economic analysis, affordability analysis (if the project is structured as a concession PPP), and environmental and social assessment. A qualitative assessment would also be useful in assessing the rationale for a PPP, such as:

1. Examining the factors that are crucial in achieving VfM:\(^44\)
   a. potential for revenue generation;
   b. does the private sector have the expertise to design and implement the project?;
   c. service needs can be defined as outputs that can be written into the PPP contract ensuring effective and accountable delivery of services in the long run;

d. risk allocation between the public and private sectors can be clearly identified and implemented;

e. it is possible to estimate on a whole-of-life basis the long-term costs of providing the assets and services involved;

f. the value of the project is sufficiently large to ensure that procurement costs are not disproportionate; and

g. the technological aspects of the project are reasonably stable and not susceptible to short-term and sudden changes.

2. Assessing the non-financial benefits or outcomes of the PPP project such as accelerated and enhanced delivery and wider social impacts.\(^4\)

3.10.4 Developing a Robust PSC for the Philippines

A Cost Probability Calculator (CPC) model is being developed as a strategic first step toward the introduction of a full PSC. The CPC is based on the current capacity of GOP IAs to identify direct and indirect costs and calculate them into an assessment of cost probability of implementation by the government. The CPC will be an aid to the decision environment, but not a crucial decision tool of itself. It is meant to:

- Begin the process of some form of comparative cost between modes of delivery, including risk analysis and costing;
- Act as a capacity building approach to implementing a more robust and detailed Cost Accounting Probability Predictor, and eventually to a PSC.

3.11 Risk Allocation in Public-Private Partnerships

Risk identification and allocation is an important part of project preparation and a complete picture of the risks that flow from the project requirements needs to be established. Risk is defined as the chance of an event occurring that would cause actual project circumstances to differ from those assumed when forecasting project benefits and costs. Achieving the VfM that justifies the development of a project as a PPP depends on the ability to identify, analyze and allocate project risks adequately. Failure to do so will have financial implications. Thus, early in the project development stage, the IA and its advisers need to undertake a broad assessment of the risks that arise from the project requirements in order to manage them.

Risk management is a continuous process throughout the life of a PPP project. It takes place in five stages as shown in Figure 1.9 following:

\(^4\) This can effectively be part of economic appraisal. See European PPP Expertise Centre, The Non-Financial Benefits of PPPs, An Overview of Concepts and Methodology (June 2011)
PPP project risks can be broadly classified into commercial risks, and legal and political risks:

Commercial risks include:

1. **Supply risk** concerns mainly the ability of the PPP Company to deliver. This could include construction risk and supply-side operation risk (where construction and operation constitute the two phases of the project) and financial market risk due to, for example, changes in the cost of capital or changes in exchange rates and inflation.
2. **Demand risk** relates to insufficient user volumes compared to base case assumptions of demand forecasts.

Legal and political risks relate to, among other factors, the legal framework, dispute resolution, the regulatory framework, government policy, taxation, expropriation and nationalization.

In general, the private sector is better placed to assume commercial risks while the public sector is better placed to assume legal and political risks. If a public guarantee is envisaged for the PPP project, the IA and its advisers need to assess the guarantee’s impact on the risk allocation and its future implication. Volume 4, Annex 7 presents NEDA’s guideline for a preferred allocation of such risks and mitigating measures for the different types of risks in a PPP project:

1. Pre-contract risks;
2. Design, construction and commissioning risks;
3. Sponsor and financial risk
4. Operating risk
5. Demand risk  
6. Network and interface risk  
7. Industrial relations risk  
8. Legislative, policy, regulatory or other Sovereign risks  
9. Force majeure risk  
10. Asset ownership risk

NEDA’s guideline can be used by the IA and relevant stakeholders as a checklist to brainstorm on the expected risk of a project. The next important task is to allocate risks between parties. The main principle in risk allocation is to assign the risk to the party best able to control or influence its occurrence or manage the consequences of the risks. Risks therefore can be allocated either to the private sector or to the IA, but they can also agree to share the risks in some instances.

The allocation of risks will depend on the nature of the project and also may vary depending on the appetite of private parties or level of competition in the market. The risk allocation exercise also helps identify issues that should be resolved at the project preparation stage. It is perhaps one of the most important steps in assessing and developing a project’s bankability.

Below is an example of a risk allocation matrix for a PPP Road Project:

<table>
<thead>
<tr>
<th>Risk/Responsibility</th>
<th>Allocation</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand Risk (Traffic)</td>
<td>Private Sector</td>
<td>Minimum traffic guarantee is not provided in the contract</td>
</tr>
<tr>
<td>Regulatory Risks (Toll &amp; Adjustment Implementation)</td>
<td>National Government</td>
<td>Tariff adjustments specified in the contract with private sector</td>
</tr>
<tr>
<td>Project Financing</td>
<td>Private Sector</td>
<td>Private Sector in control of selecting and arranging long-term financing</td>
</tr>
<tr>
<td>Inflation &amp; Foreign Exchange</td>
<td>Private Sector</td>
<td>Private Sector in control of selecting and arranging long-term financing (mix of local and foreign)</td>
</tr>
<tr>
<td>Basic ROW Acquisition &amp; Delivery</td>
<td>National Government</td>
<td>Government has special powers of acquisition and use of land</td>
</tr>
<tr>
<td>Design/Construction</td>
<td>Private Sector</td>
<td>Private Sector has control over the variables that determine the quality of design and the construction process</td>
</tr>
<tr>
<td>Operation/ Maintenance</td>
<td>Private Sector</td>
<td>Private Sector has control over the operation and maintenance processes</td>
</tr>
<tr>
<td>Political Risks</td>
<td>National Government</td>
<td>Government is in better position to manage and mitigate occurrence of risk.</td>
</tr>
<tr>
<td>Force Majeure</td>
<td>Both Private Sector and National Government</td>
<td>Private sector can buy insurance for insurable risks while Government can assume uninsurable risks</td>
</tr>
<tr>
<td>Turn-over at the end of Concession</td>
<td>Private Sector</td>
<td>Terms are included in the contract</td>
</tr>
</tbody>
</table>
At an early stage of the project preparation, IAs should keep in mind that if the private sector is asked to bear a significant degree of certain risks such as procedural delays, lack of clarity on tariff adjustments, uncertainty of demand, etc., the return that the private sector will expect from the partnership will be higher. This in turn will lead to a higher project cost, which would eventually be passed on to users, affecting the project’s affordability. The key objective is to optimize the allocation of risks between the parties so that the cost of bearing the risk (and the project cost) will be lower.

3.12 Project Restructuring (For Improved Financial Viability)

At the project preparation stage, the financing plan of the project should be guided by the outcome of the financial runs of the financial model discussed in Section 3.8. What happens if after running the financial model, the financial analysis indicates that the project is not viable? This Section deals with this particular case.

It should not automatically be assumed that fiscal support is required if the initial financial runs indicate that the project is non-viable, especially when the economic case of the project is strong. The IA should first look at the possibility of restructuring the project. This entails (i) determining whether the tariff level has been set appropriately and (ii) assessing whether it is possible to create a viable business proposition by bundling or unbundling the project, reducing or deferring the capital investment, or extending the term of the concession.

3.12.1 Project Restructuring Options

- **Use of Cost-Based Tariffs.** It is not unusual for tariffs of public sector services to be set at a level below what is required to achieve full cost recovery for social or political considerations. However, low tariffs are a major cause of poor financial viability of the project. Wherever possible, tariffs should reflect full recovery of costs. IAs may gradually increase the tariffs, but any transition period in which tariffs adjust to full cost levels should be as short as is practical.

- **Bundling.** Bundling refers to the practice of enhancing the financial viability of the proposed project by including additional, more profitable, business elements, e.g.:
  - A railway terminal can be bundled with opportunities for commercial advertisements or even a commercial center that will generate higher rental income; and
  - A government hospital can occupy a portion of a bigger building open for leases to doctors’ clinics.

- **Unbundling.** The reverse of bundling, this entails separating the non-viable business elements of the concession to improve the viability of the remaining component. For example, railway lines that are less profitable (low traffic) can be separated from railway lines that are profitable and that typically have high traffic density and can be structured as a concession; providing a higher demand base for the private sector and less of a rationale for the government to provide traffic guarantees. Unbundling often has been a way to encourage greater private sector participation in the sector. In the Philippines, for example, the passage of the Electric Power Industry Reform Act led to the unbundling of the electricity sector into generation, transmission, and distribution. These led to the increased participation of independent power producers competing in the supply of electricity (through Wholesale Electricity Spot Markets) where distributors (traditionally have been private-led) buy for their system load requirements. The transmission segment was competitively tendered and awarded to the private sector under a 25-year concession contract to construct, install, operate and maintain the transmission and grid system in the country.
• **Reducing or deferring capital investment.** Infrastructure projects are characterised by large initial capital outlays, followed by an extended operations phase, during which the original capital investment cost is recouped. Because the capital investment is made at the beginning of the project, any savings that can be made in investment cost can have a dramatic effect on financial viability. If a project is not financially viable the specifications for the project should be examined for possible savings or deferrals of investments.

• **Extending the term of the concession.** Extending the term of the concession can sometimes improve the financial performance of a marginal project, provided it does not exceed 50 years, which is the maximum agreement period under the BOT Law. However given the strong effect of high discount rates over 20 years or more, the difference to present value is usually small.

Once it has been identified that bundling/unbundling will not suffice, and that a project will require fiscal support to be viable, it is essential to first (i) determine whether that support is consistent with the IA objectives, and (b) to consider the best means of providing that support. It is also important to identify the types of support that the IA/Government (see Section 3.13 for discussion on the types of support the Philippine Government can provide under the Philippine legal framework) is prepared to consider and incorporate this information into the tender documents, so that bidders have better information on which to prepare their bids. Early identification of support mechanisms by the IA demonstrates to bidders that the IA has given thought to designing a well thought out transaction process, thereby improving investors’ confidence and willingness to bid.

The ideal package of fiscal support should be targeted, transparent, share risk most efficiently and be at least cost to Government as well as provide positive incentives to the bidders. Another round of sensitivity analysis can be undertaken once the best configuration has been modelled for the project.

### 3.12.2 Key Steps in Identifying Support Options

When considering the need for fiscal support, it is important to gain a thorough understanding of the project’s financial characteristics. This implies that an accurate and flexible financial model has been built, and that it is based on good information. The following scenarios provide examples on some review steps regarding the financial characteristics of a project, as a guide to selecting appropriate support instruments. If it is not possible to answer these questions with sufficient confidence, additional modelling may be required. A detailed discussion of the various support instruments mentioned in this scenario exercise is discussed in the next section.

1. If the PPP project is likely to cover all of its cash outflows within 10 years, i.e., operating costs including interest, principal and a yield to the investor of at least 5-10% p.a., then the cash flow problem, if one exists, is only short term and will disappear once demand builds up or tariffs ramp up to full cost recovery levels, or both. Very likely, no support will be required.

2. If the PPP project is likely to cover all its cash outflows within 10-years, i.e., operating costs including interest but has a yield to the investor of 5% p.a., or less, then the following support may be considered:
   a. Minimum revenue guarantees (see Box 1.9) in the early years;
   b. Demand (e.g. Traffic) guarantees for the early years, and/or;
c. Subsidies for low income users (see Box 1.9).

3. If the PPP project does not generate profits beyond the 10th year and does not leave some surplus to contribute to capital costs, then the project is unlikely to be viable as currently structured. Bundling/unbundling/full or partial deferral or traditional public procurement may be considered.

4. If, however, the business does generate operating profits beyond the 10th year leaving some (but not enough) surplus to contribute to capital costs, then an investment grant can bring down cost and improve the return on investment. A variable operations subsidy (i.e. a minimum revenue guarantee, traffic guarantee, etc.) may also be considered. Calculation of the fixed investment grant (See Box 1.9) or an operations subsidy needed to make the project viable can be done through model simulation.

5. If the technical risks to the project are insignificant and unlikely to deter investors, or cause them to propose an excessively high internal rate of return, no further action is necessary. However, if the technical risks are significant and may drive investors to set a high hurdle internal rate of return for the project, the use of partial guarantees for the construction risk (See Box 1.9) may be considered.

3.12.3 Caveat

Whether government support to mitigate project risks will cover all of the loss or part of the loss that can be incurred by the project (essentially either by the investors or lenders of the project company) will vary from project-to-project. It is important however that the use of such support, such as guarantees and subsidies, would need to be carefully evaluated and structured as these could potentially create fiscal problems and contingent liabilities. Also, this transfer of risks could call into question the rationale for developing the project as a PPP. The possible fiscal impact of government support in PPPs led many countries to prescribe limits to the amount or level of support that a government can provide. The Philippine BOT Law IRR essentially limits government support to up to 50% of the total project cost.

A key principle to keep in mind at the project development stage is to ensure that (i) projects are developed in such a way that there will be strong competition among funders and (ii) there is good financial advice on hand to ensure that the government support does not destroy the incentives of the PPP mechanism and create a situation where the government is confronted with fiscal obligations that it cannot sustain.46

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**Box 1.9  Examples of Support Instruments for Project Risks**

**Revenue Guarantees**  - Most large infrastructure PPP projects are characterised by an initial construction phase followed by an extended operating phase. Typically, usage of an infrastructure facility starts at a low level and builds up over time to the full capacity of the facility. Therefore it is more efficient to phase the development of the infrastructure facility to match the growth in demand. However, this is usually only partly feasible. If the PPP project’s financial viability is compromised (i.e. difficulty in covering the project’s costs in the initial years of operation) by low initial volumes of demand, a well-targeted means of correcting this is for the IA to provide an annual support payment up to a certain level of volume of demand. This support takes the form of a guarantee of a minimum level of demand for the infrastructure facility, and is usually restricted to the early years of a project. If demand levels exceed the guaranteed minimum, no payment is made. After a certain number of years, usually the time it takes a project to achieve sustainable profits, a claw-back mechanism can operate to return the original guaranteed payments to the IA.

**Guarantees of construction risk**  - Construction risks are unforeseen cost increases in the cost of the construction of the infrastructure facility. Normally the contractor bears this risk, but where increased costs or delays are anticipated to be caused by the IA, then it is appropriate for the IA to bear this risk, as the risk is under its control. The IA, for example, could cause an increase in construction cost when it reserves the right to enhance the design requirement during the construction period through the mechanism of a reopener. The compensation for that cost increase could take the form of a cash payment, or the operator may be given permission to recover the increase over time through increased tariffs. If a tariff cap is in place, increased tariff subsidies would apply.

**Tariff Subsidies**  - A private operator will set tariffs so as to generate enough revenue to cover all costs including an adequate profit. The public sector does not operate with the same constraints and it is common that tariffs to certain essential services bear little direct relation to costs. Low tariffs are often justified by the argument that infrastructure services are essential basic services, and should not be priced above people’s ability to pay (ATP). This argument has merit, but low tariffs for all users is not necessarily the best solution. It is possible to provide direct support to those who need it and allow charging higher tariffs up to the level of full cost recovery for the rest of the users of the service. This is already done in water supply and electricity distribution whereby a lower tariff is passed to consumers who consume a minimum volume of the service (i.e. targeting mostly poor households) and segment consumers (residential, commercial and industrial) and apply different tariff structures.

As a general principle, tariffs should be set at a level sufficient to achieve full cost recovery. If a subsidy is specifically allowed, compensation is paid by the IA to the PPP concessionaire based on the ATP of users. Where tariffs are very low, it is sometimes not politically possible to suddenly move to full cost pricing, and prices must adjust over a number of years. A tariff subsidy will be necessary during the adjustment period, with the amount of the subsidy declining over time as fares rise. The length of the adjustment period is both a policy and a fiscal matter, and therefore a decision for the IA to make. In some cases tariffs may never attain full cost recovery.

**Box 1.10  Investment Grants – Calculating the Amount Needed to Cover a Viability Gap**

The maximum eligible grant that should be given to a PPP project is the amount equal to the present value of a project’s investment costs plus operating costs, less the present value of the net revenue from the investment over a specific reference period discounted at the weighted average cost of capital of the project. The viability-gap approach applies to all projects that generate net revenues through charges borne directly by users. An investment grant needed to cover the viability gap of a project is set in mathematical format below:

\[
\text{PV (IC + OC) – PV (R)}
\]

Where:

- \( \text{IC} \) = investment cost
- \( \text{OC} \) = operating cost
- \( \text{R} \) = revenues
- \( \text{PV Discount} \) = weighted average cost of funds

The formula aims at ensuring enough financial resources for project implementation, avoiding, at the same time, the granting of an undue advantage to the recipient. It does not apply for projects that do not generate any revenues or those whose revenues do not fully cover operating costs. Funding gap in this case would equal 100%.
3.13 Types of Implementing Agency/Government Support

By providing support, the IA makes the PPP project less risky and thereby improves its financial viability. For risks outside of the control of the project, a public sector guarantee underwriting that risk shifts it from the private partner back to government. The provision of government support thus forms a part of the overall risk management of the project, although the provision of government support is influenced by other factors such as whether the support can fit into the budget.

3.13.1 Policy for Government Support

The BOT Law and the Local Government Code of the Philippines allow the provision of fiscal support and financial incentives to PPP projects. This task of approving support, in the case of national projects that costs up to PHP 300 million and more, is allocated to ICC and the NEDA Board. Government support involves the sharing of costs or risks. The ceiling for government support in the Philippines is 50% of the total project costs, including the cost of land.

Key principles to incorporate in any PPP policy are the following:

1. Government support shall be given to PPP projects that are economically feasible and viable commercial propositions;
2. Government support should be minimized with great attention given to evaluating the contingent liability risk, estimating its true cost to the national budget and setting up a management system to monitor the risk; and
3. Provision of government support should be made in a transparent manner.

Principle (1) imposes a limit on the amount of support. Economic feasibility implies that the amount of support may not exceed the economic benefits to be derived from the project, after taking into account the cost of the support. Principle (2) underscores the fact that IA funds are scarce and should be used efficiently. This means that support will be provided to the most appropriate projects and with ‘most efficient’ means as regards the overall amount of support provided, and the mix of support instruments chosen. Bid procedures may be designed to minimize a particular form of support. This is the case, for example, when a public tender requires the bidder to identify the lowest tariff subsidy that is acceptable to it.

Public tenders for PPP projects are sometimes structured so that the amount of direct subsidy is the key bidding criteria in the financial proposals received from bidders. This is a useful way of minimizing a particular subsidy, but it is not sufficient to ensure that the overall package of support is structured so as to provide sufficient incentive to the private sector at the minimum total cost to the IA.

Principle (3) indicates that government support shall be provided by means of a transparent process. Such government support could be in the form of a government guarantee, which may require a MYOA. It should be noted that any PPP project requiring support must be subject to competitive tender and, therefore, sole source uncontested contracts (such as unsolicited projects) should not be eligible for government support. Where financial support is required, a clear description of the nature of that support is required, and the amount of required support becomes one of the project’s ranking criteria.

47 MULTI-YEAR OBLIGATIONAL AUTHORITY – according to Circular 01 of 2009 issued by DBM, a Multi-Year Obligational Authority (MYOA) is a document issued by DBM either for locally funded projects, or foreign assisted projects, that are to be built by IAs in order to authorize the latter to enter into multi-year contracts for full project cost. A MYOA, which contains an annual breakdown of the full project cost, obligates agencies to prioritize in their budget proposal for the ensuing years the amount programmed for the said year(s). A MYOA is NOT a guarantee of payment in that Congress may not appropriate the funds to service it.
3.13.2 Options for Extending Government Support

The availability of government support, either direct or indirect, is among the most important elements in the financial structuring of a PPP project. The following are forms of government (direct and contingent) support authorized under the Philippine legal framework with discussions on their potential implications:

1. **Equity participation.** Equity participation may help achieve a more favourable ratio between equity and debt by supplementing the equity provided by the project sponsors, in particular where other sources of equity capital, such as an investment fund, cannot be tapped by the project company. Equity investment by the IA may also be useful to satisfy legal requirements concerning the composition of locally established companies. However, it may not always be possible to secure the required level of local participation on acceptable terms. Use of this instrument should probably be limited to specific situations, e.g., where local investors may lack the interest or financial resources to invest in large infrastructure and other development projects; they may also be averse to, or lack experience in, dealing with specific project risks. IA participation may also involve certain risks that require careful consideration. In particular, there is a risk that such participation may be understood as an implied guarantee to the project given by the IA, thus parties may expect the IA to back the project fully or take over at its own cost if the project company fails. Where such an implied guarantee is not intended, appropriate provisions should be made to clarify the limits of IA involvement in the project.

2. **Public Sector Obligation or Output-Based Subsidies.** A Public Sector Obligation provides a project company with a defined cash subsidy in return for some targeted service output. When cash subsidies are tied in this way, they are referred to as output-based subsidies. Essentially, the project company would be required by formal agreement to provide services to a certain segment of the population, under a series of definable annual outputs, at a specified tariff. This type of subsidy is not to be confused with untargeted investment and operating subsidies.

3. **Investment and Operating Subsidies.** Such subsidies arise when government makes a contribution to a project’s construction or operating costs without reasonably expecting to receive a return commensurate with the size of the contribution and risk taken. Investment (or capital) subsidies are used to increase the project’s FIRR and usually take the form of upfront grants. Operating subsidies, in contrast, could be year-on-year support designed to create revenue for a particular project, augment its revenue, or ensure a revenue stream. Operating subsidies are generally discouraged in the Philippines because of their unpredictability:

   a. **Shadow tolls** are paid by government based on traffic, rather than by the users of the road, for the purpose of supplementing a reduced project revenue stream that arises from low tariffs. They are also used in instances where direct tolls are politically unacceptable. Although shadow tolls take away one component of risk (i.e., tariff affordability), the project may still be exposed to unacceptable levels of market risk (e.g., the traffic volumes needed to meet all economic costs). Box 1.11 contains an example of the use of shadow tolls;

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Box 1.11 “Shadow Toll” for MRT 3

MRT 3’s ridership during its first six months of operation was significantly lower than what was projected. This was attributed mostly to the fact that facilities then were not yet competed, i.e., not all stations were operational. Fares on MRT Line 3 have undergone a revision the following year (in January 2000) to increase ridership but with the view of raising the fares three to six months after it became fully operational. The fares then were revised again downward in July 2000. Ridership surged, but the fares have never been increased since then due to political reasons. Given fare adjustments have never happened, the Government continues to subsidize MRT3 fares.
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Alternatively, government can also provide voucher-like support to selected customers, usually low income groups, for private infrastructure services.

Draft Version as of 4 August 2014
b. **Revenue deficiency guarantees** ensure that the project has a minimum level of revenue, comprised of the revenues generated by the project and the operating subsidies made available through government. The total of these two revenue streams is usually enough to cover debt service and a negotiated profit element. Although this is beneficial for the project, revenue deficiency guarantees create problems for government as the level of subsidies required each year over project life is not predictable;

c. **Design-Build-and-Lease arrangements**, as referred to in some countries, have a different structure. In this case government owns and finances the design and building of the assets. Upon commissioning, the project is tendered and a concession is given to the private sector company willing to make the highest lease payments to government in return for the rights to operate and maintain the project. This structure is used for projects that have high levels of market risk.

d. **Annuities** constitute another method of tendering out projects. Under this method, the IA declares it is willing to award a concession to build and operate, for example, a sanitation project to the bidder asking for the lowest annuity payments, measured on a discounted cash flow basis. This structure is also used for projects that have high levels of market risk.

All four instruments (a. to d. above) can be used to mitigate market risk. The provision of service in some areas where the project company is required to operate, such as the extension of water supply coverage into a remote area, may not be a profitable undertaking because of low demand, high operational costs or some other reason. Thus, the IA involved may opt to extend subsidies through one or more of the instruments described above to the project company to enable it to secure financing (see also paragraphs (6) and (7) below, which describe two other tools for dealing with market risk).

Investment and operating subsidies, as implied by the above definitions, usually take the form of direct payments to the project company, either fixed lump-sum payments or variable payments calculated specifically to supplement the project company’s revenue up to a certain defined level. In the latter case, the IA may want to ensure that it has in place adequate mechanisms for verifying the accuracy of subsidy payments made to the project company, by means of audit and financial disclosure provisions in the PPP Contract.

4. **Guarantees of performance by the IA.** The most common situations in which such guarantees are used include the following:

a. **Off-take guarantees.** As a matter of policy, the IA may decide in an Availability PPP to guarantee payment of goods and services supplied by the project company to the public entity. Hence, such guarantees, as an example, are used in connection with payment obligations under off-take agreements where the main or sole customer of the project company is a government-owned entity.

b. **Supply guarantees.** Supply guarantees may also be provided to protect the project company from the consequences of default by public sector entities providing goods and supplies required for the operation of the project—fuel, electricity or water, for example—or to secure payment of indemnities (i.e., contract-driven liquidated damages arising from non-performance under the terms of the contract), for which the IA may become liable.
under the supply agreement. Below is a case featuring the Casecnan BOT Project and the MWSS concession where the appropriateness of the guarantee should be closely examined to ensure it is not construed as a commercial risk which in principle the private sector should bear (see Box 1.12).

### Box 1.12 Guaranteeing input supply risk: The Casecnan and Metropolitan Waterworks Sewerage System cases

Examples of the tricky issue of identifying what risk is to be guaranteed can be gleaned in the Casecnan BOT project and the MWSS concessions. In both cases, the government bears the risk of not having the main input in the project: water. This is the appropriate policy for MWSS but the wrong policy for Casecnan. Not having water supply for distribution is not an option in the MWSS case since the alternative would be to let households dig wells or stop drinking water. In the Casecnan project, in contrast, which aims to provide irrigation services and electricity, there are other sources of electricity, and the farmers can also get water from other sources (or go into activities that are not too dependent on water). The hydrologic risk in Casecnan is therefore purely a commercial risk, a risk that the government should not bear.

Source: As cited in the World Bank, Philippines: Meeting Infrastructure Challenges, 2005

c. **Contractual Remedies.** Different types of contractual remedies, or combinations thereof, may be used to deal with various events of default, for example, liquidated damages in the event of default and price increases or contract extensions in the event of additional delay in project execution caused by acts of the IA. Furthermore, in order to limit IA exposure and to reduce the risk of calls on the guarantee, it is advisable to consider measures encouraging the IA to live up to its obligations under the PPP Contract or to make efforts to control the causes of default.

5. **Tax and customs benefits.** Another method for an IA to support the execution of PPP projects could be to grant some form of tax exemption, reduction or benefit. This is not a risk mitigation instrument, per se, but rather an instrument designed to lower investment and/or operating costs by eliminating taxes that would otherwise apply to the project company. Local governments can provide exemptions from local taxes such as business tax covered under the Local Government Code. Note that under the BOT Law, projects costing at least PhP1 billion are automatically entitled to incentives under the Omnibus Investment Code.

6. **Protection from competition.** An additional form of support may consist of assurances that no competing infrastructure project will be developed for a certain period by the IA or by another concessionaire. Assurances of this sort serve as a guarantee that the exclusivity rights that may be granted to the concessionaire will not be nullified during the life of the project. This protection may be regarded as an essential condition for participating in the development of infrastructure in the IA. Provisions of this type may be intended to foster the confidence of the project sponsors and the lenders that the basic assumptions under which the project was awarded will be respected. However, they may limit the ability of the IA to deal with an increase in the demand for the service concerned as the public interest may require, or to ensure the availability of the services to various categories of users. It is therefore important to consider carefully the interests of the various parties involved. For instance, the required price level to allow profitable exploitation of a water supply service may exceed the paying capacity of low-income segments of the public. Thus, the IA may have an interest in maintaining open to the public a communal tap as an alternative.

Generally, it may be useful for the IA to give assurances that the project company’s exclusive rights will not be unduly affected by subsequent changes in government policies without appropriate compensation. However, it may not be advisable to adopt statutory provisions that rule out the possibility of subsequent changes in the
IA policy for the sector concerned, including a decision to promote competition or to build parallel infrastructure. The possible consequences of such future changes for the project company should be dealt with by the parties in contractual provisions in the PPP Contract describing “Changes in Circumstances.”

7. **Ancillary revenue sources.** One additional form of support to the execution of PPP projects may be to allow the project company to diversify its investment through additional concessions for the provision of ancillary services or the exploitation of other activities. In some cases, alternative sources of revenue may also be used as a subsidy to the project company for the purpose of pursuing a policy of low or controlled prices for the main service. Provided that the ancillary activities are sufficiently profitable, they may enhance the financial viability of a project.

### 3.14 Market Sounding

Market sounding prepares the groundwork for the formation of a PPP as it is used to validate the suitability of the business case and requirements that will be imposed on the private party. The sponsoring IA therefore must conduct itself in such a way as to sell the project’s concept to the private sector as the exercise will seek to obtain market feedback on the business concept, the financial structure that is being used, the scope and content of the project, the requirements that will be imposed on the project proponent, the risks that are inherent in the project and the risk mitigation options that may be available. Feedback from the private sector will also assist in the preparation of an information memorandum. From the perspective of the contracting authority, a market sounding would also be used to influence the expectations with regard to the project of the various government stakeholders that will be involved in the project’s review or approval.

Market sounding is particularly needed in the following cases:

1. There is uncertainty about the level of private sector interest in the project;
2. The in-house knowledge of the market is unknown, incomplete or absent;
3. There is uncertainty about the right PPP modality to use;
4. There is a need to manage investor expectations with regard to the project; and / or
5. The project is likely to involve a consortium – perhaps one with a new or unusual structure.

Its key focus should involve gathering knowledge in the following areas:

1. Project viability - whether the proposed business scheme is considered viable, or whether it has been done before;
2. Private sector capability – whether the private parties (individual or in consortium) believe they are able to achieve or deliver the requirement;
3. Capacity - whether the market has the capacity to achieve what is required quickly enough and with the needed scale; and
4. Maturity of the concept - whether there is a market sufficiently large to satisfy the need for competitive tension during the procurement phase.

The following items are important areas to remember during the market sounding:

1. Keeping options open - avoid a tendency to “zero in” on particular options, allow the private sector ample room for suggestions;
2. Consider all business options carefully; and
3. Consider the way market sub-sectors work and how it might affect the PPP project.
The output from market sounding is not always a single best option, it could include a range of possible options. These options can be compared to each other to represent the best way forward, taking into consideration government’s strategic goals.
TECHNICAL NOTE 1: INCENTIVES UNDER THE OMNIBUS INVESTMENT CODE

Under the Omnibus Investment Code, PPP projects, upon registration, are generally granted non-pioneer status, unless otherwise granted pioneer status based on an explicit provision in the General Policies and Specific Guidelines of the Investment Priority Plan. As a project with a non-pioneer status, PPP projects may take advantage of income tax holiday and duty-free importation of capital equipment, spare parts, and accessories, among other fiscal and non-fiscal incentives. Incentives that are available under the Omnibus Investment Code include:

1. Income Tax Holiday
   a. New registered firms shall be fully exempt from income taxes levied by the national government for six years commencing from the start of commercial operations for Pioneer enterprises, and for four years commencing from the start of commercial operations for Non-pioneer enterprises. The exemption may be extended for another year in each of the following cases:
      i. The project meets the prescribed ratio of capital equipment to number of workers set by the BOI.
      ii. Utilization of indigenous raw materials at rates set by the BOI.
      iii. The net foreign exchange savings or earnings amount to at least USD 500,000 annually during the first three years of operation.
   b. Registered expanding firms shall be entitled to an exemption from income taxes levied by the national government proportionate to their expansion for a period of three years from the start of commercial operations of such expansion under such terms and conditions as the BOI may determine.

2. Additional Deduction for Labor Expense
   For the first five years from registration, a registered enterprise shall be allowed an additional deduction from the taxable income of 50% of the wages corresponding to the increment in the number of direct labor for skilled and unskilled workers if the project meets the prescribed ratio of capital equipment to number of workers set by the BOI.

3. Tax Credit for Taxes and Duties on Raw Materials
   Every registered enterprise shall enjoy a tax credit equivalent to the national internal revenue taxes and customs duties paid on the supplies, raw materials, and semi-manufactured products used in the manufacture, processing, or production of its export products and forming part thereof. However, the taxes on the supplies, raw materials, and semi-manufactured products domestically purchased must be indicated as a separate item in the sales invoice.

4. Exemption from Taxes and Duties on Imported Spare Parts
   Importation of required supplies and spare parts for consigned equipment or those imported tax and duty-free by a registered enterprise with a bonded manufacturing warehouse shall be exempt from customs duties and national internal revenue taxes payable thereon. Such spare parts and supplies must, however, not be locally available at reasonable process, sufficient quantity, and comparable quality. Moreover, all such spare parts and supplies shall be used only in the bonded manufacturing warehouse of the registered enterprise under such requirements as the Bureau of Customs may impose.

5. Exemption from Wharfage Dues and Export Tax, Duty, Imposts, and Fees

6. Exports by a registered enterprise of its non-traditional export products shall be exempted from any wharfage dues, and any export tax, duties, impost, and fees.

EO 70, Series of 2012, which reinstated the incentive of duty-free importation of capital equipment, spare parts, and accessories of BOI-registered new and expanding enterprises as originally provided under Art. 39(c), EO 226, as amended and EO 528, Series of 2006, was signed by President Benigno Aquino, Jr. on 29 March 2012. However, under Sec. 7 thereof, the EO shall take effect thirty (30) days following its complete publication in a newspaper of general circulation in the Philippines.
TECHNICAL NOTE 2: COMPUTING THE WEIGHTED AVERAGE COST OF CAPITAL

Financial institutions usually apply the WACC approach in analyzing the financial viability of the project as they decide on how much and in what form their exposure would be. The WACC is the weighted average of the yields, net of tax on different sources of funds put up by the project proponent. This is determined by calculating the relative weights of the capital resources and multiplying them with the corresponding opportunity cost of capital for each of the capital resource. The WACC is mathematically represented in equation form by:

\[
WACC = \frac{Pe \times Re}{1-Tr} + \frac{P1 \times R1}{1-Tr}
\]

Where
- \( Pe \) = percentage of equity investment to total capital investment
- \( P1 \) = percentage of loaned funds
- \( Re \) = opportunity cost of equity funds
- \( R1 \) = effective cost of loaned funds
- \( Tr \) = corporate tax rate in Philippines

The cost of debt is indexed on the Philippine Dealing System Treasury (PDST) Reference Rates, which have benchmark rates for 12 periods, i.e., 1, 3 and 6 months, 1, 2, 3, 4, 5, 7, 10, 20 and 25 years. The rates represent the risk free opportunity cost of funds, to which banks will add a spread for the risk premium. Current average spreads are at 3%.

Banks use the PDST-F index, which is the calculated average of the best 60% of firm bid rates posted by designated market-making banks for the original 12 benchmark tenors at 11:16 AM daily (see www.pdex.com.ph)

The cost of equity is based on the rate of return acceptable to the investor. It is usually estimated using the Capital Asset Pricing Model (CAPM). The formula for the CAPM is as follows:

\[
Equity \ return = Rf + B \ (Rm-Rf)
\]

Where:
- \( Rf \) = risk free rate
- \( B \) = beta for the security
- \( Rm \) = expected market return
- \( Rf \) = equity market premium

CAPM’s starting point is the risk free rate, usually the 10-year government bond yield. Added to this is the premium that equity investors demand for risks they take on. The equity market premium consists of the expected return from the market as a whole less the risk free rate or return. This is then multiplied by the beta. The beta is the relevant measure of a stock risk. It measures the volatility of the stock vis-à-vis the movement up or down of the market as a whole. Should there be no related domestic stock, related stocks in other countries may be used adjusted by the Philippine country risk premium.
### 3.15 Stage 2 Checklist

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<td>□ Value for Money Analysis, Public Sector Comparator</td>
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<td>□ Complete NEDA ICC PE-Forms</td>
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