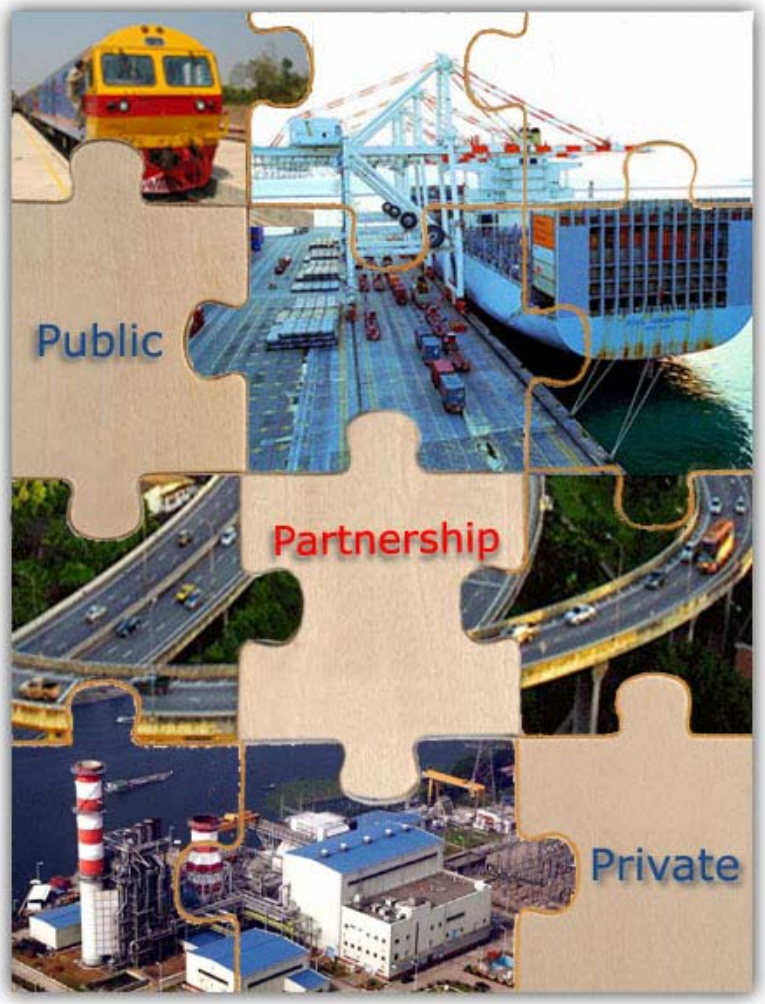
A GUIDEBOOK ON

PUBLIC-PRIVATE PARTNERSHIP IN INFRASTRUCTURE



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This Guidebook was developed by Mr. Abdul Quium of the Transport Division of ESCAP. Its development benefited from the work of the secretariat in the area of public-private partnership in infrastructure development and interaction with practitioners from many countries. The Guidebook is based on an earlier developed Primer on public-private partnerships in infrastructure development.

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The Purpose of this Guidebook

Public-private partnership (PPP) in infrastructure is a relatively new experience in most developing countries of the Asian and Pacific region. Although many governments have considered various steps to promote PPPs in their countries, lack of capacity in the public sector remains to be one of the major problems in implementing PPP projects. So far, only few countries have established institutional arrangements and developed manuals and resource materials in support of PPP development and for the capacity-building of their public officials. In the absence of such established institutional arrangements and resource materials, public officials face difficulties in project development and implementation, and general public can have many misunderstandings about PPPs.

This Guidebook describes the overall process and activities usually involved in PPP project development, implementation and management. It has been developed as a general resource material for better understanding of the whole process. The Guidebook also revisits some of the basics of PPPs to help understand the process and the requirements for developing successful projects. As the actual process followed in a country depends on its administrative and institutional arrangements, this Guidebook is *not* a substitute for manuals/advisory guidelines that many countries have developed* and other countries may consider to develop.

The Guidebook is divided into six chapters. Chapter 1 revisits the basics of PPPs in infrastructure. It focuses on three things: the characteristics that make PPPs different from conventional construction projects, models of PPPs, and the basic structure of a PPP project.

Chapter 2 considers the PPP process and the matters that need to be taken into account before any project development starts.

The preparatory activities prior to actual project development tasks are considered in Chapter 3. This chapter identifies the key tasks at the preparatory stage and makes elaborations on those tasks.

Chapter 4 deals with project development and due diligence. It identifies the key tasks involved in project development and describes the details of those tasks.

Procurement is the subject of discussion in Chapter 5. This chapter describes the typical activities involved in this stage.

Chapter 6 is the last chapter of the Guidebook. It considers contract management and dispute resolution.

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* Manuals/handbooks and guidelines have been developed in many countries including Australia, Singapore and South Africa. The development of this Guidebook has also benefited from these manuals and handbooks as well as practices followed in those and other countries.

CONTENTS

Abbreviations

ADSCR	Annual Debt Service Coverage Ratio
BLT	Build-Lease-Transfer
BOO	Build-Own-Operate
BOT	Build-Operate-Transfer
BROT	Build-Rehabilitate-Operate-Transfer
BTO	Build-Transfer-Operate
CAPM	Capital Assets Pricing Model
COD	Commercial Operation Date
DBFO	Design-Build-Finance-Operate
DBO	Design-Build-Operate
DCM	Design-Construction- Maintenance
ECA	Export Credit Agency
EOI	Expressions of Interest
EPC	Engineering, Procurement and Construction
ICD	Inland Container Depot
IRR	Internal Rate of Return
LOA	Letter of Acceptance
LOI	Letter of Intent
MCA	Model Concession Agreement
MIGA	Multilateral Investment Guarantee Agency (an affiliate of the World Bank)
MOU	Memorandum of Understanding
NPV	Net Present Value
O&M	Operation and Maintenance
PFI	Private Finance Initiative
PLCR	Project Life Coverage Ratio
PPI	Private Participation in Infrastructure
PPP	Public-Private Partnership
PSC	Public Sector Comparator
PSP	Private Sector Participation
PSO	Public Service Obligation
RFP	Request for Proposal
ROE	Return on Equity
SPV	Special Purpose/Project Vehicle
TOR	Terms of Reference
VAT	Value Added Tax

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CHAPTER 1

PUBLIC-PRIVATE PARTNERSHIPS IN INFRASTRUCTURE: REVISITING THE BASICS

This chapter revisits the basics of public-private partnerships (PPP) in infrastructure with a focus on:

- The characteristics that make PPPs different from conventional public sector projects;
- Models in public-private partnerships; and
- The basic structure of a PPP model.

The public officials, involved in PPP project planning and development, implementation and contract management, need to have clear understanding of these basics.

A. THE CHARACTERISTICS THAT MAKE PPPs DIFFERENT

1. What is public-private partnership in infrastructure projects?

Governments in most developing countries face the challenge to meet the growing demand for new and better infrastructure services. As available funding from the traditional sources and capacity in the public sector to implement many projects at one time remain limited, governments have found that partnership with the private sector is an attractive alternative to increase and improve the supply of infrastructure services.

The partners in a PPP, usually through a legally binding contract or some other mechanism, agree to share responsibilities related to implementation and/or operation and management of an infrastructure project. This collaboration or partnership is built on the expertise of each partner that meets clearly defined public needs through the appropriate allocation of[1]:

- Resources
- Risks
- Responsibilities, and
- Rewards

It is important to emphasize here that a PPP is not a solution option to an infrastructure service problem but it is a viable project implementation mechanism for a preferred solution option.

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1. Adapted from the definition of PPP provided by the Canadian Council for PPPs (see the Council's PPP definition at http://www.pppcouncil.ca/aboutPPP_definition.asp). Some other terms such as private sector participation (PSP) and private participation in infrastructure (PPI) are also used. These terms may not always have the same meaning, however.

2. What advantages PPPs may provide?

Governments worldwide have increasingly turned to the private sector to provide infrastructure services in energy and power, communication, transport and water sectors that were once delivered by the public sector. There are several reasons for the growing collaboration with the private sector in developing and providing infrastructure services, which include:

- Increased efficiency in project delivery, and operation and management;
- Availability of additional resources to meet the growing needs of investment in the sector; and
- Access to advanced technology (both hardware and software).

Properly executed planning and development of a project also allows better screening of options, and helps in deciding appropriate project structure and choice of technology considering cost over the whole life cycle of the project.

3. Should lack of government budget be the main factor in considering a PPP?

Often, lack of government funding has been the main reason for considering a PPP option for a project. However, lack of government funding may not be the main reason for deciding a PPP option for the implementation of a project. There are additional costs for PPP projects – usually the cost of borrowing money is higher for the private sector than for the public sector and there are administrative costs for the management of PPP contractual regimes. Transaction costs[2] of PPP projects can also be substantial. PPP projects may also impose many explicit and implicit liabilities on the government.

A project may not be considered for being implemented as a PPP project unless efficiency gains from improved project delivery, operation and management, and access to advanced technology can offset the above-mentioned additional costs. In fact, many countries have established value for money as the main criterion in judging the merits of a PPP option for a project.

4. Why PPPs are attractive to governments?

PPPs have become attractive to governments as an off-budget mechanism for infrastructure development as:

- They can enhance the supply of much-needed infrastructure services.
- They may not require any immediate cash spending.

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2. The development of a PPP project requires firms and governments to prepare and evaluate proposals, develop contract and bidding documents, conduct bidding and negotiate deals, and arrange funding. The costs incurred in these processes are called transaction costs, which include staff costs, placement fees and other financing costs, and advisory fees for investment bankers, lawyers, and consultants. Transaction costs may range from 1 to 2 percent to well over 10 per cent of the project cost. Experts suggest that transaction costs vary mainly with familiarity and stability of the policy and administrative environment and not so much with the size or technical characteristics of a project (See in Michael Klein et al. 1996. “Transaction costs in private infrastructure projects – are they too high?”, Public Policy for the Private Sector, Note Number 95, World Bank, Washington D.C. Available at: <http://rru.worldbank.org/Documents/ PublicPolicyJournal/095klein.pdf>.)

- They provide relief from the burden of the costs of design and construction.
- They allow transfer of many project risks to the private sector.
- They promise better project design, choice of technology, construction, operation and service delivery.

5. How a PPP project is different from a conventional project?

There are significant differences between a conventional construction procurement project and a PPP project that need to be clearly understood. The main differences include:

- PPP projects are different from conventional construction projects in terms of project development, implementation, and management. The administrative and approval processes in the case of PPP projects are also different.
- A PPP project is viable essentially when a robust business model can be developed.
- The focus of a PPP project should not be on delivering a particular class/type of assets but on delivering specified services at defined quantity and levels.
- The risk allocation between the partners is at the heart of any PPP contract design and is more complex than that of a conventional construction project. Both partners should clearly understand the various risks involved and agree to an allocation of risks between them.
- A PPP contract generally has a much longer tenure than a construction contract. Managing the relationship between the private company and the implementing agency over the contract tenure is vital for the success of a PPP project.

6. Are there any limitations of PPPs?

There are many important economic, social, political, legal, and administrative aspects, which need to be carefully assessed before approvals of PPPs are considered by the government. PPPs have various limitations which should also be taken into account while they are being considered. The major limitations include:

- Not all projects are feasible (for various reasons: political, legal, commercial viability, etc.).
- The private sector may not take interest in a project due to perceived high risks or may lack technical, financial or managerial capacity to implement the project.
- A PPP project may be more costly unless additional costs (due to higher transaction and financing costs) can be off-set through efficiency gains.
- Change in operation and management control of an infrastructure asset through a PPP may not be sufficient to improve its economic performance unless other necessary conditions are met. These conditions may include appropriate sector and market reform, and change in operational and management practices of infrastructure operation.

- Often, the success of PPPs depends on regulatory efficiency.

IMPORTANT CHARACTERISTICS OF PPP PROJECTS

- Promise of better project structure and design.
- Allows better screening of projects. A bad project is a bad project no matter whether it is implemented by the public or the private sector.
- Better choice of technology based on life-cycle costing.
- Better service delivery, especially if performance based payment is considered.
- Better chances of completion on time and within the budget.
  - Risk of default.
  - Project risks can easily turn into government risks.
  - Various liabilities on government (direct and indirect).
  - A long-term contract management system needs to be in place.
  - An administrative mechanism and special skills in the government are required to develop and implement PPP projects.

There can be underlying fiscal costs and contingent liabilities of PPPs on the government that may arise in the medium- and -long-term. These underlying fiscal costs and contingent liabilities on the government should be given due consideration when a PPP project is considered.

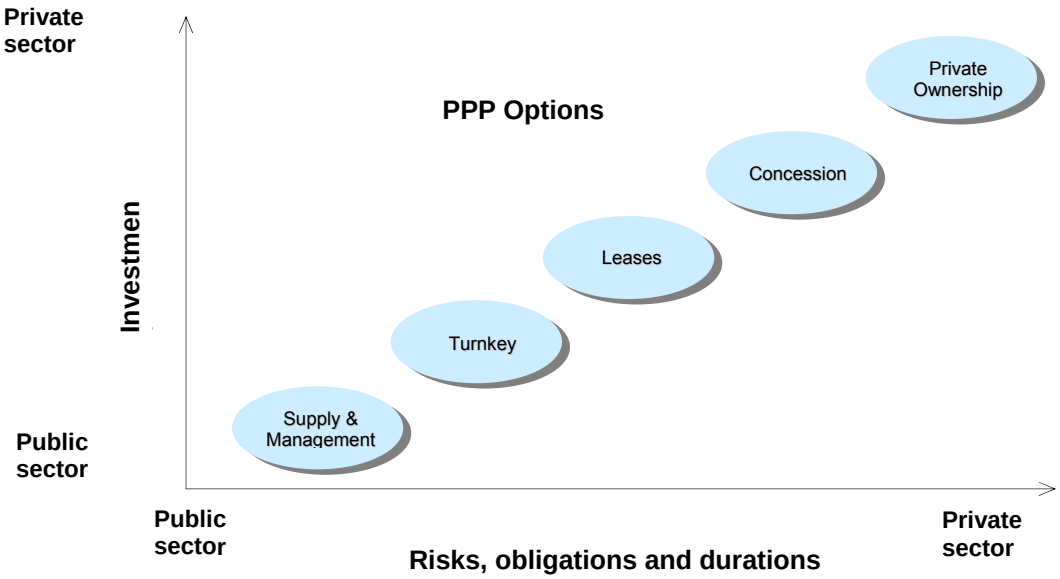
B. MODELS OF PPP

A wide spectrum of PPP models has emerged. These models vary mainly by:

- Ownership of capital assets;
- Responsibility for investment;
- Assumption of risks; and
- Duration of contract.
- The PPP models can be classified into five broad categories in order of generally (but not always) increased involvement and assumption of risks by the private sector. The five broad categories are:
- Supply and management contracts
- Turnkey contracts
- Affermage/Lease
- Concessions
- Private Finance Initiative (PFI) and Private ownership.

The basic features of these five categories of PPP models are shown in figure 1.

Figure 1. Basic features of PPP models



Each of these five categories has many variants. A categorization of the PPP/PSP models together with their main characteristics is shown in table 1[3]. While the spectrum of models shown in the table are possible as individual options, combinations are also possible such as, a lease or (partial) privatization contract for existing facilities which incorporates provisions for expansion through Build-Operate-Transfer. In fact, many PPP projects of recent times are of combination type.

Table 1. Classification of PPP models

Broad category	Main variants	Ownership of capital assets	Responsibility of investment	Assumption of risk	Duration of contract (years)
Supply and management contract	Outsourcing	Public	Public	Public	1-3
	Maintenance management	Public	Public/Private	Private/Public	3-5
	Operational management	Public	Public	Public	3-5
Turnkey		Public	Public	Private/Public	1-3
Affermage/Lease	Affermage	Public	Public	Private/Public	5-20
	Lease*	Public	Public	Private/Public	5-20
Concessions	Franchise	Public/Private	Private/Public	Private/Public	3-10
	BOT**	Public/Public	Private/Public	Private/Public	15-30
Private ownership of assets and PFI type	BOO/DBFO	Private	Private	Private	Indefinite
	PFI***	Private/Public	Private	Private/Public	10-20
	Divestiture	Private	Private	Private	Indefinite

* Build-Lease-Transfer (BLT) is a variant.

3. The use of various categorization terms in the table, and arrangements that go by these terms do not always have the same features as set out in the table or mentioned in the discussion afterwards.

** Build-Operate-Transfer (BOT) has many other variants such as Build-Transfer-Operate (BTO), Build-Own-Operate-Transfer (BOOT) and Build-Rehabilitate-Operate-Transfer (BROT).

*** The Private Finance Initiative (PFI) model has many other names. In some cases, asset ownership may be transferred to, or retained by the public sector.

The main features of each of the broad categories of the PPP models are discussed next.

Supply and management contracts

A management contract is a contractual arrangement for the management of a part or whole of a public enterprise (for example, a specialized port terminal for container handling at a port or a utility) by the private sector. Management contracts allow private sector skills to be brought into service design and delivery, operational control, labour management and equipment procurement. However, the public sector retains the ownership of facility and equipment. The private sector is assigned specified responsibilities concerning a service and is generally not asked to assume commercial risk.

The private contractor is paid a fee to manage and operate services. Normally, the payment of such fees is performance-based. Usually, the contract period is short, typically three to five years[4]. But the period may be longer for large and complex operational facilities such as a port or an airport.

The main pros and cons of this model include the following:

Pros:

- Can be implemented in a short time.
- Least complex of all PPP models.
- In some countries, politically and socially more acceptable for certain projects (such as water projects and strategic projects like ports and airports).

Cons:

- Efficiency gains may be limited and little incentive for the private sector to invest.
- Almost all risks are borne by the public sector.
- Applicable mainly to existing infrastructure assets.

Turnkey

Turnkey is a traditional public sector procurement model for infrastructure facilities. Generally, a private contractor is selected through a bidding process. The private contractor designs and builds a facility for a fixed fee, rate or total cost, which is one of the key criteria in selecting the winning bid. The contractor assumes risks involved in the design and construction phases. The scale of investment by the

4. For example, the initial management contract for Port Klang in Malaysia with a foreign company was only for three years. The main purpose was to set-up the system so that eventually a local company could take over for a longer period.

private sector is generally low and for a short-term. Typically, in this type of arrangement, there is no strong incentive for early completion of the project. This type of private sector participation is also known as Design-Build.

The main pros and cons of this model include the following:

Pros:

- Well understood traditional model.
- Contract agreement is not complex.
- Generally, contract enforcement is not a major issue.

Cons:

- The private sector has no strong incentive for early completion.
- All risks except those in the construction and installation phases are borne by the public sector.
- Low private investment for a limited period.
- Only limited innovation may be possible.

Affermage/Lease

In this category of arrangement, the operator (the leaseholder) is responsible for operating and maintaining the infrastructure facility (that already exists) and services, but generally the operator is not required to make any large investment. However, often this model is applied in combination with other models such as build-rehabilitate-operate-transfer. In such a case, the contract period is generally much longer and the private sector is required to make significant investment.

The arrangements in an affermage and a lease are very similar. The difference between them is technical. Under a lease, the operator retains revenue collected from customers/users of the facility and makes a specified lease fee payment to the contracting authority. Under an affermage, the operator and the contracting authority share revenue from customers/users.

In the affermage/lease types of arrangements, the operator takes lease of both infrastructure and equipment from the government for an agreed period of time. Generally, the government undertakes the responsibility for investment and thus bears investment risks. The operational risks are transferred to the operator. However, as part of the lease, some assets also may be transferred on a permanent basis for a period which extends over the economic life of assets. Fixed facilities and land are leased out for a longer period than for mobile assets. Land to be developed by the leaseholder is usually transferred for a period of 15-30 years.

The main pros and cons of this model include the following:

Pros:

- Can be implemented in a short time.
- Significant private investment possible under longer term agreements.
- In some countries, legally and politically more acceptable for strategic projects like ports and airports.

Cons:

- Has little incentive for the private sector to invest, particularly if the lease period is short.
- Almost all risks are borne by the public sector.
- Generally used for existing infrastructure assets.
- Considerable regulatory oversight may be required.

Concessions

In this form of PPP, the government defines and grants specific rights to an entity (usually a private company) to build and operate a facility for a fixed period of time. The government may retain the ultimate ownership of the facility and/or right to supply the services. In concessions, payments can take place both ways: concessionaire pays to government for the concession rights and the government may pay the concessionaire, which it provides under the agreement to meet certain specific conditions. Usually, such payments by the government may be necessary to make projects commercially viable and/or reduce the level of commercial risk taken by the private sector, particularly in a developing or untested PPP market. Typical concession periods range between 5 to 50 years.

The main pros and cons of this model include the following:

Pros:

- Private sector bears a significant share of the risks.
- High level of private investment.
- Potential for efficiency gains in all phases of project development and implementation and technological innovation is high.

Cons:

- Highly complex to implement and administer.
- Difficult to implement in an untested PPP market.
- May have underlying fiscal costs to the government.
- Negotiation between parties and finally making a project deal may require long time.
- May require close regulatory oversight.
- Contingent liabilities on government in the medium and long term.

In a Build-Operate-Transfer or BOT type of concession (and its other variants namely, Build-Transfer-Operate (BTO), Build-Rehabilitate-Operate-Transfer (BROT), Build-Lease-Transfer (BLT) type of arrangement), the concessionaire makes investments and operates the facility for a fixed period of time after which the ownership reverts back to the public sector. In a BOT modal, operational and investment risks can be substantially transferred to the concessionaire.

In a BOT model, the government has, however, explicit and implicit contingent liabilities that may arise due to loan guarantees and sub-ordinate loans provided, and default of a sub-sovereign government and public or private entity on non-guaranteed loans.

By retaining ultimate ownership, the government controls the policy and can allocate risks to parties that are best suited to assume or remove them. BOT projects may also require direct government support to make them commercially viable.

The concessionaire's revenue in a BOT project comes from managing and marketing of the user facilities (for example, toll revenue in a toll road project) and renting of commercial space where possible. Concessions for BOT projects can be structured on either maximum revenue share for a fixed concession period or minimum concession period for a fixed revenue share, a combination of both, or only minimum concession period.

Private Finance Initiative (PFI)

In the private finance initiative model, the private sector remains responsible for the design, construction and operation of an infrastructure facility. In some cases, the public sector may relinquish the right of ownership of assets to the private sector.

In this model, the public sector purchases infrastructure services from the private sector through a long-term agreement. PFI projects, therefore, bear direct financial obligations to the government in any event. In addition, explicit and implicit contingent liabilities may also arise due to loan guarantees provided to the lenders and default of a public or private entity on non-guaranteed loans.

A PFI project can be structured on minimum payment by the government over a fixed contract tenure, or minimum contract tenure for a fixed annual payment, or a combination of both payment and tenure.

In the PFI model, asset ownership at the end of the contract period is generally transferred to the public sector. Setting up of a Special Purpose Vehicle (SPV) may not be always necessary (see discussion on SPV in the following section). A PFI contract may be awarded to an existing company. For the purpose of financing, the lenders may, however, require the establishment of an SPV. The PFI model also has many variants.

In a PFI project, as the same entity builds and operates the services, and is paid for the successful supply of services at a pre-defined standard, the SPV / private company has no incentive to reduce the quality or quantity of services. This form of contractual agreement reduces the risks of cost overruns during the design and construction phases or of choosing an inefficient technology, since the operator's future earnings depend on controlling the costs. The public sector's main advantages lie in the relief from bearing the costs of design and construction, the transfer of certain risks to the private sector and the promise of better project design, construction and operation.

The main pros and cons of this model are summarized below:

Pros:

- Private sector may bear a significant share of the risks.

- High level of private investment.
- Potential for efficiency gains and innovation is high.
- Attractive to private investors in an untested or developing PPP market.
- Most suitable for social sector infrastructure projects (schools, dormitories, hospitals, community facilities, etc.).

Cons:

- Complex to implement and manage the contractual regimes.
- Government has direct financial liability.
- Negotiation between parties may require long time.
- Regulatory efficiency is very important.
- Contingent liabilities on the government in the medium and long term.

Which model to select?

The answer to this question needs careful assessment of many things.

Each model has its own pros and cons and can be suitable for achieving the major objectives of private-private partnership to a varying degree. Special characteristics of some sectors and their technological development, legal and regulatory regimes, and public and political perception about the services in a sector can also be important factors in deciding the suitability of a particular model of PPP.

There is no single PPP model that can satisfy all conditions concerning a project's locational setting and its technical and financial features. The most suitable model should be selected taking into account the country's political, legal and socio-cultural circumstances, maturity of the country's PPP market and the financial and technical features of the projects and sectors concerned.

As an example, for a new project, a BOT type of model may be quite suitable in a matured PPP market while a PFI or BOO type of models may be more appropriate in a developing/untested market.

C. Understanding the basic structure of a PPP arrangement

A typical PPP structure can be quite complex involving contractual arrangements between a number of parties, including the government, project sponsor, project operator, financiers, suppliers, contractors, engineers, third parties (such as an escrow agent[5]), and customers.

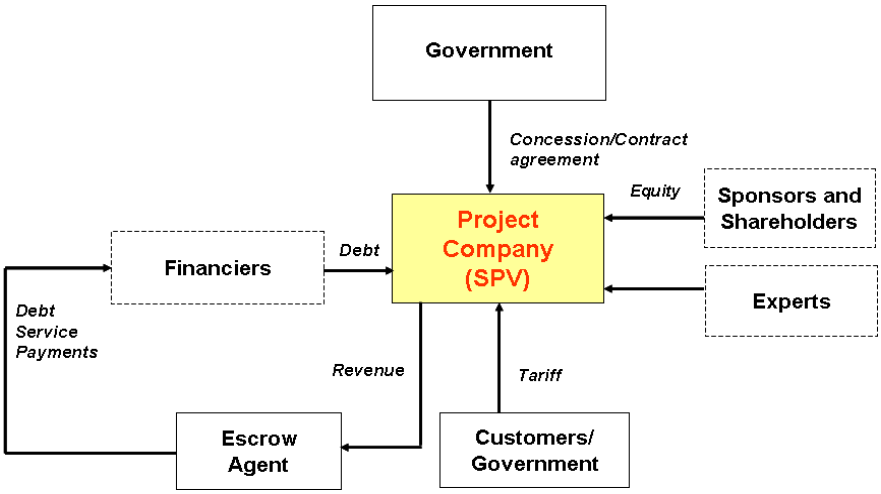
The creation of a separate commercial venture called a Special Purpose/Project Vehicle (SPV) is a key feature of most PPPs. The SPV is a legal entity that undertakes a project and negotiates contract agreements with other parties including the government. An SPV is also the preferred mode of PPP project

5. An escrow agent (normally a financial institution) is appointed by the project company and the lenders for managing an account called escrow account. The escrow account is set up to hold funds (including project revenues) accrued to the project company. The funds in the account are disbursed by the escrow agent to various parties in accordance with the conditions of the agreements. An escrow account is also used to hold a deposit in trust until certain specified conditions are met.

implementation in limited or non-recourse situations, where the lenders rely on the project's cash flow and security over its assets as the only means to repay debts.

Figure 2 shows a simplified PPP structure. The actual structure of a PPP, however, depends on the type of partnership model and can be quite complex involving contractual arrangements between a number of parties including the government, project sponsor, project operator, financiers, suppliers, contractors, engineers, third parties (for example, an escrow agent[6]), and customers (see Chapter 4, 'Terms of contract').

Figure 2. Typical structure of a PPP project[7]



An SPV is usually set up by the private concessionaire/sponsor(s), who in exchange for shares representing ownership in the SPV contribute the long-term equity capital, and agree to lead the project[8]. The SPV may not always be directly owned by the sponsors. They may use a holding company for this purpose.

An important characteristic of an SPV as a company is that it cannot undertake any business that is not part of the project. An SPV as a separate legal entity protects the interests of both the lenders and the investors. The formation of

6. See footnote 5 for details regarding escrow agent and escrow account.
7. The box on the right side labelled "expert" represents various participating groups in a PPP project including engineers (designer), contractor (builder), operator and insurer. Similarly, the box on the left side labelled "financiers" includes various parties investing in a project comprising equity and debt financiers which may include domestic and foreign banks and financial institutions, bi-lateral and multi-lateral donor agencies, development banks, and similar other agencies.
8. An SPV is a commercial company established under the relevant Act of a country through an agreement (also known as memorandum of association) between the shareholders or sponsors. The shareholders agreement sets out the basis on which a company is established, giving such details as its name, ownership structure, management control and corporate matters, authorized share capital and the extent of the liabilities of its members. The authorized share capital is the maximum amount of equity capital, measured at par value, that a company is allowed to raise by issuing shares to existing or potential shareholders (or investors). The shareholders of a company may be granted special privileges on matters such as elections to the company's board, the right to purchase new shares issued by the company and the right to share in distribution of the company's income. It is, however, important to mention here that in the event of liquidation of the company, the shareholders' rights to a company's assets are subordinate, or "junior" to the rights of the company's lenders.

an SPV has also many other advantages. A project may be too large and complicated to be undertaken by one single investor considering its investment size, management and operational skills required and risks involved. In such a case, the SPV mechanism allows joining hands with other investors who could invest, bring in technical and management capacity and share risks, as necessary.

The government may also contribute to the long-term equity capital of the SPV in exchange of shares. In such a case, the SPV is established as a joint venture company between the public and private sectors and the government acquires equal rights and equivalent interests to the assets within the SPV as other private sector shareholders.

Sometimes, governments want to ensure a continued interest (with or without controlling authority) in the management and operations of infrastructure assets such as a port or an airport particularly those which have strategic importance, or in assets that require significant financial contribution from the government. In such a case, a joint venture may be established. A joint venture is an operating company owned by a government entity and a private company (or multiple companies including foreign companies if permitted by law), or a consortium of private companies.

Often, an SPV is formed as a joint venture between an experienced construction company and a service operations company capable of operating and maintaining the project.

Other than its strategic, financial and economic interest, the government may also like to directly participate in a PPP project. The main reasons for such direct involvement may include:

- To hold interest in strategic assets;
- To address political sensitivity and fulfil social obligations;
- To ensure commercial viability of the project;
- To provide greater confidence to lenders; and
- To have better insight to protect public interest.

Direct government involvement in a PPP project is usually guided by the legal and regulatory regime of the country and the government policy on PPPs. For example, the government may hold certain defined percentage of the stake in a strategic project such as an airport or a port.

CHAPTER 2

BEFORE PROJECT DEVELOPMENT: UNDERSTANDING THE OVERALL PROCESS AND THE BASIC REQUIREMENTS

Before starting any work on project development, the implementing government agency ought to have clear understanding of the basic requirements that the PPP project in consideration must meet, the administrative processes involved, and the capacity in the government to develop and implement the project. Such an understanding is required to prepare detailed terms of reference for the work to be undertaken and a timeframe for its execution. Generally, the following need to be clearly understood:

- The legal and regulatory environment, and government policy on PPPs;
- The objectives that the proposed project has to achieve;
- The PPP process in the country, and administrative and approval processes and their requirements;
- Private sector requirements and capacity in the government to implement the project; and
- How to ensure good governance in project development and procurement.
- These are discussed in the following sections.

A. THE LEGAL AND REGULATORY ENVIRONMENT AND GOVERNMENT POLICY

A government agency should have the necessary powers laid down by statute or legal act to enter into a PPP agreement with a private party and undertake obligations under the agreement. A PPP project may also require authorization from government bodies at different levels of government. However, in an emerging PPP market, it may not be always clear what government bodies/agencies may have the legal authority to make such agreements or can authorize a PPP project. It is important to note that obligations undertaken or agreements made, or authorization provided without legal right are *ultra vires* and generally considered to be void and unenforceable. An *ultra vires* act may be void by law and can affect the acts of private companies and government agencies.

In order to clarify these important legal issues, some countries have enacted special laws on PPPs that define the legal regime, administrative and approval processes involved and other related matters. The coverage in national laws may vary widely but should provide clarity and certainty to award contracts and implement projects and may specify:

- Division of responsibility between levels of government and powers of government bodies;
- Sectors covered, details of project identification, approval, procurement and implementation arrangements;

- Types of permitted PPP models and general conditions for these models;
- Guidelines on risk sharing arrangements;
- Provision of financial and other incentives by the government;
- Provisions concerning contract management including dispute resolution;
- The extent to which lenders can undertake security over project assets and its liabilities;
- Administrative process (G to G activities) involved in PPP project development and implementation;
- Rights of the parties to a PPP contract agreement.

It is important to note that the PPP legal regime may, however, scatter over many legal instruments, not just the special law. These instruments may include the private contract law, infrastructure sector regulatory laws, company law, tax law, labour law, competition law, consumer protection law, insolvency law, infrastructure sector laws, property law, foreign investment law, intellectual property law, environmental law, public procurement law or rules, pledge law, acquisition or appropriation law and many other laws. Separate sets of operational rules and guidelines may also exist for many of such applicable laws. All such applicable laws, statutes, operational rules and guidelines and other specified institutional and administrative arrangements together constitute the legal regime of PPPs in a country. Careful consideration of the legal regime is necessary to examine the extent to which it:

- Provides the legal coverage to enter into an enforceable contract;
- Provides the private sector the necessary legal coverage to finance, build, operate and collect revenues or service payments;
- Covers issues to avert future confusions related to regulatory control, obligations of parties, services, land acquisition, risk and profit sharing, pricing and handover of facilities;
- Deals with issues in contract management (monitoring, dispute settlement mechanisms).

Provisions in the legal framework concerning the following four important aspects need to be carefully considered:

- Do they sufficiently meet the requirements/interests of the government and the private parties involved;
- How a contract would need to be structured around the provisions in all applicable laws;
- How difficult it would be to enforce the rights of the parties;
- What obligations are allowed to undertake and what government agency has the power to make an agreement and what government body has the authority to approve the project.

The legal regime may not allow all types of PPPs in a sector, or may have specified conditions for some PPP models. General policy guidelines on PPPs or specific policy frameworks for PPPs in different sectors may also be available. The

implementing agency needs to clearly understand these policies and their implications for the proposed project.

Certain projects may not be allowed as PPPs. Government policy or legal provisions may not allow a private sector company to hold majority stake in a joint venture with the public sector. For example, considering the strategic importance of ports and airports or large power and energy projects, private stakes in such projects could be limited to a maximum allowable percentage, which can be greater than or less than 50 per cent of the stakes.

Policy guidelines may also mention what type of government support would be available for a project and the requirements for such support.

A PPP project has to be structured considering all such legal, regulatory and policy requirements.

Whether defined in the special law and/or in other laws or in policy frameworks, the implementing agency needs to have clear understanding of the basic requirements that a PPP project has to meet. In this context, the vital questions that the implementing agency may have to consider include:

- Whether a PPP project is allowed in that sector or sub-sector and what legal, regulatory or policy restrictions may apply;
- What government policy guidelines on PPPs exist;
- Which other government agencies would have to be involved in the process and their roles;
- What would be the procurement process; and
- What sort of government support may be available for the project.

Answers to these questions will set the basic parameters that need to be considered in project development and in structuring the contract.

B. MAIN OBJECTIVES THAT THE PROJECT HAS TO ACHIEVE

A PPP is not a solution option to an infrastructure service problem but could be a viable project implementation or procurement mechanism for a preferred solution option. A project is expected to meet some service needs as well as to achieve some policy objectives of the government. A basic question is how far the proposed project can meet these requirements as a solution option.

A preliminary needs assessment by the implementing agency may be considered to show:

- The project is among the best options for meeting the service needs;
- The project can help achieve some of the relevant objectives of the government; and
- A PPP would be a viable project implementation/procurement option.

Details analyses and confirmation of these aspects will, however, have to be undertaken as a part of the feasibility study at a later stage.

It is also important at this stage to consider the government stake in the proposed project. Considering the public good nature of infrastructure projects, their strategic importance, effects on other sectors, public safety and security, and utilization of natural resources, the government has an important stake in all such projects. How a PPP project may satisfy these requirements needs to be carefully examined.

C. THE PPP PROCESS IN THE COUNTRY

The implementation of PPP projects may require the involvement of several public authorities at various levels of government. A project may require approvals at several stages by many different authorities. The authority for final approval and award of PPP contracts is generally centralized. This may be a special body set up for this purpose and is usually at the ministerial or council of ministers level.

The whole process of project development, approval and implementation should be clearly understood by the implementing agency at the outset. In some countries, the process, activities at various stages of the process and requirements for approval by the competent authority are all well defined. The implementing agency just follows them.

In other countries, however, these elements may not be defined or may be only partially defined. In such a case, the implementing agency in consultation with the concerned authorities may consider to:

- Determine the administrative, legal and regulatory requirements for the project.
- Map out the whole PPP process.
- Identify tasks involved at each stage of the process.
- Set clear definitions and procedures of the tasks to be undertaken at each stage, and
- Find out the approvals that may be required and possible requirements and criteria for such approvals.

The above activities would give a clear idea about the entire project development and implementation process, amount of work involved in each stage, and the likely requirements of human and financial resources.

Table 2 provides some guidance in developing a PPP project. The activities at different stages in project development, as mentioned in the table, are discussed in Chapters 3 through 6.

Any previous experience of the concerned implementing agency or any other agency in the government in implementing PPP projects can greatly help in mapping out the whole process and in establishing the requirements and approval criteria.

A process flow diagram showing all the stages and their linkages, and tasks to be accomplished at each stage can help to understand the whole process by all

persons involved in the project. The diagram can also help to estimate human and other resource requirements in project development.

Table 2. Stages in PPP project development and implementation

1. *Project Identification and preparatory activities (Chapter 3)*
   1A. Project identification and preliminary internal stakeholder consultation
   1B. In-house preparatory arrangements
   - Scoping of the project and its structure
   - Identifying the major planning and implementation issues
   - Institutional due diligence
   - Establishment of a project management structure
   - Setting up of mechanism for stakeholder consultation and information disclosure

   ► Government approval (e.g. by a special body established for PPPs)

   1C. Appointment of transaction advisor (if needed)
   - Terms of reference
   - Appointment

   ► Government approval
2. *Project development and due diligence (Chapter 4)*
   - Project planning and feasibility
   - Risk analysis and risk management matrix
   - Financing
   - Value for money
   - Government support
   - Responsibilities of, and liabilities on government
   - Regulatory arrangements
   - Service and output specifications
   - Terms of contract

   ► Government approval (Special body, concerned ministries, central bank, etc.)
3. *Implementation arrangement and pre-procurement (Chapter 5)*
   - Implementation arrangement
   - Independent credit rating of the project (when possible)
   - Bidding documents
   - Draft contract
   - Special issues (land acquisition, investment promotion, etc.)
   - Bid evaluation criteria, committees

   ► Government approval (Special body, legal office, Ministry of Law, etc.)
4. *Procurement and project construction (Chapter 5)*
   - Interest of the private sector
   - Pre-qualification of bidders
   - RFP – finalization of service and output specifications
   - Final tender
   - Bid evaluation and selection

   ► Government approval (Special body, cabinet, etc.)

- Contract award, negotiation and signing; financial close; and construction

5. *Contract management (Chapter 6)*
   - Establishment of a monitoring process and a team
   - Monitoring of operation and service delivery
   - Management of financial matters
6. *Dispute resolution (Chapter 6)*
   - Establishment of a process and a dispute resolution team

► Government approval (when needed by defined bodies)

Note: Mention of government approval and the activities shown against different stages are only indicative. The actual stages of government approval and activities undertaken in any stage may vary from one country to another.

D. UNDERSTANDING THE PRIVATE SECTOR'S REQUIREMENTS AND CAPACITY IN THE GOVERNMENT TO IMPLEMENT THE PROJECT

The private sector has certain requirements that a project must meet in order to be considered as a viable project. Often the term "bankability" is used in the industry to refer to the viability of a PPP project. The term, however, may mean different things to different parties in a PPP. But, generally, it means if the project is financially viable, legally tenable, and administratively implementable.

Some of the typical requirements of the private sector are:

- Private investment is feasible in size and manageable considering the technical managerial and financial capacity of the private sector;
- A fair return on investment taking into account the level of involvement and assumption of risks;
- Security of the private investment;
- Political and social comfort in cost recovery pricing of the services;
- Government policy continuity; and
- Predictable timeframe in administrative and regulatory processes.

The implementing agency possibly will also have to consider other specific requirements that the private sector should have for specific projects.

Concerning the capacity in the government, the implementing agency should take into consideration the following matters before considering further work on the project development:

- Whether there is any PPP unit in government or any agency that can help in project development and implementation;
- What previous experience exists within the government and how much capacity does the agency have in implementing the project;
- How much fund is available for project development and, if needed, how more funds can be obtained.

The agency should make a realistic assessment of the capacity in the government, the likely need of resources for project development and resources

available for this purpose. This assessment is needed to establish the terms of reference for the appointment of a transaction advisor, if needed.

E. GOOD GOVERNANCE

The promotion of good governance based on certain generally accepted core principles is a major responsibility of the government. These core principles include: accountability, transparency, fairness, efficiency, participation, and decency. Given these core principles, the implementing agency may consider the following matters to ensure good governance in the PPPs:

- A fair and transparent rule-based administrative process by which projects are developed and procured;
- Fair incentives to all stakeholders and fair return to all partners taking into account their level of involvement and assumption of risks;
- A widely representative participatory decision-making process that takes into account concerns of all concerned stakeholders including those who may be adversely affected;
- An acceptable dispute resolution mechanism that assures continuation of services and prevents the failure of project;
- An arrangement for project delivery that ensures efficient utilization of human, financial, natural and other resources without sacrificing the needs of the future generations;
- An arrangement that improves and ensures public security and safety, and environmental safety; and
- An arrangement for the improvement of essential public services without harming or causing grievance to people and for which public officials remain responsible to society.

Further elaborations on issues in PPP governance can be found in a publication prepared by the Economic Commission for Europe[9].

9. The ECE publication entitled “Guidebook on Promoting Good Governance in Public-Private Partnerships”, is available at <http://www.unece.org/ceci/publications/ppp.pdf>.

CHAPTER 3

PROJECT DEVELOPMENT I: UNDERTAKING THE PREPARATORY ACTIVITIES

Key Tasks

The key tasks in this stage would involve:

- Project identification and preliminary internal stakeholder consultation
- Scoping the project
- Identifying the major issues in project planning
- Assessing institutional due diligence
- Establishment of a project management structure
- Appointing a transaction advisor
- Establishing a mechanism for public participation and information disclosure

A. PROJECT IDENTIFICATION AND PRELIMINARY INTERNAL STAKEHOLDER CONSULTATION

There are established procedures in identifying and preparing a portfolio of potential PPP projects in many countries (such as in the Republic of Korea). The implementing agencies consider projects on the basis of such a portfolio. In the absence of such a portfolio, the project ideas may originate from existing plans or studies, or from political commitments of the government.

After developing a project, the concerned implementation agency in the government invites proposals from the private sector for its implementation through a procurement process. The proposals submitted by private parties in response to such a request are called solicited proposals. This Guidebook focuses on project development for solicited proposals.

Sometimes, private parties may also submit proposals without any request from the government. Such proposals are called unsolicited project proposals. The procedure for handling such projects are different and are briefly discussed in a separate section in Chapter 4.

A number of government departments and agencies may be directly or indirectly involved in the implementation of a PPP project. It is important to ensure their participation in the process from the very beginning. Valuable inputs may be received from them in developing a project. Previous experience of other agencies in PPP project implementation can also greatly help in structuring a viable project.

A PPP project may require approval and concurrence of a number of government agencies and regulatory bodies. They may include Ministries of Planning and Finance, the concerned sectoral Ministry, Department of Environment,

Board of Investment, Central Bank, etc. A project may also require various licences and permits from many agencies – for example, the concerned sector regulator and local government.

The project implementing agency needs to identify all such stakeholders in the government and start preliminary consultation with them concerning the project. A coordination mechanism with all such agencies could also be considered.

At this stage, it is equally important to identify stakeholders from outside the government, such as sector experts, local residents and various user groups, and interested and potential private providers of the project who could be consulted later on in the process. If there is no established mechanism for consultation with all the stakeholders, an appropriate mechanism needs to be considered at the outset.

B. SCOPING OF THE PROJECT

At this stage, the main objectives of the project and the broad terms are defined. The project may aim to procure new infrastructure assets and/or infrastructure services. It may also require modernization/rehabilitation and expansion of an existing asset or may just wish to have its management and operation. If creation of new assets is involved, it needs to be emphasized here that in most cases the primary focus of a PPP project may not be on creation of new infrastructure assets but procurement of infrastructure services. The scoping study may also consider how the project fits in any wider plans and programmes of the government and the implementation agency, and implementation strategy of the project.

The key tasks in this stage would involve:

- Establish the need for the project and its objectives;
- Identify service needs and requirements of infrastructure assets for the project objectives;
- Delineate scope of the project; and
- Outline delivery options and an initial assessment of each option.

Establish the need for the project and its objectives

There should be sufficient justification for undertaking any project. It needs to be clearly shown how the implementation of the project may help solve an existing problem and how it may help achieve the stated objectives of the government. These considerations will, in turn, define the broad objectives of the project.

The project being considered should be in line with an existing plan or with other projects that are either being implemented or being considered for implementation. It also needs to be examined if implementation of the project would bring any radical change in the structure of the industry and, if so, its implications.

Identify services needs and project objectives

An infrastructure project is developed to provide certain services. Therefore, consideration of a project will require clear statement of output/outcome requirements. For example, an urban public transport project may be considered to

permit travel of 40,000 passengers/ hour/direction apart from other objectives. A project may also be necessary for the replacement of an old/obsolescent asset or to meet the requirements specified under a new legislation or government policy.

Outline delivery options

Once the service requirements are defined, it becomes possible to consider alternative delivery options and their implications. Further consultation with the stakeholders from within and outside government can be helpful at this stage.

The delivery options identified may have varying technical, environmental, operational, financial, and ownership elements. Apart from considering new assets, where applicable, such options may also include increased utilization of existing facilities and solutions based on a broader umbrella project with direct involvement of other agencies. For example, rather than considering a stand-alone public transport project, a broader urban development project with a public transport component can be considered. Such an umbrella project can be structured to produce synergetic effect between the components, which increases the viability of individual components.

An initial assessment of the identified delivery options should include estimates of life cycle costs, major risks involved, resources that may be available, and constraints.

Life cycle cost estimates should take into account capital expenditure over the project's life cycle, cost of borrowing money, life cycle maintenance and refurbishment costs, and costs of associate infrastructure. Associate infrastructure includes facilities that are essential to meet the project needs – for example, an access road or utility lines that may need to be constructed.

The major risks involved in all options need to be identified. An initial assessment of their implications and how they are likely to be shared between the public and private sector may be indicated.

The implementing agency can make an estimate of the availability of any resources in the future that may have been already committed by the government or included in the agency's long-term funding programme.

The delivery options may have varying constraints in terms of legal and regulatory requirements, contractual obligations, environmental considerations, technical aspects, public interest, private sector's interest, land requirements and availability, and various social and political issues. All major constraints need to be identified and how they can be resolved should be assessed.

Establish scope of the project

This provides a summary of the project needs and service requirements and how the project fits in the existing plans and other related projects that are being implemented or being considered for implementation. It also considers indicative investment requirements, a timeframe for delivery and the broad strategy for implementation.

Government approval of the project scope may be required or considered after this stage before any further work is undertaken.

C. IDENTIFYING THE MAJOR ISSUES IN PROJECT PLANNING

Infrastructure projects can have wide-ranging effects in the sector concerned as well on other sectors. They may also require resolution of important issues related to utilization of natural resources and many other matters. These issues need to be identified and carefully considered in project planning.

The network nature of most infrastructures also implies that they cannot be considered as isolated projects (road, energy transmission line, telephone line, etc) without considering system and service integration with the existing networks and operators, future networks as well as other issues related to network development and capacity augmentation.

The system and service integration issues for each sub-sector are, however, different due to differences in their technological and operational characteristics. Depending on the nature of the issue, they may be dealt with in two ways:

- Matters that need to be considered in project planning and design. For example, system and service integration, future expansion of the network, interconnection with other networks, access to common infrastructure facilities, and lateral access control (in case of transport projects).
- Matters that need to be considered through separate complementary/linked projects either by the same government agency or by another agency.

Another important issue that also needs to be considered at the planning stage is the physical/natural characteristics of the project, particularly those related to the optimum use of the natural endowment, such as land, water, mineral and mining resources, and radiofrequency spectrum.

D. INSTITUTIONAL DUE DILIGENCE

Institutional due diligence is an important aspect of project development. This process determines the institutional aspects of a PPP project and how much capacity the government has to handle the project. The main elements in institutional due diligence include:

- The conditions and requirements as required under the legal and regulatory frameworks and how the proposed project can meet these conditions and requirements.
- Identifying the relevant government policies and assessing the likely implications of such policies for the proposed project.
- As provided in various guidelines, laws and rules, which other government agencies and stakeholders need to be involved in the process and what roles they will be required to play in project development and approval.
- Assessing the in-house capacity of the implementing agency and other relevant government agencies in undertaking various tasks related to project development and implementation.

- Specifying the role of the transaction advisor.

The implementing agency can undertake an assessment of these aspects and determine how they may be reflected in project design and planning tasks.

E. ESTABLISHMENT OF A PROJECT MANAGEMENT STRUCTURE

A PPP project is usually more complex than similar projects in the public sector. It also requires contract management not just for the construction period but for the whole tenure of the contract, which can last many years. Public agencies and the concerned private parties may need to address many critical issues during the whole period of project development and procurement, and at any time during the entire contract or concession period. These issues may include determining the output/outcome specifications, structuring a viable project, preparing whole lifecycle costing and realistic payment mechanisms, structuring a bankable deal and crafting the broad terms of contract that are fair to all parties.

It is important to have a project management structure in place from the beginning.[10] The management structure is entrusted with the responsibility of implementing the project and addressing all the above-mentioned critical issues. For a large project, a project management structure could involve:

- A Project Steering Committee
- A Project Team headed by a Project Director/Manager
- Project sub-teams (as necessary)

The Project Steering Committee provides overall direction and general guidance and has the ultimate accountability in respect of a project. The Steering Committee should consist of key decision makers/senior managers (at the level of permanent secretaries, director generals/chief executives of agencies) from the concerned ministries and departments, and from the implementing agency.

The Project Team consists of a Project Director/Manager and in-house staff supported by specialist external advisors on technical, financial and legal aspects, as considered necessary. A stable and dedicated project team is vital for structuring and implementing a successful project. While the composition of the team may change to meet the specific expertise needs during any phase of the project cycle, the core staff members of the team should be retained throughout the project development, assessment and implementation stages.

The Project Director/Manager is responsible for the delivery of the project and for the management of the project team and sub-teams. The Director/Manager should have the qualifications required for handling the project and should act on a full-time basis due to the key role of his position. The specialist expertise required within the team will vary from project to project depending on its nature. Subject to availability, they may be drawn partly from within the government and partly from the external consultants.

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10. Discussion in this section draws from National Treasury, PPP Unit, South Africa, “Public Private Partnership Manual” (undated), accessed from http://www.ppp.gov.za/Documents/ Manual/ Main%20Intro+Contents.pdf; and other sources.

The main responsibilities of the project team may include the following:

- Overseeing project development activities (undertaken in-house and by the transaction advisor);
- Overseeing project development budget and expenditure;
- Serving as an information exchange platform with other government departments and agencies and the public when required;
- Approval of the deliverables of the transaction advisor; and
- Reviewing and endorsement of the documentation for submission to the government and approving authorities.

Formation of project sub-teams may be considered to deal with specific issues such as financing, contract agreement development and negotiation, public consultation and social marketing, resettlement and rehabilitation and verification of engineering drawings and designs, etc.

Competencies of the Project Team

The public officials involved in the PPP project teams need to have competencies to structure and evaluate a project considering its financial, legal and technical aspects. The five broad areas of expertise that they need to have are project planning, financial matters, legal, technical, and project management.

Generally, not all types of expertise needed in these five areas may be available within the implementing agency. The transaction advisor of course complements the necessary expertise. But the project team should have a general level of expertise in all such areas in order to be able to oversee, guide and endorse the work of the transaction advisor.

If the project team has to remain responsible for the post-implementation management activities as well, it also needs to have project management expertise in the following areas:

- Contract management;
- Monitoring the quality of service and contractor compliance;
- Performance monitoring; and
- Partnership relationship management

Elaborations on these points are provided in Chapter 6.

F. APPOINTMENT OF A TRANSACTION ADVISOR

It is unlikely that all kinds of expertise, experience and human resources needed to develop and implement a PPP project will be available in-house. In most cases, a transaction advisor will be needed to assist the implementing agency in undertaking various tasks.

A transaction advisor should have the appropriate skills and experience to assist and advise the implementing agency on matters related to a PPP project development and its implementation including the preparation and conclusion of the concession/contract agreement. Usually, the transaction advisor means a group of professional consultants having expertise in technical, financial, and legal matters who work collectively as a team. They may be drawn from one or more firms.

Usually, the lead firm under contract with the implementing agency makes the services of the consultants available to the team as required.

The transaction advisor undertakes detailed works related to technical, financial and legal aspects of a PPP project as required by the implementing agency. It may be engaged to:

- Conduct a feasibility study that may satisfy the requirements of the implementing agency and approving authorities as well as potential financiers;
- Draft a contract document;
- Prepare necessary bidding documents and assist in bid evaluation;
- Assist the implementing agency in contract negotiation and completion; and
- Provide support to contract management.

The implementing agency prepares detailed terms of reference (TOR) for the transaction advisor which clearly mention the scope of work and services required, and deliverables and their timeframes. The TOR, among other things, may also include:

- Competencies and experience of the transaction advisor;
- Remuneration;
- Management of the advisor by the implementing agency;
- The process and rules of bidding and bid submission requirements;
- Background documents required to be submitted with bid submissions; and
- Bid evaluation, selection and approval procedure.

The TOR may or may not mention the budget for engaging the transaction advisor. There are, however, implications in both situations.

The prepared TOR as well as the selected transaction advisor after the bidding process may need to be endorsed by the implementing agency or by some other competent authority in accordance with the public procurement laws/rules of the country.

Competencies of the Transaction Advisor[11]

The specific expertise that the transaction advisor will need to have depends on the TOR. However, considering the general requirements of a typical PPP project, the transaction advisor may be required to have expertise in the following areas:

(a) Project planning expertise

- Project identification and structuring including incorporation of government's objectives;
- Economic and financial evaluation;

11. Some elements of this section are drawn from Ministry of Finance, Singapore, "Public Private Partnership Handbook", Version 1 (October 2004), accessed from http://app.mof.gov.sg/data/cmsresource/PPP/Public%20Private%20Partnership%20Handbook%20.pdf; and other sources.

- Assessment of social and environmental impacts and mitigation measures;
- Assessing value for money of a PPP project;
- Designing of resettlement and rehabilitation programmes;
- Marketing of project.

(b) Financial expertise

- Development of a robust business case for the project;
- Identification of risks and assessment of their likely impact on the project outcomes, and development of an optimum risk-allocation arrangement between parties;
- Structuring payment mechanisms considering responsibilities, risks and rewards in respect of both parties;
- Analysis of the tender proposals received from the bidders, including scrutinizing the financial proposals and their implications for the government and verification of cost analysis and financial models; and
- Identification of and reviewing the contract clauses that have financial implications for the public sector.

(c) Legal expertise

- Preparation of the tender documents, PPP contract and applicable lease agreements;
- Ascertaining the best possible method of procurement or bidding following the government procurement rules/laws;
- Legal matters involving taxation, property right, building and planning regulations, environmental law, and legal provisions in any other relevant laws (such as bankruptcy law, competition law, etc.) that have implications and need to be considered in tender documents, and contract and lease agreements;
- Contract negotiation; and
- Legal aspects related to renegotiation of the contract and other agreements due to unforeseen circumstances.

(d) Technical expertise

- Defining technical and output/outcome specifications and standards for services to be procured;
- Formulation of safety and security standards and their compliance by the concessionaire/private party under contract;
- Technical evaluation of proposals and bids;
- Assessment of the capacity of private sector bidders to deliver the project and subsequently operate and manage it;
- Quality control during construction, assessment of technical risks and their mitigation measures, and contractor compliance;
- Formulation of appropriate performance measures and development of monitoring systems to determine performance.

It may be mentioned here that for a PPP project, more emphasis needs to be placed on output/outcome and service standards rather than specifying technical parameters of inputs.

G. ESTABLISHMENT OF A MECHANISM FOR STAKEHOLDER CONSULTATION, MARKET TESTING AND INFORMATION DISCLOSURE

A good project marketing strategy would be to identify and engage in consultation with the stakeholders from within and outside the government from the very beginning of project development. The stakeholders may include:

- Relevant and knowledgeable officials within the implementing agency;
- Appropriate representation from all other concerned agencies;
- Experts in the field;
- Representatives of interest groups;
- Likely beneficiaries, affected groups and general public; and
- Representatives of potential private investors.

The stakeholder consultation process ensures appropriate project structure and helps in setting the broad terms of the project gradually over the whole project development period. It also greatly helps to identify the major planning and implementation issues early on, and to discuss what generally acceptable solutions are available for their resolution.

Consultation with stakeholders increases the likelihood that actions taken or services provided by the project can more effectively meet the needs of the people and that the benefits of development are more equitably shared. The implementing agency needs to consider a formal mechanism for such public consultations and incorporate the outcomes of consultation in the decision-making process.

Steps need to be taken for information disclosure on the project through the media and other means. Information disclosure helps in better understanding of the project by the general public and various interest groups. It also helps in removing misgivings and facilitates public participation.

It is important to mention here that public participation is extremely important for social sector infrastructure projects (schools, community/civic facilities, housing, etc.) as well as for economic infrastructure projects. Considering its importance, some governments have devised an in-built mechanism for public participation at the planning and design stage of PPP projects.

CHAPTER 4

PROJECT DEVELOPMENT II: THE FEASIBILITY STUDY AND DUE DILIGENCE

Key Tasks

The key tasks in this stage include:

- Project planning and feasibility
- Risk analysis and management
- Financing
- Value for money
- Pricing policy
- Government support
- Responsibilities of, and liabilities on government
- Regulatory arrangements
- Service and output specifications
- Setting the main terms of contract
- Getting the necessary government approvals

A. Project planning and feasibility

All projects require a detailed planning and feasibility study based on the most recent data and information usually collected from a variety of primary and secondary sources and previous studies. The physical components of the project and their capacities are determined on the basis of the outcomes of the feasibility study. These elements, in turn, determine the service requirements that the project has to deliver.

Any PPP project should be subject to social cost-benefit analysis based on a proper feasibility study to examine its public as well as private benefits. Results of the analysis provide an essential input for the political decision making process.

A financial analysis with due consideration of all costs will also have to be undertaken to assess the commercial viability of a project. The economic and financial analyses[12] are undertaken to establish the need and size of the project, and

12. Both the economic and financial analyses use a systematic format to account for all relevant costs and benefits (or revenues) of a project year by year. One of the major differences between these analyses is in the identification and valuation of the cost and benefit items. While the economic analysis considers all costs and benefits (including externals costs and benefits) to the economy as a whole and valued at their economic prices, the financial analysis considers only those costs and benefits that are internal to the project and are valued at their market prices. Both the analyses apply the discounting technique to find the present values of all future costs and benefits. This is done to reflect the time value of money or resources (see also footnote 26).

    Often, the internal rate of return or IRR of a project is used to examine its viability. The IRR is the discount rate, which, when applied to the yearly stream of costs and benefits of a project, produces a zero net present value. A project is considered viable when its IRR is greater than a pre-determined cut-off rate. Both the economic and financial IRRs are calculated to establish the economic and financial viability of a project.

also to provide the basis for any government support (including participation in financing), if necessary.

All cost calculations for a project should be based on its life cycle costs. Consideration of life cycle costs is necessary to establish the business case for a project. Such costs may include:

- Capital cost (construction, equipment and land costs);
- Soft costs (interest cost, bidding and development costs, management and consultation fees, etc.);
- Operational costs;
- Life cycle maintenance and refurbishment costs; and
- Cost of any necessary associated/complementary infrastructure (for example, access or physical integration infrastructure)

The work involved in the project planning and feasibility study is generally undertaken by the transaction advisor. The implementing agency prepares detailed terms of reference for the study, and the in-house project team remains directly involved in overseeing the conduct of the study.

The success of a PPP project depends on the quality of project planning, stakeholders' support, consideration of the major implementation issues in the planning stage, and implementation arrangement. The main issues that are generally considered in project planning are:

- Project selection and engagement with the private sector;
- Realistic demand analysis; and deciding location, structure and size of the project;
- Social and environmental impacts and mitigation measures;
- Sector specific issues/physical and natural characteristics;
- Legal and regulatory aspects that the project has to satisfy;
- Pricing of the product and services;
- Implementation issues;
- Liabilities on the government and government support that may be required; and
- Financing

Some of these issues require more elaborate discussion and are considered in separate sections.

Project selection

An important element in project planning is the selection of the best solution option to the problem. A thorough analysis of an existing problem with consideration of feasible alternatives for its solution should be explored with due participation of important stakeholders from within and outside the government. In this exercise, the participation of all relevant government agencies, important decision-makers and experts is necessary. A participatory project planning exercise has several merits including:

- There is no prejudgement about any solution option;

- It helps to understand the complexity and intricacies involved in a project; and
- Acceptable solutions and innovative ideas may emerge from the process.

Another important advantage of participatory planning is that it provides a general endorsement of the selected option by the stakeholders.

Engagement with the private sector

The interest of the private sector may be assessed by organizing a conference open to the interested private parties. The main purpose of this engagement is to get preliminary feedback from the private sector on the feasibility of the proposed PPP project. Relevant basic information on the project is provided to the interested parties which may include the type of services to be procured and the demand for such services; types of PPP deals under consideration (BOT, BOO, etc.); likely tenure of the contract; obligations of the parties in broad terms; revenue sharing arrangement; financing, etc.

Engagement with the interested private parties at this stage is a technical consultation and is not related to procurement. Both the government and interested investors are benefited through this type of engagement and consultation. Preliminary response from the private sector can greatly help in refining the project ideas and subsequently in developing a project structure. The implementing agency also benefits by having a better picture of the capacity and interest of the private sector in implementing the project.

Realistic demand analysis

Once the best solution option has been identified, the next stage is determining the parameters of the service that the project has to provide. In other words, its location, size, structure and capacity have to be determined. This requires a realistic assessment of the service demand in the future. For many projects, for example, transport sector projects, demand forecasting is often difficult and tricky but the success of the project greatly depends on it. Once the demand for the service is established, other technical parameters concerning size, capacity, etc can be determined through technical analyses,

Social and environmental impacts and mitigation measures

The likely social and environmental impacts of the project and their possible mitigation measures need to be assessed early on in the project planning phase. Many countries have special laws on environment, which stipulate the requirements for environmental impact studies. These requirements need to be carefully assessed.

Large tracts of land may be required for many infrastructure projects. In such cases, resettlement and rehabilitation of the affected people and compensation for the acquired land/property may become major issues in project development and implementation. The problem may become of a serious nature in the absence of fair

policies, and necessary legal measures to deal with such complex social issues. These issues also have deep financial as well as political implications. Some governments have formulated clear policies on these matters. The social, legal, administrative and financial implications of these issues need to be carefully considered during the project planning stage.

Legal and regulatory matters

The legal and regulatory issues in implementing a PPP project need to be carefully examined during the project planning stage. These issues have important implications in project structuring as well as in contract design. Also, a concession agreement cannot be considered in isolation from the legal system of the jurisdiction. Generally, civil law[13] based countries have a separate category of laws dealing with contracts and concessions. Rights of the parties to the contract or concession may have been clearly specified in such laws.

However, when a contract is awarded or a concession is granted under the administrative laws, as is often the case in common law countries, the contract/concession may be revocable at the will of the government. The private sector, including the lenders, would obviously be concerned considering such a possibility. The private parties would consider the extent to which it affects their commercial rights and may require some special provisions in the contract to protect and enforce their commercial rights. In the due diligence process, they would carefully consider legal issues concerning irrevocability, certainty and enforceability of their rights.[14] The enforceability of rights, however, is also an important legal issue for the government, especially when a foreign private party is involved.

Besides these issues that are of a more fundamental nature concerning the legal systems of the jurisdiction, there could be many legal and regulatory restrictions. For example, not all types of PPP models may be applicable for a sector or type of a project. A PPP project needs to be designed around these restrictions. If these restrictions are not assessed early on and a project is not designed accordingly, the project will not pass lenders' due diligence process. Consequently, the concessionaire/private party in the contract would not be able to arrange financing.

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13. The legal systems of most countries can be broadly categorized in two systems: civil law and common law. Over the years, the differences between these legal systems, however, have become blurred to a great extent.

14. The lenders, for example, would carefully assess their step-in right. They would also like to ensure as much security for the financing as possible. They may require security rights to allow them to take over the project rather than just sell the project assets, as the value of the project lies in its operation and not in its completed assets. They may ask for securing their interests through assignment, transfer and substitution of the concession to a nominated company under certain specified conditions.

Sector specific issues/physical and natural characteristics of sectors

Some of the physical, natural and technological characteristics of a sector that may have to be considered in the planning and design of a project are suggested below by sub-sector.

(a) Transport

- System integration, network expansion (urban transport)
- Service integration between different operators and across different modes, common ticketing system, public service obligation (PSO) (especially for urban transport)
- Interconnection between systems, access to common infrastructure facilities by service operators, passenger and cargo traffic rights (road and rail)
- Lateral access control, safety and parting of communities on two sides of right-of-way (road and rail)
- Intermodal transport development and operation (for all modes)
- Traffic rights, safety and security, further expansion (port, airport and other facilities such as ICDs and freight villages, etc.)

(b) Power/Energy

- Market structure
- Unbundling of the sector (generation, transmission, distribution and sales)
- Access to common energy power/energy transmission lines
- Imposition of security, and quality and reliability standards on the common energy/power transmission lines
- Facilitative framework for non-discriminating open access to common infrastructure facilities
- Source of energy, method of exploration, extraction, etc.
- Choice of technology
- Waste heat recovery and cogeneration
- Waste and waste water treatment and disposal
- Safety and environmental issues

(c) Communication

- Interconnection with other operators (technology, fee, management of interconnection facility, monitoring of call and data transfer between operators)
- Internet, Voice over Internet Protocol, IP Telephony, Asymmetric Digital Subscriber Line (ADSL) and other data transmission technologies
- Upgradation of technology (for example, from 2G to 3G in mobile telephony)
- Radiofrequency allocation and utilization
- Reallocation of radio frequency after the expiry of contract period
- Revenue sharing between operators as well as between the government and the operators (in lieu of any licence fee or in addition to such fees)
- Sharing of communication infrastructure facilities between operators

- International gateway (telephone, Internet, VOIP)
- Value-added service provided by telephone service operators
- Public service obligations

(d) Water

- Sector structure
- Sources of water and the limits of their use for a particular purpose
- Creation of reservoir and other means of storage
- Harvesting of rain water
- Treatment, disposal and recycling, and use of waste water
- Management of storm water
- Service area
- Fire service and other public service obligations (PSO)

B. RISK ANALYSIS AND MANAGEMENT

Risks are inherent in all PPP projects as in any other infrastructure projects. They arise due to uncertain future outcomes which may have direct effect on the provision of services by the project, and/or the commercial viability of the project. The risk allocation to parties in contract and the management of risks are, therefore, at the heart of a PPP design. This is also an important element in establishing the business case for a PPP project.

The risk analysis, allocation and management involve the following activities:

- Identification of all possible risks and assessing their likelihood;
- Examining the likely effects of the risks in quantitative and qualitative terms;
- Consideration of suitable mitigation measures that may be available; and
- Allocation of risks to parties.

Identification of all possible risks

A good feasibility study provides the basis for identification of risks in a project and assessment of their chances of occurrence. The main categories of risks in a project may include:

- Construction and completion risks (delays in construction or cost overruns);
- Technology risk (new and untried technology, whose performance cannot be checked against existing references);
- Sponsor risk (ability of private sponsor(s) to deliver the project);
- Environmental risk (environmental constraints in construction and operation);
- Commercial risk (lower demand and/or revenues than the ones projected);
- Operating risk (inefficiency in operation leading to higher operating cost);
- Financial risks (change in interest and currency exchange rates, and tax laws);
- Legal risk (change in legal regime);

- Regulatory risk (change in regulatory regimes);
- Political risk (change in government policy or action that affects the business case of the project); and
- Force majeure (risks due to unpredictable natural and man-made events such as earthquake, flood, civil war, etc.).

All such risks may also have many sub-categories. A risk matrix is a useful tool in risk management. The matrix can be developed showing all the identified major categories of risks together with their sub-categories and chances of occurrence over the proposed contract tenure of the project. An example of a simplified risk matrix is shown in table 3.

Examining the likely effects of the risks in quantitative and qualitative terms

The next step involves assessing the effects of the risks in quantitative and/or qualitative terms for all possible risk factors. The risks may affect the service outcome of the project (for example, the project fails to deliver on time or provides service at a lower level), or the commercial viability of the project (for example, lower return on investment, or difficulties in debt servicing).

Many different techniques ranging from the rule of thumb (based on past experiences) to sophisticated simulation models are available for the assessment of different risks in a project.[15] However, it is important to mention here that risk analysis is not a purely scientific process. While the available sophisticated tools may help in assessing the risks, in the end, it is as much an art as it is a scientific process.

PPP contracts often include incentives that reward private partners for mitigating risk factors.

Consideration of mitigation measures

Generally, mitigation measures are available for most risks. An effective strategy in risk management is to consider suitable mitigation measures for risks at the project planning stage. As appropriate, their consideration needs to be reflected in contract design and negotiation, and later on in designing a contract management process to address them during the construction and operation periods. The basic approaches to risk mitigation include:

- Transparency in the whole process, including participation of key stakeholders from the beginning;
- Properly executed project appraisal with details of risks and their likely effects, and return expectations;
- Cash flow projections based on technical, market and financial analysis;

15. General purpose and special purpose softwares are available for risk assessment of infrastructure projects. *Inforisk* is a special purpose software developed by the World Bank. There are also many general purpose softwares commercially available.

- Structured finance16 to meet the characteristics of the project;
- Security package and elaborate documentation; and
- Project monitoring and contract compliance.

Following are some of the commonly applied tools for risk mitigation:

- Measures that can de-risk to the extent possible or minimize the possibility of risk occurrence;
- Obligations and comforts in contract agreement through allocation of risks to identified parties with penalties and/or responsibilities for consequences;
- Insurance when available;
- Financial instruments (hedge, swap, etc.); and
- Designing of financial structure to minimize the risk of default.

The risk matrix in table 3 shows some examples of possible mitigation measures against the risks.

Table 3. Risk matrix

Category of risk	Description and likely effect	Mitigation measures	Allocation
Develop-mental risk	Insufficient preparatory tasks and project planning leading to delays in procurement and financial close	– Good feasibility study (that includes comprehensive analysis of risks, possible effects and how to address them as well as de-risking to the extent possible) – Institutional due diligence – Competent transaction advisor	Government/ implementing agency
Sponsor risk	Financial strength (ability to participate with equity, can arrange third party equity, financially solvent and financial requirement does not exceed capacity, can provide limited recourse, if needed)	– Credit references and rating – Minimum level of equity stake – Bank guarantee and undertaking – Bid bond from banker(s) – Track record – Financial statement analysis – Ensure adequacy of finance under loan facilities – Use of non-financial evaluation criteria and due diligence on private parties	Government/ implementing agency
Cost overrun risk	During the design and/or construction phase, the actual project costs exceed the estimated cost	– Fixed price and fixed time EPC contract – Review by lender's engineer – Contingency provisions; standby debt facilities/additional equity commitments (commitments are needed upfront) – Equity stake of EPC contractor	SPV/PP (can pass on to EPC contractor)

16. In project finance, structured finance broadly means debt structured to fit the cash flow.

Category of risk	Description and likely effect	Mitigation measures	Allocation
Time overrun risk	Takes longer time to complete the project	– Technical competence and experience of EPC contractor and subcontractors – Retainage, completion bond – Penalty regime – Full powers for implementation to IA	SPV/PP (can pass on to EPC contractors)
Input supply risk	Raw materials and inputs not supplied in time or of less in quantity or of low quality, price escalation of inputs	– Contractual framework (provision for liquidated damages) – Secured supply source – Relief may be considered if failure or shortage not attributable to any private party	SPV/PP (may pass on to input suppliers/ EPC contractor)
Operating risk	Factors negatively impacting upon operation and available capacity such as, unreliable/ untested technology; increased cost of operation, lower capacity; nature and cost of O&M; inefficient operation	– Proven technology, technology transfer – Clear output specification – Independent/lender's engineer report – Guarantee by technology provider, EPC contractor – O&M contract – Sinking fund, maintenance reserve – Maintenance bond – Contractual framework (penalty regime) – Substitution right	SPV/PP/ O&M contractor
Demand/ revenue risk	Insufficient demand and/or revenue (due to low demand, leakage, competing facilities, capacity, price setting, augmentation)	– Realistic demand studies, sensitivity analysis – Regular monitoring – Contractual framework – Price indexation – Long term offtake contracts – Take or pay	SPV/PP; Government in case of PFI type or projects with off-take agreements with government
Change in tax rates	Changes in tax law or policy that have negative effect on the private party, its assets, or the project	– Sensitivity analysis to test the robustness of financial return – Compensation if such effects are discriminatory	SPV/PP if changes were foreseeable and not discriminatory, otherwise government
Repat-riation of capital and profit	Unable to repatriate capital or profit, currency convertibility and transfer	– Partial risk guarantee provided by some development banks and ECAs – Insurance for political risks (see notes at the bottom of the table)	SPV/PP
Force Majeure Natural events	Flood, earthquake, cyclone etc; closure of operation and negative effects on assets and project	– Robustness of cash flow – Provision of reserves – Contractual provisions to withstand effect of such periods – Relief for short-term close down	SPV/PP

Category of risk	Description and likely effect	Mitigation measures	Allocation
Force Majeure-Political events	Change in law, expropriation, revocation of licences, permits etc, civil disturbance, war, non-default termination of contract.	– Insurance for political risks – Contractual framework – Provision of compensation	SPV/PP
Dispute between parties	Non-compliance of contract provisions, or difference in interpretation of provisions	– Establishment of a contract management framework and formalization of management responsibilities – Well defined dispute resolution mechanism spelt out in the contract – Appropriate regulatory mechanism – Termination of contract	Government/ SPV/PP

Notes: EPC = Engineering, Procurement and Construction; IA = Implementation Agency; O&M = Operation and Maintenance; PP = Private party in contract with the IA or Government; SPV = Special purpose vehicle.

Government means government in general or the concerned ministry, department or an organ of government as the case may be.

The table merely shows some examples of the common risks and their typical mitigation measures that may be considered. It does not provide any exhaustive list of risks, their nature or mitigation measures. Many mitigation measures shown in the third column may also apply to other risks identified in the second column.

Although the general principle of allocating risk that the party who is in the best position to manage should assume the risk applies to all situations, the party in the best position to manage a particular risk may vary from one situation to another. Many risks are project and situation specific.

A relief event is an incident that temporarily prevents the private company/SPV from completion or operation of the project. The private company is not penalized but also does not receive any compensation.

Some risks may remain unallocated to any specific party. These residual risks would have to be implicitly assumed by the SPV and the lenders.

Multi-lateral agencies such as Multilateral Investment Guarantee Agency or MIGA of the World Bank Group provide loan guarantee for developing country private sector projects. MIGA provides guarantee against foreign currency transfer restrictions, expropriation, breach of contract, war and civil disturbance. Many other development banks such as the Asian Development Bank, and ECAs have also similar mechanisms for providing loan guarantee to private projects.

Allocation of risks to parties

An important aspect of a PPP project is an explicit arrangement for allocation of risks between the parties involved. A good feasibility study provides the background that is needed for an allocation exercise. The following general principles may be considered to manage and allocate risks:

- Eliminate or reduce to the extent possible the chances of a risk to occur. For example, when possible, borrow in local currency to avoid exchange rate risk.
- Allocate risks to the party that is best equipped to manage them most cost effectively. For example, political and regulatory risks are more appropriate for the public sector, while construction and operating risks are more suited to the private sector.[17] The commercial risks are generally allocated to the private sector. But deviations can be considered on the basis of valid reasons - for example, sharing of commercial risks may be considered to attract private investors in an untested PPP market.[18]
- Consider an insurance (if available) to deal with risks which neither party is able to manage but still can maintain value for money in the project.
- When neither party is in a position to effectively mange a risk, it may be kept unallocated with an indication in the contract how the risk may be shared between the parties or assumed by a party in the event of its occurrence. In case of a concession contract, it may also be transferred to the end-users by way of charging higher tariffs.

It is not advisable to transfer all risks to the private party. There should be a good balance in risk allocation between parties. If a good balance is not achieved, it will result in increased costs and one or both parties may not be able to fully realize their potential.

The magnitude of project risks is also assessed as a part of the due diligence process undertaken by the lenders. The greater the assessed/perceived risk of a project, the higher is the risk premium charged by lenders. Consequently, the financing cost of project becomes higher.

Government means government in general or the concerned ministry, department or an organ of government as the case may be.

The table merely shows some examples of the common risks and their typical mitigation measures that may be considered. It does not provide any exhaustive list of risks, their nature or mitigation measures. Many mitigation measures shown in the third column may also apply to other risks identified in the second column.

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17. The project company, in turn, may transfer some of these risks to third parties namely by passing on to sub-contractors, covering them by insurance, having them guaranteed by the project sponsors.
18. However, in such a situation there is a danger that needs to be carefully examined before agreeing to any such risk sharing arrangement. It is convenient to structure the project debt around the government support, which basically turns the project risks into government risks.

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C. FINANCING

PPPs in infrastructure are normally financed on project basis. This refers to financing in which lenders look to the cash flows of an investment for repayment, without recourse to either equity sponsors or the public sector to make up any shortfall. This arrangement has several advantages: reduces the financial risk of the investors; may allow more debt in the financing structure; results in limited liability on project sponsors and more careful project screening.

However, project financing also has many disadvantages which include: more complex transactions than corporate or public financing; higher transaction costs[19]; protracted negotiations between parties; requirement of close monitoring and regulatory oversight (particularly for the potential expostulate guarantees).

When investors and financiers consider financing a project, they carry out extensive due diligence works in technical, financial, legal and other aspects of the PPP deal.[20] This due diligence is intended to ensure that the project company's (or SPV's) business plan is robust and the company has the capacity to deliver on the PPP contract.

Sources of project finance

The project finance may come from a variety of sources. The main sources include equity, debt and government grants. Financing from these alternative sources have important implications for the project's overall cost, cash flow, ultimate liability on concerned parties, and claims to project incomes and assets.

Equity refers to the capital invested by the sponsor(s) of the project and others. The main providers of equity are project sponsors, government, third party private investors, and internally generated cash.

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19. See footnote 2 for the definition of transaction cost.
20. Often the term "bankability" is used in the industry to refer to feasibility of a PPP project. The term, however, may mean different things to different parties in a PPP. Generally it may be used if the project is financially viable (from financial perspective), legally tenable (from legal perspective), and administratively implementable.

Debt refers to borrowed capital from banks and other financial institutions, and capital market. Debt has fixed maturity and a fixed rate of interest is paid on the principal. Lenders of debt capital have senior claim on the income and assets of the project. Generally, debt finance makes up the major share of investment needs (usually about 70 to 90 per cent) in PPP projects. The common forms of debt are:

- Commercial loan
- Bridge finance
- Bonds and other debt instruments (for borrowing from the capital market)
- Subordinate loans

Commercial loans are funds lent by commercial banks and other financial institutions. Bridge financing is a short-term financing arrangement (say for the construction period or for an initial period) which is generally used until a long-term (re)financing arrangement can be implemented.

Refinancing may allow more favourable lending conditions which reduce overall borrowing costs. Bonds are long-term interest bearing[21] debt instruments purchased either through the capital markets or through private placement (which means direct sale to the purchaser, generally an institutional investor[22]).

Subordinate loans are similar to commercial loans, but they are secondary or subordinate to commercial loans in their claim on income and assets of the project. To promote PPPs, governments often provide subordinate loans to reduce default risk and thereby reduce the debt burden and improve the financial viability of the projects (see box 1).

Special infrastructure financing institutions can be another source of debt finance. Many countries have established such institutions to meet the long-term debt financing needs of their infrastructure sectors. Public-private partnership projects awarded to private companies receive priority for financing from such institutions. Another important role that these financing institutions play is refinancing of private sector projects initially financed by banks, which find long-term financing for infrastructure projects difficult.

The other sources of project finance include grants from various sources, supplier's credit, etc. Government grants can be made available to make PPP projects commercially viable, reduce the financial risks of private investors, and achieve some socially desirable objectives such as to induce growth in a backward

21. Not all types of bonds however, pay interest. Zero coupon or discount bonds are bought at a price lower than their *face values*, with the face values paid back at the time of maturity. For such bonds, no additional interest is paid either on the face value or on purchase price.

22. Institutional investors such as investment funds, insurance companies, mutual funds, pension funds normally have large sums of money available for long-term investment and may represent an important source of funding for infrastructure projects.

area. Many governments have established formal mechanisms for the award of grants to PPP projects.[23]

Financial structure

Careful analysis of alternative financial structures is required to establish the right financing structure for a project. As the expected return on equity is higher than return on debt, the relative shares of debt and equity in the total financing package have important implications for cash flow of the project. Their relative share is also important for taxation purpose (generally, the higher the debt the lower is the tax on return).

Higher proportion of debt, however, requires larger cash flow for debt servicing. This could be problematic, particularly in the early years of project operation when the revenue earnings are generally low. This is a typical situation faced by transport and water sector projects. In such a possibility, the risk of default would be considered high.

Cost of capital

The cost of capital for a project is a weighted sum of the cost of debt and the cost of equity. Risk is an important element which is factored in to determine the cost of debt and equity.[24] Lenders determine risk premiums to take into account the assessed levels of risks from various sources. These are added to risk-free rate of borrowing to determine the required return on debt finance. The risk-free rate of borrowing is practically the rate at which government can borrow money from the market.

Similarly, the cost of equity is defined as the risk-weighted projected return required by the investors. However, unlike debt, equity does not pay a set return to its investors. The cost of equity is therefore established by comparing the investment to other investments with similar risk profiles.[25]

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23. The viability gap funding scheme of the Government of India is an example of an institutional mechanism for providing financial support to public-private partnerships in infrastructure. A grant, one-time or deferred, is provided under this scheme with the objective of making projects commercially viable. The viability gap funding can take various forms including capital grants, subordinated loans, operation and maintenance support grants, and interest subsidies. A mix of capital and revenue support may also be considered.
A special cell within the Ministry of Finance manages the special fund, which receives annual budget allocations from the government. Implementing agencies can request funding support from the fund according to some established criteria. In case of projects being implemented at the state level, matching grants are expected from the state government.

24. The cost of capital is often used as the discount rate, the rate at which projected cash flow is discounted to find the present value or net present value of a project. It is also important to mention here that consideration of the cost of capital is required to determine an appropriate tariff level by the government or by a regulator. Ideally, the Internal Rate of Return of a project should be equal to its cost of capital. If IRR is greater than the cost of capital, the concessionaire/investor makes excess profit, and if IRR is less than the cost of capital, the concessionaire/investor loses money and may even go bankrupt.

25 There are methodologies to establish the expected rates of return on debt and equity. For example, the capital assets pricing model or CAPM is used to determine the expected return on equity for a particular type of asset. Governments (through the Treasury or Ministry of Finance) may also establish the expected rates of return considering alternative investment opportunities and the level of risks involved in different types of infrastructure projects in their countries.

Once these rates of return on debt and equity are established, the cost of capital can be determined as follows:

Cost of capital = Return on debt x % of debt + Return on equity x % of equity

Box 1. How subordinate debt helps in debt financing

The revenue available for debt service is used first to meet the senior claims. If revenue is still available, it is used to meet the junior claims (subordinate debt and thereafter equity). A simplified example below shows how it works in reducing the burden of debt on a project.

	Amount	Coverage Ratio
Revenue:	$1,050	
Senior claims:	$700	1,050/700 = 1.50
Junior claims:	$230	1,050/(700+230) =1.13

On a combined claim (if the whole amount of loan was of the same type, i.e. senior debt), the coverage ratio is 1.13, which may be considered low and may not qualify for cheaper credits. The coverage ratio, however, is significantly improved if the debt is divided into two parts: a senior debt and a subordinate debt. As the senior debt is only a portion of the total debt and has the first claim on all the revenues available for debt service, its coverage is increased to 1.5 and its credit quality would be enhanced. The credit quality is very important to debt financing. With a good credit rating the project may also be bond financed. As the cost of bond financing is generally lower than commercial borrowing from banks and financial institutions, bond financing can also significantly enhance the financial viability of a project.

The availability of subordinate debt helps in reducing the risk to senior debt lenders and allows the project sponsor to borrow at lower interest rates. The subordinate debt provider, however, absorbs a share of the risk if revenues fall short of debt service requirements.

Because of this feature of subordinate debt in reducing the monetary cost of debt, some governments provide loans to implementing agencies (under public credit assistance programmes) to improve the credit quality of senior debt. It lowers the risk to lenders and helps the implementing agency to obtain loans at a lower interest rate reducing the debt burden on the project.

Source: Based on an example given in a publication of the Federal Highway Administration, US Department of Transportation (undated). Innovative Finance Primer, Publication Number FHWA-AD-02-004, available at http://www.fhwa.dot.gov/innovativeFinance/ifp/ifprimer.pdf

Cash flow analysis

It is important to analyze a project's cash flow as available cash is used to service any debt obligations. The analysis is done through the development of a cash flow model. Once the financial model for a project is developed, the implications of alternative financial structures and effects of changes in other

parameter values on cash flow can be analyzed. The following are the critical components of a cash flow model:

- Capital expenditure
- Financial structure and cost for finance from each source
- Terminal cash flow
- Discount rate
- Assumptions on parameter values

Capital expenditure is the cost of developing and building a project, regardless of funding sources. Typical components of capital expenditure are: land and site development costs; buildings and all civil works; plant and machinery; technical, engineering, legal and other professional service fees; project development and bidding costs; interest cost during construction and funding draw down; working capital, etc.

Alternative financial structures (that is relative shares of debt and equity finance from different sources) are considered to calculate the average cost of capital.

The terminal cash flow is the cash that is generated from the sale or transfer of assets upon termination or liquidation of the PPP contract tenure. In the case of a PPP project, the residual or transfer price is generally negotiated and included in the contract agreement.

The discount rate is the rate that is used to calculate the present value of future cash flows. It is often the weighted average cost of capital for the project from different sources.

In order to calculate the future cash flows, it is also necessary to make assumptions of important parameter values over the project's life. The main parameters for which values are assumed include: interest and inflation rates, pricing mechanism, demand for the goods and services produced by the project, construction time, debt repayment method, depreciation schedule, tax structure, and physical and technological life of assets.

Once the cost of capital, expenditures and terminal cash flow are known, the necessary assumptions are made and parameter values are set, a cash flow model can be constructed. The model is used to calculate cash flows in likely future situations to examine the availability of cash to meet the debt service obligations.

Financial indicators

A number of financial indicators are used to assess the financial viability of a project as well as alternative financial structure for its implementation. Some of the commonly used indicators are:

- Return on Equity (ROE)
- Annual Debt Service Coverage Ratio (ADSCR)

- Project Life Coverage Ratio (PLCR)
- Payback period
- Net Present Value (NPV)
- Financial Internal Rate of Return (FIRR)

Return on Equity: It is the net income earned on an equity investment. It measures the investment return on the capital invested by shareholders and should not be less than the expected return on equity.

Annual Debt Service Coverage Ratio: It is a measure that calculates the cash flow for a period in relation to the amount of loan interest and principal payable for that same period. The ratio should be (at the minimum) equal to or greater than 1 as the same demonstrates that the project is earning enough income to meet its debt obligations. It is an important criterion used by financiers to monitor financial performance of a project.

Project Life Coverage Ratio: It is also similar to debt service coverage ratio but considers debt service coverage on a given date based on future cash flows from that date until the end of the project life. This ratio enables lenders to assess whether or not there would be sufficient cash flow to be able to service the debt in case the debt needs to be restructured.

Payback period: It is the length of time needed to recover initial investment on a project. It may be determined using either discounted cash flow or non-discounted cash flow.

Net present value: It is the sum of the present value of all future cash flows. It refers to discounted value[26] of cash flows at future dates. A project is considered for investment if its NPV is positive.

Internal Rate of Return: It is the discount rate at which the net present value of the cash flow of a project is zero. The IRR may be calculated based on either economic, or financial (i.e., market) prices of all costs and revenues (or benefits). If the financial IRR is less than the cost of capital, it implies that the project would lose money. If the economic IRR is less than the opportunity cost of capital (i.e., a predetermined cut-off rate of investment), the project is not considered economically viable.

A preliminary financing plan for the proposed project needs to be developed based on the outcome of the financial analysis and cash flow analysis. The plan should show a broad outlay of the estimated investment required by the government, private party and the lenders.

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26. Discounted present value is a method of measuring the return on investment which takes into account the time value of money. If alternative investment opportunities exist, money can be shown to have a time value. For example, US$ 100 today invested at 10 per cent will yield US$ 110 in one year's time. Conversely, US$ 110 to be received in one year would be worth $100 now. The technique used to calculate the present value of a known future worth at a given discount rate is called discounting. It is the reverse of compounding which calculates the future value of a present investment at a given interest rate.

D. VALUE FOR MONEY

Theoretically, a PPP project is favoured only when its generated benefits/revenues exceed the total costs including the additional costs compared with a public sector project. To ensure this, government regulations guiding PPP schemes may establish some value for money or public sector comparator (PSC) criterion. For example, in the United Kingdom of Great Britain and Northern Ireland and in Australia the net present value of the proposed project as a PPP scheme is compared with its value if implemented by the public sector. A project is implemented through the PPP modality only when it promises to give a superior value for money as a PPP project compared with its value as a public sector project.

There are, however, problems in applying the PSC concept ranging from methodological issues to various practical limitations involving the concept. Some of the major problems include lack of consensus on discount rate, high costs of financial modelling, omitted risks, lack of realistic data for meaningful comparison of implementation by the public sector, and non-existence of a public sector alternative. In view of these serious limitations of PSC, it may not always be a feasible proposition to apply the concept in developing countries.

E. PRICING POLICY AND COMPENSATION TO THE PROJECT COMPANY

A major responsibility of the government (or the regulator) is not to allow any excessive profit to the private sector in a PPP deal. Ideally, the price should be set at a level that allows a fair return on the investment to recover the cost of financing and to meet the contractual obligations.

An appropriate level of base tariff can be established by considering the cost of capital. Ideally, the Internal Rate of Return (IRR) of a project should be equal to its cost of capital. If IRR is greater than the cost of capital, the concessionaire/investor makes excess profit, and if IRR is less than the cost of capital, the concessionaire/investor loses money.

The established base tariff rates can be adjusted periodically (yearly, or every two years, etc) according to an agreed formula based on a weighted adjustment index that may take into consideration items such as:

- The total amount of outstanding debt to finance the project;
- The rates of inflation in the host country and the overseas countries that provided equity and debt;
- The increase in cost of operation due to cost escalation by major components; and
- The local/(agreed) major international currencies exchange rate.

The issue of subsidy may also be taken into consideration when the pricing structure of infrastructure services is established. A PPP does not mean that there would not be any element of subsidy in pricing. Even when government subsidy is not available, pricing may be based on cross-subsidization between two groups of

users of a facility or between two components of the same project, if possible. For example, cross-subsidization of domestic users by industrial and commercial users can be considered while the pricing structure of water from a water project is considered. The government may also consider providing price subsidy to a particular group in the society to achieve its broader social and political objectives.

There are five main ways to compensate a private investor of a PPP project:

- Direct charging of users
- Indirect charging of (third party) beneficiaries
- Cross-subsidization between project components
- Payment by the government (periodic fixed amount or according to use of the facility or service)
- Grants and subsidies (discussed below)

Direct charging of users by the private investor is most common for economic infrastructures, such as power, telecommunication, water, and transport, particularly for port, airport and railway projects. In case of road projects, however, compensation may be provided either through direct charging of users or payment by the government. Direct charging of road users may not always be possible because of social and political reasons. In such a situation, the government pays the operator on behalf of the road users.

Systems for collecting payment from the indirect beneficiaries of many projects can constitute a major source of compensation. Such systems include a capital gains tax in the form of certain land-related taxes and fees imposed on the property owners and developers. However, in most countries, such payment systems either do not exist or have very limited applications. Some countries have used the land readjustment tool[27] for the financing of urban infrastructure projects.

PPPs can be designed based on cross-subsidization between project components, when excess revenues generated from one component can be used to compensate the shortfall in another component in order to make the whole project commercially self-sustainable[28].

The government may make periodic payments of fixed amount or according to the use of the facility, product or service at a predetermined agreed price. This is a common feature of the PFI model and is commonly used for social infrastructures

27. Land readjustment is a comprehensive technique for urban area development that provides network infrastructure and other utility facilities and amenities in an integrated manner together with serviced building plots. This approach is also known as land pooling or reconstitution of plots. It may be undertaken by a group of landowners or by a public authority. In this method, all the parcels of land in an area are readjusted in a way that each land owner gives up an amount of land in proportion to the benefits received from the infrastructure which is determined on the basis of the size and location of each site. The provision of public facilities enhances the land value and a sound urban area is created. The land contributed by the landowners is used to provide community facilities and amenities and can also be sold or leased out to meet the project costs including those for the infrastructure.

28. The rail-property development model used in Hong, China is a good example of such an arrangement. In this model, part of the profit made from real estate development on lands at or close to station areas, and along the right-of-way of rail transit routes is used to partly finance the rail system.

such as schools, hospitals and other public buildings. However, this is also practiced for many economic infrastructures. Shadow tolling of roads is an example.

F. GOVERNMENT SUPPORT

Infrastructure projects have long gestation periods, and often are not financially viable on their own. A feasibility study may reveal that a project is not commercially viable or attractive to private investors but is economically and socially desirable from long-term considerations. In such a situation, various options can be considered for improving the project's commercial viability and attractiveness. These options may include government intervention of various types and provision of incentives or subsidies. Government support is also well justified when a project can generate substantial external benefits, which cannot be captured or priced by the project operator. Social welfare is improved by undertaking such projects with government support.

Government support may also be needed considering a fundamental problem in infrastructure financing that arises due to a mismatch between the shorter duration of market valuation time compared with the long life of many infrastructure assets.

Without government support, implementation of commercially unviable projects is not possible. Government support may also be crucial in the early years of PPP development in a country or in an untested PPP market. Without sufficient government support, the private sector may not take much interest in such situations. Subject to provisions in the government's PPP policy framework or in legal and regulatory framework, the commonly available government support includes:

- Land acquisition
- Capital grant and other forms of financial support
- Revenue guarantee
- Foreign exchange risk
- Tax incentives
- Protection against reduction of tariffs or shortening of concession period
- Loan guarantee
- Relief in certain Force Majeure events
- Equity participation
- Performance guarantee

These are discussed below.

Land acquisition: Land acquisition is a typical problem in most developing countries. Any delay or problems in land acquisition could be a major source of risk to investors, particularly for road and rail projects and other projects that require large tracts of land. In order to remove the uncertainties in land acquisition, the government may ensure that minimum amount of land is required and also consider the use of public lands for infrastructure projects when such lands are available. If necessary, the government may also acquire private land for a project on behalf of

the investor. In situations where the investor is required to negotiate with the owners for the purchase of land, the government can also assist the investor through its use of the right of eminent domain. The land acquisition issue should be settled before the financial close.

Capital grant and other forms of financial support: A capital grant, one-time or deferred, may be considered by the government. The government may also consider other forms of financial support. These may include interest free or low interest loans, subordinated loans, operation and maintenance support grants, and interest subsidies. A mix of capital and revenue support may also be considered.

Revenue guarantee: For high-risk projects, the government may consider to provide revenue guarantees. The government can guarantee up to a certain specified percentage of the projected revenues. Where these guarantees are provided, governments normally also limit the maximum amount of revenues that the project developer can retain. Any amount in excess of this defined maximum limit is taken by the government. The revenue guarantee, however, has a major drawback. When such a guarantee is available, debt can be structured around it and may practically mean transferring of commercial risks to the government. In such a case, the private operator may lose interest in increasing its internal efficiency.

Foreign exchange risk*:* One of the serious concerns in the minds of investors relates to foreign exchange risk. The revenues generated by most infrastructure projects are primarily in local currency. But a large part of debt servicing and other payments are often made in a foreign currency. The government may undertake measures to limit the investor's risk from foreign exchange fluctuations. Where foreign exchange fluctuations exceed a certain defined limit (say, 20 per cent), a part of losses due to such fluctuations may be offset through modifications of tariff rates, government subsidies, adjustment of the concession period or other provisions.

Tax incentives: PPP projects may qualify for various tax incentives offered by the government. These incentives may include:

- Exemption from registration tax on the acquisition of real estate;
- Exemption from, or application of a lower rate of value added tax for infrastructure facilities or construction of those facilities;
- Reduction of, or exemption from various appropriation charges;
- Recognition of a certain percentage of the investment as a reserve to be treated as an expense for the purpose of computing corporate taxes;
- Allowing the project company to issue infrastructure bonds at a concessional tax rate on interest earned; and
- Exemption of capital equipment from import taxes and duties.

Protection against reduction of tariffs or shortening of concession period: Another incentive is protection from a reduction of tariffs or the concession period if the project developer is able to reduce construction costs below those estimated in the agreement. In fact, such a provision provides an incentive for early completion of

a project. However, this implies that there would be no adjustment if construction costs exceed the original estimate. This would be a disincentive to delay completion of a project.

Loan guarantee: A loan guarantee is an assurance to a lender providing credit to a project company. Such a guarantee provides an assurance that, if a borrower defaults, the government will repay the amount guaranteed, subject to the terms and conditions of the agreement. As the guarantee reduces the lender's risk, the borrower should be able to obtain funds at a lower interest rate or negotiate a loan that might not otherwise be available. However, it is important to mention here that full guarantee by government reduces the incentives for the private operator to manage the project risks.

As loan guarantees do not involve immediate cash spending by the government, they can be a more attractive tool to the government than direct loans or grants, particularly in periods of fiscal restraint. However, they can generate sizable financial obligations for the government and may significantly affect its fiscal framework. Further discussion on this issue is provided in the next section.

Force majeure: The government may consider buyout of a project in cases of prolonged force majeure. Government buyouts may also apply in certain extraordinary circumstances as may be provided for in the concession or contract agreement.

Equity participation: The government may also consider direct or indirect equity participation in a project to assure government support for its implementation and operation. Equity participation helps in many ways. It may be a vital source to supplement equity provided by project sponsors, particularly when equity capital from investment funds or other sources is not available. Equity participation helps to achieve a more favourable debt-equity ratio necessary to keep the debt service obligations manageable, particularly in the initial years of project operation. It may give comfort to debt financiers and consequently the cost of lending could be lower. Equity participation by the government is also helpful in securing public support for politically sensitive projects and projects that are of strategic importance.

Performance guarantee: The main purpose of the types of support discussed so far is to make projects commercially viable. However, the government may also consider other forms of support for PPP projects to attract private investment and enhance investors' confidence. An important one among such supports is sovereign guarantees. These guarantees include performance guarantees, and guarantees against adverse acts of the governments such as acquisition without adequate compensation. The performance guarantees relate to the honouring of the commitments of the contracting authority, as provided for in the contract agreement, by the government.

The Implications for any government support, particularly liabilities on the government (direct and indirect) need to be carefully assessed before agreeing to any such support.

G. RESPONSIBILITIES OF AND LIABILITIES ON GOVERNMENT

Besides usual responsibilities in regulatory and legal affairs and in policy and administrative matters, the government may be involved in a PPP project in many other ways. The involvement may be through assets ownership, equity participation, subordinate debt financing, risk sharing and provision of various incentives including loan guarantees for sub-sovereign and non-sovereign borrowings. These types of involvement require the government to bear direct and contingent liabilities, which can be both explicit and implicit.

Explicit direct liabilities are those which are recognized by law or as mentioned in a contract agreement, for example, the fixed periodic payments that are made in a PFI type of project, a grant or an agreed level of subsidy to a project. They arise in any event and are therefore certain. Contingent liabilities, on the other hand, are obligations if a particular event such as default of a guaranteed loan occurs. Therefore, they are uncertain in nature and difficult to predict.

Often guarantees are used to pursue policy objectives in support of priority infrastructure projects and governments may provide loan guarantees to cover some or all of the risk of repayment. Guarantees can be extremely valuable in reducing the financing cost of a project and can substantially reduce the risk of loan default. Guarantees, however, may impose cost to the government. Such a cost is not explicit but may be real. Many governments (for example, in Canada) have established procedures for providing loan guarantees to create reserves and channel funds through transparent means to ensure that costs of guarantees are evident to the decision-makers from the outset.

The government also bears certain implicit direct and contingent liabilities including those for which there may not be any direct financial involvement. Implicit liabilities may arise owing to public expectations and pressure of interest groups. Implicit direct costs include any future recurrent costs, such as for contract management and infrastructure maintenance. Implicit contingent liabilities also include default of a sub-sovereign and public and private entity on non-guaranteed loans and other liabilities, such as environmental damage, buyout, bailout, and default of the central bank on its obligations to allow repatriation of capital and profit.

The direct and contingent liabilities (explicit or implicit) have important implications for fiscal management in government. The underlying fiscal costs of PPPs that may arise in the medium and short term would require provision of substantial public financing in the budget. Therefore, there is a necessity to estimate

the likely direct and contingent liabilities in future before approvals of PPP projects by the government are considered[29].

H. REGULATORY ARRANGEMENTS

There is a need to regulate a service provider to ensure that services provided reflect the adequate level and meet the desired standard or quality. Several risks are involved in the absence of a regulatory system. The main risks are:

- Excessive tariff
- Inadequate service level and quality
- Non-compliance of contractual obligations to users, government or other parties
- Low efficiency in production and in the provision of goods and services
- Inadequate level of investment in the sector, and
- Frequent discontent between the parties involved.

In order to eliminate or minimise these risks, an appropriate regulatory system needs to be in place and should be considered at the planning stage of a project.

The powers to regulate are provided in the relevant legal instruments, statutory rules, concession/contract agreements, and other applicable documents.

The structure of the regulatory authority varies from one country to another and may also vary by sector within a country. There can also be various institutional arrangements with respect to regulatory authorities that may include: the concerned ministry, a special cell within the ministry, regulation by contract, and an independent regulator with discretionary powers.

Often, PPPs rely mainly on regulation by contract, particularly in the early years of PPP development. This is also a common form of regulatory arrangement in the roads sector. In such a case, a contract administrator monitors compliance with the contract agreement. Investors may often prefer such arrangements because of low discretionary powers on the part of the regulator. However, the major disadvantage of regulation by contract is that such contracts may be difficult to adjust or renegotiate, if such a necessity arises.

I. SERVICE AND OUTPUT SPECIFICATIONS

The focus of a PPP project is usually on delivering specified amount of services at defined levels and not on delivering a particular class/type of assets. For many projects, however, the assets created will have to be transferred back to the government and the assets may have very long life. As such, they should be usable

29. For more details on contingent liabilities on government, see Polackova, Hana (undated). Government Contingent Liabilities: A Hidden Risk to Fiscal Stability, World Bank, available at: http://www.worldbank.org/html/dec/Publications/Workpapers/WPS1900series/wps1989/wps1989.pdf

The recent bailouts of financial institutions and other interventions by many governments to pacify the financial sector may be an extreme case but clearly shows the extent of contingent liabilities on governments in the event of any major credit defaults.

in delivering the required amount of service much beyond the contract tenure of the project. The new assets may also require compatibility with the existing ones. In such cases, the class/type of assets may also be specified. In all cases, the preparation of details of the service/performance requirements of a project is very important.

Once the service that the implementing agency wants to provide through the project is specified, the outputs required to deliver that service have to be determined. The project has to produce those outputs in order to deliver the specified service.

There may be four types of output specifications:

- The main outputs required to deliver the specified service;
- Ancillary outputs that are not directly related to the main service (for example, a park-and-ride facility with an urban rail project or a community building facility with a power project);
- Input specifications; and
- Conditions of assets at the time of handover of the project to the government (if applicable).

As an example, the broad service specification for an urban transport project may read: to meet the travel needs of at least 50 percent passengers in a corridor by a fast and efficient mass transit system. The corresponding main output specifications may read: the design, construction, commissioning and operation of an elevated mass transit system that follows the universal design concept to provide access to all groups of users; has a capacity to carry 50,000 passengers/hour/direction at an average travel speed of 30km/hour; and is available for 16 hours everyday.

Further details on the quality aspect of each service delivery element will then have to be worked out. A common approach to specifying the quality of service outputs is to develop a matrix of key performance indicators which set the requirements for each service output. For the above project, performance indicators can be developed related to universal design of access to facilities, level of on-board loading (say, at least 40 percent passengers seated and not more than 6 standees/sq m), average waiting time at platform, average waiting time in queue to buy ticket, total ingress/egress times, ambient conditions in the vehicles, transfer arrangements to other service operators, fare collection system, etc.

Since the payment/penalty regimes of a PPP project are normally linked to service availability and its quality, the performance indicators have to be very detailed. There is, however, a problem associated with too many details. The more detailed the specification is, the closer it becomes to an input rather than an output.

Mention of any particular choice of technology may be avoided as far as possible as this may inhibit the private party to choose the most efficient technology and innovation in design. For example, rather than mentioning any particular

technology in fare collection/payment, mention may be made of an electronic fare collection system that does not require fare payment for every single trip separately.

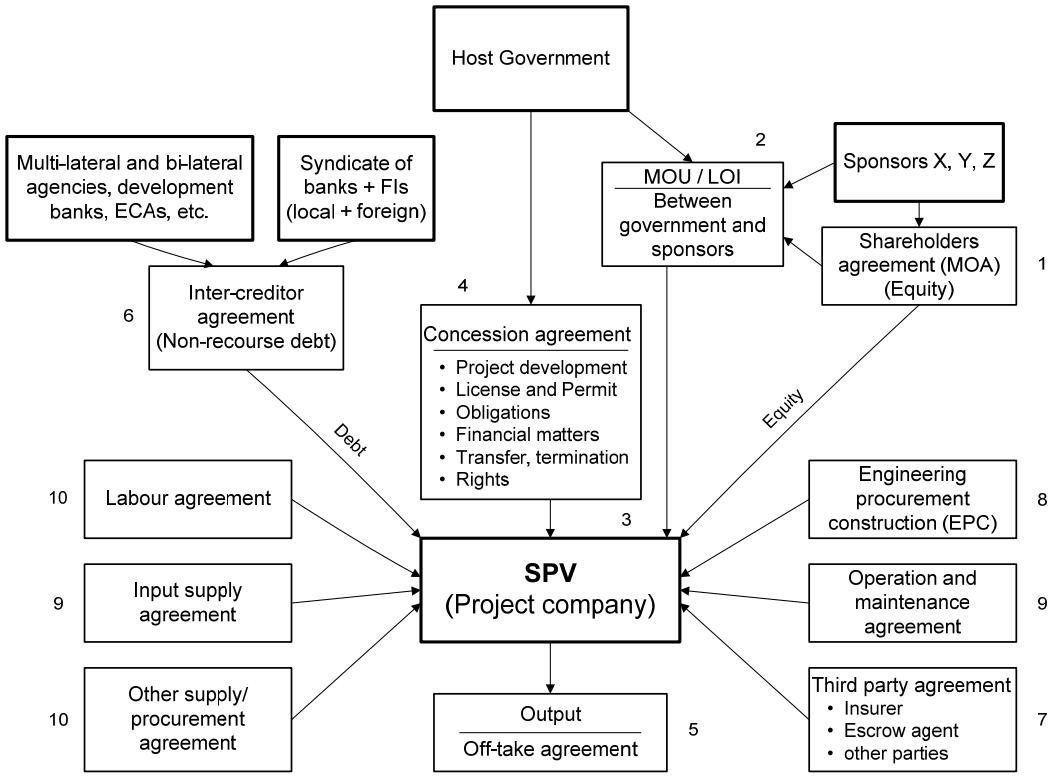
J. TERMS OF CONTRACT

Several parties are involved in the implementation of a PPP project. They include government agencies, project sponsor(s), banks and other financial institutions, experts, suppliers, off-taker(s) and third parties. A special project company called SPV may also be established for the purpose of project implementation and its operation. The details of implementation and payment arrangements are negotiated between the parties involved and are documented in a number of written agreements signed by them.

If an SPV is established, it is at the centre of most such agreements. The SPV negotiates the agreements with the other parties involved in the process. If the establishment of an SPV is not required, the concessionaire (or the private project company which sponsors the project) is at the centre of such agreements and negotiates the contract agreements with the other parties including the government involved in the process.

Figure 3 shows the nature and the general order of execution of agreements between different parties. The contract agreement with the government forms the basis for subsequent agreements with other parties.

Figure 3. Agreements in a typical PPP arrangement



A concession/contract agreement is the only agreement that is unique to PPP projects. The agreement:

- Underpins the whole structure of a PPP transaction;
- Defines the relationship between the public sector and the private sector;
- Identifies and allocates vital risks in a project; and
- Represents an important part of the security documents for the lenders.

Other agreements are analogous in form and content to agreements found in other corporate or commercial transactions.

It may be mentioned here that all types of agreements shown in figure 3 may not be necessary for all projects, for example, an off-take agreement in case of a toll road. An off-take agreement may not also be necessary for all power projects.

Contract agreements in respect of a project between the contracting authority in government and the private project company may be contained in a single document or may consist of more than one separate documents. It is difficult to generalize possible contents of all such agreements as they vary due to difference in legal and regulatory provisions from one country to another, type of PPP model and the nature of involvement of the public sector, implementation arrangements (including financial matters), operational, and various sector specific resource utilisation, technological and other matters. There are, however, certain key elements that need to be covered in most contract agreements. These key elements are discussed in Chapter 5.

K. GOVERNMENT APPROVAL

A government approval would normally be required at the end of the project development phase. Activities related to procurement in the next phase can follow this approval.

For government approval, an interim business case[30] for the project may be prepared by the project team/transaction advisor based on the outcome of the feasibility study. In some countries, there are specific information requirements for government approval at this stage.

The interim business case proposal for approval could be expected to contain information on, among others, justifications for pursuing the project and selection of the PPP model, key details about the project, expected costs, financial and economic viability, financing plan, proposed risk allocation, responsibilities of, and liabilities (fiscal or otherwise) on government, justifications for government support (if proposed), and implementation plan and arrangements.

30. The understanding of the public sector about what constitutes a business case for a project is different from that of the private sector. For a private sector company, a business case in simple terms would mean if the project is commercially viable, legally tenable and administratively implementable, and is within its technical, managerial and financial capacity.

The interim business case should also provide assessment of all financial and budgetary, institutional, legal, regulatory, physical and other socio-economic factors that constrain and/or enable the project. When possible, the business case should also establish the value for money for the project according to the selected PPP model.

The interim base case is finalized after the preparation and finalization of tender documents in the next phase.

L. DEALING WITH UNSOLICITED PPP PROJECT PROPOSALS

Unsolicited PPP projects have been implemented in many countries, but some countries do not entertain such proposals because of the problems associated with them, especially the risks they involve for competition and transparency. In fact, the legal provisions of many countries do not allow consideration of such project proposals.

There are some merits in keeping provision for considering unsolicited project proposals. Often, such proposals are based on innovative project ideas. The difficulty with unsolicited proposals however, lies in getting the right balance between encouraging private companies to submit innovative project ideas without losing the transparency and efficiency gains of a competitive tender process.

Considering the merits of unsolicited proposals that they may often have, some governments have developed procedures to transform unsolicited proposals for private infrastructure projects into competitively tendered projects.

There are two main approaches that have been developed to deal with unsolicited proposals. These are:

- In a formal bidding process, a predetermined bonus point is awarded to the original proponent of the project.
- The Swiss challenge system in which other parties are invited to make better offers than the original proponent within a specified time period. If a better offer is received, the original proponent has the right to countermatch any such better offer.

A third approach has also been suggested by some practitioners. The government can purchase the project concept and then award it through a competitive bidding process.

The government agencies are in a better position to handle unsolicited proposals if a transparent procedure is already in place for the purpose. Such a procedure may include an initial screening to determine the merit of the project and its conformity with the existing legal, regulatory and policy environment of the country.

A thorough examination of the submitted feasibility study may then follow with a focus on matters that include suitability of the project and its likely effect on the

concerned sector and market; assessment of risks and their proposed sharing; responsibilities of, and liabilities on government; the financing proposal; the main terms of the contract; and competency of the project sponsor. Some countries (for example, the Republic of Korea) have institutional mechanisms for thorough examination of unsolicited project proposals.

The implementing agency after thorough examination of the proposal may consider separate procurement processes for unsolicited proposals that do not involve proprietary concepts or technology and those that involve proprietary concepts or technology. Given the scope of the present Guidebook, no further discussion on unsolicited projects is considered necessary.

CHAPTER 5

PROJECT IMPLEMENTATION: PROCUREMENT AND CONSTRUCTION

Key Tasks

The key tasks in this stage include:

- Considering the legal and governance aspects in procurement
- Deciding the implementation arrangements
- Undertaking the pre-procurement activities
- Conducting the procurement process
- Overseeing construction and commissioning

A. LEGAL AND GOVERNANCE ASPECTS IN PROCUREMENT

The legal basis of procurement

Each country has its own unique approach to soliciting and evaluating PPP project proposals. Many countries have special legal instruments concerning PPPs. It is likely that the procurement process is also outlined in their legal instruments. In other countries where there is no such special law on PPPs, governments normally follow a procurement process in line with the general public procurement process of the country. Considering the complexity of PPP procurement compared with conventional public procurement, some countries have outlined detailed steps to be followed in a PPP procurement process.

Good governance in procurement

The PPP procurement process needs to be a transparent, neutral process based on the common principles of good governance. It should promote competition and ensure a balance between the need to reduce the length of time and cost of the whole procurement process. The main objective of such a process is to acquire the best proposal that serves the purpose of the government and provides the value for money. The main characteristics of such a procurement process include:

- Open and unbiased tendering process that provides equal opportunity to all prospective bidders;
- Not a one-way process;
- The schedule of requirements is finalized through a two-way communication and is based on what best possible solution the private sector can offer;
- Avoids costly retendering;
- Ensures wide participation of the private bidders by eliminating costly design efforts before the contract is finally awarded; and

- Where applicable, a two-step tendering process is considered to avoid costly design exercises in the first stage.

Section D outlines a procurement process that considers these elements in good governance.

B. IMPLEMENTATION ARRANGEMENT

Implementation issues

The project team should identify the implementation issues that may need to be resolved. Depending on the nature of the difficulties, they may need to be resolved either before the official commencement date of the project or during the construction period.

A project may face four broad types of difficulties:

- Administrative;
- Social;
- Legal; and
- Supply of materials for project construction.

Some of the typical administrative difficulties faced include land acquisition, utility shifting, lack of coordination between government departments, absence of clear rules, and undefined process and lack of control over the speed of decision-making in other government departments whose approval or concurrence may be required.

Ideally, land acquisition and the shifting of utilities and structures should be completed before the start of construction. Comprehensive site readiness is probably the single most important element to avoid delays in large, complex infrastructure projects. This requires early coordination between the physical works team and the teams preparing the social and environmental components.

Chief among the difficulties that are social in nature include agitation by local groups either against the project itself or some elements of it. Resistance against payment of increased tariff, new toll and agitation for more social benefits to local communities could also be common.

Critical attention needs to be given to the preparation and implementation of the social and environmental components of large projects. The resource needs for these components should be carefully assessed and made available in time. A large project may require relocation of households and other establishments. The impacts of such relocation (particularly public discontent) can be largely minimised by taking adequate mitigation measures through designing and implementing an appropriate resettlement and rehabilitation plan with the direct participation of the affected people.

The typical legal difficulties in implementation may include difference in the interpretation of tender conditions, grant of execution stay by court, violation of

environmental and other laws, and consumer complaints. The project team should have the competency to deal with these matters.

The project may also face difficulties in getting the supply of right construction materials in time due to shortage of supply, price escalation and delay in the amendment of codes and specifications.

The project team should consider if any of such implementation difficulties would arise and how these may be resolved.

Project implementation arrangement

Depending on the size, nature and complexities involved in project implementation, either the Project Director/Manager and the project team (with new members having the expertise to oversee the progress of construction), or a new project implementation set-up may need to be established before the actual procurement process begins.

For a large project, a full-time team with the requisite expertise headed by a Project Manager of appropriate level of seniority can be considered. The Project Manager should be fully empowered and should be senior enough in position to handle the complex coordination activities between different government departments that may be required.

For a very large and complicated project, the government may decide to establish a fully empowered separate/new implementing agency, which can coordinate and manage the numerous activities and parties involved in the project development, construction, operation and management, and can finally take over after the end of the contract tenure, or as needed.

C. PRE-PROCUREMENT TASKS

The feasibility study should provide certain outcomes that are essential before proceeding with procurement activities. These outcomes include:

- Detailed understanding of all aspects of the project (physical, financial, legal and administrative);
- Output and service specifications;
- Third parties[31] involved in the project and the risks;
- Any ancillary project that will have to be implemented
- Funding sources;
- Payment mechanisms;
- Risk analysis with sources, effects, likely costs and their sensitivity; and
- Due diligence.

31. Third party risks are those risks that arise because of failures by parties that are not involved with the main project contract but may affect the completion or operation of the project, for example, utility connections by concerned agencies.

If any of these outputs are not available, further work on them would be required before initiating the procurement process.

Independent credit rating

The due diligence process undertaken by an independent agency for the rating of a project can significantly enhance the investors' and lenders' confidence in the project. The due diligence process undertaken by the rating agency, among other things, assesses various aspects of the project, the risks involved and its business case. In consideration of these matters, the independent rating agency establishes the creditworthiness of the project. However, it may not always be possible to have independent credit rating for all projects (for example, if there is no previous experience of a similar project in the country).

The creditworthiness of a project is very important to debt financing. With a good credit rating a project can qualify for debt finance at a lower cost. The lower cost of borrowing can significantly enhance the financial viability of a project. A project with good credit rating can also be bond financed. As the cost of bond financing is generally lower than that of commercial borrowing from banks and financial institutions, bond financing can significantly enhance the financial performance of a project.

Establishing the procurement process, evaluation committee and setting the evaluation criteria

The procurement of a PPP contract is generally much more complex than the procurement of conventional public sector projects and, depending on the complexity of the project, it may require much longer time. There are tasks that need to be completed before initiating the formal procurement process. These tasks may include the following:

- Deciding the whole procurement process including identification of stages at which government approval is required (if not already defined);
- Establishment of evaluation criteria and committees;
- Setting a timeframe and deliverables; and
- Establishing a contract negotiation team.

Once these tasks are completed and cleared by the government, the implementing agency can consider initiating the contract procurement process.

Setting the terms of contract and preparing a draft contract/agreement

The main items that are generally covered in a PPP contract may include the following:

- Definitions and interpretations
- Tenure of contract, end of term arrangements and access rights to the project site
- Obligations of the parties to the agreement (the private party, the contract awarding agency and the government)

- Project, project site, and ownership of land and other assets
- Design, construction, commissioning, operation and maintenance of the facility
- Engagement of subcontractors
- Handover of project facility
- Performance requirements
- Payment and other financial matters (including tariff, fees and their collection and appropriation; price review and adjustments; and penalties for failure to meet performance requirements)
- Tariff, fees, levy and their collection and appropriation
- Insurance
- Waste treatment and disposal
- Independent engineer
- Independent auditor
- Applicable law and dispute resolution
- Change in law
- Liability and indemnity
- Force Majeure
- Termination of contract
- Events of default and termination
- Contract compliance and management (including monitoring and review, data collection, compilation and reporting)
- Redressal of public grievances
- Representations and warranties, disclaimer
- Substitution Agreement

The body of the contract agreement is generally divided in several sections or chapters, each on a specific issue. There may be one or more annexes or schedules attached to the main body of the agreement. These annexes or schedules provide more details on some specific matters, for example, the technical and performance specifications for the project. The common key sections of an agreement and the nature of their contents are briefly mentioned next.

The preamble of the agreement: This section identifies the parties in agreement, purpose of the agreement, context and reference to legal empowerment of the authority to execute the agreement, objectives and description of the project (generally more elaborate scope of the project is mentioned in a schedule attached to the main agreement), language and number of original copies of the agreement, date of effect, the date and place of agreement, and other related matters.

Definitions and interpretations: This section provides operational definitions and interpretation of terms (such as, accounting year, agency, authority, book value, concession, contractor, financial closure, good industry practice, minister, terminal, etc.) used in the contract document that require clear understanding. It may also define what would prevail if any discrepancies or ambiguities in the text of the agreement are observed.

Tenure of contract/concession: With other relevant items, this section outlines authorisation of activities granted to the concessionaire or the project company; rights, privileges and obligations of the concessionaire/project company; and concession/contract period. It may also mention what would have to be done by the private company at the end of the contract period.

Project, project site, and ownership of land and assets: The major items in this section include location of the project site, rights, title and use of the project site, handover of the project site, possession of the site, maintenance of the site, and applicable licences and permits that the private company needs to collect from the concerned authorities. It may also mention if the contracting agency would have any role in securing these licences and permits.

Concessionaire's/private company's obligations: This section deals with matters related to general obligations; shareholding arrangement; financing arrangement, financial close and refinancing; use of insurance proceeds; uninsurable risks; information disclosure and public information; and performance security. Obligations in respect of sectoral issues (for example, providing interconnection to services provided by other operators), and various reporting requirements to regulatory bodies may also be included in this section or in a separate section.

Implementing agency's obligations: This section provides general and specific obligations of the contracting agency. These may include, for example, establishment of a tariff review commission, government incentives that may be applicable, handing over the project site and other areas in which the concessionaire/project company may expect support from the government and the conditions of such support. The obligations of the government, if any, may be considered in a separate section.

Design, construction, operation and maintenance of facility: This section may include provisions related to the design and preparation of drawings, approval of architectural and engineering design and drawings, review and approval of design and drawings, project construction, start and completion, consequences of early and late completion, monitoring and supervision of construction, testing and commissioning, operation and maintenance, temporary closure for repair and maintenance, incidence management, network connectivity and access to facility by other operators/agencies, material breach of operation and maintenance, performance measures (quality and quantity of project outputs), performance monitoring, information disclosure, below performance, insurance, operation period, etc.

Engagement of subcontractors: The purpose, general rules, applicable areas, obligations of the private company in engaging subcontractors are mentioned in this section.

Handover of project facility: Time, obligations of concessionaire, defect liability, rights of agency, procedure of handover, and valid discharge are the major points in this section.

Performance requirements: This covers the details of service delivery and other technical, quality and safety standards[32]; availability of contracted services and procedures for variations of service scope. Normally, these are included in a separate schedule annexed to the main agreement.

Change of scope: This section explains the necessity of change, admissible changes and the defined procedure for making such changes.

Payments and financial matters: This section considers the provision of types and period of payments (including mode of payment, valid discharge, dates of payment, etc); procedure for payment; calculation of the amount of payment; payment adjustment; bonus and reduction in payment; security; sinking funds; VAT and other taxes; performance security; supervision charges of the implementing authority; and monitoring expenses.

Tariff, fees, levy and their collection and appropriation: The implementing agency's rights, concessionaire's obligations, tariff structure and amount, exemption and discrimination, subsidization/cross-subsidization, reviewing of tariff, tariff adjustment, cost of tariff review, fees and levy, integration of fees and tariff with other relevant operators, appropriation, revision of fees, collection and payment/transfer mechanism are included in this section. It may also include accounting standards, information on cost of operation, tariff review process and mechanism.

Insurance: This section specifies the types of insurance the private party (project company/concessionaire) in contract is required to have, the proof of such insurance covers, and application of insurance proceeds.

Waste treatment and disposal: This section may include types of waste covered and their sources; methods of collection, transportation, treatment and final disposal (solid and liquid); physical, chemical and biological characteristics of the wastes at final disposal; and recycling of treated waste water. The details of technical standards on treatment and disposal can be considered in a separate annex or schedule.

Force majeure: This section considers events (political and non-political), obligation of parties, allocation of costs, compensation to concessionaire, termination of contract due to force majeure and payments due to such termination.

Termination of contract: The contents of this section include the possibility of renewal, the transition arrangements when a new operator takes over, the basis for

32. As the focus of a PPP project should be on delivering specified amount of services at defined levels, the details of performance requirements in a contract document are very important.

calculating compensation for assets not fully amortized or depreciated and related matters.

Events of default and termination: The matters of consideration in this section include concessionaire's event of default, agency's event of default, termination due to concessionaires or agency's events of default, obligations and rights of parties, termination procedure and payments and claim on assets.

Independent engineer: This section specifies the eligibility and general qualifications and broad terms of reference for independent engineers, procedure for appointments, payment, replacement and eligibility for reappointment. Payment to independent engineers and other third parties may also be included in this section.

Independent auditor: General requirements and eligibility, procedure of appointment, obligations of the auditor and payment of fees are specified in this section.

Applicable law and dispute resolution: The applicable laws, methods of dispute resolution to be used (conciliation, arbitration, etc.) and their procedure, obligations and rights of the parties are specified in this section.

Change in law: The definition of meaning by change in law, assessment of effect on concessionaire, compensation to concessionaire, obligation of concessionaire and other related matters are covered in this section.

Liability and indemnity: Indemnity provided by the concessionaire to the government, implementing agency, and other government agencies; and indemnity provided by the implementing agency/government are covered in this section.

Representations and warranties, disclaimer: Representations and warranties of the concessionaire and the implementing agency, obligations to notify any change to the other party are covered in this section.

Contract compliance and management: This section outlines the establishment of a contract management set-up including the line of communication between the private party and the implementing agency, clear administrative procedures for communication on different matters, data collection, compilation and reporting requirements.

Redressal of public grievances: This section specifies how members of the public can lodge complaints, maintaining a register of public complaints and how the private party needs to address these complaints.

Miscellaneous: This section considers amendments to agreement, governing laws and jurisdiction, waiver, counterparts, etc.

Schedules and annexes: Description of schedules on various items (I, II III, etc.) as referred to in the main text is given in this section.

Substitution Agreement: This is a provision for a separate agreement between the implementing agency and the senior lenders for securing their interests through assignment, transfer and substitution of the concession to a nominated company under certain specified conditions. Generally, this is contained in a separate schedule annexed to the main agreement.

Preparation of bidding documents

A major task in this stage is the preparation of all bidding documents in line with the public procurement rules/laws of the country.

D. PROCUREMENT

The procurement process

There are certain common steps involved in the procurement process in countries that have a matured PPP programme. Although the details of each of these common steps may vary and differ in approaches, their purpose is very much similar. Generally, the following steps are taken:

- Assessing interest of the private sector;
- Prequalification of bidders;
- Request for proposal from prequalified bidders;
- Information exchange and feedback from the bidders;
- Finalization and issuance of final tender;
- Evaluation and selection of preferred bidder; and
- Contract negotiation, award and financial close.

Interest of the private sector

The interest of the private sector can be assessed by organizing a procurement briefing/conference open to the interested private parties. The main purpose is to get some feedback from the market on the feasibility of the proposed PPP project. On this occasion, relevant basic information on the project is provided to the interested parties. Both the government and the interested investors are benefited through this pre-procurement engagement and consultation.

The implementing agency can structure, refine, and subsequently tender documents and terms in such documents in a better way with the feedback received at this stage. The engagement with the interested private parties is considered a technical consultation and is not intended for any other purpose related to procurement. Also, at this stage no commitment is expected from any side.

An additional advantage of this process is that it helps the government to establish prequalification criteria and develop a general schedule of requirements.

Prequalification of bidders

The prequalification of bidders is a typical step taken in most countries. This may also be considered as the beginning of the formal procurement process to select a private investor/service provider. It begins with an invitation for expression of

interest (EOI). The main objective is to pre-qualify potential bidders for the project. The purpose of prequalification is to assess the technical and managerial competency and financial soundness of the interested bidders. Prequalification of bidders is not intended to cover any aspect of the proposal for the project or factors related to the indicative contract. These elements are considered at the later stages of the procurement process.

Sufficient time is given to the prospective bidders to submit their EOI. Considering the complexity of the project some countries allow 4-12 weeks for the submission of EOI. The EOI notice may include the following information for the prospective bidders to consider:

- Sufficient explanation of the project and basic information;
- Project objectives and its service requirements;
- Services to be delivered by the private sector and the implementing agency's role in service delivery;
- Main terms of the indicative contract including proposed risk allocation. These terms are similar to those presented at the procurement briefs/conference but modified to accommodate the response of the private sector as necessary;
- Any available technical reports and known project constraints (legal, financial, budgetary, planning etc.);
- The information that tenderers must submit;
- Evaluation criteria and their relative weights. Such criteria may include technical capability, management capacity, financial condition, past performance, etc. The prequalification criteria are chosen to assess the capacity of the intending bidders to deliver the contract;
- The procedure for selection.

All bidders who satisfy the prequalification criteria are generally selected as prequalified bidders. There may not be any pre-determined number to artificially limit the number of prospective bidders who can participate in the following tendering stage. If there are too many prequalified bidders, some countries allow formation of consortiums of prequalified bidders for submission of their final bids.

Tendering

Often, a two-step tendering process is employed. This serves two main purposes. First, it helps both the implementing agency and the bidders to understand each other's requirements and the implementing agency gets sufficient time to make appropriate revisions before the issuance of the final tender. Second, it avoids costly detail design efforts of the bidders before they are awarded the contract which is widely viewed as unfair and, can also diminish participation in the bidding process.

Request for proposal (RFP) from selected bidders: First stage of tendering

At this stage, the prequalified bidders are requested to submit their proposals. This is a very crucial stage for complex PPP projects and may require substantial

time. Before issuing this request notice, it is important to refine the project appraisal, if needed, and also to reconsider the assumptions made.

In the first step, bidders are invited to submit tender proposals for the PPP project. At this stage, the interested bidders are asked to supply the conceptual design, a rough estimate of cost, a business plan with performance forecast, the financing plan and the desired share of risks, rewards, costs, etc. The tendering agency may also require other information concerning the bidder's partnership proposal, past performance data, information on technical and managerial capacity and financial status.

At this stage, the implementing agency may consider to provide more detailed information about the project and the contract to the bidders. This may include: the level and amount of service to be provided, output-/input-based performance specifications, draft contract to be signed, timetable and the process for all clarifications that the intending bidders may ask for and other relevant documents.

In order to undertake due diligence the bidders require sufficient information about the project and terms of the contracts. To make this viable, the implementing agency may provide the following information to the bidders:

- Technical conditions of the project site;
- The projected usage/demand for services;
- Relevant legal, technical, financial information;
- Level and amount of service to be delivered;
- Output standards/specifications;
- Auxiliary tasks that may also be needed to be undertaken;
- Safety/security standards;
- Terms of the indicative contract including service specifications, standard specifications, payment mechanism and penalty regime, and legal/regulatory requirements;
- Bid formalities, bid evaluation criteria and their relative weights;
- Whether any first round evaluation would be done;
- Contents of the tender proposal with specified requirements to be met; and
- Other relevant requirements.

The draft contract document should include all critical elements and clearly specify all such items which, among others, include the following:

- Risk allocations and responsibilities of each party;
- Financial terms (including revenue sharing, if any);
- Performance standards, target dates, deliverables;
- Options for terminating the contract;
- Contract management procedures and mechanisms; and
- Dispute resolution approach and mechanisms.

Information exchange and feedback from the bidders

A feedback period can be considered after the first stage of tendering. In this stage, many countries allow further exchange of information between the bidders and the implementing agency within a specified time period mentioned in the RFP. The bidders may request any clarification in this period. The main purpose of this stage is to ensure that all intending bidders have the same understanding about the project. The information exchange serves three important purposes.

- It helps the prequalified bidders better understand the terms and conditions of the contract and undertake due diligence, and thus better decide whether to participate in the final stage.
- It allows the government to amend the terms and conditions of the intended contract in order to make it more robust and viable considering the feedback from the contesting bidders.
- It allows the government to clarify any issues raised by the bidders.

The bidders with highest evaluations are asked to submit comprehensive proposals in the second stage. In some countries, for some projects (such as a large housing project or a community/cultural facility) at the end of the 1st round the bidders are required to submit a draft proposal with conceptual designs for scrutiny by the stakeholders. For this purpose, a public participation process is designed as an in-built mechanism of the procurement process. The preliminarily selected bidders are then asked to submit their final bids with greater details of their conceptual design and the basic proposal. This process helps to avoid costly design exercise by the bidders at the outset which may in fact limit competition.

Finalization and Issuance of final tender: Second stage of tendering

Considering the feedback received from the first round of selected bidders, the implementing agency may like to amend the tender document at the end of the information exchange and market feedback period. If any such amendment is carried out, the same is made known to all the bidders well in advance of the closing date. The whole process may take several months depending on the complexity of the project.

Evaluation and selection of preferred bidder

A tender evaluation committee conducts a fair objective evaluation of the tenders received from the bidders following the criteria which were made known to the bidders in the first stage of tendering (RFP) and at the EOI stage. In the process of evaluation, the committee may require and ask for clarifications from the bidders. Generally, the tenders that do not meet the specified requirements (termed as “non-responsive”) are excluded from the evaluation process.

The evaluation committee selects the preferred bidder and makes its recommendations to the concerned approving authority. For the sake of transparency in the process, the members of the evaluation committee can be asked

to declare that they do not have any conflict between their personal or family interests and those of the project.

Contract negotiation, award and financial close

The successful bidder is notified of the award after the approval of the government. The implementing agency negotiates the final contract document (not the basic terms but details of implementation arrangements such as establishing dates, identifying the relevant authorities/officials on both sides and other relevant matters of contract management) with the successful bidder.

After the end of the contract negotiation and after agreeing on the contract document, both parties (the selected bidder and the implementing agency) sign the contract. Signing of the contract is the last task of the procurement process.

Thereafter, the selected bidder is allowed sufficient time to finalise and complete all agreements with other parties. The bidder enters into agreements with the lender(s), sub-contractors and other parties within a given time period and brings the deal to financial closure.[33] Depending on the complexity and size of the project, several months may be required for a project to come to financial close after the contract award is made.

Financial close marks the end of the project development phase. The bidder notifies the implementing agency of the financial close and submits copies of the agreements with the lenders and other parties as required in the contract agreement.

E. PROJECT CONSTRUCTION

The project construction phase begins after the financial close. This is the phase during which the project finance is drawn down and the EPC contractor and subcontractors engaged by the private party/SPV start construction, testing and commissioning of the different components of the project according to an implementation schedule.

The major responsibility related to the implementation tasks in this phase lies with the private party. However, a management process by the implementing agency needs to be in place from the outset to ensure timely completion and satisfactory operation of the project.

The implementing agency and its Project Director oversee the tasks related to project construction and its commissioning. The Project Director and his/her team:

- Take steps in resolving differences in the interpretation of tender conditions;

33. Financial close means the date on which the financing documents in respect of financial assistance for the project to be provided by the lenders (by way of loans, advances, subscription to debentures and other debt instruments, guarantees, etc.) have become effective and the concessionaire has immediate access to such funding.

- Monitor the progress of project delivery and quality of work;
- Oversee the conduct of required tests, evaluate the test results and take decisions as required;
- Consider variations in the contract;
- Inspect equipment to be installed; and
- Certify and provide approvals as may be needed under the contract.

The Project Director may also have responsibilities related to resolution of various implementation issues discussed in Section B of this chapter.

The construction phase ends with the certification of the employed independent engineer and successful commissioning of the project. The end of this process marks with what is known as the commercial operation date (COD), and the project starts delivering the contracted services.

CHAPTER 6

POST PROJECT IMPLEMENTATION: CONTRACT MANAGEMENT AND DISPUTE RESOLUTION

Key Tasks

The key tasks in contract management are:

- Establishment of an administrative process and a contract management team,
- Formalization of management responsibilities,
- Monitoring of operation and service delivery, and
- Management of financial matters.

A. CONTRACT MANAGEMENT[34]

Contract management is an important activity in PPP programme/project administration. The management process needs to be in place from the outset to ensure timely completion and satisfactory operation of a project. A separate process may also be considered to monitor the PPP programme performance of a sector or for the country as a whole.

The contract management process not only helps to fix responsibilities, but also allows timely response to any deviation in project implementation or operation from the provisions in the contract agreements and thus helps to avoid disputes between the parties at later stages. The three key aspects of contract management are:

- Contract administration
- Service delivery management
- Relationship management

Contract administration involves the establishment of administrative processes to ensure that all the procedures and documentation relating to the contract are effectively managed. The major activities in contract administration include: variation management, maintaining the integrity of the contract, and financial administration. Clear administrative procedures for these activities help to ensure that all parties to the contract agreement clearly understand their individual responsibilities, and time and procedure of action.

Service delivery management has two major elements: risk management and performance management. Risk management involves keeping the exposure of the project to potential risks at an acceptable level by taking appropriate action in time. Performance management is concerned mainly with ensuring the quantity and

34. Parts of the discussion in this section draw from National Treasury, PPP Unit, South Africa, "Public Private Partnership Manual" (undated), accessed from http://www.ppp.gov.za/Documents/ Manual/ Main%20Intro+Contents.pdf; and other sources.

quality of service delivery as per the contract, resource utilization, and performance improvement in the future to reflect technological and other new developments as appropriate.

Relationship management between the private party and the government implementing agency over the long contract tenure of a PPP project is vital for its success. Building an effective relationship that is mutually beneficial does not imply that either party has to compromise its contractual rights and obligations.

The key factors to a successful relationship are mutual understanding, open communication and information sharing, and recognition of mutual objectives. Appropriate lines of communication at strategic, business and operational levels between the implementing agency and the private party are necessary to build a successful relationship. The clear lines of communication at the appropriate levels help to reduce confusions and ensure a prompt resolution of issues that may arise.

Usually, a team comprising officials from the implementing agency and other concerned departments of the government supported by a range of specialists and technical advisors with varying levels of involvement is required for contract management. The resource requirement of the team is affected by the overall size and complexity of the project and its implementation stage in the overall project cycle. In some cases, it may be possible for the contract management function to be carried out by a single individual. But for large projects it would normally require a team work. The contract management team, in effect, may evolve from the project team in the inception, feasibility and procurement phases, taking on different technical skills and experience as needed throughout the project cycle.

Besides the implementing agency, some other agency/department of the government (for example, the central bank) and the respective sector/industry regulator may also be involved in the contract management process. The main tasks in contract management include:

- Formalization of management responsibilities by the organization at different levels. A critical aspect is to identify and clarify the roles and responsibilities of key individuals involved in the contract management process. Ambiguity about the functions of important individuals in the contract management process could lead to unnecessary delays and disputes.
- Monitoring of project delivery (construction phase).
- Management of variations during project implementation (time schedule, change of design and specification, etc.) and operation.
- Monitoring of operational aspects and service outputs after project implementation.
- Maintaining the integrity of the contract. It involves establishing procedures to ensure that the contract agreement and related documentation are consistent, up-to-date and accessible to all the relevant parties. Contract

agreement maintenance also involves taking action to allow all parties to develop a common view of contractual obligations.

- Fiscal obligations of the government (if any).
- Financial matters. Effective financial administration involves the development of systems and procedures to make and receive financial payments according to the provisions in the contract agreement, and to keep records of such transactions.
- Redressal of public grievances. Monitoring of action taken by the concessionaire for redressal of complaints by affected persons.
- Compliance with reporting requirements by the concessionaire under contract.

The reporting requirements are specified in the contract. Usually, templates for the regular reports are also provided.

Separate monitoring frameworks may be developed for the construction and operational phases. A mechanism is also required to gather, collate and analyze the required information on a regular basis for these frameworks, and to feed that information to the relevant authorities according to their requirements.

The information requirements for different agencies are generally different. As such, the implementing agency, regulator and the government may require separate monitoring frameworks to serve their own specific needs. However, the monitoring frameworks for the implementing agency should be based primarily on the performance indicators mentioned in the contract/concession agreement and other administrative procedures related to PPPs as may be required.

B. DISPUTE RESOLUTION

The legal basis for the settlement of disputes is an important consideration in the implementation of PPP projects. Private parties (concessionaire, financiers and contractors) feel encouraged to participate in PPP projects when they have the confidence that the disputes between the contracting authority and other governmental agencies and the concessionaire, or between the concessionaire and other parties (for example, the users or customers of the facility) can be resolved fairly and efficiently. Disputes may arise in all phases of a PPP project, namely, construction, operation, and final handover to the government.

The agreed methods of dispute resolution between the parties are generally mentioned in the contract agreement as allowed under the legal framework of dispute resolution in the country.

The legal framework for dispute resolution may be embodied in a number of legal instruments and relevant rules and procedures of the country. The legal instruments may include the PPP/private contract law, company law, tax law, competition law, consumer protection law, insolvency law, infrastructure sector laws, property law, foreign investment law, intellectual property law, environmental law,

public procurement law or rules, acquisition or appropriation law, and various other laws. The commonly used methods for dispute resolution include:

- Facilitated negotiation. A facilitator is appointed by the parties in the contract. The facilitator aids the parties in resolving any dispute through negotiation. He/She does not provide any opinion but assists the parties in analyzing the merits of their cases.
- Conciliation and mediation. A person or a panel appointed by the parties provides independent and impartial assistance to them in resolving a dispute. This process may end either in the settlement of the dispute agreed by the parties or it may end unsuccessfully.
- Non-binding expert appraisal. A neutral third party provides an appraisal on the merits of the cases of parties in dispute and also suggests an outcome for their consideration. The process is usually followed by negotiations between parties.
- Review of technical disputes by independent experts. This method is often used for the settlement of technical disputes between parties in contract. To review disagreements, the contesting parties refer such matters to an independent expert appointed by them. The decision of the independent expert may either be binding or non-binding, as agreed in the contract agreement.
- Arbitration. In this process, the matter in dispute is referred to a board or tribunal of arbitrators appointed by the parties according to an agreed procedure set forth in the contract agreement. Such arbitration is held in accordance with the rules and at a place as agreed in the contract agreement. Any award made by the arbitral board or tribunal is binding on parties.
- Adjudication by Regulatory Authority. If a statutory Regulatory Authority exists with powers to adjudicate upon disputes between the contracting government agency and the concessionaire, matters of dispute may be referred to the Regulatory Authority. An appellate tribunal or a court of law as defined in the contract agreement can consider an appeal against such adjudication.
- Legal proceedings. In accordance with the legal provisions, parties in dispute may go to the domestic judiciary for the settlement of their disputes.

It is important that the settlement mechanisms considered in the contract agreement are in line with the international practices and requirements, particularly when large-scale investments from the foreign private sector are expected.

Generally, the contract agreement(s) specifies what methods of dispute resolution would be followed to settle any dispute arising between the parties and the rules and procedures to be followed for that. The United Nations Commission on International Trade Law (UNCITRAL) has prepared a Legislative Guide on Privately

Financed Infrastructure Projects.[35] The UNCITRAL Guide provides clauses related to dispute resolution that may be considered for inclusion in the contract document.

35. Available at <http://www.uncitral.org/pdf/english/texts/procurem/pfip/guide/pfip-e.pdf>.