Module 3

PPP Cycle

This module provides guidance on each stage of developing and implementing a PPP project—from identifying PPP candidates to managing contracts through the project life cycle. *Section 2.3.1 - PPP Process* introduced the overall PPP development and implementation process, also shown in *Figure 3.1 - PPP Development and Implementation Process*. This module describes each stage of the PPP process in more detail, providing links to resources, tools, and further guidance for PPP practitioners.

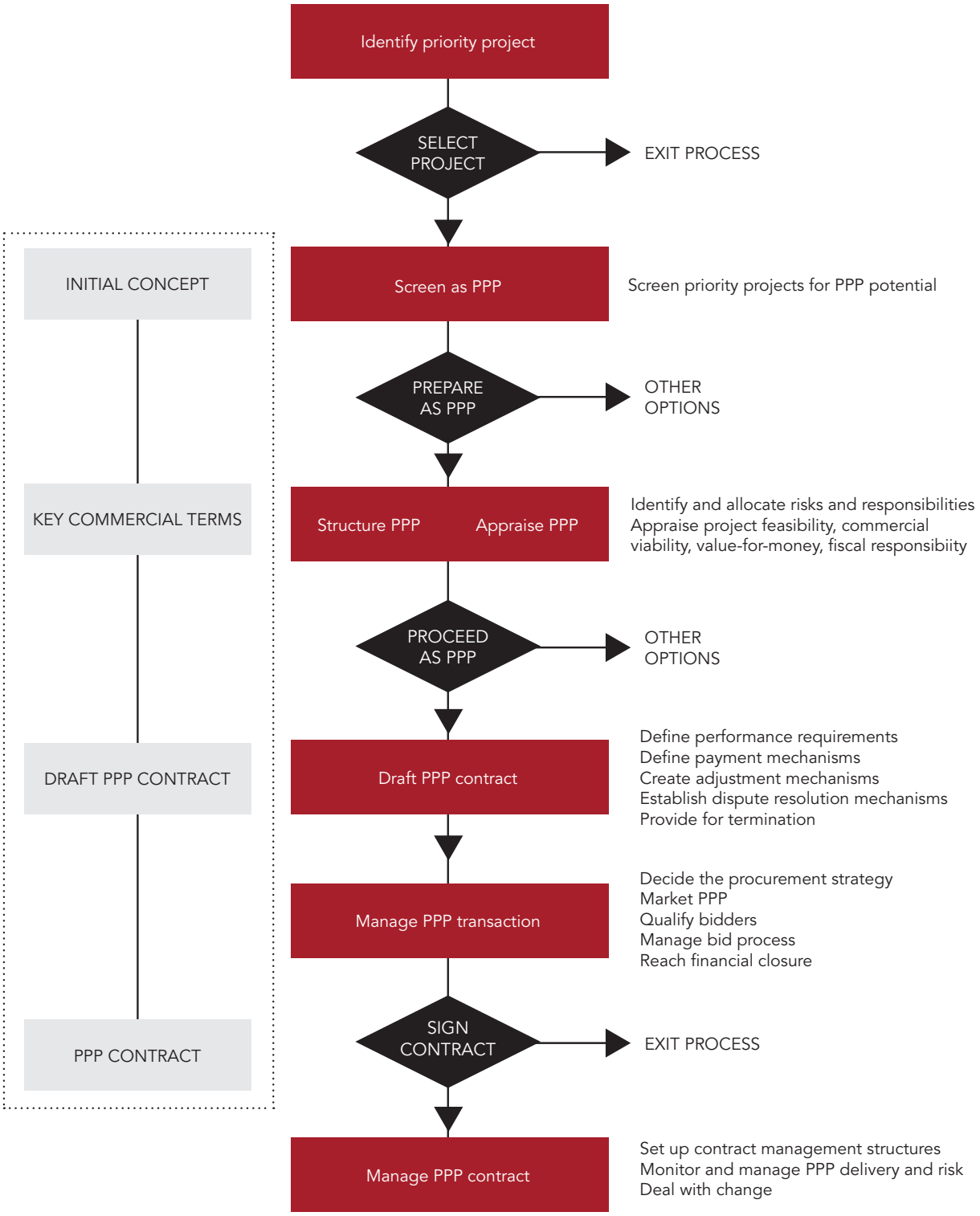
Governments should only develop PPP projects that are cost-benefit justified, provide better value for money than traditional public procurement, and are fiscally responsible. However, it is difficult to assess whether a project meets all these criteria until the project is fully designed, and the decision cannot be confirmed until bids are received. This creates a dilemma—government does not want to incur the considerable costs of developing a PPP unless it knows the project meets the criteria, but cannot tell if it meets the criteria until the project has been developed.

Successful PPP programs tackle this problem through an approach where projects are screened more rigorously at successive stage of development. A project must be a good candidate for development as a PPP before any public money is spent on it. Then, the process of preparation is broken into successively more intensive and expensive phases. Before each new phase, the project must be checked to provide assurance that it is likely to meet the criteria for successful PPPs as it develops.

This module describes the iterative process for developing a PPP, as follows:

- **Project identification and screening**—the process of developing and implementing a PPP is typically preceded by **identifying a priority public investment project**, typically through a public investment planning and project selection process. During this process, some or all proposed public investment projects are **screened for their potential as a PPP.**
- Candidate projects that survive this screening process are then **developed** and **appraised**. Again, this is a multi-stage process—hence appraisal and structuring are shown in parallel in *Figure 3.1 - PPP Development and Implementation Process*. Because appraisal and structuring are conceptually different, the *Reference Guide* discusses appraisal first (*Section 3.2 - Appraising Potential PPP Projects*) and then structuring (*Section 3.3 - Structuring PPP Projects*). Projects will typically be partially structured, then par-

Figure 3.1 PPP Development and Implementation Process



tially appraised, then more fully structured, and more fully appraised. Different countries break up these steps differently. The result, or the *business case* for the project, is typically the basis for approval to proceed with the PPP transaction.

- Before the PPP transaction can be implemented, the **draft PPP contract needs to be prepared**—further refining the PPP structure by setting out its details in appropriate legal language. *Section 3.4 - Designing PPP Contracts* sets out some key elements of PPP contract design.
- **Managing a PPP transaction** is a complex process. A well-designed and well-implemented transaction process is central to achieving value for money from the PPP. As described in *Section 3.5 - Managing PPP Transactions*, this includes marketing the PPP, checking the qualifications of bidders, inviting and evaluating proposals, interacting with bidders during the process, and identifying and finalizing the contract with the selected bidder. At the end of the transaction, after bids are received and the contract agreed, government will finally know the cost and risks in the PPP project. At this point it may be checked once more to ensure it still meets the PPP criteria.
- Having executed the contract, the PPP enters the final and longest stage—**managing the contract** throughout its lifetime, as described in *Section 3.6 - Managing PPP Contracts*.
- As an alternative approach to originating and developing PPP project ideas, some governments accept **unsolicited proposals** for PPP projects from private companies, as described in *Section 3.7 - Dealing with Unsolicited Proposals*.

This guidance module is not an exhaustive resource—developing a PPP is a complex process and every project has its own peculiarities.

Public officials should hire experienced advisors when implementing a PPP project. The **World Bank toolkit for hiring advisors for PPP in infrastructure** (PPIAF 2001) provides extensive guidance on engaging and managing advisors.

Overall guidance on implementing PPP Projects

As described in *Module 2 - Establishing the PPP Framework*, some governments and multilateral institutions, including the World Bank, have developed detailed guidance materials, manuals, and toolkits to help PPP practitioners develop and implement PPP projects. These include sector-specific materials. The Key References table on PPP on 'Other Guidance Material and Toolkits' list some of the best PPP guidance documents. Relevant sections are included as further resources for each PPP stage described in this *Reference Guide*.

3.1 Identifying PPP Projects

The first step towards a successful PPP is identifying a potential PPP project. Since a PPP is a public investment, most successful PPP projects originate from the broader public investment planning process as described in *Section 2.3.1 - PPP Process*. During this process, priority public investment projects can be screened for their potential to achieve better value for money if implemented as PPPs. Several governments have established tools and checklists to support this screening. The **online toolkit for PPPs in India** (IN) provides a good overview of the PPP project screening process.

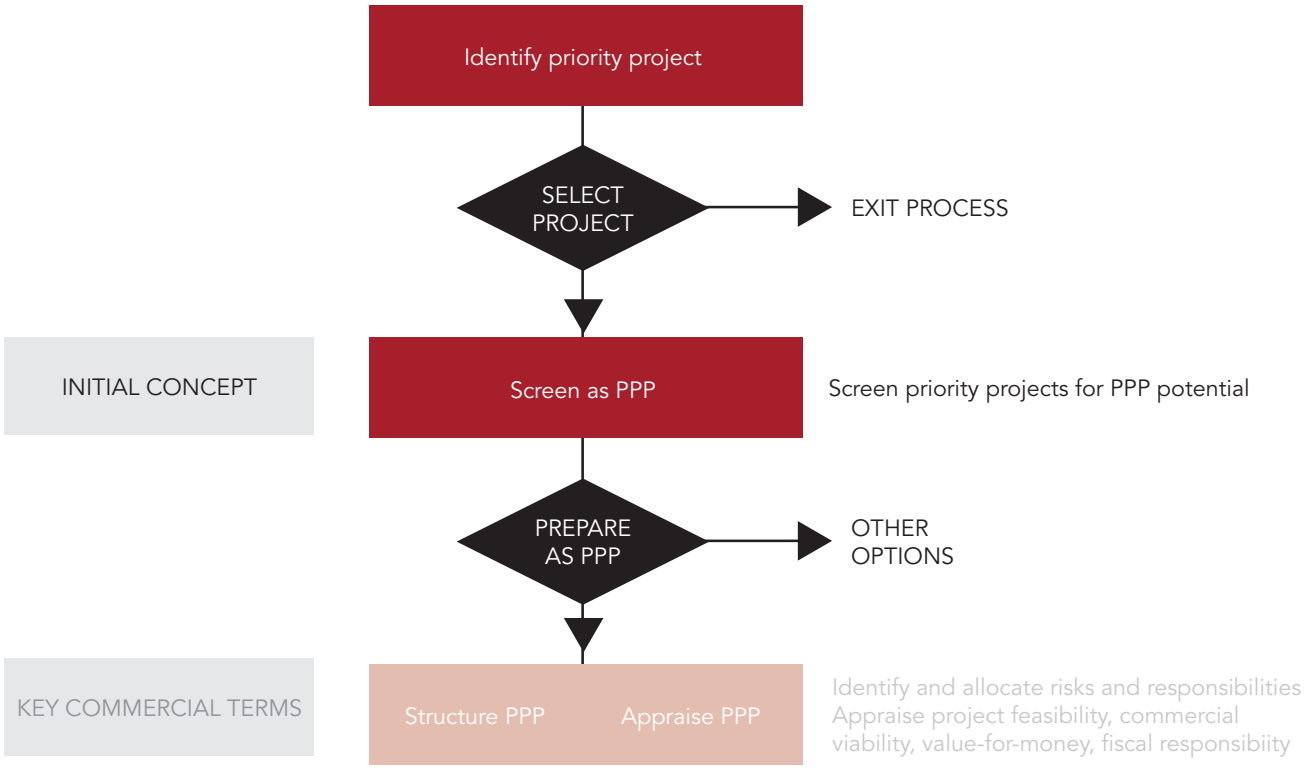
As shown in *Figure 3.2 - Identifying PPP Projects*, the output of the project identification stage is typically an initial concept and the *strategic* or *outline* business case for pursuing the project as a PPP. In many countries, the concept must be formally approved before developing the PPP further.

3.1.1 Identifying Priority Public Investment Projects

The starting point—or precursor—to identifying a potential PPP is identifying a priority public investment project. Many governments have well-defined processes and methodologies for public investment planning. These may extend from setting out sector or infrastructure strategies, assessing project options to meet objectives, conducting detailed feasibility and cost-benefit analyses, and prioritizing projects within an overall public investment plan or fiscal envelope.

Sound public investment planning and management are crucial components of the success of PPP projects. Like all public investment projects, a PPP needs to address clearly-identified socio-economic objectives that are central to sector needs—particularly since the long-term nature of PPP contracts effectively locks in asset and service specifications over a long-term period. Procurement skills are essential to deliver a well-structured PPP that meets public investment management standards. The **World Bank webpages on Public Investment Management** (PIM) (WB-PIM) provides a

Figure 3.2 Identifying PPP projects



wealth of resources and examples on this topic. **Rajaram et al's book on PIM** (Rajaram et al. 2014) presents a step-by-step approach and specifically addresses PPPs.

An **IMF report on infrastructure efficiency** (IMF 2015a) concluded that countries with stronger PIM institutions have more predictable, credible, efficient, and productive investments. This IMF research, by focusing on the quality of investment results (output)—instead of its volume (input)—suggests that better public investment decisions lead to higher economic growth, implying that strengthening PIM institutions could be as effective, in terms of output, as increasing investment by two-thirds of the estimated additional needs.

In some cases, PPP project ideas may also emerge from other sources than the standard public investment planning process. These could include:

- **Sector reform processes**. Governments undertaking reform of an under-performing infrastructure sector may consider PPPs among a range of options for introducing private participation to improve service delivery in that sector, as described in *Section 1.1.2 - What PPP is Not: Other Types of Private Involvement*. The **ADB's PPP Handbook** chapter on sector diagnostic analysis (ADB 2008, Chapter 3) describes how potential PPPs may emerge in this context.
- **Unsolicited proposals from businesses**. Most governments provide a legal framework to encourage businesses and other non-government entities to originate PPP project ideas that may be considered by government—as described in *Section 3.7 - Dealing with Unsolicited Proposals*. This approach can be a way to harness on the ideas of the private sector on how to solve infrastructure challenges.

However, wherever a PPP is developed outside the typical public investment planning process, this raises the risk that such ideas may not be well-integrated with broader sector and infrastructure plans and priorities. Such project ideas must be subject to the same analysis and screening as any proposed public investment and PPP.

3.1.2 Screening for PPP Potential

At some point in the process of identifying priority public investments, or sector reform options, projects may be **screened for their potential to be implemented as a PPP**. The objective of this screening is to identify—based on the available information—whether the project may provide better value if implemented as a PPP.

In practice, different governments do this PPP screening at different stages, as described in *Box 3.1 - PPP Selection in the Public Investment Planning Process*. Some may screen all projects, as part of a comprehensive procurement options analysis, as described in (Burger and Hawkesworth 2011, 47–50). Others may consider PPP only for certain project types—as may be established in the PPP Policy (see *Section 2.1.2 - PPP Program Scope*). In many countries, the initial impetus to develop a project as a PPP is left to the discretion of the implementing agency.

To support this screening process, many governments introduce criteria or checklists for PPP potential against which projects can be compared. *Box 3.2 - PPP Potential Screening Factors in South Africa* provides an example of such a checklist from the **South Africa PPP Manual** (ZA 2004a). Similar criteria may be also used for more detailed appraisal, as described in *Section 3.2.4 - Assessing Value for Money of the PPP*—at the screening stage, the idea is to check if the criteria are likely to be met for the project to proceed to the next level of development.

The following resources provide further suggestions and guidance on the factors to consider when screening potential PPP projects:

- **India's online PPP toolkit** (IN) includes a suitability filter that guides the user to consider the same issues described in *Box 3.2 - PPP Potential Screening Factors in South Africa*, as well as the support of the public sector for the project (including an assessment of the public sector capacities to implement the project as a PPP). It also considers potential barriers to project implementation (based on information from the pre-feasibility study) and other factors, such as the expected effort and resources needed to develop the PPP. For example, the availability of standard contracts should be assessed.
- In **Colombia**, the implementing agency must present an Executive Report to the PPP Unit, ANI, requesting authorization to implement the project as a PPP. The analysis in this report—such as pre-feasibility analysis—is described in the **PPP Manual** (CO 2014, 34–38).

Box 3.1 PPP Selection in the Public Investment Planning Process

The PPP process can be seen as a branch of the broader public investment management process—that is, at some point a project is selected as a potential PPP, and thereafter follows a PPP-specific process. However, this branching can occur at different points in the public investment process. For example, this could be:

- After budgeting as a public investment project, as is the case in Australia and the Netherlands, where procurement options (including PPPs) are assessed only after a project has been approved and budgeted for as a public investment project. If the project is subsequently implemented as a PPP, then budget allocations are adjusted accordingly.
- After project appraisal and approval as a public investment. In Chile, all public investment projects undergo a cost-benefit analysis by the National Planning Commission and must also meet a specified social return rate for public investments. PPP projects are also taken from this list.
- After pre-feasibility or strategic options analysis. In the Republic of Korea, a potential PPP is identified after a pre-feasibility analysis and a detailed project appraisal (such as technical feasibility studies or a cost-benefit analysis). These are part of the PPP appraisal process. A similar approach is followed in South Africa, where PPP implementation is part of an initial needs analysis and options assessment of a potential public investment project.

Well-defined PPP processes typically mirror public investment management processes—for example, requiring approvals by the same bodies, as described further in *Section 2.3.3 - Institutional Responsibilities: Review and Approval*.

Sources: Irwin & Moktad paper on managing Contingent Liabilities (for Chile and Australia) (Irwin and Mokdad 2010); PPP projects from the Republic of Korea (Kim et al. 2011, 63); South Africa PPP manual (ZA 2004a, Module 4, 1–13)

Box 3.2 PPP Potential Screening Factors in South Africa

The South Africa PPP Manual lists the following, as factors to consider when deciding whether a project could achieve value for money as a PPP:

- Scale of the project—are transaction costs likely to be justified? *Section 2.1 - PPP Policy* describes how some governments set a minimum size for their PPP projects.
- Outputs capable of clear specification—is there reason to believe we can write a contract that will hold provider accountable?
- Opportunities for risk transfer (and other PPP value drivers)—is there good reason to believe that a PPP will provide value for money compared to the alternative of traditional public procurement? That is: appropriate risk allocation should assign risks to the party best able to control or bear them—and capitalize on the PPP value drivers set out in *Box 1.2 - PPP Value Drivers*.
- Market capability and appetite—is there a potentially viable commercial project and a level of market interest in the project? Assessing market appetite may require initial market sounding with potential investors.

Source: South Africa PPP Manual (ZA 2004a, Module 4, 13)

- The **Government of Hong Kong's Guide to PPPs** (HK 2007, 31–32) describes a list of criteria that a PPP should meet at the initial screening stage (or *stage one business case*) to be considered as a PPP candidate.
- The **Caribbean PPP Toolkit** (Caribbean 2017, Module 3) provides guidance using Caribbean examples with global relevancy.

The **UNESCAP Qualitative Value-for-Money Toolkit** (UNESCAP 2017) contains a set of criteria that governments may use for prioritization and helps identify project weaknesses. Ministries, departments, or sector agencies often need support to overcome initial unfamiliarity or reluctance to adopt PPPs. A central PPP unit can play this role, as described in *Section 2.3.4 - Dedicated PPP Units*. Developing and implementing a PPP transaction is typically more expensive than the equivalent process for a traditional public investment project, which may deter agencies from identifying PPPs. Additional funding for PPP development can help level this playing ground. For example, the India Infrastructure Project Development Fund (IN 2013a) was established as a revolving fund, and can fund up to 75 percent of PPP project development expenses.

The outcome of this screening process is a pipeline of PPP projects set in the context of a national infrastructure program and sector strategic plans. Making this PPP pipeline public can be a good way to build private sector interest in investing in PPPs. The Chilean PPP unit, Coordinación de Concesiones de Obra Pública, shares all relevant information on their project pipeline on their website.

Farquharson et al describes the advantages of defining the investment framework for a PPP program—including the PPP pipeline and other planned infrastructure investments that complement it (Farquharson et al. 2011, 21–22).

3.1.3 Building an Initial PPP Pipeline

In countries with relatively new PPP programs, project selection often means sifting through the project concepts generated by sector agencies and screening them for PPP potential using the approach described in *Section 3.1.2 - Screening for PPP Potential*. In this context, governments may consider additional criteria in deciding which potential PPP projects to develop first. Often, at this stage, the priority is to build experience and momentum in the PPP program by achieving project successes in a relatively short timeframe.

Several factors may feed into this process. For example, the **Philippines PPP Center** notes that projects in its PPP program pipeline (on its PPP List) were selected based on the following criteria:

- **Project readiness and stage of preparation**—some projects were more developed than others before being proposed as PPPs, reducing the remaining project development costs.
- **Responsiveness to the sector's needs**—the order of implementation of PPP projects needs to be aligned with overall sector priorities within the strategic plan—in other words, PPPs should be central to the development of the sector, not peripher-

al projects whose benefits may turn out to be marginal, or which may distract from strategic priorities.

- **High implementability**—prioritizing PPP projects with a high likelihood of success, that are considered most likely to attract private sector interest, and for which there is a precedent in the local or regional market.

PPIAF (PPIAF 2017), in its Rapid Support Framework, includes consultancy services for pipeline diagnostic and project prioritization. The **Caribbean PPP Toolkit** (Caribbean 2017, Module 3, Section 4) presents guidance on pipeline identification and its common challenges.

In an **interview with the Reason Foundation** (Gilroy 2011), the Director of the Puerto Rico PPP Authority also describes how the Authority initially prioritized PPP projects that were most ready to go to market, as well as ensuring that these corresponded with overall policy priorities (such as brownfield school PPPs).

Key References: Identifying Candidate Projects

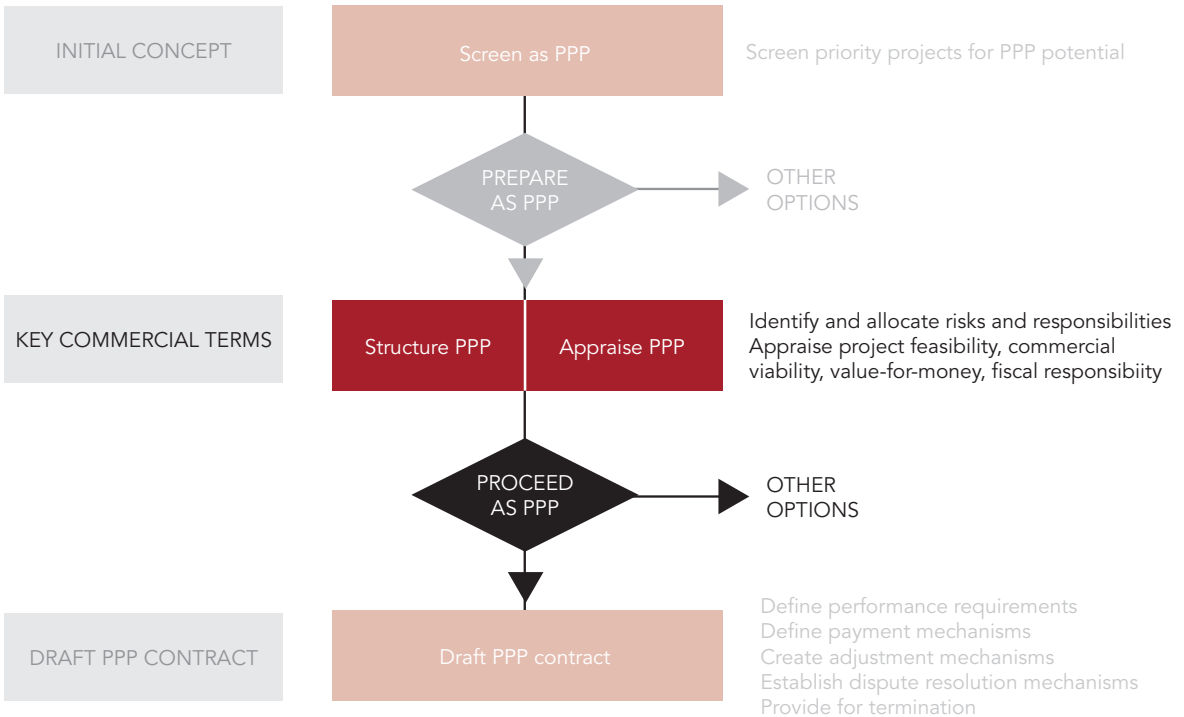
Reference	Description
IN. Accessed March 15, 2017. "PPP Toolkit for Improving PPP Decision-Making Processes." Public-Private Partnerships in India. New Delhi: Government of India, Ministry of Finance.	Module 2: "Work through the PPP Process, Phase 1: Identification" provides extensive guidance on identifying PPP projects.
CO. 2014. *Manual de Procesos y Procedimientos para la Ejecución de Proyectos de Asociación Público-Privada*. Bogotá: Gobierno de Colombia, Ministerio de Hacienda y Crédito Público.	The Process and Procedures Manual for PPP Projects describes (on pages 34–38) the information that an implementing agency must include in its initial report to the PPP Unit requesting that a project be implemented as a PPP.
ZA. 2004a. *Public Private Partnership Manual*. Pretoria: South African Government, National Treasury.	Module 4: "PPP Feasibility Study" describes needs analysis and options analysis as the first two stages of carrying out a feasibility study to "decide whether traditional public procurement of a PPP is the best choice for the proposed project."
IN. 2013a. *Scheme and Guidelines for Financial Support to Public Private Partnerships in Infrastructure*. New Delhi: Government of India, Ministry of Finance.	Describes the rationale for establishing the IIPDF to overcome barriers to PPP project identification, and the structure and operational arrangements for the fund.
PE. 2010. *Pautas para la Identificación, formulación y evaluación social de proyectos de inversión pública a nivel de perfil*. Lima: Ministerio de Economia y Finanzas.	Module 2: "Identification" within the Guidelines for the Identification, Formulation, and Social Evaluation of Public Investment Projects outlines the gap analysis approach to identifying investment needs and projects.
ADB. 2008. *Public-Private Partnership Handbook*. Manila: Asian Development Bank.	Chapter 3: "Structuring a PPP: Sector Diagnostic and Sector Road Map" sets out how identifying possible PPPs can be part of an overall strategic review of a sector.
HK. 2008. *An Introductory Guide to Public Private Partnerships*. Hong Kong, China: Efficiency Unit.	The first section of Chapter 4: "Making the Business Case" sets out the criteria for a project should meet to have a prima facie case to be implemented as PPP.
Farquharson, Edward, Clemencia Torres de Mästle, E. R. Yescombe, and Javier Encinas. 2011. *How to Engage with the Private Sector in Public-Private Partnerships in Emerging Markets*. Washington, DC: World Bank.	The section on developing a PPP Investment Framework on pages 21–23 describes the importance of building a PPP project pipeline, together with clear public sector investment plans.
Caribbean. 2017. *Caribbean PPP Toolkit*. Washington, DC: World Bank, Inter-American Development Bank and Caribbean Development Bank.	Discusses methodology for PPP project pipeline identification as well as typical issues that arise during this process.

3.2 Appraising Potential PPP Projects

Potential PPP projects must undergo an appraisal process to ensure that developing and implementing them makes sense. For any proposed PPP project, there are five key criteria that governments should consider when deciding whether or not to pursue a project as a PPP:

- **Feasibility and economic viability of the project** (*Section 3.2.1 - Assessing Project Feasibility and Economic Viability*)—whether the underlying project makes sense, irrespective of the procurement model. First, this means confirming that the project fits in with national development and sector strategies, policy priorities, and sector and infrastructure plans. It then involves feasibility studies to ensure that the project is technically feasible, and the technology is easily available in the market and unlikely to become obsolete in the medium term; and economic appraisal to check that the project is cost-benefit justified, and represents the least-cost approach to delivering the expected benefits. Attention should be paid to **environmental and social issues (E&S)**, addressed in *Section 3.2.2 - Environmental and Social Studies and Standards*.
- **Commercial viability** (*Section 3.2.3 - Assessing Commercial Viability*)—whether the project is likely to attract good-quality sponsors and lenders by providing robust and reasonable financial returns. This is subsequently confirmed through the tender process.
- **Value for money of the PPP** (*Section 3.2.4 - Assessing Value for Money of the PPP*)—whether developing the proposed project as a PPP can be expected to best achieve value for money compared to other options. This includes comparing against public procurement (where that would be an option) and other possible PPP structures. Some countries, like Australia and India, mandate the development of a *public sector comparator* during the appraisal process. This is an estimate of the hypothetical, whole-of-life cost of the project if financed by government under traditional procurement. This ensures that the proposed structure provides the best value for money.
- **Fiscal responsibility** (*Section 3.2.5 - Assessing Fiscal Implications*)—whether the project's overall revenue requirements are

Figure 3.3 Appraising PPP Projects



Box 3.3 The Five Case Model

The United Kingdom has developed a methodology for project assessment called the *Five Case Model*. The methodology can be applied to every type of project, whether PPP or not. It provides a comprehensive framework for assessing projects. It consists of looking at a project through five different *lenses*, or cases, as follows:

- The Strategic Case—covers the rationale for the project, outlining its scope and objectives, and places it within an overall strategic and policy context; in short it should make the case for change.
- The Economic Case—this demonstrates that a wide range of options has been considered taking into account relevant political, economic, social, technical, legal and environmental factors. A cost-benefit analysis should be conducted on a short list of options to determine which one offers best value. For a PPP, it should demonstrate that using private finance offers best value for money for the public sector. In the United Kingdom, a qualitative evaluation and a numerical quantitative evaluation are used to test this.
- The Commercial Case—demonstrates that the project is commercially viable and bankable; that the supplier market has been tested; and that the contract is well developed with an appropriate risk allocation.
- The Financial Case—demonstrates that the project is affordable and explains what amount is to be funded by the contracting authority, what amount will be funded by the central government funding, and what user of the facility will pay.
- The Management Case—this should demonstrate that all arrangements are in place to ensure the successful delivery of the project, namely, that the project is properly staffed and resourced, with appropriate governance arrangements, advisers and timetable, so that it can be procured on time and on budget.

Guidance on this can be found in the United Kingdom Green Book (UK 2011a) and Five Case Model methodology (Flanagan and Nicholls 2007).

within the capacity of users and the public authority to pay for the infrastructure service. This involves checking the fiscal cost of the project—both in terms of regular payments and fiscal risk—and establishing whether this can be accommodated within prudent budget and other fiscal constraints.

- **Project management** (*Section 3.2.6 - Assessing the Ability to Manage the Project*)—whether the contracting agency has the authority, capacity, and fiscal resources to prepare and tender the project, and to manage the contract during its term.

These criteria (with some variations) are described in more detail in Chapter 5: "Public-Sector Investment Decision" in **Yescombe's book on PPPs** (Yescombe 2007); Chapter 4: "Selecting PPP Projects" in **Farquharson et al's book on PPPs** (Farquharson et al. 2011), Module 3 of the *Caribbean PPP Toolkit* (Caribbean 2017), and Chapter 1: "Project Identification" in the **EPEC Guide to Guidance** (EPEC 2011b).

Figure 3.3 - Appraising PPP Projects shows how project appraisal fits in to the overall PPP process. Initial assessment against each criterion is typically done at the project identification and initial screening stage, as described in *Section 3.1 - Identifying PPP Projects*. Detailed appraisal is usually first conducted as part of a detailed business case alongside developing the PPP project structure, as described in *Section 3.3 - Structuring PPP Projects*. For example, assessing the value for money of the PPP depends on risk allocation, an important part of PPP structuring.

PPP appraisal is typically re-visited at later stages. The final cost, affordability and value for money is not known until after procurement is complete, when the government must make the final decision to sign the contract. Many governments require further appraisal and approval at this stage.

3.2.1 Assessing Project Feasibility and Economic Viability

Implementing a project as a PPP only makes sense if the project itself is sound. Most governments therefore subject proposed PPP projects to the same technical and economic appraisal as any other major public investment project. There are typically two broad elements to this assessment:

- Developing and assessing the feasibility of the project concept
- Appraising whether the project is a good public investment decision based on an economic viability analysis

This assessment may take place prior to consideration of a project as a PPP as described in *Section 3.1 - Identifying PPP Projects*. In other cases, it may be undertaken as part of the PPP appraisal process. The project feasibility and economic viability analysis of a PPP should be as thorough as that of any other major public investment project.

This section describes such analyses as applied to potential PPP projects, highlighting key issues that would typically be addressed and providing a selection of sources that may supplement governments' existing guidance materials.

Defining a project and checking feasibility

A project must be clearly defined before it can be appraised. Project definition includes the description of the physical facilities that will be constructed, the technology to be used, the outputs to be provided, and the identification of the end-users. Capital, operating, and maintenance costs should be estimated over the life of the project, as well as any revenue expected to be generated. This definition should be sufficiently broad to apply to a project delivered as either a PPP or a traditional publicly financed project. The PPP contract should focus on output and refrain from specifying the technologies, inputs, and processes to be used. This should be the responsibility of the private operator. However, some technological definition is still needed for initial cost assessment.

The project can then be tested for feasibility across several dimensions:

- **Technical feasibility**—can the project be implemented as planned, using proven technologies, and without unreasonable technical risks?
- **Legal feasibility**—are there any legal barriers to the project? For a PPP, this includes due diligence to identify any legal constraint preventing the government to enter into a PPP contract.
- **Environmental and social sustainability**—at a minimum, does the project comply with national environmental and planning standards? In some cases, a higher bar may be set, such as compliance with the **Equator Principles**—a set of standards on managing environmental and social risk from project finance transactions, based on World Bank Group standards, set out in detail at (Engel et al. 2009). This is discussed in greater detail in *Section 3.2.2 - Environmental and Social Studies and Standards*.

Answering these questions involves engaging experts to undertake several detailed studies—for example, technical feasibility studies, legal due diligence, environmental, and social impact assessments. For further guidance, see for example the detailed manuals published by the governments of **Chile** (CL 2010b), **Germany** (DE 1998), **Peru** (PE Pasivos), **Philippines** (PH 2010), and the **United Kingdom** (UK 2011a) for carrying out feasibility studies for public sector investment projects. The **Caribbean PPP Toolkit** (Caribbean 2017, Modules 3 & 4) also provides guidance on carrying out feasibility studies, including checklists on legal and technical topics.

Creating and appraising options

Developing value for money in a project requires identifying delivery options and appraising them. Noting that establishing a range of options can be challenging, the **United Kingdom Green Book** (UK 2011a) suggests the following actions:

- Research existing reports, and consult widely with practitioners and experts, to gather the set of data and information relevant to the objectives and scope of the project.
- Analyze the data to understand significant dependencies, priorities, incentives and other drivers.
- From the research, identify best practice solutions, including international examples if appropriate.
- Consider the full range of issues likely to affect the objective.
- Identify the full range of policy instruments or projects that may be used to meet the objectives. This may span different sorts or scales of intervention; regulatory (or deregulatory) solutions may be compared with self-regulation; different financing and funding solutions may be considered as well as various tax options.
- Develop and consider radical options. These options may not become part of the formal appraisal but can be helpful to test the parameters of feasible solutions. Well-run brainstorming sessions can help to generate such a range of ideas.

The same **Green Book** (UK 2011a) provides examples of strategic and operational options. They include, among others:

- Varying time and scale
- Options to rent, build, or purchase

- Refurbishing existing facilities or leasing and buying new ones
- Changing locations or sites
- Co-locating, or sharing facilities with other agencies
- Changing the combination of capital and recurrent expenditure
- Varying the balance between outsourcing and providing services
- Varying quality targets

Appraising project economic viability

Many governments undertake some form of economic viability analysis (also known as socio-economic viability) to decide whether a proposed project is a good use of public resources. A project is economically viable if the economic benefits of the project exceed its economic costs, when analyzed for society as a whole.

The economic costs of the project are not the same as its financial costs—externalities and environmental impacts should be considered. Externalities (positive or negative) are economic impacts that affect persons who are not necessarily part of the project scope. The economic benefits are a measure of the value the project will deliver to society as a whole. The revenue a project will generate is usually a lower-bound estimate of its economic benefits; however, benefits can be much higher than revenues. For example, the benefits from improved transportation, for drivers, can far exceed the tolls paid on a highway—faster connections, reduced vehicle maintenance, lower accident rates, may be significant factors. In addition, the project may enhance regional economic activity and quality of life for the people living in the vicinity of the project. Similarly, the value of education at a high school should be measured by the enhancement in the lives and prospects of the children who attend that school, even if no school fees are charged. Economic viability analysis can also include a cost-effectiveness analysis to determine whether the project is the lowest-cost alternative to achieve the identified benefits.

There is a wide range of literature and guidance material available on project appraisal and economic cost-benefit analysis. The *Key References* for this section provide a selection, with examples of government guidance material, as well as resources from international institutions, and textbooks. The **United Kingdom Green Book** on appraisal (UK 2011a) states as the main purpose of appraisal guaranteeing that no project, program, or policy is adopted without answering two major questions: Are there better ways to achieve this objective? Are there better uses for these resources?

Application to PPP

Many countries require PPP projects to meet feasibility and economic viability criteria. For example:

- In the **Philippines**, all major infrastructure projects are required to undergo a feasibility and viability assessment process, as described in details in a reference manual (NEDA 2005a). The same process is required for PPP projects.
- In **Chile**, the 2010 Concessions Law states that the social impact evaluation of a potential PPP project must be approved by the Ministry of Planning. The Concessions Council must also review this document before allowing a project to be implemented as a PPP.
- In **Indonesia**, guidelines issued by the state-owned Indonesia Infrastructure Guarantee Fund specify the criteria to assess the opportunity cost of issuing guarantees to PPP investors. The criteria include technical feasibility, economic viability, and environmental and social desirability.

Optimism bias is a systemic issue relevant to all infrastructure projects including PPPs (see *Section 1.2.2 - Poor Planning and Project Selection*). It needs to be addressed at the time of appraisal as it is often the cause of project renegotiation. In addition, overly optimistic demand studies may induce governments to approve projects that ultimately generate more cost than benefit. The **United Kingdom Treasury has published guidance material** (UK 2013) on overcoming optimism bias.

Implementing agencies should bear in mind that the work undertaken in assessing project viability also lays the foundation for the rest of the PPP appraisal. The project definition provides the basis for developing the PPP financial model and commercial and fiscal viability analysis, as well as any quantitative value for money analysis. Assessment of technical feasibility, and environmental and social sustainability will provide a basis for the risk analysis. Cost and demand estimates developed for the economic viability assessment will also provide initial inputs to the financial modeling, and PPP value for money analysis.

Stakeholder engagement should be initiated as early as possible in the project cycle. The **IFC stakeholder handbook** (IFC 2007, 4) states that many private operators begin their consultation process around the pre-feasibility stage of the project. IFC's handbook also recommends beginning the consultation at the time of the project concept stage.

Early engagement has both its positive and negative aspects. It allows government to introduce the project in a positive light, lay out its development rationale publicly, and strike a balance between promoting the project and managing expectations. All projects have potential benefits but also uncertainties. Early engagement also signals to stakeholders that their needs and views are being taken into consideration (IFC 2007, 4–5). Establishing a positive relationship early generates social capital and creates a foundation of credibility with stakeholders if an issue were to arise.

The negative aspects of early engagement are connected to the danger of spreading of misinformation. As soon as disclosure on the project begins, the window for misinformation and rumors opens. As described in the **IFC stakeholder engagement handbook** (IFC 2007, 111–113), the ability to counteract these rumors is limited in the early stages of the project cycle, since many details will only become clear toward the end of the appraisal phase. It may therefore be difficult to reassure stakeholders or respond to questions in the absence of concrete details. This lack of information may cause stakeholders to speculate and prematurely condemn a project based on unconfirmed facts or false assumptions. Therefore, stakeholders for the initial consultation should be chosen strategically. Limited consultation with targeted stakeholders can be conducted during the project concept stage to receive important stakeholder input; but care is needed to avoid the spreading of unnecessary and potentially harmful misinformation that will raise alarms before a project is even given the go-ahead. After this initial consultation, stakeholders may then be more broadly identified and consulted when more project specifics are known. *Box 2.11 - The Delhi Water Project* provides an example of the consequences of misinformation remaining unchecked.

Having a solid project narrative in place may help countering such misinformation. Several useful steps in formulating a narrative are:

- Identify the current problem faced by the populations
- Explain the problem's impact on the lives of those affected
- Explain how the government is addressing the problem
- Explain why the government is choosing to address the problem with a PPP

The **European Commission guidelines on stakeholder consultation** (EC 2015) suggest a maximum of 12 weeks for this consultation process to occur. This period will vary based off the scale and scope of the project with only major projects necessitating the full 12-week consultation period.

Stakeholder engagement to assess project viability

Stakeholder engagement is a valuable tool for assessing the viability of a project and identifying risks. *Section 2.5.1 - Stakeholder Communication and Engagement* describes the process in detail.

Evaluating climate change-related and natural disaster risks

As policy makers and project developers gradually enhance their understanding of the risks posed by climate change, practitioners should be able to design the contractual obligations of private investors and adequate contract management mechanisms. The life cycle approach opens avenues for creating incentives for all stakeholders engaged in the PPP process and minimizing risks to investments. A **European Commission study: Guidelines for Project Managers** (CLIMATE-ADAPT 2012, 17–53) presents guidelines for integrating climate resilience into the asset lifecycle.

Downscaled models use macro information to predict climate outcomes at the local level. Although the data on climate and disaster risks for downscaled models is becoming more robust, the range of uncertainty regarding these risks and resulting impacts remains a challenge. Good practice consists of incorporating the concept of resilience in the risk allocation matrix and whole-asset-life-cost optimization approaches, instead of focusing only on the project implementation phase.

Procurement specialists need to develop incentive structures in PPP procurement to foster innovation in climate mitigation and adaptation while still operating within a competitive environment. For example, **evaluation criteria** for resilience could be introduced in tender documents, using the asset life costing approach—bidders could be invited to demonstrate how their proposals address resilience to risk, highlighting the costs as well as the benefits, and how they will manage the project when facing changes in the risk itself.

Two key resources enable non-specialists to consider the impacts of disasters on new development projects. These are:

- The **Climate Change Knowledge Portal** (WB-Climate)
- **Think Hazard** (GFDRR), a web-based tool, developed by the World Bank and other partners

Other innovative technical assistance available to procuring authorities are:

- The **Society for Decision Making under Deep Uncertainty (DMDU)** (Deep Uncertainty), an interactive platform that supports learning and dialogue about key aspects of long-term investment under uncertainty.
- **Making Informed Investment Decisions in an Uncertain World: A Short Demonstration** (Bonzanigo and Kalra 2014) seeks to motivate and equip analysts to better manage uncertainty in investment decisions.
- A **World Bank study: Robust decision-making in the water sector** (Kalra et al. 2015) helped SEDAPAL, the water utility serving Lima, Peru, make smart investments to ensure long-term water reliability by drawing on state-of-the-art methods for decision-making under deep uncertainty.
- A **World Bank publication** (WB 2016d) outlines the decision tree used in South Asia to procure climate resilient hydropower.

3.2.2 Environmental and Social Studies and Standards

Potential damage to the environment and the impact on populations are key issues when planning infrastructure projects. Besides the cost-benefit analysis that determines whether the expected benefits of a project outweigh potential detrimental environmental and social (E&S) impacts, there is increasing recognition that the success of a project depends on managing E&S risks and impacts effectively in addition to managing its technical and financial aspects.

Investment decisions increasingly include an assessment of the management of E&S risks and impacts—not only when MDBs and international financial institutions are involved but also when commercial banks and private equity funds are the source of financing. Furthermore, in many developing countries international players require compliance with both national laws and international E&S standards developed by MDBs, which are sometimes more stringent than those imbedded in national legislation.

A key element in E&S risk management is the *mitigation hierarchy*, whereby priority is given to avoidance and minimization of impacts. Where residual risks or impacts remain, a compensation or offset is provided to support relocated persons and affected communities, or to mitigate risks to the environment. E&S studies are necessary to determine how to mitigate these risks and impacts and how to compensate those affected by them. For example, if people living on or near a proposed construction site of a PPP project will be displaced, E&S studies should consider ways to minimize displacement and propose specific measures to compensate relocated persons fairly.

There are cases where the need for compensation is not as obvious as in the case of displaced people. For example, building a new bridge may benefit passengers, but could also prevent a ferry operator from collecting monopoly fees. Loss of a monopoly position does not necessarily require compensation. If the livelihood of ferry employees is greatly affected, solutions such as skills training and job search support could be provided to reduce social impacts, or ensure that they do not fall disproportionately on the most vulnerable.

The E&S studies should address the whole life cycle of the project, including design, construction, operation, and decommissioning. The assessment should consider sectoral and national policies, legislation and regulations, governance frameworks, and environmental capacity. These studies should be conducted early in the project preparation phase so that the findings can be considered in the decision-making process. In the PPP context, this translates into assessing E&S risks and developing mitigations during PPP preparation and procurement.

Introducing E&S risk management steps when structuring a PPP project can improve the quality of the project, help it achieve political, social and environmental sustainability, prevent conflicts, and avoid delays. Impacts to PPP timeline and related cost implication could be avoided when stakeholders impacted by the project (or perceived to be impacted) are adequately engaged and risks and impacts are recognized at a stage that allows integration of mitigation strategies in the project design. Examples of this include:

- **Manila Light Rail, Philippines, 2014**. The design, construction and operation of a 12-kilometer extension of railway transit and ancillary facilities in the densest part of Manila, and the operation of the existing line, implied the displacement of over 1,000 households with no land title and a significant number of small firms. IFC commissioned an analysis to identify gaps between relevant national legislation and IFC E&S Performance Standard 5 (PS5), estimate the costs of closing these gaps, and make recommendations on allocating associated risks (WB 2015b).
- **New port in Tibar Bay, Timor Leste, 2016.** A greenfield container port in a region with significant biodiversity, including

mangrove and coral habitats of protected species). The early E&S studies led to a change in site location within the selected harbor. A biodiversity offset program is being formulated by the concessionaire and the public authority to compensate for the impacts on mangroves and corals. The operator will apply IFC E&S Performance Standards (PS) to its construction and operation activities with third party monitoring (TL 2016).

Environmental and social assessments

Countries have found advantages in creating their own framework for E&S assessment in several stages of the PPP project cycle. These frameworks include provisions for:

- Assessing E&S impacts when selecting PPP projects to mitigate negative project impacts and optimize social welfare
- Engaging with stakeholders during project preparation to communicate government concerns and solutions regarding environmental and social impact, and to receive useful feedback and suggestions—*Section 2.5.1 - Stakeholder Communication and Engagement* discusses stakeholder engagement
- Defining the specific E&S standards to be included in the PPP contract
- Monitoring E&S issues during the contract term (design, construction, and operation)

Several countries have found it effective to define **E&S mitigation requirements** prior to tendering projects. This approach allows bidders to factor the cost of these measures into their bid. Good practice consists of including the E&S constraints in the Call for Tender documents, thereby allowing bidders and concessionaires to design and implement projects at their own risk, subject to the satisfaction of those constraints.

This approach is followed by IFC when providing advice to governments on structuring PPP projects. During the appraisal stage an **E&S due diligence** is undertaken to:

- Assess major E&S risks and impacts of the project
- Identify gaps between the relevant national legislation and international E&S standards
- Provide a preliminary indication of possible mitigation measures and associated high level costs
- Evaluate for each measure which party will be best placed for its implementation
- Map key stakeholder groups and design an engagement plan
- Develop Terms of Reference (ToRs) for further, detailed E&S studies, such as Environmental and Social Impact Assessment or a Resettlement Action Plan to be undertaken by the responsible party (usually included in bidding documents to ensure the responsible party adequately covers the identified risks and impacts)

E&S due diligence enables government officials, bidders, and other stakeholders to understand key E&S issues affecting PPP projects. It also supports development of projects in line with national legislation and international E&S standards.

The outcomes of the E&S due diligence also feed into specific steps of the PPP project appraisal stage such as the assessment of technical feasibility and the assessment of commercial viability which needs to include the cost estimate of identified mitigation measures. They also inform risk allocation during PPP structuring (see *Section 3.3 - Structuring PPP Projects*) and the E&S specific provisions of the draft contract.

E&S studies should distinguish between mitigation measures to be implemented by the PPP operator and by the contracting authority before contract award. For example, stakeholder engagement (see *Section 2.5.1 - Stakeholder Communication and Engagement*) should often be started by the contracting authority in the PPP preparation stage, and then taken over by the private partner.

A good example of this approach is found in the guidance notes on screening (EC 2001c), scoping (EC 2001b) and review (EC 2001a) of the **European Environmental Impact Assessment** (EIA) scheme. This requires governments to submit the EIA to the environmental authority before the project is implemented. Based on the assessment, the authority will issue an environmental license identifying the constraints affecting the project. In a second phase, a more detailed project design that explains how the constraints will be mitigated is submitted for approval. This process allows for the government to establish limits prior to tendering, and for the potential concessionaire to present the detailed project.

Effective use of environmental and social standards

It is good practice to include E&S standards in the draft PPP project agreement. Certain standards may be required by national legislation, or by international finance institutions and major commercial banks (for example, signatories of the Equator Principles) as a financing condition. The contracting authority will need to detail how the service provider will be monitored to ensure compliance with these standards. The consequences for failure to meet these standards also need to be established. The E&S-related provisions of the draft project agreement should reflect the allocation of responsibilities for the design and implementation of E&S mitigation. Depending on the level of E&S risks of the project, and complexity associated with the design and implementation of the mitigation measures, the (pre) qualification criteria might benefit from the introduction of E&S-related criteria.

For large projects, the contracting authority may also supplement the national environment-protection framework with contractual provisions in the PPP contract discouraging the service provider from damaging the environment.

IFC has developed a risk management methodology (IFC 2012) consisting of eight Performance Standards (PS). Compliance with these standards is required for projects financed by IFC. Since 2012, all PPP projects where the IFC had an advisory mandate are screened against the Performance Standards and, where gaps are identified, recommendations are made to align them with the standards. IFC's Performance Standards are a global benchmark to determine, assess, and manage E&S risks in project financing. Eighty-four private financial institutions in 35 countries have adopted the ten **Equator Principles** (EP 2017), which are based on IFC's Performance Standards. The Equator Principles have been accepted as a move towards establishing an industry norm for managing environmental issues.

In summary, a proper assessment and mitigation of E&S risks will likely have a significant impact on the perceived value of a project, increasing its probability of success. The value for several categories of stakeholders is highlighted below:

- **Directly impacted communities** will perceive the project more positively following the analysis of the E&S risks of a project and the presentation of proposed mitigation measures.
- **Donors and commercial banks** who are members of the **Equator Principles Association** (EP 2017) will discard projects that do not comply with international E&S standards. Project sustainability will be strengthened from this methodology, thereby improving the bankability of a project.
- **Bidders** concerned about the reputational risk posed by E&S issues, particularly international bidders, can be reassured by preliminary E&S assessment and will have less uncertainties to factor in their offer.
- **Governments** can protect the public interest by requiring bidders to adopt best practices for managing E&S issues. This approach allows for a leveling up of competition for both local and international bidders and guarantees that E&S standards rise for all stakeholders.

3.2.3 Assessing Commercial Viability

Once a project is established as viable, the next step is to determine whether it would be attractive to the market if structured as a PPP. Generally speaking, private parties will find a project commercially attractive if it offers good financial returns and requires the private party to bear reasonable levels of risk.

Assessing returns typically involves **financial analysis**—that is, building a project financial model and checking project cash flows, returns, and financial robustness. The **ADB's PPP Handbook** (ADB 2008, 17–18) gives a brief overview of typical financial analysis of a PPP. **Yescombe's chapter on financial structuring** (Yescombe 2007) provides a more comprehensive description.

Where revenue from user charges exceeds costs and yield sufficient returns to remunerate capital, the project will generally be commercially attractive provided risks are reasonable. Where user charges are not at this level, government can use the financial model to assess what government contributions will be needed. Such contributions need to be integrated in financial analysis to assess what government contributions that will be needed—which in turn needs to be assessed as part of the fiscal analysis discussed in *Section 2.4.1 - Assessing Fiscal Implications of a PPP Project*.

Governments often assess the **appetite of potential partners** for a proposed PPP before taking it to market. This can be determined by investigating whether similar projects have previous-

ly been implemented with private partners, in the country or the region. It can also include testing market interest through **market sounding**—that is, presenting the main parameters of the project to selected potential investors for questions and comments—typically the project concept and initial structure developed during the structuring phase described in *Section 3.3 - Structuring PPP Projects*. The following resources provide more guidance on market sounding:

- **Farquharson et al's chapter on managing the interface with the private sector** (Farquharson et al. 2011, Chapter 8), which includes top 10 tips for a successful market-sounding exercise
- **4ps paper on soft market testing** (4ps 2007), which includes tips, practical guidance, and a case study of a market sounding exercise for a PPP in the United Kingdom
- **Grimsey and Lewis' chapter on procurements options analysis** (Grimsey and Lewis 2009, 409–411), which describes a market sounding exercise for a hypothetical hospital PPP project
- **Singapore's PPP Handbook** (SG 2012, 56–57), which requires implementing agencies to conduct market sounding before pre-qualification, and describes the type of information that should be shared at this stage
- The **Caribbean PPP Toolkit** (Caribbean 2017, Module 5, Section 5), which offers guidance on marketing PPP projects

Market sounding may be done by government agencies directly or may be delegated to transaction advisors. Experienced transaction advisors tend to know the most likely bidders for many kinds of PPP projects—using them to assess market interest allows government to take advantage of these relationships. Market feedback can be more honest and specific when the consultation is conducted by transaction advisors. A government agency may not have the same industry expertise nor the same capacity to engage in a candid dialogue with market participants.

Where local experienced transaction advisors are not available, governments may hire international advisors that have a track record

Box 3.4 World Bank Environmental and Social Framework

MDBs and other international development institutions are attentive to E&S issues when they co-finance an infrastructure project. The World Bank's Environmental and Social Framework rules (WB 2016c) are often more stringent than the host country's national legislation. The World Bank may accept the country's E&S standards or require that the utilization of the Bank's own E&S safeguards standards. Then they must apply over the entire project, even if they are only financing a portion of it. There are ten World Bank E&S standards:

- Standard 1: Assessment and Management of Environmental and Social Risks and Impacts
- Standard 2: Labor and Working Conditions
- Standard 3: Resource Efficiency and Pollution Prevention and Management
- Standard 4: Community Health and Safety
- Standard 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement
- Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
- Standard 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities
- Standard 8: Cultural Heritage
- Standard 9: Financial Intermediaries
- Standard 10: Stakeholder Engagement and Information Disclosure

These standards were approved by the Board in August 2016, to be implemented after a preparation and training period. According to the World Bank (WB-Safeguards), the new E&S framework introduces comprehensive labor and working condition protection; an over-arching non-discrimination principle; community health and safety measures that address road safety, emergency response and disaster mitigation; and a responsibility to include stakeholder engagement throughout the project cycle. Other MDBs have their own corresponding standards. For example, the Asian Development Bank (ADB-Safeguards) and Asian Infrastructure Investment Bank (AIIB 2016) use three safeguard categories: (1) Environment; (2) Involuntary Resettlement; and (3) Indigenous Peoples.

of closing transactions in the specific sector, or perhaps multilateral financial organizations, such as **IFC PPP advisory services.** Transaction costs may be financed by the various preparation facilities, such as the **Multilateral Investment Fund** PPP advisory facility of the Inter-American Development Bank (MIF) or the **Global Infrastructure Facility** (GIF 2017). These facilities offer advisory services in preparing and structuring PPPs to both attract private sector investment in emerging markets and uphold government project objectives.

3.2.4 Assessing Value for Money of the PPP

A key objective of governments in implementing PPPs in infrastructure is to achieve value for money (VFM). *Value for money* means achieving the optimal combination of benefits and costs in delivering services users want. Many PPP programs require an assessment of whether a PPP is likely to offer better value for the public than traditional public procurement—often called *value for money analysis*.

A VFM analysis can be done for a specific PPP project, and at a program level, for projects with common characteristics. For example, the **United Kingdom Treasury's manual on assessing value for money** (UK 2011b) described how value for money should be assessed at both the program and project levels (that methodology was later considered biased and recalled by government).

VFM analysis typically involves a combination of qualitative and quantitative approaches. **Qualitative VFM analysis** consists of sense-checking the rationale for using a PPP. This involves asking whether a proposed project is of a type likely to be suitable for private financing, and whether the conditions are in place for the PPP to achieve value for money—for example, that the PPP has been structured well, and that competitive tension is expected during the bidding process. This often takes place at a relatively early stage of PPP development—as such, qualitative VFM analysis may constitute part of the PPP screening described in *Section 3.1.2 - Screening for PPP Potential*.

Some PPP programs also require **quantitative assessment** of value for money. This typically involves comparing the chosen PPP option against a *Public Sector Comparator* (or *PSC*)—that is, what the project costs would look like if delivered through traditional procurement. This comparison can be made in different ways. The most common is to compare the **fiscal cost** under the two options—comparing the risk-adjusted cost to government of procuring the same project through traditional procurement, to the expected cost to government of the PPP (pre-procurement) or the actual PPP bids (post-procurement). An alternative is to compare the two options with an **economic cost-benefit basis**—that is, to quantitatively weigh the expected benefits of a PPP over traditional procurement against its additional costs.

Value for money analysis—particularly using quantitative public sector comparator methodologies—has been widely debated. Some question the value and relevance of a PSC approach, which can appear to be more scientific than is the case, potentially misleading decision-makers; or conversely, may simply come too late in the process to be a genuine input to decision-making. A **World Bank report on Value for Money** (WB 2013a) analysis presents evidence on practices from several countries, and on trends regarding the scope of value for money analysis and the relative advantages of quantitative and qualitative approaches.

For more discussion on approaches to assessing value for money, and their relative advantages and disadvantages, see also:

- **Farquharson et al's** section on selecting projects (Farquharson et al. 2011, 41–43), which briefly describes value for money and cost benefit analysis, and considers the value of qualitative versus quantitative approaches.
- **Grimsey and Lewis's article on PPPs and Value for Money** (Grimsey and Lewis 2005, 347–351) includes a section on approaches to value for money describing examples of different countries' approaches.
- The **OECD's publication on PPPs** (OECD 2008a, 71–72), which also describes the range of methods used by different countries, on a *spectrum* of complexity, from simply relying on competition, to full cost-benefit analysis of different procurement options.
- The **PPIAF Toolkit for PPP in Roads and Highways** has a section on value for money and the PSC (WB 2009a), which describes the logic behind value for money analysis, and how the PSC is used.
- The **European PPP Expertise Centre (EPEC)** value for money assessment report (EPEC 2015) outlines and compares value for money assessment methodologies in several European countries.

The remainder of this section briefly describes and provides further resources for readers on qualitative and quantitative value for money assessment methodologies.

Qualitative Value-for-Money assessment

Qualitative VFM analysis involves sense-checking the rationale for using PPP as a delivery mechanism—that is, asking whether a proposed project is of a type likely to be suitable for private financing; as well as whether the conditions that are necessary to achieve value for money are in place, as described in **Farquharson et al**, (Farquharson et al. 2011, 42–43). This often takes place at a relatively early stage of PPP development—as such, qualitative VFM analysis may overlap with the PPP Screening process described in *Section 3.1.2 - Screening for PPP Potential* above—but may be repeated throughout the project development process.

Some jurisdictions have clearly-defined criteria for this analysis. For example:

- The **UK Treasury** has defined criteria for assessing suitability, and unsuitability, for a Private Finance Initiative (PFI)—the UK's availability payment PPP model. Suitability criteria include the long-term, predictable need for the service; the ability to allocate risk effectively—including through performance-related payments and ensuring sufficient private capital at risk; the likely ability of the private sector party to manage risk and take responsibility for delivery; presence of stable and adequate policy and institutions; and a competitive bidding market. *Unsuitability criteria* include projects that are either too small or too complicated; sectors where needs are likely to change or there is a risk of obsolescence (for example, PFI projects are no longer used in the ICT sector in the UK); or where the contracting authority is inadequately skilled to manage PPP (WB 2013a).
- In **France**, preliminary analysis of a PPP includes checking against several criteria under three categories: PPP relevance—for example, appropriateness of an integrated, whole-of-life approach to managing a project; commercial attractiveness; and the potential for optimal risk allocation (WB 2013a).
- In the **Commonwealth of Virginia, United States**, assessment of a potential PPP at high level and detailed screening stages also considers proposed road projects against specific criteria to determine if the project is delivered under the Public-Private Transportation Act (PPTA)—that is, as a PPP. These criteria include whether a project is sufficiently complex to benefit from private sector innovation; whether a PPP can achieve appropriate risk transfer; and the degree of stakeholder support. The extent to which a project can generate revenues from tolls is also taken into consideration when assessing possible PPP structures (WB 2013a).
- The **Caribbean PPP Toolkit** (Caribbean 2017, Module 4, Section 8) presents **Jamaica**'s methodology for assessing value for money, and other globally-relevant guidance.

The **EPEC Guide to Guidance** also includes a list of key conditions that should be met to have a higher probability of achieving value for money (EPEC 2011b, Chapter 1.2.4).

Public Sector Comparator: Comparing Fiscal Cost

The most common quantitative tool for value for money assessment of a PPP project is derived from the approach originally used in the United Kingdom's PFI program in the early 1990s as described in **Leigland and Shugart's Gridlines article on the PSC** (Leigland and Shugart 2006). It involves comparing the fiscal cost of a PPP delivery option with that of a conventional public delivery option—not a single conventional option, but a range of infrastructure options as noted in the **2011 Treasury Guidance on Valuing Infrastructure Spend** (UK 2015a). **NAO evidence presented in the House of Commons 2014 report** (UK 2014a) discusses several shortcomings in the identification of PSCs.

The focus of the Fiscal Cost approach to value for money analysis is the construction of a PSC—the cost to government of implementing the project through traditional public procurement. Calculating the PSC can be complicated, as several adjustments are needed to ensure a fair comparison. *Box 3.5 - How the Public Sector Comparator is calculated*, highlights some methodological debates.

This type of PSC can be used at two stages of the procurement process, as described in the **OECD book's chapter on the economics of PPPs** (OECD 2008a, 71–72). These are:

- **Before the bidding process**—the PSC can be compared with a shadow or reference PPP, or market comparator—a model of the expected cost of the project under the PPP option. This can help identify whether the PPP can be expected to provide value for money, before deciding to go ahead with detailed preparation and procurement. The reference PPP model would be the same as the financial model described in *Section 3.2.3 - Assessing Commercial Viability*.

Box 3.5 How the Public Sector Comparator is calculated

Calculating a PSC can be complex. The starting point is typically the best estimate of the capital cost and lifetime operations and maintenance cost of implementing the project under public procurement. This is typically adjusted, to enable a fair comparison between the PSC and the PPP. The Infrastructure Australia guidance note on PSC (AU 2011b, Section 2.3) describes two types of adjustment:

Risk adjustments—one of the main differences between traditional procurement and the PPP approach is that the PPP transfers more risks to the private party. The return on investment expected by the private party will consider these transferred risks. This means that to make a fair comparison, the PSC should also consider the cost of these risks.

'Competitive neutrality' adjustments—a public sector project or enterprise may have cost advantages or disadvantages compared to a private company, which creates costs or benefits to the government that are not normally considered when considering the cost of a traditionally procured project. For example, the tax liabilities under the two options may be different. These differences should be corrected for in calculating the PSC.

There are also differences in the timing of payments between the PPP option—where payments are often spread over time—and traditional procurement, where the government must meet construction costs upfront. The streams of payments are usually converted into net present values, to give a single value for comparison. This requires defining the appropriate discount rate to apply to future cash flows in both the PPP and PSC models.

The following provide further descriptions and examples of how the PSC is used and calculated in different countries:

The Treasury of the United Kingdom's detailed guidance for quantitative PSC assessment was recalled in 2013, and guidance on qualitative assessment was developed.

South Africa's PPP Manual's module on the PPP Feasibility Study includes a detailed description of how to calculate and use the PSC (ZA 2004a, Module 4, 17–49).

Methodological differences and challenges

Although the PSC has been widely used, the methodology differs between countries, and there is ongoing debate on several methodological points. For example, Shugart's article on the PSC (Shugart 2006) highlights two related issues: which is the appropriate discount rate to use when calculating present values, and how the cost of risk should be considered. Grimsey and Lewis (Grimsey and Lewis 2004) and Gray, Hall and Pollard (Gray et al. 2010) both focus on the choice of discount rate, and its relationship with risk allocation under PPP and traditional procurement. In IFC's report on lessons learned (IFC 2010, 7-13), José Luis Flores presents a concrete case of "value for money" assessment.

Some countries in Latin America, such as Colombia and Peru, have developed guidelines for implementing the PSC methodology. However, due to lack of capacity and or trustworthy information to implement such a complex methodology, none of these countries have implemented the full methodology in practice.

The World Bank report on Value for Money assessment practices (WB 2013a, 23–28) reviews methodological evolution and practices in several governments with significant PPP experience, including the United Kingdom, France, India, Chile, the U.S. state of Virginia, and British Columbia, Canada.

- **During the bidding process**—the PSC can also be compared with actual PPP bids received, to assess whether the bids provide value for money. This approach is used in **Australia**, and is described in a PSC Technical Note (AU 2016a).

Despite the appealing logic of the concept, there have been many criticisms of the usefulness of the PSC and fiscal cost comparison approach in countries where it has been used frequently, such as the United Kingdom and Australia. A **United Kingdom House of Lords' review of the PPP program** (NAO 2013a), for example, argued that shortage of relevant data and methodological issues limit the value of the PSC. The government's response to the review agrees that the PSC provides only a partial picture, and highlights that its use is balanced with qualitative analysis, as described above.

Leigland's Gridlines article on the PSC (Leigland 2006, 2–3) summarizes these criticisms, which include the inevitable inaccuracy of estimates over a long-term project, lack of consensus on methodology, and so the possibility of manipulation to reach the desired conclusion. **Grimsey and Lewis** (Grimsey and Lewis 2005, 362–371) describe some of these criticisms in more detail. Given these challenges, **Leigland's Gridlines article** (Leigland 2006,

3–4) also discusses whether and how the PSC approach could make sense in a developing country context.

Economic cost-benefit comparison of PPP and public procurement

One of the criticisms sometimes leveled at the PSC is that it focuses solely on the financial cost to government of PPP or traditional procurement. A more comprehensive approach would also consider the differences in expected benefits, and compare the net economic benefit under PPP or under public procurement. On the other hand, as **Grimsey and Lewis** note (Grimsey and Lewis 2004, 353), this adds further complexity to the value for money analysis over the PSC approach, and could risk making the results even more subjective.

For example, the **EPEC's note on non-financial benefits of PPP** (EPEC 2011c) suggests how some of the benefits of PPP—as described in *Section 1.2 - Infrastructure Challenges and How PPPs Can Help*—could be quantified, and added to a more typical PSC analysis.

Few countries have introduced this kind of analysis in practice. **New Zealand**'s new PPP program is an exception. Cost-benefit analysis is the main tool for assessing procurement options. **New Zealand's PPP guidance material** (NZ 2016, 6–12) asks practitioners to identify the possible benefits of PPP over traditional public procurement and where possible to assign dollar values to each benefit.

In many developing countries' PPP programs, the aim is not just to reduce cost, but to transform service delivery. For example, governments hope that roads will be better maintained, thus delivering additional trade and economic benefits. These changes in service levels and quality cannot be captured by comparing fiscal costs of PPP and public procurement. Where these expected benefits are deemed important, and quantitative value for money analysis is desired, economic cost-benefit analysis may be the better approach.

3.2.5 Assessing Fiscal Implications

A proposed PPP project may be feasible and economically viable, and value for money analysis may show that the PPP is the best option to procure it. Nonetheless, the government also needs to decide whether the PPP project is affordable and fiscally responsible, given its fiscal constraints.

Many governments have entered into PPPs not fully understanding their potential costs. This can create significant fiscal risk for governments (see *Section 1.2.1 - Insufficient Funds*). To avoid this pitfall, governments need to assess fiscal affordability when they appraise a PPP project so that they do not go to market with projects they cannot afford.

Fiscal commitments can be either direct or contingent.

- Direct commitments are those the government knows it will have to make if the PPP project goes ahead—for example, the availability payments for a school PPP.
- Contingent payments are ones that will only be made if certain events occur—for example, payments that may have to be made under a minimum traffic guarantee if traffic levels are below projections on a PPP highway, or compensation in the event of early termination.

For more on these concepts, see *Box 2.8 - Types of Fiscal Commitments to PPPs*.

Governments need to assess the likely costs of both types of commitments. Once likely fiscal costs are identified, governments need to assess whether they are affordable. *Section 2.4.2 - Controlling Aggregate Exposure to PPPs* describes how governments can assess the affordability of those commitments. For example, by comparing annual cost estimates against the budget of the contracting authority, considering the impact on debt sustainability under various scenarios, or introducing specific limits on different types of PPP commitment. A **World Bank note on managing fiscal commitments from PPPs** (WB 2013b) provides an overview of typical types of fiscal commitments to PPP projects, and how these can be assessed.

Assessing cost of direct fiscal commitments

Direct fiscal commitments may include up-front capital contributions or regular payments by government such as availability payments or shadow tolls, as described in *Box 3.6 - Types of Direct Payment Commitments to PPP Projects*.

The nature of the government's direct commitments will be defined during the structuring process described in *Section 3.3 - Structuring PPP Projects*. This highlights the importance of a back-and-forth process between appraisal and structuring. The government should have an idea of the level and type of support that will be needed to make a project bankable to assess fiscal affordability be-

fore investing large amounts in project preparation. Fiscal limits set in appraisal can then inform further structuring efforts until the project converges on a structure that is both fiscally responsible and attractive to the market. In fact, the value of the direct fiscal commitments is often a key bid variable, as described in *Section 3.5 - Managing PPP Transactions*. This means the fiscal cost cannot finally be known until after the tender process is complete.

During the appraisal stage, the value of the direct fiscal commitments required can be estimated from the project financial model, described in *Section 3.2.3 - Assessing Commercial Viability*. The value of these direct payment commitments is driven by the project costs and any non-government revenues. The value of the direct fiscal contribution required is the difference between the cost of the project (including a commercial return on capital invested) and the revenue the project can expect to earn from non-government sources such as user fees.

The fiscal cost can be measured in different ways:

- **Estimated payments in each year**—that is, the amount that the government expects to have to pay in each year of the contract, given the most likely project outcomes. This is the most useful measure when considering the budget impact of the project.
- **Net present value of payments**—if the government is committed to a stream of payments over the lifetime of the contract—such as availability payments—it is often also helpful to calculate the net present value of that payment stream. This measure captures the government's total financial commitment to the project, and is often used if incorporating the PPP in financial reporting and analysis (such as debt sustainability analysis). Calculating the net present value of future payments requires choosing an appropriate discount rate—the choice of discount rate to apply when assessing PPP projects has been a subject of much debate.

In both cases, it is also helpful to estimate how the payments might vary—for example, they may be linked to demand, or be denominated in a foreign currency and so be subject to exchange rate changes. **Irwin's paper on fiscal support to PPPs** (Irwin 2003, 16–17 and Annex) provides more detail on measuring the cost of different kinds of fiscal support.

Having estimated the cost of direct payment commitments, the government needs to decide if they are affordable. *Section 2.4.2 - Controlling Aggregate Exposure to PPPs* describes how some governments consider the affordability of direct payment commitments under PPPs—for example, this can include projecting current spending levels forward, or introducing specific limits on government payment commitments to PPPs. An **OECD publication on PPPs** (OECD 2008a, 36–46) provides a helpful overview.

Assessing the cost of contingent liabilities

Contingent liabilities arise in well-designed PPP projects because there are some risks that government is best placed to bear. These risks should be defined throughout project structuring—see *Section 3.3 - Structuring PPP Projects*.

Assessing the cost of contingent liabilities is more difficult than for direct liabilities, since the need for, timing, and value of payments are uncertain. Broadly speaking, there are two possible approaches, as described in the **Infrastructure Australia guidance note for calculating the PSC** (AU 2016b, 84–109):

- **Scenario analysis**—scenario analysis involves making assumptions for the outcome of any events or variables that affect the value of the contingent liability and calculating the cost to the government given those assumptions. For example, this could include working out the cost to government in a worst-case scenario, such as default by the private party on its debt obligations at various points in the contract. It could also include calculating the cost of a guarantee on a specific variable—for example, demand—for different levels of demand outturns.
- **Probabilistic analysis**—an alternative approach is to use a formula to define how the variables that affect the value of the contingent liability will behave and use a combination of mathematics and computer modeling to calculate the resultant costs. This enables analysts to estimate the distribution of possible costs, and calculate measures such as the median (most likely) cost, the mean (average) cost, and different percentiles (for example, the value within which the cost is likely to lie 90 percent of the time). However, producing useful results requires a lot of information on the underlying risk variables.

Scenario analysis is the simpler form of risk analysis, and gives a sense of the range of possible outcomes, but not their likelihood. In practice, most governments use scenario analysis, if anything, to assess the possible cost of contingent liabilities. A probabilistic approach requires more input data, and complex statistical analysis. In practice, only a few governments have used probabilistic analysis to assess a few types of contingent liabilities.

Irwin's book on government guarantees (Irwin 2007) provides a comprehensive discussion of why and how governments accept contingent liabilities under PPP projects by providing guarantees, and how the value of these guarantees can be calculated. The following resources provide more guidance and example of how particular countries approach this problem:

- **Colombia's Ministry of Finance** has defined its approach to assessing the financial and economic implications of contingent liabilities; accounting, budgeting and assessing the fiscal implications of contingent liabilities; and identifying, classifying, quantifying and managing contingent liabilities. This approach is set out in a presentation on management of contingent liabilities (CO 2012b).
- In **Chile**, the Ministry of Finance has developed a sophisticated model for valuing minimum revenue and exchange rate guarantees to PPPs. This valuation is updated on an ongoing basis for all PPP projects, and reported in an annual report on contingent liabilities (CL 2016). The report includes a brief description of the techniques used in Chile to analyze and value guarantees extended to PPP projects. **Irwin and Mokdad's paper on managing contingent liabilities from PPP projects** (Irwin and Mokdad 2010, Appendix 1) also describes the Chilean methodology in more detail.
- **Peru's Finance Ministry** has also published a methodology for valuing contingent liabilities under PPPs—available on the Ministry's website section on managing contingent liabilities (PE Pasivos).

Defining and publishing a methodology for valuing contingent liabilities from PPPs is only part of the solution—implementing such methodologies in practice can be demanding. Governments may need to strike a balance between building capacity in risk analysis, and adopting sufficiently straightforward and simple approaches to this assessment that can be implemented in practice.

Having estimated the cost of contingent liabilities, the government can assess whether they are affordable given fiscal constraints. For example, as described in *Section 2.4.2 - Controlling Aggregate Exposure to PPPs*, this could include considering the implications of PPP contingent liabilities in the context of overall debt sustainability analysis, or specific limits on PPP liabilities. A few countries, such as Indonesia, have introduced contingent liability funds to ring-fence and budget for these liabilities. The **EPEC publication on State Guarantees in PPPs** (EPEC 2011a) also provides a helpful overview of different approaches to managing the fiscal implications of PPP contingent liabilities.

Box 3.6 Types of Direct Payment Commitments to PPP Projects

Direct liabilities are payment commitments that are not dependent on the occurrence of an uncertain future event (although there may be some uncertainty regarding the value). Direct liabilities arising from PPP contracts can include:

Upfront viability gap payments—an up-front capital subsidy (which may be phased over construction, or against equity investments).

Availability payments—a regular payment or subsidy over the lifetime of the project, usually conditional on the availability of the service or asset at a contractually specified quality. The payment may be adjusted with bonuses or penalties related to performance.

Shadow tolls, or output-based payments—a payment or subsidy per unit or user of a service—for example, per kilometer driven on a toll road.

For more on types of payment commitments, see *Section 2.4 - Public Financial Management Frameworks for PPPs*.

3.2.6 Assessing the Ability to Manage the Project

A less common but still highly relevant component of project assessment focuses on the ability of the procuring authority to manage the delivery of the project, i.e. project preparation, tendering, and contract management over the term of the PPP contract.

This requires an appraisal of the **current** capacity of the procuring authority including its leadership, and the identification of **future** needs. The exercise should lead to the formulation of a credible plan drawing upon the resources of other government agencies, and including the costs of hiring external experts and transaction advisors, and of strengthening the leadership of the project team.

This assessment of the procuring authority should demonstrate that the project is appropriately resourced and that appropriate governance arrangements are in place. The project should have gone through a detailed planning exercise with a realistic timetable; advisers should have been hired; and a risk register should have been prepared showing the primary risks faced by the procurement and how they will be mitigated. There should also be a benefits realization plan. This plan should explain how the project will be evaluated, and how project outcomes will be captured and monitored during the operational phase of the project.

In the United Kingdom, the **Five Case Model methodology** (Flanagan and Nicholls 2007) includes in this assessment (the *management case*) the following components:

- Program and Project Management Methodology and Structure
- Program and Project Management Plans
- Use of Specialist Advisers
- Change and Contract Management Arrangements
- Benefits Realization
- Risk Management
- Monitoring during Implementation
- Post Implementation Evaluation Arrangements
- Contingency Arrangements

Key References: PPP Project Appraisal

Reference	Description
Yescombe, E.R. 2007. *Public-Private Partnerships: Principles of Policy and Finance*. Oxford: Butterworth-Heinemann.	Chapter 5: The Public-Sector Investment Decisions describes the factors that a public authority should consider when deciding to invest in new public infrastructure via a PPP, and how these can be assessed.
Farquharson, Edward, Clemencia Torres de Mästle, E. R. Yescombe, and Javier Encinas. 2011. *How to Engage with the Private Sector in Public-Private Partnerships in Emerging Markets*. Washington, DC: World Bank.	Chapter 4: Selecting PPP Projects describes how governments can assess whether a project can and should be developed as a PPP, including considering affordability, risk allocation, value for money, and market assessments.
EPEC. 2011b. *The Guide to Guidance: How to Prepare, Procure, and Deliver PPP Projects*. Luxembourg: European Investment Bank, European PPP Expertise Centre.	Chapter 1: "Project Identification, Section 1.2: Assessment of the PPP Option" describes and provides links to further references on how governments assess whether a proposed PPP is affordable, whether risks have been allocated appropriately, whether it is bankable, and will provide value for money.
ZA. 2004a. *Public Private Partnership Manual*. Pretoria: South African Government, National Treasury	Module 4: "PPP Feasibility Study" describes in detail the analysis required to support a business case for a PPP project. This includes needs and options analysis, project due diligence, value for money analysis, and economic valuation.

Key References: Commercial Viability Analysis

Reference	Description
ADB. 2008. *Public-Private Partnership Handbook*. Manila: Asian Development Bank.	Chapter 3.5 on assessing commercial, financial and economic issues, includes an overview of a typical financial model of a PPP project, and how it is used to assess commercial viability.
Farquharson, Edward, Clemencia Torres de Mästle, E. R. Yescombe, and Javier Encinas. 2011. *How to Engage with the Private Sector in Public-Private Partnerships in Emerging Markets*. Washington, DC: World Bank.	Chapter 8: "Managing the Initial Interface with the Private Sector" describes how to prepare and carry out a market sounding exercise.
4ps. Accessed March 16, 2017. "Public Private Partnerships Programme (4Ps) website." Website.	Provides tips and guidance on implementing market sounding, and a case study on the experience of market sounding for a hospital in the United Kingdom.

Reference	Description
Grimsey, Darrin, and Mervyn K. Lewis. 2009. "Developing a Framework for Procurement Options Analysis." In *Policy, Finance and Management for Public-Private Partnerships*, edited by Akintola Akintoye and Matthias Beck. Oxford, England: Wiley-Blackwell.	Describes the advantages of market sounding and sets out a market sounding exercise for a hypothetical example hospital PPP project.
SG. 2012. *Public Private Partnership Handbook. Version 2*. Singapore: Government of Singapore, Ministry of Finance.	Requires implementing agencies to conduct market sounding before pre-qualification, and describes the type of information that should be shared at this stage.

Key References: Value for Money Analysis

Reference	Description
UK. 2011b. *Quantitative assessment: User Guide*. London: UK Government, HM Treasury.	Provides detailed guidance and a worked example on the quantitative approach to value for money assessment—calculating the Public Sector Comparator, and comparing it to the PPP reference model, as well as an excel spreadsheet tool for carrying out the analysis.
Grimsey, Darrin, and Mervyn K. Lewis. 2005. "Are Public Private Partnerships value for money?: Evaluating alternative approaches and comparing academic and practitioner views." *Accounting Forum* 29(4) 345-378.	Describes approaches to assessing value for money in PPPs, and sets out in detail the PSC approach and its pros and cons.
OECD. 2008a. *Public-Private Partnerships: In Pursuit of Risk Sharing and Value for Money*. Paris: Organisation for Economic Co-operation and Development.	Chapter 3: "The Economics of Public-Private Partnership: is PPP the Best Alternative" describes the determinants of value for money in a PPP, and how it is typically assessed.
WB. 2009a. "Toolkit for Public-Private Partnerships in Roads and Highways." World Bank. Website.	Section on value for money and the PSC describes the logic behind value for money analysis, how the PSC is used, and some of its shortcomings.
Leigland, James, and Chris Shugart. 2006. "Is the public sector comparator right for developing countries? Appraising public-private projects in infrastructure." Gridlines Note No. 4. Washington, DC: Public-Private Infrastructure Advisory Facility.	Summarizes common criticisms of PSC analysis, and describes whether and how using PSC analysis may make sense in developing country contexts.
AU. 2016a. *National Public Private Partnership Guidelines - Volume 4: Public Sector Comparator Guidance*. Canberra: Commonwealth of Australia.	Provides detailed guidance on calculating the public sector comparator, and a worked example, including extracts from the excel model used.
CO. 2010. *Nota Técnica: Comparador público-privado para la selección de proyectos APP (Borrador para Discusion)*. Bogotá: Gobierno de Colombia, Ministerio de Hacienda y Crédito Público.	Introduces the PSC methodology, explains all the analytic steps, and provides a worked example.
Shugart, Chris. 2006. *Quantitative Methods for the Preparation, Appraisal, and Management of PPI projects in Sub-Saharan Africa*. Midrand, South Africa: NEPAD.	Describes some methodological inconsistencies and challenges with the PSC—focusing on two related issues: which is the appropriate discount rate to use when calculating present values, and how the cost of risk should be considered.
Grimsey, Darrin, and Mervyn K. Lewis. 2004. "Discount debates: Rates, risk, uncertainty and value for money in PPPs." *Public Infrastructure Bulletin* 1(3).	Describes the implications of the choice of discount rate in comparing PPP and public procurement, and the relationship between discount rates and risk allocation.
Gray, Stephen, Jason Hall, and Grant Pollard. 2010. *The public private partnership paradox*. Brisbane, Australia: University of Queensland.	Provides a more theoretically-driven discussion of the choice of discount rate for evaluating PPPs, compared with public procurement projects—emphasizing the difference between discounting future cash outflows and inflows.

Reference	Description
EPEC. 2011c. *The Non-Financial Benefits of PPPs: A Review of Concepts and Methodology*. Luxembourg: European Investment Bank, European PPP Expertise Centre.	Describes the shortcomings of standard PSC analysis, which assesses fiscal costs but does not consider non-financial costs and benefits. Suggests an alternative approach incorporating non-financial benefits in the PSC.
NZ. 2016. "Public Private Partnership (PPP) Guidance." The Treasury. Website.	Chapter 5: "Procurement Options" sets out the logic and analysis for assessing whether procuring a project as a PPP is likely to provide value for money. This includes a simple, quantitative cost-benefit comparison of PPP and public procurement.

Key References: Fiscal Analysis

Reference	Description
Irwin, Timothy C. 2003. "Public Money for Private Infrastructure: Deciding When to Offer Guarantees, Output-Based Subsidies, and Other Fiscal Support." Working Paper No. 10. Washington, DC: World Bank.	Section 6: "Comparing the Cost of Different Instruments" describes how governments can assess the cost of various types of fiscal support to PPPs—including output-based grants, in-kind grants, tax breaks, capital contributions, and guarantees.
OECD. 2008a. *Public-Private Partnerships: In Pursuit of Risk Sharing and Value for Money*. Paris: Organisation for Economic Co-operation and Development.	Chapter 3: "The Economics of Public-Private Partnership: is PPP the Best Alternative" describes how the affordability of a PPP can be assessed.
EPEC. 2011a. *State Guarantees in PPPs: A guide to better evaluation, design, implementation, and management*. Luxembourg: European Investment Bank, European PPP Expertise Centre.	Sets out the range of state guarantees used in PPPs—encompassing finance guarantees, and contract provisions such as revenue guarantees, or termination payments. Describes why and how they are used, how their value can be assessed, and how they can be best managed.
AU. 2016a. *National Public Private Partnership Guidelines - Volume 4: Public Sector Comparator Guidance*. Canberra: Commonwealth of Australia.	Section 16: "Identifying, allocating, and evaluating risk" describes in detail different methodologies for valuing risk (and contingent liabilities) in PPPs.
Irwin, Timothy C. 2007. *Government Guarantees: Allocating and Valuing Risk in Privately Financed Infrastructure Projects*. Directions in Development. Washington, DC: World Bank.	Comprehensively describes why and how governments accept contingent liabilities under PPP projects by providing guarantees. Describes in detail how the value of these guarantees can be calculated, with examples.
CO. 2012b. *Obligaciones Contingentes: Metodologías del caso colombiano*. Bogotá: Gobierno de Colombia, Ministerio de Hacienda y Crédito Público.	Presentation by the Ministry of Finance of Colombia on the conceptual and legal frameworks, and methodologies used in Colombia for managing contingent liabilities.
CL 2015. *Informe de Pasivos Contingentes 2015*. Santiago: Gobierno de Chile, Dirección de Presupuestos.	Describes the conceptual framework for assessing contingent liabilities and the government's contingent liability exposure. This includes quantitative information (maximum value and expected cost) on government guarantees to PPP projects (concessions).
Irwin, Timothy C., and Tanya Mokdad. 2010. *Managing Contingent Liabilities in Public-Private Partnerships: Practice in Australia, Chile, and South Africa*. Washington, DC: World Bank.	Describes the approach in the State of Victoria, Australia, Chile, and South Africa, to approvals analysis, and reporting of contingent liabilities under PPPs. Appendix 1 describes in detail the methodology used in Chile to value revenue and exchange rate guarantees.
PE Pasivos. Accessed March 8, 2017. "Pasivos Contingentes." Peru, Ministerio de Economía y Finanzas. Website.	Presents a methodology, results, and background reports on the value of contingent liabilities under PPP projects in Peru.

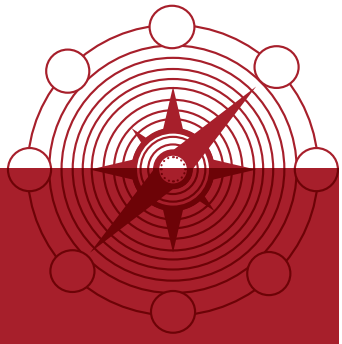
Key References: Environmental and Social Studies and Standards

Reference	Description
WB. 2016c. *Environmental and Social Framework: Setting Environmental and Social Standards for Investment Project Financing*. Washington, DC: World Bank.	Highlights the World Bank E&S safeguards for investment project finance.
EP. Accessed March 6, 2017. "Equator Principles." Essex, England: The Equator Principles Association. Website.	Risk management framework adopted by financial institutions for determining, assessing and managing environmental and social risk in projects.
ADB-Safeguards. Accessed March 2, 2017. "Safeguards." Asian Development Bank. Website.	Presents an overview of ADB's E&S safeguards, including frameworks and relevant publications.
AIIB. 2016. *Environmental and Social Framework*. Beijing: Asian Infrastructure Investment Bank.	Presents an overview of AIIB's E&S policies and safeguards.
IFC. 2012. *Performance Standards on Environmental and Social Sustainability*. Washington, DC: International Finance Corporation.	Presents the IFC's sustainability framework which applies to all investment and advisory clients.
EC. 2001c. *Guidance on Environmental Impact Assessment: Screening*. Luxembourg: European Commission.	Presents EU guidance on EIA screening.
EC. 2001b. *Guidance on Environmental Impact Assessment: Scoping*. Luxembourg: European Commission.	Presents EU guidance on EIA scoping.
EC. 2001a. *Guidance on Environmental Impact Assessment: EIS Review*. Luxembourg: European Commission.	Presents EU guidance on EIA, and is designed principally for use by authorities, developers and EIA practitioners.

Key References: Project Feasibility and Economic Viability Analysis

Reference	Description
EP. Accessed March 6, 2017. "Equator Principles." Essex, England: The Equator Principles Association. Website.	Describes the Equator Principles framework for managing the social and environmental impact of project finance investments, and provides guidance material on best practices.
CO. 2006. *Metodología general ajustada para la identificación, preparación y evaluación de proyectos de inversión*. Bogotá: Gobierno de Colombia, Departamento Nacional de Planeación, Dirección de Inversiones y Finanzas Públicas.	Pages 79–84 in the General Adjusted Methodology for the Identification, Preparation, and Evaluation of Projects provide guidelines for the Technical Feasibility Studies that should be carried out at this stage to estimate the capital, machinery, labor, materials, and other inputs required to implement the PPP project.
CL. n.d. *Metodología General de Preparación y Evaluación de Proyectos*. Santiago: Gobierno de Chile, Ministerio de Planificación.	The General Methodology for Preparing and Evaluating Public Investment Projects provide guidance for preparing projects—identifying the problem, producing a diagnosis of the current situation, identifying possible alternatives—and evaluating projects—including cost-benefit analysis, cost-efficiency analysis.
PE. 2010. *Pautas para la Identificación, formulación y evaluación social de proyectos de inversión pública a nivel de perfil*. Lima: Ministerio de Economia y Finanzas.	The Guidelines for the Identification, Formulation, and Social Evaluation of Public Investment Projects provides guidelines for identifying public investment projects, and for carrying out detailed feasibility studies and economic viability analysis.
NEDA. 2005a. *Reference Manual on Project Development and Evaluation*. Manila: National Economic Development Authority.	Provides detailed guidance on feasibility and economic evaluation analysis required for all public investment projects.

Reference	Description
UK. 2011a. *The Green Book: Appraisal and Evaluation in Central Government*. London: UK Government, HM Treasury.	Provides guidance on appraisal of projects, programs and policies, by combining economic, financial, social and environmental assessments to guide analysis of the options available, along with detailed technical annexes. The Green Book is used as a guide by many other governments.
EC. 2013. *Evalsed Sourcebook: Method and Techniques*. Brussels: European Commission.	Online sourcebook covering all aspects of socio-economic evaluation as part of their Resource for the Evaluation of Socio-Economic Development. Includes sections on cost-benefit analysis and cost effectiveness analysis; in each case describing the approach, when it is used, its strengths and weaknesses, and provides a bibliography with further reading.
WB. 1998. *Handbook on Economic Analysis of Investment Operations*. Washington, DC: World Bank.	A detailed handbook, starting with an introduction to economic analysis, and going on to describe in detail how to assess economic costs and benefits. The handbook includes chapters on estimating economic benefits specific to the health, education, and transport sectors.
Boardman, Anthony, David Greenberg, Aidan Vining, and David Weimer. 2010. *Cost Benefit Analysis: Concepts and Practice*. 4th ed. Cranbury, New Jersey: Pearson.	Comprehensive reference textbook on cost-benefit analysis issues.
ADB. 1999. *Handbook for Economic Analysis of Water Supply Projects*. Manila: Asian Development Bank.	Provides detailed guidance on appraising water supply projects—including demand analysis and forecasting, least cost analysis, financial and economic cost-benefit analysis, and sensitivity and risk analysis.
Hine, John. 2008. *The Economics of Road Investment*. Washington, DC: World Bank.	This presentation provides an overview of specific issues in cost-benefit analysis for road sector projects.
Khatib, Hisham. 2014. *Economic Evaluation of Projects in the Electricity Supply Industry*. 3rd ed. Stevenage, England: The Institution of Engineering and Technology.	Chapter 7: "Economic Evaluation of Projects" focuses on economic cost-benefit analysis. Other chapters cover financial analysis, describe how to build environmental considerations into project appraisal, and describe risk analysis.
EIB and EC. 2005. *RAILPAG: Railway Project Appraisal Guidelines*. Luxembourg: European Investment Bank and European Commission.	Chapter 4: "Financial and Economic Analyses" includes guidance for the development of the financial and cost-benefit analyses and sector relevant aspects.



Did you know....?

The Roman Empire used PPPs

At its peak, the Roman Empire financed some of its large infrastructure projects through concessions and private finance. In those projects, the public sector was mainly responsible for building roads, ports, lighthouses, and upstream water mains, while the private sector, through concessions and private finance, built thermal facilities, theaters and circus, canals, and even roads (including sewage pipes and water mains). The projects were paid by users and municipalities, but also rich donors. The latter had the right to put their names on the works, and have a better chance of being elected for public functions.

Source: Xavier Bezançon, 2000 Ans d'Histoire du Partenariat Public-Privé (Paris: Presses de l'École Nationale des Ponts et Chaussées, 2004

3.3 Structuring PPP Projects

"Structuring a PPP project" means allocating responsibilities, rights, and risks to each party to the PPP contract. This allocation is defined in detail in the contract. Project structuring is typically developed through an extended process, rather than by drafting a detailed contract straight away. The first step is to develop the initial project concept into key commercial terms—that is, an outline of the required outputs, the responsibilities and risks borne by each party, and how the private party will be paid. The key commercial terms are typically detailed enough to enable practitioners to appraise the proposed PPP, as described in *Section 3.1 - Identifying PPP Projects*, before committing the resources needed to develop the draft PPP contract in detail.

Figure 3.4 - Structuring PPP Projects shows how PPP structuring—to the level of key commercial terms—fits into the overall development process. Information from the feasibility study and economic viability analysis is a key input to PPP structuring—for example, identifying the key technical risks, and providing estimates for demand and users' willingness to pay for services. The PPP structure then feeds into commercial viability, affordability and value for money analysis—which may find that changes are needed to the proposed risk allocation. The aim is typically to structure a PPP that will be technically feasible, economically and commercially viable, fiscally responsible, and provide value for money.

The starting point for PPP structuring is the project concept: that is, the project's physical outline, the technology it is expected to use, the outputs it will provide, and the people it will serve. These are often developed before deciding whether to implement the project as a PPP, as described in *Section 3.1 - Identifying PPP Projects*.

The specification of output requirements in the PPP contracts is described in *Section 3.4 - Designing PPP Contracts*. PPP project structuring focuses on identifying and allocating risks. This makes sense since appropriate risk allocation is behind many of the PPP Value Drivers described in *Box 1.2 - PPP Value Drivers*. Following this approach, the other elements of the PPP structure—such as the allocation of responsibilities and the payment mechanism—stem from the risk allocation. For example, construction risk may be allocated to the private party, on the basis that it is best qualified to manage construction. This means that the private party should also be allocated the responsibility and right to make all construction-related decisions. The mechanism for allocating commercial risk to the private party may take the form of a user-pays payment mechanism.

This section follows the literature, starting with identifying and prioritizing project risks (*Section 3.3.1 - Identifying Risks*) then describing how risks are allocated (*Section 3.3.2 - Allocating Risks*) then explaining how the risk allocation relates to the other aspects of project structure (*Section 3.3.3 - Translating Risk Allocation into Contract Structure*).

3.3.1 Identifying Risks

The first step toward structuring the PPP is often to put together a comprehensive list of all the risks associated with the project. Such a list is known as a *risk register*. In this context, a *risk* is an unpredictable variation in the project's value—from the point of view of some or all stakeholders—arising from a given underlying *risk factor*. For example, *demand risk* is the risk that the project value, and project revenues, will be lower (or higher) than expected because demand for the output is lower (or higher) than expected. **Irwin's book on PPP guarantees and risk** defines risk in more detail (Irwin 2007).

PPP risks vary depending on the country where the project is implemented, the nature of the project, and the assets and services involved. Nonetheless, certain risks are common to many types of PPP project. These are usually grouped into risk categories that are often associated with a particular function (such as construction, operations, or financing), or with a particular project phase (such as termination), as discussed in *Box 3.7 - PPP Risk Categories*.

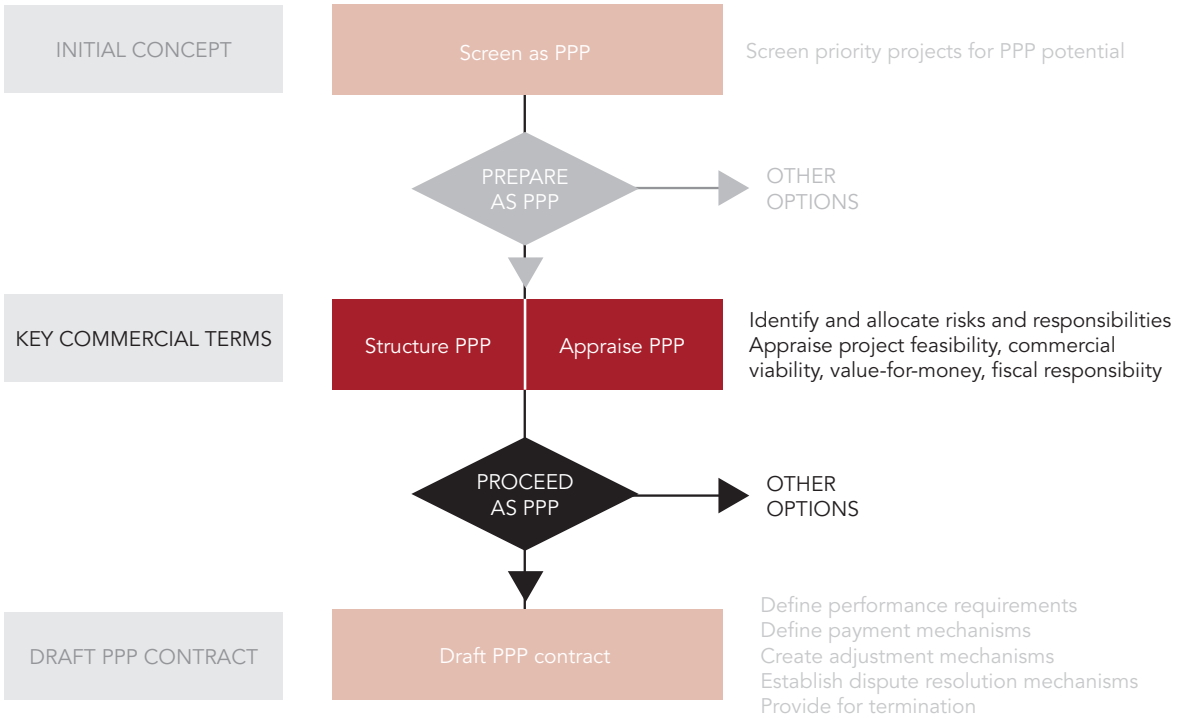
Many resources provide standard risk lists and preferred risk allocations, in some cases for specific project types. Several examples are provided in *Section 3.3.2 - Allocating Risks*. These standard lists can be useful resources when identifying project risks for a particular PPP. However, PPP projects often have unique features or circumstances—for example, the specific geological conditions on the route of a proposed road. This means that implementing agencies should make use of experienced advisors to help identify a comprehensive list of project risks.

Assessing and prioritizing risks

To focus efforts when allocating risks, it is often helpful to consider their importance. Some risks will be more significant than others in terms of likelihood and severity of impact on project outcomes, or both. Risk can be assessed either quantitatively or qualitatively.

The **Infrastructure Australia guidance note on calculating the PSC** (AU 2016a, 84–109) provides detailed guidance both on

Figure 3.4 Structuring PPP Projects



identifying risk, and using various quantitative techniques to evaluate risks. An **ADB handbook for risk analysis in project evaluation** (ADB 2002, 9–28) also includes a chapter describing quantitative techniques for assessing risk. **PFRAM, the PPP Fiscal Risk Assessment Model** (IMF and WB 2016) designed by the IMF and the World Bank, identifies a large set of risks that may have a fiscal impact.

In practice, many implementing agencies take a more qualitative approach at this stage. **Guidance on risk management by the Victoria Managed Insurance Authority** (VIC 2015, 79–83) provides helpful guidance on a *risk heat map*—a qualitative risk assessment approach, in which risks are categorized according to their likelihood of occurrence, and impact. **Farquharson et al** (Farquharson et al. 2011, Appendix B) provides an example 'risk register' for a PPP project, which also takes a qualitative approach. Each risk is categorized as being low, medium, or high for both risk status (likelihood) and impact. Most effort should be directed to managing those risks identified as being both high likelihood, and high impact.

Mitigating risks

After full identification of project risks, a mitigation process should occur—wherein, based on a cost-benefit analysis, some project characteristics or procedural steps may be adjusted. For instance, additional geological surveys or traffic studies may be conducted before the tender to reduce uncertainty and contain bidding costs. Performance requirements that are not critical to project success and may create unacceptable risk to private operators may be eliminated.

3.3.2 Allocating Risks

Allocating risk, in the context of a PPP, means deciding which party to the PPP contract will bear the cost (or reap the benefit) of a change in project outcomes arising from each risk factor. Allocating project risk efficiently is one of the main ways of achieving better value for money through PPPs. **Iossa et al** (Iossa et al. 2007, 20) describe two main goals of risk allocation. The first is to create incentives for the parties to **manage risk well**—and thereby improve

Box 3.7 PPP Risk Categories

The following categories of risk are common to many PPPs:

- Site—risks associated with the availability and quality of the project site, such as the cost and timing of acquiring the site, needed permits or assuring rights of way for a road, the effect of geological or other site conditions, and the cost of meeting environmental standards.
- Design, construction and commissioning—risk that construction takes longer or costs more than expected, or that the design or construction quality means the asset is not adequate to meet project requirements.
- Operation—risks to successful operations, including the risk of interruption in service or asset availability, the risk that any network interface does not work as expected, or that the cost of operating and maintaining the asset is different than was expected.
- Demand, and other commercial risk—the risk that usage of the service is different than was expected, or that revenues are not collected as expected.
- Regulatory or political—risk of regulatory or political decisions that adversely affect the project. For example, this could include failure to renew approvals appropriately, unjustifiably harsh regulatory decisions, or in the extreme, breach of contract or expropriation.
- Change in legal or regulatory framework—the risk that a change in general law or regulation adversely affects the project, such as changes in general corporate taxation, or in rules governing currency convertibility, or repatriation of profits.
- Default—the risk that the private party to the PPP contract turns out not to be financially or technically capable to implement the project.
- Economic or financial—risk that changes in interest rates, exchange rates or inflation adversely affect the project outcomes.
- *Force Majeure*—risk that external events beyond the control of the parties to the contract, such as uninsurable natural disasters, war or civil disturbance, affect the project.
- Asset ownership—risks associated with ownership of the assets, including the risk that the technology becomes obsolete or that the value of the assets at the end of the contract is different than was expected.

For more detail, see Yescombe's chapter on risk evaluation and transfer (Yescombe 2007), and Delmon's chapter on risk allocation (Delmon 2015, Chapter 5), both of which start with descriptions of typical types of PPP risk.

project benefits or reduce costs. The second is to reduce the overall cost of project risk by insuring parties against risks they are not happy to bear. *Box 3.8 - Allocating Land Acquisition Risk*—commonly a significant risk for PPP projects.

Risk allocation principles

A central principle of risk allocation is that each risk should be allocated to whoever can manage it best. **Irwin's book on guarantees and PPP risk** (Irwin 2007, 56–62) defines this principle more precisely, stating each risk should be allocated to the party:

- **Best able to control the likelihood of the risk occurring**—for example, the private party is usually in charge of project construction because it has the most expertise in that area. This also means it should bear the cost of construction cost over-runs or delays.
- **Best able to control the impact of the risk on project outcomes**, by assessing and anticipating a risk well and responding to it. For example, while no party can control the risk of an earthquake, if the private firm is responsible for project design, it could use techniques to reduce the damage should an earthquake occur.
- **Able to absorb the risk at lowest cost**, if the likelihood and impact of risks cannot be controlled. A party's cost of absorbing a risk depends on several factors, including: the extent to which the risk is correlated with its other assets and liabilities;

Box 3.8 Allocating Land Acquisition Risk

Land acquisition can be one of the most challenging aspects of developing a PPP project. Delays in obtaining land have created significant hurdles or even blocked some promising PPP projects. There are many options for dealing with risk associated with land acquisition delays or difficulties. Some governments adopted a policy of freeing land before launching a project to the market, thereby accepting and taking this risk out of the contractual equation—such as for transport projects in India. Others allocate to the private party the responsibility for identifying the plots of land that will be needed for the project, and for undertaking the necessary processes to acquire that land and free it from occupancy. Still others prepare carefully the land acquisition process, detailing the need for land and the identification of owners, but then transfer to the private partner the responsibility for obtaining the land. The best option may depend on circumstances—not least the prevailing legislation regarding compulsory acquisition of land.

India's Toolkit for Highways (IN, Module 3), in its Module 3: *Tools and Resources*, presents several good and bad examples of how to handle land acquisition. Jonathan Lindsay's paper (Lindsay 2012) discusses compulsory land acquisition in detail.

its ability to pass the risk on (for example, to users of the service through price changes, or to third parties by insuring); and the nature of its ultimate risk bearers. For example, the ability of governments to spread risk among taxpayers means they may have lower risk-bearing cost than private firms, whose ultimate risk-bearers are their shareholders.

As described in the **OECD's publication on risk sharing and value for money in PPPs** (OECD 2008a, 49–50), applying these principles does not imply transferring the maximum possible risk to the private sector. Transferring to the private party the risks that it is better able to control or mitigate can help lower the overall project cost, and improve value for money. However, the more total risk transferred to the private party, the higher the return—or risk premium—the equity investors will require, and the harder it will be to raise debt finance.

The principles and practice of risk allocation in PPPs is also increasingly the subject of academic research and literature. For example, **Ng and Loosemore's article on risk allocation in PPPs** (Ng and Loosemore 2007) describes PPP risk categories and allocation approach and provides a case study of risk allocation in the New Southern Railway project (an underground airport-city rail link) in New South Wales, Australia. **Bing et al's article on risk allocation in PPP/PFI projects** in the United Kingdom (Bing et al. 2005) assesses how risks have been allocated in PFI projects in practice, to identify risk allocation preferences. An **IDB review of the Spanish PPP experience** (Rebollo 2009) includes several examples of risk allocation used in different types of projects, from roads to hospitals. The World Bank Group's ***Report on Recommended PPP Contractual Provisions*** (WB 2017e) discusses several contractual clauses related to core risks such as Force Majeure and Change in Law.

Limitations on risk allocation

There are some limits to how risks can be allocated in a PPP project. These include the following:

- **Level of detail of risk allocation**—in theory, every project risk could be identified and allocated to the party best able to bear it, thereby improving value for money. In practice, as **Irwin** describes (Irwin 2007, 63–65) the cost of doing so would be high, and likely outweigh the benefits in the case of less significant risks. In most cases, risks are allocated in groups, sometimes with exceptions for certain significant risks. For example, the private party may bear all construction risks, except certain key geological risks, against which the government could provide an indemnity.
- **Risks that cannot be transferred**—certain types of risk cannot be transferred through the PPP contract. For example, the private party will always bear certain political risks—in particular, the risk that the government will renege on the contract or expropriate the assets. International institutions such as the Multilateral Investment Guarantee Agency (MIGA) provide political risk insurance to help mitigate this risk.
- **Extent of risk transfer to private party**—the equity holders of the private party to the PPP contract—the PPP company—are only exposed up to the value of their equity stake. Moreover,

lenders will typically only accept a relatively low level of risk, concomitant with their expected returns. In practice, this means that the extent to which risk can be transferred is limited by the level of equity in the project company, as described by **Ehrhardt and Irwin** (Ehrhardt and Irwin 2004). If losses due to a risk turn out to be greater than the equity stake, the equity holders can walk away from the project. Since the government is ultimately responsible for making sure services are provided, the remainder of the project risk remains with the government—as described by **Iossa et al** (Iossa et al. 2007, 25).

- **Incomplete contracts**—even well-designed contracts may suffer from the absence of certain necessary provisions. While PPP contracts cannot provide solutions for every possible situation, they should provide rules (templates or formulas) for the range of foreseeable scenarios, and a decision-making methodology for any other situation.

A combination of these limitations can mean that country characteristics affect the possibilities of risk transfer. **Ke et al's study of risk allocation** (Ke et al. 2010) demonstrates this in their comparison of risk allocation for projects in China, Hong Kong, Greece, and the United Kingdom.

Risk allocation matrices

The output of the risk allocation process at this stage is often a **risk allocation matrix**. The risk allocation matrix lists risks—often sorted by category—and defines who bears each risk. This risk allocation is then put into practice by including the appropriate clauses in the PPP contract as described in *Section 3.4 - Designing PPP Contracts*. **Farquharson et al** (Farquharson et al. 2011, Appendix B) provides an example risk register (or matrix) for a PPP project.

Some governments capture the risk allocation principles described above in preferred risk allocations, often presented in the form of a preferred risk allocation matrix. These preferred allocations may be generic, or specific to sectors or types of project. They are usually a starting point for allocating risk on a particular project, since projects often have specific characteristics where a different risk allocation would provide better value for money. Risk allocation matrices should be checked again prior to signing the contract to review the responsibilities of each party before it is legally binding. This final review could also serve as an additional gate-keeping mechanism.

The following are examples of preferred risk allocations and risk allocation matrices:

- **Infrastructure Australia** has produced standard commercial principles for both economic and social infrastructure projects (AU 2011b), which describe in detail how risks and responsibilities will be allocated.
- **Hong Kong's Introductory Guide to PPPs** (HK 2008, Annex E) provides a detailed example of a risk matrix for PPP of a water treatment plant.
- The **Government of Rio de Janeiro's PPP Manual** (RJ 2008, Annex 2) provides an example of a risk matrix for a PPP infrastructure project.
- **South Africa's PPP Manual**, Module 4: PPP Feasibility Study (ZA 2004a, Annex 4) includes a standardized PPP risk matrix—listing risks, and describing for each risk a typical risk mitigation mechanism and allocation.
- **The Global Infrastructure Hub (GI Hub)'s** report on *Allocating Risks in Public-Private Partnership Contracts* (GIH 2016a) **presents a series of 12 sample risk matrices** in different infrastructure sectors, specifically transport, energy, and water and sanitation. In each of the sample risk matrices, there is a detailed listing of project risks, along with a discussion of risk allocation, mitigation measures and government support arrangements. There is also a comparison of the different risk allocation arrangements in developed and emerging markets. The GI Hub website (GIH) also provides an interactive blog and Q&A forum.

3.3.3 Translating Risk Allocation into Contract Structure

Much of the PPP literature focuses on risk allocation. Some of it can give the impression that, once a preferred risk allocation has been settled, this can somehow translate smoothly into a detailed contract. Such an impression may be misleading. Many experienced PPP practitioners will go through an intermediate step in which they define other elements of the contract structure such as: "who will do what"?, and "how will the payments flow"? Unfortunately, relatively few resources describe how the risk allocation translates into an overall contract structure.

The **World Bank's Toolkit for PPP in Water Services** (PPIAF 2006, 97–124) is an exception. It sets out a process for allocating responsibilities and risks together—each responsibility being associated with a bundle of risks. For example, the private party may be

responsible for revenue collection, which carries the risk that some customers will not pay. The private party may be responsible for construction, which entails a series of risks. Labor costs, the timing of equipment delivery, and the cost and time to obtain permits can affect total costs and construction times, positively or negatively.

The toolkit sets out an approach to contract structuring, starting with identifying the major areas of responsibility, or functions: design and construction of new assets, finance, operations, and maintenance (for more on these functions see *Section 1.1 - What is a PPP: Defining 'Public-Private Partnership'*). For each function, specific responsibilities can then be defined, and risks identified that are associated with each responsibility.

The toolkit also describes the linkage between defining the details of the payment mechanism—in this case, tariff review mechanisms, since the toolkit focuses on user-pays projects—and risk allocation. *Section 3.4.2 - Payment Mechanism* goes into more detail.

Generalizing from this approach suggests that it may be helpful to think of arriving at a PPP type (see *Section 1.1 - What is a PPP: Defining 'Public-Private Partnership'*) from considering whether the public or private party is better able to carry out the key functions (*Design, Build, Operate, Maintain*, and *Finance*). This allocation of functions may be based on an analysis of which party is best able to bear the risks naturally associated with each function. Consideration of institutional linkages and political constraints will also come into play when deciding on which party can best perform which function.

Once a basic PPP type is chosen, the remainder of the risk allocation can be thought of as fine-tuning the basic function allocation. For example, if the private party is to be responsible for the *Build* function, but the public party is to retain geotechnical risk, this would be included in the contract design as an exception to the basic functional principle that all construction-related risks are for the private party to manage and absorb.

Beside allocation of functions, another key element in contract structure is how the payments flow. Payment mechanisms may follow from the allocation of functions and risks. For example, if the private party is better able to manage collection risks and demand risks, then the private party will likely be remunerated directly from user charges. However, if the private party can manage collection risk but is not asked to take demand risk, then the payment structure may involve the private party collecting user charges and remitting them to the public authority, while the public authority then pays the private party for asset availability, with a bonus for achieving high levels of collections.

Finally, a necessary complement to defining the payment mechanism is defining how performance will be measured, monitored, and enforced. For example, the government's payment may be conditional on the availability of the asset, with a view to transferring most operating risk to the private sector. This risk transfer can only be achieved in practice if the standards defining "availability" are clear and practicable. *Section 3.4.1 - Performance Requirements* provides more details.

The following resources provide further guidance on the linkages between responsibilities, risks, rights, and payment mechanisms, which can inform development of the contract structure:

- **Irwin** (Irwin 2007, 61) briefly describes how responsibilities, rights, and risks should be allocated together. This follows from the principle of risk allocation that a risk is allocated to the party best able to manage it: the rationale only holds if the party is also given the right and responsibility to make decisions related to that risk.
- **Iossa et al** (Iossa et al. 2007, 26–31) describes how different PPP contract types—with different functions allocated to the private party and different payment mechanisms—typically correspond to different risk allocations. The authors also describe (33–34) how output specifications, payment mechanisms, and risk allocations need to be closely aligned.
- **India's online PPP Toolkit** (IN) Module 1: *PPP Background* has a section on PPP model variants which describes typical risk allocations under different PPP contract types, thus giving a guide to how risk allocation can translate into choice of basic contract structure.

Key References: Structuring PPP Projects

Reference	Description
Irwin, Timothy C. 2007. *Government Guarantees: Allocating and Valuing Risk in Privately Financed Infrastructure Projects*. Directions in Development. Washington, DC: World Bank.	Chapter 4 defines risk, and explains the principles of allocating risk under PPP projects. Chapter 5 provides examples of putting those principles into practice for three risks: exchange-rate risk, insolvency risk, and policy risk.
Yescombe, E.R. 2007. *Public-Private Partnerships: Principles of Policy and Finance*. Oxford: Butterworth-Heinemann.	Chapter 14 on risk evaluation and transfer describes types of risk that are common to PPP projects.
Delmon, Jeffrey. 2015. *Private Sector Investment in Infrastructure: Project Finance, PPP Projects and PPP Frameworks*. 3rd edition. Alphen aan den Rijn, Netherlands: Wolters Kluwer.	Chapter 5 on risk allocation goes into more detail on PPP risk categories.
AU. 2016a. *National Public Private Partnership Guidelines - Volume 4: Public Sector Comparator Guidance*. Canberra: Commonwealth of Australia.	Section 16: Identifying, Allocating, and Evaluating Risk describes in detail different methodologies for quantitatively valuing risk in PPPs.
ADB. 2002. *Handbook for Integrating Risk Analysis in the Economic Analysis of Projects*. Manila: Asian Development Bank.	Chapter 2 describes quantitative techniques for assessing risk.
VIC. 2015. *Victorian Government Risk Management Framework*. Melbourne, Australia: Victorian Government, Secretary Department of Treasury and Finance.	A general guide on risk management frameworks, developed for public sector managers in the State of Victoria, Australia. Includes examples of risk assessment, and risk management templates.
Farquharson, Edward, Clemencia Torres de Mästle, E. R. Yescombe, and Javier Encinas. 2011. *How to Engage with the Private Sector in Public-Private Partnerships in Emerging Markets*. Washington, DC: World Bank.	Appendix B is risk register for a PPP project, providing an example of a risk allocation matrix, and of a qualitative approach to assessing and prioritizing risks.
Iossa, Elisabetta, Giancarlo Spagnolo, and Mercedes Vellez. 2007. *Best Practices on Contract Design in Public-Private Partnerships*. Washington, DC: World Bank.	Section 3: Risk Allocation Incentives, and Types of PPP describes typical types of risk in PPP contracts, the principles of effective risk allocation as well as its limitations, and typical risk allocations under different types of PPP contract.
OECD. 2008a. *Public-Private Partnerships: In Pursuit of Risk Sharing and Value for Money*. Paris: Organisation for Economic Co-operation and Development.	Chapter 3: "The Economics of Public-Private Partnership" includes a section on the role and nature of risk, which describes the concept of optimum risk transfer.
Ng, A., and Martin Loosemore. 2007. "Risk allocation in the private provision of public infrastructure." *International Journal of Project Management* 25(1) 66-76.	Describes classification and allocation of risk in PPP projects, and provides a case study of risk allocation for a railway PPP project in Australia.
Bing, Li, A. Akintoye, P.J. Edwards, and C. Hardcastle. 2005. "The allocation of risk in PPP/PFI construction projects in the UK." *International Journal of Project Management* 23 (1) 25-35.	Assesses how risks have been allocated in practice in PPP projects in the United Kingdom.
Rebollo, Andres, ed. 2009. *Experiencia española en concesiones y asociaciones público-privadas para el desarrollo de infraestructuras públicas: Marco general*. Research for Programa para el Impulso de Asociaciones Público-Privadas en Estados Mexicanos (PIAPPEM). Madrid: Deloitte España.	Review of the Spanish PPP experience. Includes a description of typical project structure divided by sectors and includes multiple examples of successful PPP projects.
Ke, Yongjian, ShouQing Wang, and Albert P. C. Chan. 2010. '"Risk Allocation in PPP Infrastructure Projects: Comparative study." *Journal of Infrastructure Systems* 16(4) 343-351.	Compares risk allocation for PPP projects in China, Hong Kong, Greece, and the United Kingdom, exploring how country characteristics affect the risk allocation that can be achieved in practice.

Reference	Description
AU Guidelines. Accessed March 20, 2017. "National Guidelines for Infrastructure Project Delivery." Canberra: Australian Government, Department of Infrastructure and Regional Development. Website.	Volumes 3 and 7 describe in detail how the risks and responsibilities will be allocated in social and economic infrastructure projects. The Roadmap describes how the principles should be used—as a starting point for developing contracts for particular projects.
HK. 2008. *An Introductory Guide to Public Private Partnerships*. Hong Kong, China: Efficiency Unit.	Section 6 provides guidance on managing risk. Annex E provides an example risk allocation matrix for a water treatment plant.
RJ. 2008. *Manual de Parcerias Público-Privadas - PPPs*. Conselho Gestor do Programa Estadual de Parcerias Público-Privadas. Rio de Janeiro: Governo do Estado do Rio de Janeiro.	Annex 2 provides an example of a typical risk matrix.
ZA. 2004a. *Public Private Partnership Manual*. Pretoria: South African Government, National Treasury.	Annex 3 provides guidance on how to calculate the value of risk. Annex 4 presents a standardized PPP risk matrix—listing risks, and describing for each risk a typical risk mitigation mechanism and allocation.
PPIAF. 2006. *Approaches to Private Sector Participation in Water Services: A Toolkit*. Washington, DC: Public-Private Infrastructure Advisory Facility.	Section 6: Allocating Risks and Responsibilities describes a process and principles for allocating both risks and responsibilities, as well as how the allocation can be defined in the contract, including through tariff rules.
IN. Accessed March 15, 2017. "PPP Toolkit for Improving PPP Decision-Making Processes." Public-Private Partnerships in India. New Delhi: Government of India, Ministry of Finance.	Module 1: PPP Background has a section on PPP modal variants that describes typical risk allocations under different PPP contract types.
ES. 2011. "Real Decreto Legislativo 3/20111, de 14 de noviembre, por el que se aprueba el texto refundido de la Ley de Contratos del Sector Público." *Boletín Oficial del Estado*, 276 (1) 117729-117913. Madrid: Gobierno de España, Ministerio de la Presidencia.	The Spanish Procurement law regulates the public procurement PPP contracts that can be used in Spain. Some of them are partially structured by the law and some of them have a flexible risk allocation.
Toro Cepeda, Julio. 2009. *Experiencia Chilena en Concesiones y Asociaciones Público-Privadas para el desarrollo de Infraestructura y la Provisión de Servicios Públicos: Informe Final*. Research for Programa para el Impulso de Asociaciones Público-Privadas en Estados Mexicanos (PIAPPEM). Santiago, Chile.	Review of the Chilean PPP experience. Includes a description of typical project structure divided by sectors and includes multiple examples of successful PPP projects.
GIH. 2016a. *Allocating Risks in Public-Private Partnership Contracts*. Sydney: Global Infrastructure Hub.	Outlines risk allocation and risk mitigation measures in several sectors, distinguishing between developed and emerging markets.

3.4 Designing PPP Contracts

The PPP contract is at the center of the partnership, defining the relationship between the parties, their respective rights and responsibilities, allocating risk, and providing mechanisms for dealing with change. In practice, the PPP contract can encompass several documents and agreements, as described in *Box 3.9 - What is the PPP Contract?*

Most PPP projects present a contractual term between 20 and 30 years; others have shorter terms; and a few last longer than 30 years. The term should always be long enough for the private party to adopt a whole-life costing approach to project design and service management, guaranteeing service performance at the lowest cost. The term depends on the type of project and on policy considerations—the project should be needed over the term of the contract, the private party should be able to accept responsibility for service delivery over its term, and the procuring authority should be able to commit to the project for its term. The availability of finance, and its conditions, may also influence the term of the PPP contract.

As shown in *Figure 3.5 - PPP Contract Design Stage*, the draft PPP contract is generally needed before a Request for Proposal (RFP) is issued. Detailed contract design takes significant time and resources—including from expert advisors. Approval is often required before embarking on detailed design and investing these resources.

The draft PPP contract is typically included with the RFP sent to prospective bidders. In some cases, the PPP contract issued with the RFP cannot be changed. In others, it may be changed because of interaction with bidders during the transaction process. **Australia National PPP Guidelines Roadmap** (AU 2015) and the **South Africa PPP Manual** (ZA 2004a) provide an overview of PPP contract development and how it progresses at each stage of implementing the PPP.

Aim of PPP contract design

A well-designed contract is clear, comprehensive, and creates certainty for the contracting parties. Because PPPs are long-term, risky, and complex, PPP contracts are necessarily incomplete—that is, they cannot fully predict future conditions. This means the PPP contract needs to have flexibility built in to enable changing circumstances to be dealt with as far as possible within the contract, rather than resulting in renegotiation or termination.

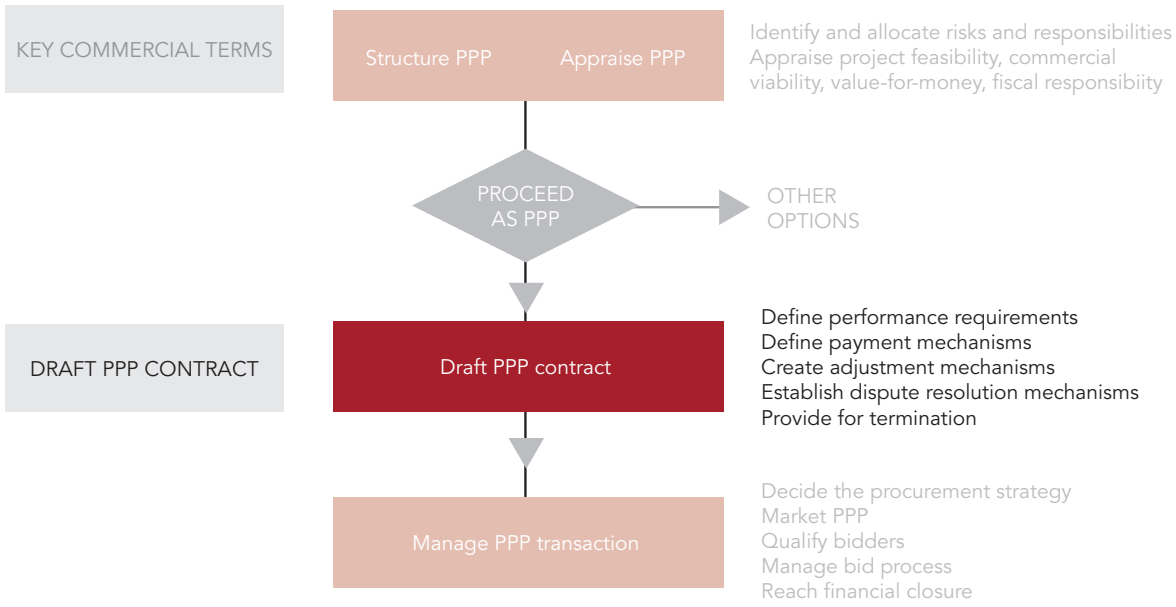
The aim of PPP contract design is therefore to create certainty where possible, and bounded flexibility where needed—thereby retaining clarity and limiting uncertainty for both parties. This is achieved by creating a clear process and boundaries for change. To implement this style of contract in practice requires strong contract management institutions, as described in *Section 3.6 - Managing PPP Contracts*. Where possible, involving the future contract manager in designing or reviewing the PPP contract can help ensure that change management processes are implementable in practice. PPP contract design is a complex task. This section briefly sets out some key considerations—and provides links to tools, examples, and further resources—in five areas of PPP contract design:

- **Performance requirements**—defining the required quality and quantity of assets and services, along with monitoring and enforcement mechanisms, including penalties
- **Payment mechanisms**—defining how the private party will be paid, through user charges, government payments based on usage or availability, or a combination, and how bonuses and penalties can be built in
- **Adjustment mechanisms**—building into the contract mechanisms for handling changes, such as extraordinary reviews of tariffs, or changing service requirements
- **Dispute resolution procedures**—defining institutional mechanisms for how contractual disputes will be resolved, such as the role of the regulator and courts, or the use of expert panels or international arbitration
- **Termination provisions**—defining the contract term, handover provisions, and circumstances and implications of early termination

Together, these sets of provisions define the risk allocation under the contract. Obviously, the aim must be to draft these provisions so that the risk allocation chosen (as set out in *Section 3.3 - Structuring PPP Projects*) is achieved. The provisions dealing with adjustment mechanisms and dispute resolution are intended to avoid the need for renegotiation, by allowing changes to be made, and problems resolved, within the framework provided by the contract.

Some countries have made efforts to standardize elements of PPP contract design to reduce the considerable time and cost frequently involved in preparing and finalizing a given PPP contract. They have developed standardized contractual provisions or even complete standardized PPP contracts—*Table 3.1 - Examples of Standardized PPP Contracts and Contract Clauses* provides some examples. Other countries have chosen to incorporate certain elements

Figure 3.5 PPP Contract Design Stage



of PPP contract design in legislation that governs all PPP contracts, as described in *Section 2.2 - PPP Legal Framework*.

For example, in Chile the dispute resolution mechanism is established in the Concessions Law. The World Bank Group's ***Report on Recommended PPP Contractual Provisions*** (WB 2017e) sets out and analyzes certain contractual provisions dealing with particular legal issues encountered in virtually every PPP contract, such as *force majeure*, termination rights and dispute resolution. Another useful resource is the World Bank's online PPP in Infrastructure Resource Center (PPPIRC 2017)—this website hosts a collection of actual PPP contracts and sample agreements for a range of contract types and sectors. To review the impact of contractual clauses on statistical classification, the **2016 Eurostat Guide to the Statistical Treatment of PPPs** (EPEC 2016) reviews a large set of PPP contractual provisions typical in European government-pays PPP contracts.

3.4.1 Performance Requirements

The PPP contract should clearly specify what is expected from the private party in terms of the quality and quantity of the assets and services to be provided. For example, this could include defining required maintenance standards for a road, or defining the required service quality and connection expansion targets for utility services provided directly to users. Performance indicators and targets are typically specified in an annex to the main PPP agreement.

A key feature of a PPP is that performance is specified in terms of required outputs (such as road surface quality), rather than inputs (such as road surfacing materials and design) wherever possible. This enables the private PPP company to be innovative in responding to requirements as described in **Farquharson et al** (Farquharson et al. 2011, 34). For more guidance and examples on the differences between output and input specification, see **Hong Kong's guidance on managing outsourcing contracts** (HK 2007, 32–33), and **Guidance on output specifications from the United Kingdom's Ministry of Defence** (UK 2010a), which also sets out a process for developing the specification for a PPP project.

Specifying outputs rather than inputs also keeps competition as open as possible and reduces the opportunities for corrupt practices. The **World Bank's sourcebook on governance in the electricity sector** describes a power sector procurement, in which a particular technology was specified in the RFP, with the intent of limiting competition and facilitating corruption.

Box 3.9 What is the PPP Contract?

This section uses the term *PPP contract* to mean the contractual documents that govern the relationship between the public and private parties to a PPP. In practice, the PPP contract may comprise more than one document. For example, a PPP to design, build, finance, operate, and maintain a new power plant, with power supplied in bulk to a government-owned transmission company may be governed by a power purchase agreement (PPA) between the transmission company and the PPP company, as well as an implementation agreement between the responsible government ministry and the PPP company. Each agreement may, in turn, refer to schedules or annexes to set out particular details—for example, detailed performance requirements and measures.

In addition to the PPP contract, there will also be numerous contracts between the SPV and its suppliers and financiers. Chief among them would be financing agreements between the SPV and its lenders, and shareholder agreements between equity investors (see *Section 1.3 - How PPPs Are Financed* for more on the PPP contractual structure). The PPP contract may not be effective until these other contractual agreements are in place. The EPEC Guide to Guidance (EPEC 2011b, 23) lists topics that should be covered in a typical PPP contract—the *Table 3.1 - Examples of Standardized PPP Contracts and Contract Clauses* provide further examples. The PPIAF Toolkit for PPP in Highways (WB 2009a) section on contracts describes the range of contractual agreements typically involved for different types of PPP.

The PPP contract should set out the following:

- **Clear performance targets or output requirements**. **Farquharson et al** (Farquharson et al. 2011, 34–36) note performance targets should be SMART—that is, Specific, Measurable, Achievable, Realistic, and Timely—and provides an example of SMART targets for a government accommodation PPP.
- **How performance will be monitored**—specifies what information must be gathered, by whom, and reported to whom and how frequently. This can include roles for the government's contract management team, the private party, external monitors, regulators, and users (see *Section 3.6 - Managing PPP Contracts*).
- The consequences for failure to reach the required performance targets, clearly specified and enforceable. This could include:
  - Specifying penalty payments, liquidated damages or performance bonds. **Iossa et al** (Iossa et al. 2007, 47–49) describe the pros and cons of these kinds of enforcement mechanism. The **United Kingdom's standardized PPP contracts** also include a chapter on protection against late service commencement (UK 2007, Chapter 4), describing when and how liquidated damages or performance bonds may be used.
  - Specifying payment deductions for poor performance (or bonuses for good performance), built into the payment mechanism (see *Section 3.4.2 - Payment Mechanism*).
  - Following a formal performance warning procedure, lenders will be allowed to exert their step-in rights, in order to improve performance and avoid contractual default. Persistent unsatisfactory performance can escalate into termination for default, as described in *Section 3.4.5 - Termination Provisions*.
- **Step-in rights for the public party**, to take control of the concession (typically temporarily) under certain well-defined circumstances. As described by **Iossa et al** (Iossa et al. 2007, 81–83), the intention is to enable the public party to resolve problems threatening service provision when it is better able to deal with these problems, such as a riot in a PPP prison.

The following resources provide more guidance and examples on these three elements of setting performance requirements:

- **Kerf et al's Guide to Concessions** (Kerf et al. 1998, 70–74) describes issues and provides examples of performance targets in the context of concession contracts for utilities.
- **4Ps paper on the United Kingdom's PFI experience** (4ps 2005, 7–10) presents lessons learned on specifying output requirements. These include the need for clarity to avoid differences in interpretation, leading to disagreement, and ensuring reporting requirements are adequate.
- The **South Africa PPP Manual** Module 6 *Managing the PPP Agreement* (ZA 2004a, Module 6, 25–26) briefly outlines how performance requirements, monitoring and enforcement mechanisms

Table 3.1 Examples of Standardized PPP Contracts and Contract Clauses

Jurisdiction	Standard	Links
Australia	Guidelines issued by Infrastructure Australia on standard commercial principles for social and economic infrastructure PPPs	Infrastructure Australia's PPP Guidelines (AU 2017): Volume 3 on social infrastructure and Volume 7 on economic infrastructure.
India	Descriptions of model agreements for PPP in a range of transport sectors	Former Planning Commission (IN 2014d), (IN 2009)
Netherlands	Standard PPP contract for DBFM in buildings and DBFMO in infrastructure	Ministry of Finance Publications (NL 2017)
New Zealand	Draft standard PPP contract	National Infrastructure Unit (NZ 2013)
Philippines	Sample contracts for PPP in bulk water supply, ICT, solid waste management, and urban mass transit. The PPP Center is currently developing standardized terms for broader application	Public-Private Partnership Center: PEGR Sample Contracts (PEGR 2009)
South Africa	Standardized PPP provisions published alongside the South Africa PPP Manual	National Treasury Standardized PPP Provisions (ZA 2004c)
United Kingdom	Standardized contracts for PFI projects; includes extensive guidance on each element of the contract	Her Majesty's Treasury: *Standardized contracts* (UK 2012c)

should be established; more detail is set out in South Africa's Standardized PPP Provisions on performance monitoring (ZA 2004a, Standardized PPP Provisions, 121–133).

- The **Scottish Government** has produced standard output-based performance requirements for PFI schools (SCT 2004), which also describe some key issues in defining performance requirements.
- The **United States Department of Transportation's Key Performance Indicators in Public-Private Partnerships** (US 2011) reviews the indicators used in several countries and their efficiency.

3.4.2 Payment Mechanism

The payment mechanism defines how the private party to the PPP is remunerated. Adjustments to payments to reflect performance or risk factors are also important means for creating incentive and allocating risk in the PPP contract, as described in the **EPEC Guide to Guidance** (EPEC 2011b, 24).

Iossa et al (Iossa et al. 2007, 41–49) provides a helpful overview of payment mechanisms for PPPs. The basic elements of PPP payment mechanisms can include:

- **User charges**—payment collected by the private party directly from users of the service
- **Government payment**—payment by the government to the private party for services or assets provided. These payments could be:
  - Usage-based—for example, shadow tolls or output-based subsidies
  - Based on availability—that is, conditional on the availability of an asset or service to the specified quality
  - Upfront subsidies based on achieving certain milestones
- **Bonuses and penalties, or fines**—deductions on payments to the private party, or penalties or fines payable by the private party, due if certain specified outputs or standards are not reached; or conversely, bonus payments due to the private party if specified outputs are reached

A PPP payment mechanism could include some or all of these elements, which should be fully defined in the contract—including specifying the timing and mechanism for making the payments in practice. Key considerations in each case are described briefly further in this section.

Defining user charges

When a concession is paid by charging users, the approach to tariff setting and adjustment becomes an important risk allocation mechanism. In some PPPs, the private party may be free to set tariffs and the tariff structure. However, in many cases, user-pays PPPs are in sectors with monopoly characteristics, and tariffs are typically regulated by government (along with service standards), to protect users. A **PPIAF note on tolling principles** (Bull and Mauchan 2014) discussed toll policy trade-offs and risks. The key question for risk allocation is how tariffs will be allowed to change—for example, with changes in inflation or other economic variables, or changes in different types of cost and who can trigger a tariff revision.

Tariffs can be controlled by establishing tariff formulae in the PPP contract, or by regulation, or a combination of the two. For example, a tariff formula may be set that establishes initial tariff levels, and a formula by which the tariff is allowed to regularly, automatically adjust in line with inflation. The contract may provide for regular tariff formula reviews, at which point other factors could be considered—as described further in *Section 3.4.3 - Adjustment Mechanisms*.

Kerf et al Guide to Concessions (Kerf et al. 1998, Sections 3.3 and 3.4) provides a helpful overview on price setting, and price adjustment for user-pays concessions contracts. The **World Bank's toolkit on water sector PPPs** (PPIAF 2006, 108–118) also discusses tariff indexation and resets as a risk allocation mechanism for user-pays PPPs.

For further information on tariff-setting and adjustment, there is a wide literature available on different approaches to tariff-setting for infrastructure regulation. The **World Bank's Body of Knowledge on Infrastructure Regulation**, available online (PURC 2012), includes a module on price setting (that is, setting the overall price level), and a module on tariff design (that is, how tariffs may vary for different customers or circumstances). Both modules describe key issues and provide extensive links to further resources.

Defining government payments

Key considerations when defining government payments include the following:

- **Risk allocation implications** of different government payment mechanisms. For example, under a usage-based mechanism, demand risk is either borne by the private sector or shared; whereas an availability payment mechanism creates an alternative reward mechanism not related to the level of demand. Providing an upfront capital subsidy means the private party bears less risk than if the same subsidy is provided on an availability basis over the contract lifetime. **Irwin's paper on fiscal support decisions** (Irwin 2003) describes some of the trade-offs between different types of subsidies to infrastructure projects (alongside user payments), and how governments can decide which is appropriate.
- **Linkage to clear output specifications and performance standards**—linking payments to well-specified performance requirements is key to achieve risk allocation in practice. See *Section 3.4.1 - Performance Requirements* for more resources on specifying output and performance targets in the contract. The section on defining bonuses and penalties provides more on how adjustments to payments should be specified.
- **Indexation of payment formulae**—as for tariff specification, payments may be fully or partially indexed to certain risk factors, so the government bears or shares the risk.

The **EPEC Guide to Guidance** (EPEC 2011b, 24) provides a helpful overview of how to define the payment mechanism for government-pays PPPs. **Yescombe** (Yescombe 2007) provides more detailed description of the different options and their implications for risk allocation and bankability. A **note developed by the Scottish Government** (SCT 2007) describes experience with defining and implementing payment mechanisms in PPPs.

Defining bonuses and penalties

Under both government- and user-pays PPPs, bonuses and penalties can be tied to particular outcomes. Under government-pays contracts, bonuses and penalties are typically adjustments to regular payments. Governments may also provide bonuses or charge penalties under user-pays contracts.

Iossa et al (Iossa et al. 2007, 46–47) provide an overview of performance-based payments. The **Scottish Government note on designing payment mechanisms for PPPs** (SCT 2007, 9–13) emphasizes the need to calibrate the payment mechanism—that is, to check the financial impact of penalties under different possible combinations of under-performance. The model contracts in *Table 3.1 - Examples of Standardized PPP Contracts and Contract Clauses* provide further examples of the use of bonuses or penalties. For example, the **United Kingdom's standardized PPP contracts** include a chapter on payment mechanisms (UK 2007, Chapter 7),

which also describes calibration of penalties and bonuses based on financial analysis.

3.4.3 Adjustment Mechanisms

PPP projects are long-term, and are often risky and complex. For example, a new toll highway faces obvious risks such as fluctuations in demand, but also hidden risks such as demand to provide more interchanges in the future, or install new traffic management technologies. More complex PPPs, such as water concession contracts, are even more exposed to unpredictable changes. Network assets may last more or less time than assumed. Demands for changes in treatment and distribution technologies may flow from new health research, while urban growth may create large investment demands, sometimes in unpredicted locations.

This means PPP contracts are necessarily incomplete—that is, they cannot fully specify all future possibilities. The PPP contract therefore needs to have flexibility built in—to enable changing circumstances to be dealt with as far as possible within the contract, rather than resulting in re-negotiation or termination. Such adjustment mechanisms typically aim to create a clear process and boundaries for change.

The concept of financial equilibrium, common in civil law systems, provides a broad mechanism for dealing with several different types of change. Other mechanisms are more specific—such as mechanisms for changes to service requirements, changes to tariff formulae, other cost adjustments in response to market changes, or dealing with refinancing gains.

As described in the **EPEC Guide to Guidance** (EPEC 2011b, 37–38), the administrative arrangements and processes for handling change are often further defined as part of the contract management framework and materials (see *Section 3.6.1 - Establishing Contract Management Structures*). While rules and processes can be specified for changes, room for discretion is likely to remain. The contract therefore needs to define a process that gives both public and private parties confidence that their interests will be respected.

Financial equilibrium clauses

Civil law systems commonly espouse a concept of financial equilibrium in contracting, which may be established in general administrative law, or defined in more detail in PPP-specific law or a particular contract. Financial equilibrium provisions entitle an operator to changes in the key financial terms of the contract to compensate for certain types of events beyond their control. Adjustments are based on a mutually-agreed financial model that is maintained over the lifetime of the contract. Three causes of unexpected changes that merit financial equilibrium revisions are typically defined as *force majeure* (major natural disasters or civil disturbances), *factum principis* (government action) and *ius variandi* (unforeseen changes in economic conditions). The **PPPIRC Website** (PPPIRC) provides more information and references on financial equilibrium clauses in the section on *Key Features of Common Law or Civil Law Systems*.

Changes to service requirements

It may be difficult for the contracting authority to accurately anticipate service requirements over the duration of the contract. Contracts typically build in approaches for handling changes to service requirements in response to changing circumstances (which could also include changing technology). For example, the **Hong Kong PPP Guide** (HK 2008, 68–71) describes how changes in circumstance can be dealt with. The **South Africa standardized contract provisions** (ZA 2004a, Part K: 50) provide for four categories of variation:

- Variations with no additional cost
- Small works variation
- Institutional variations (changes in service requirements), and
- Variations requested by the private party

Changes to tariff or payment rules or formulae

Tariffs or payments are often specified by formulae, as described in *Section 3.4.3 - Adjustment Mechanisms*, to allow regular adjustments for factors such as inflation. The PPP contract can also include mechanisms for reviewing these formulae—whether periodic, or one-off changes in extraordinary circumstances (with specified triggers). Since these processes are analogous to regulatory tariff reviews, regulatory guidance material may be useful. The **World Bank's body of knowledge on infrastructure regulation** (PURC 2012) section on price level regulation describes key issues in tariff regulation, and guides readers in accessing a wide range of references.

Market testing and benchmarking operating costs

Some PPP contracts require periodic market testing or benchmarking of certain sub-services in the contract, to allow costs to be adjusted to market conditions. This is typically done where a PPP includes provision of a long-lived asset (such as a school or hospital facility) together with soft services where market contracts are typically of shorter duration (such as cleaning). This approach is most common in PPP contracts in the United Kingdom Private Finance Initiative (PFI) tradition. One objective is that the price charged for the soft services should be kept in line with market conditions, through periodic challenges or benchmarking exercises. The other reason for market testing "soft" services is that service providers would normally be reluctant to provide a fixed price (with simple inflation indexation) for such services over a long period of time, because the actual costs are likely to get out of line with the indexation.

A **United Kingdom Operational Taskforce note** provides detailed guidance on benchmarking and market testing approaches (UK 2006a). The **United Kingdom's Department of Health** has also produced a code of best practice on benchmarking and market testing in hospital PFIs (NAO 2010b). This code provides guidance on how to manage the market testing process, focused on health facilities contracts—see also (NAO 2011).

Refinancing

During implementation, changes to the project risk profile or in capital markets may mean the PPP company can replace or renegotiate its original debt on more favorable terms. As described in *Section 1.3 - How PPPs Are Financed*, many PPP contracts set out rules for determining and sharing the gains from refinancing. For example, in 2004 the United Kingdom's Treasury introduced into its standard PFI contracts a 50:50 split of any refinancing gain between the investors and the government. The **EPEC Guide to Guidance** on PPPs (EPEC 2011b) also provides a succinct summary of how refinancing can be treated in the PPP contract.

3.4.4 Dispute Resolution Mechanisms

Because PPP arrangements are long-term and complex, contracts tend to be incomplete, as described in *Section 3.4.3 - Adjustment Mechanisms*. Where this creates room for differences in interpretation, disputes can arise. Defining a dispute resolution process helps ensure disputes are resolved quickly and efficiently, without interruption of service. Dispute resolution mechanisms can be built into the PPP contract. Some governments define dispute resolution mechanisms in international instruments (e.g. bilateral investment treaties or multilateral agreements), or in local PPP legislation, that may apply to all PPP contracts.

As described by **Kerf et al** (Kerf et al. 1998, Section 3.10) dispute resolution mechanisms for PPP can include the following:

- **Mediation and conciliation**—a neutral third party is appointed to resolve a dispute by helping the parties settle their disagreements. It may be used in the hope of not having to enter formal arbitration. A mediator typically acts as a facilitator, assisting the parties in identifying the best possible negotiated solution or settlement—the solution itself will be developed by the disputing parties themselves. A conciliator has a still neutral but more active role, also actively proposing solutions and settlement terms.
- **Recourse to a sector regulator**—for PPPs in sectors under the remit of an independent regulatory body, the regulator can be assigned responsibility for resolving certain disputes. This is a relatively simple and hence low-cost option, but can be risky for the private party, particularly in case of concerns over regulator independence or capacity.
- **Judicial system**—generally, contractual disputes are subject to jurisdiction of the courts, and the same is typically true of PPP contracts. However, parties to PPPs often consider the court system as inappropriate for solving disputes, since it may be slow, or lack technical expertise—particularly in developing countries. Dispute resolution mechanisms for PPPs often try to avoid resorting to the court system as far as possible.
- **Panel of experts as arbitrators**—the PPP contract or law could designate a panel of independent experts, to act as arbitrators in case of dispute. Decisions could be defined as non-binding (in which case a further escalation mechanism is required), or binding.
- **International arbitration**—the last resort for many PPPs is international arbitration, which can be under a permanent arbitration institution such as the International Centre for Settlement of Investment Disputes (see *Box 3.10 - International Centre for Settlement of Investment Disputes)* or involve ad hoc arrangements such as an international expert panel.

More than one of these approaches may be used, to allow for escalation of disputes should simpler methods fail. For example:

- **Chile concessions.** The dispute resolution mechanism for PPP contracts in Chile was established in the Concessions Law, and centers on the role of an independent panel of experts, as set out in **Jadresic's review of Chile's experience with expert panels** (Jadresic 2007, 25–26). A conciliation panel of experts is established for each contract, comprising three experts—one chosen by the government, one by the private party, and a third by mutual agreement. The conciliation panel may be called on to propose conciliatory terms to resolve disputes for agreement by the parties. If agreement cannot be reached, the private party can either request the conciliation panel become an arbitration panel (and reach a binding decision), or refer to the court system.
- **Bucharest Water Service Concession.** The dispute resolution mechanism is defined in the PPP contract. It involves an economic regulator, a technical regulator housed in the municipal government, with recourse to an international panel of experts in case of appeal.
- In **Mexico, the Federal Law on Acquisitions, Leases and Services** (MX 2014) sets out the procedures for conflict resolution during the implementation of the PPP contract. The Secretaría de la Función Pública is the organization in charge of handling these processes. The law states that interested party must request for dispute resolution support from the Secretary. The Secretary facilitates a dispute resolution meeting. Any agreements reached through this procedure will be binding, and the parties involved must produce a report showing the progress made in implementing the agreement reached.
- In **Uruguay**, **the Law on PPP Contracts** (UY 2011) prescribes that the parties must agree on an ad hoc arbitration panel to solve any disputes.

The standardized contracts listed in *Table 3.1 - Examples of Standardized PPP Contracts and Contract Clauses* provide further examples of dispute resolution clauses and options.

3.4.5 Termination Provisions

In most cases, PPP contracts have a defined term. The contract typically sets out the contract termination date and arrangements for contract close and asset handover. The PPP contract, or in some cases the relevant PPP Law, should also specify circumstances in which the contract may be terminated early, and the consequences of termination in each case.

Contract term and asset handover

The PPP contract typically defines the contract term, and arrangements for any handover of project assets to the government. The most common approach is for the government to choose the contract term, in the draft contract, as the best estimate of the time needed for the private party to achieve its required return, at reasonable tariffs or payment levels. A second option, with a similar result, is to define tariffs or annual payments, and enable the contract length to be determined by bidders as one of the key bid variables. This approach was used, for example, in **Mexico's toll road program** (Fisher and Babbar 1996), where concessions were awarded to the bidder offering the shortest term.

A third alternative is to let the length of the concession be determined endogenously, as described by **Kerf et al** (Kerf et al. 1998, 83), by inviting bids on the basis of the **least present value of revenue (LPVR)**. This means the concession terminates when that value is reached—the higher the traffic, the sooner the concession terminates. This approach was set out by **Engel, Fischer and Galetovic** (Engel et al. 2002) to manage the risk of fixed-term concessions and has been used for toll roads in Chile and Colombia.

Kerf et al (Kerf et al. 1998, 81–82) and **Iossa et al** (Iossa et al. 2007, 73–78) both describe the trade-off between a shorter concession term—enabling the government to go back to the market to re-tender the concession—against the disincentive this can create for concessionaires to invest, particularly towards the end of the concession.

Given this disincentive, PPP contracts need to clearly define the approach to transition of assets and operations at the end of the contract. This typically includes defining how the quality of the assets will be defined and assessed, when and how to review asset condition ahead of the end of the contract (ideally several years prior), whether a payment will be made on asset handover, and how the amount of any payment will be determined. It can be particularly challenging to define handover standards at the start of a long-term contract. In addition, it may be difficult to get the private party to fulfill its investment commitments towards the end of the concession period. The following resources describe some possible approaches:

- The **World Bank's toolkit for PPPs in roads and highways** (WB 2009a, Module 5, Stage 5) describes how asset standards at handover can be defined in terms of the remaining useful life of different parts of the asset.
- **Australia's standard commercial principles** (AU 2011b, 120–124) specify use of an independent assessor, appointed near the end of the contract term, to assess the quality of the assets, and define the required handover condition.
- **The United Kingdom's standard PFI contract** (UK 2007) requires inspection around two years before the end of the contract, on the basis of which any work required to bring the facility up to the required standard is specified. Fee payments may be withheld by the contracting authority and released only when the required work is carried out.

EPEC Guide to Guidance (EPEC 2011b, 42) describes how bonds or guarantees can be used to ensure asset quality at handover.

Provisions for early termination

The PPP contract needs to set out the conditions under which the contract may be terminated early, in which case the ownership of the project assets typically reverts to the public sector. This includes who may terminate and for what reason, and what if any compensation payment will be made in each case.

There are three broad possible reasons for early termination:

- Default by the private party
- Termination by the public party, whether due to default or for reasons of public interest
- Early termination due to an external reason (*force majeure*)

In each case, the government typically makes a payment to the private party and takes over control of the project assets, which may be re-tendered under a new PPP contract. Contractually-defined termination payments typically depend on the reason for termination, as summarized in *Table 3.2 - Types of Early Termination and Termination Payments*.

Table 3.2 Types of Early Termination and Termination Payments

Termination	Typical Triggers	Defining Termination Payment
Private party default	• Failure to complete construction • Persistent failure to meet performance standards • Insolvency of project company Lenders are typically given step-in rights to enable them to remedy problems due to an under-performing contractor—termination only occurs if this is ineffective, or if lenders choose not to do so	Termination payments are typically defined to ensure equity-holders bear the burden of default. Lenders may also be exposed to some possible loss—to strengthen their incentives to rectify problems—although this can affect bankability. Options include: • Full value or a specified proportion of outstanding debt • Depreciated book value of assets • Net present value of future cash flows (subtracting costs of rectification) • Proceeds of re-tendering the concession on the open market—thereby also overcoming the possible difficulty of finding budget space for termination payment obligations that are realized unexpectedly
Public party default	Public party fails to meet its obligations under the contract	A fair contract should ensure the private party does not lose out if the public party chooses to default. Termination payments in this case are typically set to the value of debt **plus** some measure of equity, and may also include lost future profits (if any)
Termination for public interest	Many PPP or public procurement laws allow the contracting entity to terminate for reasons of public interest	Typically, should be treated in the same way as public party default; otherwise creates perverse incentives to voluntarily terminate instead of default (or vice versa)
Prolonged *force majeure* damage	Should be carefully defined in the contract and limited to uninsurable, prolonged force majeure events that preclude performance of obligations	Typically, in between the two options above, since neither party is at fault

Box 3.10 International Centre for Settlement of Investment Disputes (ICSID)

ICSID, part of the World Bank Group, is an autonomous international institution established in 1966 under the *Convention on the Settlement of Investment Disputes between States and Nationals of Other States* (known as the ICSID or the Washington Convention) with over 153 member States. ICSID provides facilities and services for the settlement international investment disputes. In addition, it offers fact-finding proceedings to examine and report on facts before a dispute arises.

The ICSID Convention sought to remove major impediments to the free international flows of private investment posed by non-commercial risks and the absence of specialized international methods for investment dispute settlement. ICSID was created by the Convention as an impartial international forum providing facilities for resolving legal disputes between private investors and host states through conciliation or arbitration procedures. Recourse to the ICSID facilities is always subject to the parties' consent. Its main advantage, in comparison to other arbitration mechanisms, is that the ICSID Convention provides for a specialized and completely delocalized arbitration mechanism and the enforceability of awards.

The ICSID website (ICSID 2017) provides more information and examples of international dispute settlements—including cases concerning roads, railways, ports, airports, energy, waste, water, wastewater, and other sectors. Many awards are available on the website, in either English, French, and/or Spanish (ICSID-Cases). The website also provides a set of model clauses regarding conciliation and arbitration—in English, French, and Spanish. ICSID also maintains a Panel of Arbitrators and a Panel of Conciliators (mediators) (ICSID-Panels).

Some of these approaches to defining the termination payment—particularly when linked to the value of the project assets—require careful definition.

The following resources provide more guidance on termination causes, arrangements, and payments:

- **EPEC Guide to Guidance** (EPEC 2011b, 40–42) describes each of these causes of termination and the options for defining termination payments in each case.
- A more detailed **EPEC publication on termination provisions** (EPEC 2013) provides a review of current European practice and guidance on termination and force majeure provisions in PPP contracts.
- **Yescombe** (Yescombe 2007) also describes termination causes and options for termination payments, in greater detail.
- **Ehrhardt and Irwin** (Ehrhardt and Irwin 2004, 46–49) note that many PPP termination clauses protect lenders from any losses (that is, do not allow the PPP company to go bankrupt)—they describe why this can cause problems, and how bankruptcy could be a realistic option.
- **Clement-Davies on PPPs in Central and Eastern Europe** (EBRD 2007, 46) provides more information on lenders' step-in rights.

The standardized contracts listed in *Table 3.1 - Examples of Standardized PPP Contracts and Contract Clauses* also provide further examples of termination clauses in practice.

Notwithstanding careful provisions in the contract, early termination is typically costly for both parties, and is a last resort when other avenues have been exhausted. As described in the **EPEC Guide to Guidance** (EPEC 2011b, 40), this means the contractually-defined termination payments are important even if termination does not happen, since it defines the fallback position of each party in any dispute resolution or renegotiation.

Early termination payments are usually tailored in such a way that debt providers always have an interest in keeping the contract alive and services operational, thereby inducing them to step-in before issues of poor performance lead to default by the private party.

Key References: Designing PPP Contracts

Reference	Description
EPEC. 2011b. *The Guide to Guidance: How to Prepare, Procure, and Deliver PPP Projects*. Luxembourg: European Investment Bank, European PPP Expertise Centre.	Section 2.2.5 on preparing the draft contract briefly describes typical contract content; Box 3 provides more detail on defining payment mechanisms. Section 4 on project implementation describes dealing with change within the contract, dispute resolution, and termination.
WB. 2009a. "Toolkit for Public-Private Partnerships in Roads and Highways." World Bank. Website.	Module 4: "Laws and Contracts" includes a section on contracts describing PPP contract types and typical contract contents and provisions, including sample boiler plate clauses. The section on agreements, bonds and guarantees describes other common elements of the contractual structure, including agreements with lenders.
AU Guidelines. Accessed March 20, 2017. "National Guidelines for Infrastructure Project Delivery." Canberra: Australian Government, Department of Infrastructure and Regional Development. Website.	Set out why and how key risks and responsibilities should be allocated in the contract, for social infrastructure (government pays) (AU 2008) and economic infrastructure (user pays) (AU 2011b). The roadmap document (AU 2011a) describes the process of developing the contract, and provides guidance on deciding which set of commercial principles to use.
PPPIRC. Accessed March 13, 2017a. "PPP Arrangements / Types of Public-Private Partnership Agreements." Public-Private Partnership in Infrastructure Resource Center. Website.	The PPP in Infrastructure Resource Center hosts a collection of actual PPP contracts and sample agreements for a range of contract types and sectors.
Farquharson, Edward, Clemencia Torres de Mästle, E. R. Yescombe, and Javier Encinas. 2011. *How to Engage with the Private Sector in Public-Private Partnerships in Emerging Markets*. Washington, DC: World Bank.	Chapter 4 on selecting projects includes a section on specifying output requirements, and defines and provides examples of SMART output specifications.
HK. 2007. *Serving the Community By Using the Private Sector: A User Guide to Contract Management*. Hong Kong, China: Efficiency Unit.	Guide to contract management, in the context of outsourcing services. Includes several sections relevant to designing PPP contracts, including developing service specifications, and dealing with termination and dispute resolution.
UK. 2010a. *Output-Based Specifications for PFI/PPP Projects: Version 0.2 Consultation Draft*. London: Ministry of Defence.	Provides detailed guidance on output-based specification, and a process for developing the specification for a PPP project.
Iossa, Elisabetta, Giancarlo Spagnolo, and Mercedes Vellez. 2007. *Best Practices on Contract Design in Public-Private Partnerships*. Washington, DC: World Bank.	Provides guidance on several elements of contract design, including risk allocation, designing the payment mechanism, building in flexibility and avoiding renegotiation, contract duration, and other contractual issues to do with dealing with change.
UK. 2007. *Standardization of PFI Contracts: Version 4*. London: UK Government, HM Treasury.	Provides detailed guidance and standard wording where appropriate on every aspect of the PPP contracts used for United Kingdom PFI PPPs (predominantly user-pays). The website http://www.hm-treasury.gov.uk/ppp_standardised_contracts.htm provides additional materials, including marked up versions showing changes made to previous versions.
Kerf, Michael, R. David Gray, Timothy Irwin, Celine Levesque, Robert R. Taylor, and Michael Klein. 1998. "Concessions for Infrastructure: A guide to their design and award." World Bank Technical Paper No. 399. Washington, DC: World Bank.	Section 3: "Concession Design" provides detailed guidance on designing PPP contracts, focusing on contracts in which the private party provides services directly to users. Topics covered include allocating responsibilities, price setting and adjustment, performance targets, penalties and bonuses, termination, dealing with unforeseen changes, and dispute settlement
4ps. 2005. *4ps Review of Operational PFI and PPP Projects*. London: Public-Private Partnerships Programme.	Summarizes the results of interviews with stakeholders in operational PPP projects in the United Kingdom. Includes sections with lessons learned on output specification, payment mechanisms, and contract flexibility

Reference	Description
ZA. 2004a. *Public Private Partnership Manual*. Pretoria: South African Government, National Treasury.	Module 6 of the manual, "Managing the PPP Agreement" briefly outlines how performance requirements, monitoring and enforcement mechanisms should be established. The standardized PPP provisions set out and explain key provisions across all elements of the PPP contract.
SCT. 2004. *Output Specification – Building our Future: Scotland's School Estate*. Edinburgh: Scottish Executive.	Sets out model output specifications for schools PPP projects as well as some guidance on key issues in defining output-based specifications.
US. 2011. *Key Performance Indicators in Public-Private Partnerships: A State-of-the-Practice Report*. Washington, DC: United States Government, Department of Transportation, Federal Highway Administration.	A state-of-the practice description of domestic and international practices for key performance indicators in PPPs, based on a comprehensive literature review and eight case studies from Australia, British Columbia, the United Kingdom and the United States.
PPIAF. 2006. *Approaches to Private Sector Participation in Water Services: A Toolkit*. Washington, DC: Public-Private Infrastructure Advisory Facility.	Section 6.3: "Designing Risk Allocation Rules" describes several aspects of PPP contract design for user-pays PPPs—including payment mechanisms, and termination clauses. Section 7 on developing institutions to manage the relationship includes a discussion on dispute resolution.
Irwin, Timothy C. 2003. "Public Money for Private Infrastructure: Deciding When to Offer Guarantees, Output-Based Subsidies, and Other Fiscal Support." Working Paper No. 10. Washington, DC: World Bank.	Describes different payment mechanism for subsidies to infrastructure projects—including output-based payments and upfront capital subsidies—and how the government can decide which is most appropriate.
Yescombe, E.R. 2007. *Public-Private Partnerships: Principles of Policy and Finance*. Oxford: Butterworth-Heinemann.	Chapter 13: "Service-fee Mechanism" describes the different possible payment mechanisms (focusing on government-pays PPPs) and their implications for risk allocation and bankability. Chapter 15: "Changes in Circumstances and Termination" describes mechanisms to deal with changing costs and risks (compensation and relief events), step-in and substitution, and termination payment provisions for different causes of termination.
SCT. 2007. *Briefing Note 1: Payment Mechanisms in Operational PPP Projects*. Edinburgh: Scottish Government.	Describes experience with defining and implementing government-pays payment mechanisms in PPPs.
HK. 2008. *An Introductory Guide to Public Private Partnerships*. Hong Kong, China: Efficiency Unit.	Section 9: "Changes of Circumstance" provides guidance on the types of changes that the PPP contract should be able to deal with.
Jadresic, Alejandro. 2007. "Expert Panels in Regulation of Infrastructure in Chile." Working Paper No. 2. Washington, DC: Public-Private Infrastructure Advisory Facility.	Describe the expert panel approach used in Chile to deal with regulatory conflict. Section 6 focuses on the use of expert panels in public works concession contracts.
Ehrhardt, David, and Timothy C. Irwin. 2004. "Avoiding Customer and Taxpayer Bailouts in Private Infrastructure Projects: Policy toward Leverage, Risk allocation, and Bankruptcy." World Bank Policy Research Working Paper 3274. Washington, DC: World Bank.	Describes the problems associated with protecting lenders from losses in case of termination due to private party default, and provides some policy suggestions for alternatives.
EBRD. 2007. *Law in Transition 2007: Public-private partnerships and legal reform in Russia*. London: European Bank for Reconstruction and Development.	Discusses some of the main issues in developing concession agreements in transition countries—including risk allocation, tariff structure, performance standards, dealing with change, termination and step-in rights for lenders.
Cassagne, Juan Carlos, and Gaspar Ariño-Ortiz. 2005. *Servicios Públicos: Regulación y Renegociación*. Buenos Aires: Abeledo-Perrot.	Describes regulatory reform in public services, including achieving regulation through effective PPP contracts. Includes guidance on mechanisms for tariff changes, and for dispute resolution.

3.5 Managing PPP Transactions

In the transaction stage, the government selects the private party that will implement the PPP. This process will also determine the effective terms of the contract. This stage follows the structuring, appraisal, and detailed preparation of the PPP described in the previous sections of this module. It concludes when the PPP reaches financial close—that is, when the government has selected and signed a contract with a private party, and the private party has secured the necessary financing and can start deploying it in the project.

The aim of the PPP transaction stage is twofold:

- To select a competent firm or consortium
- To identify the most effective and efficient solution to the proposed project's objectives—both from a technical, and value for money perspective

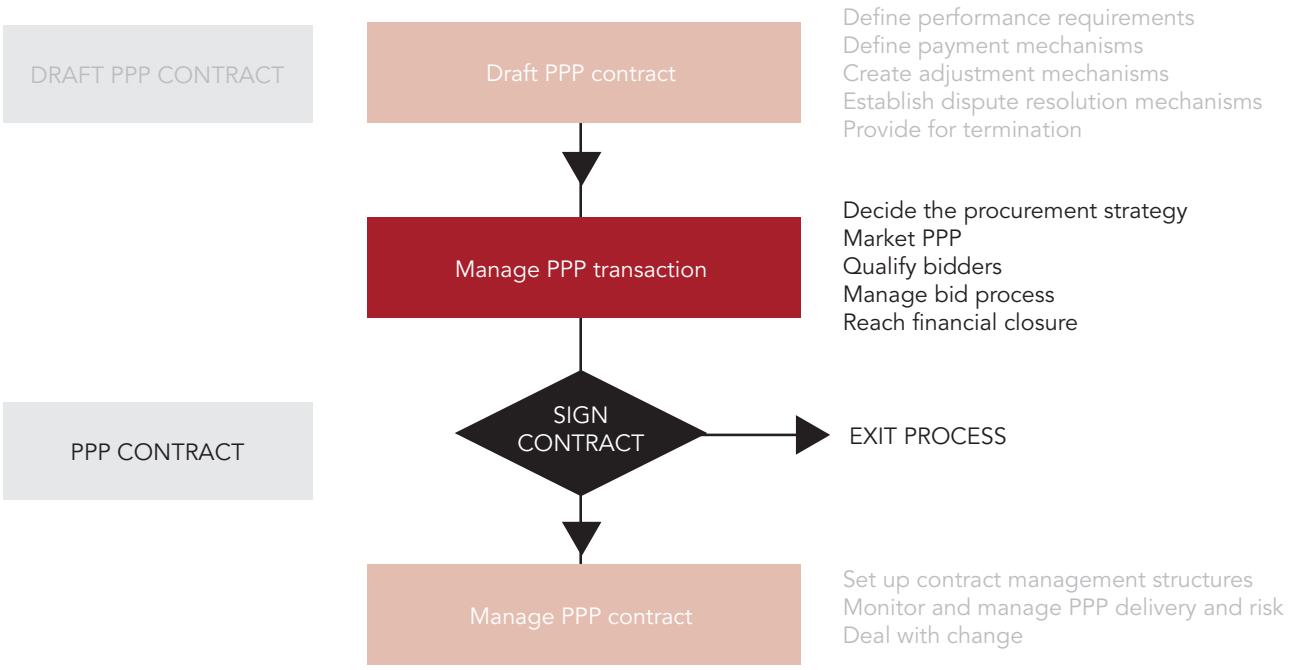
To the latter end, the process typically establishes some of the key quantitative parameters of the contract, such as the amounts the government will pay or the fees users will pay for the assets and services provided. Achieving these objectives generally requires a competitive, efficient, and transparent procurement process, as outlined in the **PPIAF toolkit for PPPs in roads and highways procurement section** (WB 2009a) under *competitive bidding*; in the **Caribbean PPP Toolkit** (Caribbean 2017, Module 5); and by **Farquharson et al** (Farquharson et al. 2011, 112) in describing the outcome of the procurement phase.

Since most governments use a competitive selection process to procure PPP contracts as the best way to achieve transparency and value for money, this section assumes a competitive process is followed. In practice, there may be a few circumstances where direct negotiation could be a good option. However, many reasons put forward to negotiate directly are spurious, as described in *Box 3.11 - Competitive Procurement or Direct Negotiation*.

Box 3.16 - Direct Negotiation of Unsolicited Proposals outlines several preparation requirements for those procuring authorities that need to directly negotiate an unsolicited proposal.

The transaction stage typically includes the following five steps, as shown in *Figure 3.7 - Transaction Steps*:

Figure 3.6 Managing PPP Transactions



Box 3.11 Competitive Procurement or Direct Negotiation

A competitive selection process is the recommended route to procure PPP contracts. Key advantages are transparency and use of competition to choose the best proposal—the mechanism most likely to result in value for money. The alternative to a competitive process is to negotiate directly with a private firm.

There can be good reasons to negotiate directly, but these are relatively few—see for example Kerf et al's guide to concessions (Kerf et al. 1998, 109–110) and the World Bank (2017) Guidelines for the Development of a USP Policy (WB 2017d) sections on direct negotiation. These reasons include:

- Small projects with known costs, where the costs of a competitive process would be prohibitively high given the level of expected returns;
- Cases where there is good reason to believe there would be no competitive interest—for example, small extensions of an asset for which a contract is already in place; and
- The need for rapid procurement in the case of emergencies and natural disasters, where speed may outweigh value for money considerations, although this is often not the case when dealing with PPPs, better able to deal with long-term needs than with urgencies.

Whenever a government allows for direct negotiations under specific circumstances, these circumstances and their associated criteria should be clearly specified in the procurement legal framework. Direct negotiations should only be pursued once suitable safeguards for value for money, transparency, accountability, and public interest have been established and operationalized.

On the other hand, several reasons commonly put forward to negotiate directly with a private proponent of a PPP can be misleading—see the section in PPIAF's toolkit for PPPs in roads and highways (WB 2009a), *Module 5: Procurement* on *overall principles for procurement*. For example, some argue direct negotiation is faster—though in practice, challenges often make the process longer. Often, direct negotiation is also considered when a PPP idea originated from an unsolicited proposal from a private company. However, there are ways to introduce competition in this case that help ensure value for money from the resulting project, as described in *Section 3.7 - Dealing with Unsolicited Proposals*. Based on these considerations, some countries do not allow non-competitive procurement processes at all,such as Brazil, under the Federal PPP Law of 2004 (BR 2004a). Elsewhere, direct negotiation may be allowed in particular circumstances. For example, Puerto Rico's PPP Act allows for direct negotiations if the investment value is under $5 million, there is lack of interest after issuing an RFP, the normal procurement process is burdensome, unreasonable, or impractical, or the technology required is only available from a single company (PR 2009, Article 9.(b).ii).

- **Deciding on a procurement strategy**, including the process and criteria for selecting the PPP contractor
- **Marketing the upcoming PPP project** to interest prospective bidders (as well as potential lenders and sub-contractors)
- **Identifying qualified bidders** through a qualification process, either as a separate step before requesting proposals or as part of the bidding process
- **Managing the bid process**, including preparing and issuing a Request for Proposal, interacting with bidders as they prepare proposals, and evaluating bids received to select a preferred bidder
- **Executing the PPP contract and ensuring all conditions are met to reach contract effectiveness and financial close**—this may require final approval from government oversight agencies

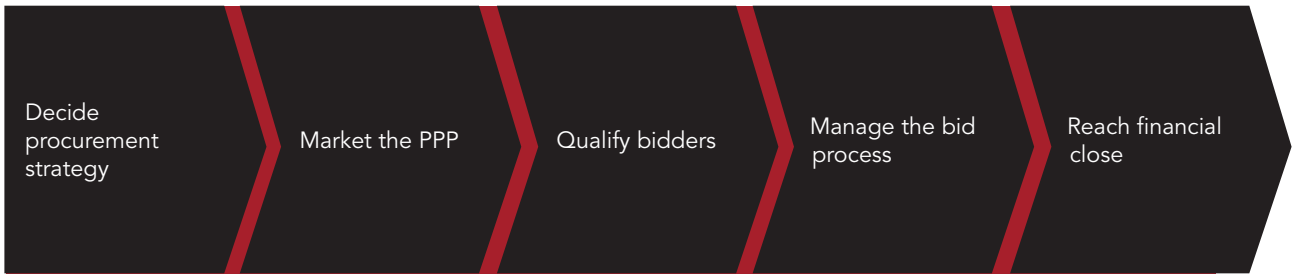
Section 3.5 - Managing PPP Transactions describes each of these steps, and provide further resources and tools for practitioners interested in managing PPP transactions.

3.5.1 Deciding the Procurement Strategy

The first step in managing a PPP transaction is defining the procurement strategy. This includes defining the following key aspects of the procurement process:

- **Pre-qualification**—whether to use a pre-qualification process to select the firms or consortia that will participate in the bidding process

Figure 3.7 Transaction Steps



- **Bid process**—whether to use a single-stage process to select the preferred bidder, or a multi-stage process in which proposals and the bidding documents may be reviewed and iterated
- **Negotiation with bidders**—to what extent discussions with bidders may lead to changes in the initial draft contract: either during the bidding process (with multiple bidders), or after final bids have been submitted
- **Basis for award**—whether to rank proposals and choose the preferred bidder based on a single financial or value-related criterion (after screening for technical merit), or some weighted evaluation of financial and technical criteria

This section briefly describes each of these aspects, with links to guidance, resources and examples in each case. An additional point for consideration, also described in this section, is dealing with bid costs—whether to charge a fee or require a bond to participate in the bid process; or conversely whether to provide support with bid costs.

The **main goals** of the procurement strategy, as described above, are both to find the best solution to the project's objectives (from a technical and value for money perspective), and to select a competent firm or consortium to implement that solution. This typically requires a fair, competitive, transparent, and efficient procurement process. However, the best procurement strategy to achieve these objectives may depend on the context. For example, allowing dialogue with bidders can lead to stronger proposals. However, it can also make the process less transparent—so may not be the right choice in a country where achieving transparency and minimizing the risk of corruption is the more important consideration. This means the best procurement process may depend on the country context, and the nature and capacity of the government institutions involved, as well as on the characteristics of the particular project.

Figure 3.7a Procurement Strategy

There may also be some **constraints** in how the procurement strategy can be defined. Firstly, as described in *Section 2.2 - PPP Legal Framework*, the procurement strategy for a PPP may be constrained by any laws or regulations on overall government procurement. Moreover, many governments choose to set PPP-specific procurement rules, in PPP laws, regulations or guidance material—that is, defining the procurement strategy for the PPP program as a whole rather than on a project-by-project basis. Doing so can improve transparency of PPP procurements; although there are also advantages to retaining flexibility to adapt processes to the needs of particular projects. *Table 3.3 - Examples of PPP Procurement Procedures* provides examples of PPP procurement procedures as defined in national or international laws and regulations. Finally, where the project involves funding from a multilateral development bank or other agency, the procurement options may also be constrained by the procurement rules of the funding agency. For example, the World Bank publishes and regularly updates regulations and guidance on its **Procurement Framework** (WB 2017f), which any project with World Bank funding must follow—the framework includes specific recommendations for procurement of PPPs.

Qualifying bidders

Most bidding processes set out qualification criteria that all participating firms must meet. Requiring bidders to set out their

qualifications helps ensure a competent firm is selected with the capacity to implement the project. Clear qualification requirements can also encourage experienced firms to participate, and to invest in preparing quality proposals, as it reduces the risk that the bid process will be undermined by low-quality firms submitting very low bids.

Most governments require bidders to pre-qualify—that is, check bidders' qualifications before the start of the tender process, with a view to capping the number of bidders. Typically, pre-qualification involves ranking potential bidders according to specified qualification criteria. The top-ranking bidders—usually between three and six—are then invited to submit proposals.

The alternative is to set pass/fail qualification criteria, and qualify and invite proposals from all firms that pass. While this approach can be used in a pre-qualification process, it is more typically done simultaneously with the bidding process—sometimes called *post-qualification*. Under this approach, bidders can self-screen against the published qualification criteria before investing resources in preparing a proposal. For a few, large and very complex process the self-selection process (aided by the due-diligence that financing parties will exert upon prospective bidders) may be sufficiently stringent that no qualification is needed.

Prequalification has both advantages and disadvantages:

- The main **advantage** is in limiting the number of bidders. By reducing the number of bidders, the probability of success increases, and bidders may be incentivized to invest more effort in developing an efficient project and presenting a competitive bid. At the same time, the effort and resources required from government to evaluate bids can be reduced.
- The main **disadvantage** is that making public the list of pre-qualified bidders may enable collusive behavior. Moreover, pre-qualifying a set number of bidders can mean the same top-ranking firms tend to be invited to bid in a given sector, providing further temptation for collusion in the bidding process.

In some developing countries (particularly with new PPP programs) the problem can be too few rather than too many bidders—in this case, there may be no advantage to pre-qualification, and it may unnecessarily extend the procurement process.

The following resources provide more discussion and detail on the pros and cons of pre-qualification:

- **PPIAF's toolkit for PPPs in roads and highways** (WB 2009a) includes a section: *Concessions: Main Steps in competitive bidding.*
- **Farquharson et al** (Farquharson et al. 2011, 118–120) describes the pre-qualification process, some of its advantages and disadvantages, and the possible pitfalls. The authors also describe the option of a pre-revision phase, in countries where pre-qualification is not allowed by procurement law.

In practice, country approaches vary. For example, **Infrastructure Australia Practitioner's Guide** (AU 2015, 16) recommends using pre-qualification to select a particular number of bidders—at least three, sometimes more. On the other hand, **Singapore PPP Handbook** (SG 2012, 60) precludes pre-determining the number of qualified bidders, because this would limit competition. *Table 3.3 - Examples of PPP Procurement Procedures* provides more examples of PPP procurement processes, including whether and what type of pre-qualification process is included.

Bid process

The bid process is the process from issuing Requests for Proposal to select a preferred bidder. The quickest and simplest is a **single-stage bid process**, in which bidders present both technical and financial proposals, which are evaluated to select the preferred bidder.

The alternative is a **two or multi-stage bid process**. Under this approach, bidders present an initial proposal, which may include comments on the RFP and draft contract, and may or may not include a financial bid. Based on these proposals, the government reviews and possibly revises the RFP and draft contract, and requests revised proposals accordingly. The government may engage in discussion with bidders to varying extent, as described under *Negotiation with bidders: during bidding process.* The government may also eliminate some bidders at this stage, and the revision process may be repeated more than once. Bidders then submit final proposals, including a final financial bid.

A multi-stage process can have advantages over a single-stage process for complex projects, particularly where there is room for innovation. It can help ensure solutions are aligned to needs, and improve final quality of proposals. On the other hand, the multi-stage process is longer, more complex to manage and more expensive for all parties involved. Care needs to be taken to retain competitive pressure, protect intellectual property, and maintain transparency.

Table 3.3 Examples of PPP Procurement Procedures

Example	Reference	Pre-qualification	Bid Process	Negotiations with Bidders	Basis for Award
Brazil	Federal Concessions Law (BR 1995, Law 8987) and Federal PPP Law (BR 2004a, Law 11079)	No mandatory pre-qualification step	One-stage bid process	No language in law about negotiations with bidders during tender	Lowest tariff or largest payment to government or a combination of the two. If tied, implementing agency must hire Brazilian company.
Chile	Concessions Law (CL 2010b, Law 20410)	Pre-qualification based on any of five elements stated in the law: legal compliance, technical and financial experience, results of previous public works, and compliance with labor and social security laws	One-stage bid process	No language in law about negotiations with bidders during the bid process. There guiding language on negotiations during implementation	Financial, or combined financial/ technical
Egypt	Executive Regulations under PPP Law (EG 2011)	Pre-qualification based on set compliance criteria	Can use one-stage process; or a two-stage process with technical and financial bids submitted at both stages. First-stage bids are non-binding	Competitive dialogue allowed in the two-stage procedure, before final bids are submitted	Financial, or combined financial/ technical
EU open procedure	Described in **EPEC Guide to Guidance** (EPEC 2011b, 22)	No pre-qualification	One-stage bid process	No negotiation or dialogue allowed with bidders; clarifications are permitted	Lowest price or most economically advantageous tender
EU restricted procedure	Pre-qualification—number of bidders may be restricted to no less than five	One-stage bid process	No negotiation or dialogue allowed with bidders; clarifications are permitted	Lowest price or most economically advantageous tender	
EU negotiated procedure	Pre-qualification—number of bidders may be restricted to no less than three	On-going multi-stage process of negotiation	Allowed throughout the process	Lowest price or most economically advantageous tender	
EU competitive dialogue	Pre-qualification—number of bidders may be restricted to no less than three	Multi-stage bid process (a variant of the negotiated procedure)	Dialogue permitted on all aspects prior to submitting final bids. No further changes after final bids submitted (clarifications are permitted)	Most economically advantageous tender	
Mexico	Law on Purchases, Leases, and Services to the Public Sector (MX 2014)	No mandatory pre-qualification step	One-stage bid process	No language in law about negotiations with bidders during tender	Combination of technical and financial criteria[1]

Example	Reference	Pre-qualification	Bid Process	Negotiations with Bidders	Basis for Award
Philippines	BOT Law Implementing Rules and Regulations (PH 2006)	Pre-qualification set out as norm; agency may choose simultaneous qualification as an alternative	One-stage bid process	Direct negotiation with a single bidder is allowed if only one firm qualifies and submits a complying proposal	Financial (following pass/fail qualification and technical criteria)
South Africa	South Africa PPP Manual Module 5: Procurement (ZA 2004a)	Pre-qualification—the number of bidders "must be kept to a minimum of three and a maximum of four" where possible	Single stage process, unless there is no clear preferred bidder, in which case a *Best and Final Offer (BAFO)* stage may be added, to invite final bids	Feedback from pre-qualified bidders strongly advised **before** issuing an RFP; clarifications only during proposal preparation and evaluation; dialogue allowed with bidders prior to issuing request for BAFO	Combined financial, technical, and Black Economic Empowerment

The following resources provide more information on the bid process options:

- **Farquharson et al** (Farquharson et al. 2011, 113–114) summarizes the advantage of sequential screening over multiple stages—improving the quality of bids.
- **PPIAF's Toolkit for PPPs in Roads and Highways** (WB 2009a) section: "Concessions: Main Steps in competitive bidding" describes one- and two-stage bid processes.

Many countries' PPP frameworks leave open the decision of whether to use a single or multi-stage bidding process, depending on the nature of the project. Some also leave the option of asking for second bids open to resolve the problem of no clear bidder emerging from a single-stage process. For example, the **South Africa PPP Manual procurement module** (ZA 2004a, Module 5, 51–52) states that a single-stage process with a clear winner is preferred, but that a best and final offer may be requested from two or more bidders. *Table 3.3 - Examples of PPP Procurement Procedures* provides further examples.

Negotiation with bidders: during bidding process

A major difference between procurement approaches in different countries is in the extent to which the government enters into negotiations with bidders. Negotiating at any stage can be challenging, and risks reducing the transparency of the bid process. For this reason, some governments do not allow negotiation on the contract at any stage of the process (although room for negotiation on bidders' proposals may remain).

In a multi-stage bidding process (see *Section 3.5.4 - Managing the Bid Process*), government may choose to dialogue or negotiate with multiple bidders in between bidding stages. This can help clarify aspects of the RFP, draft contract, and bidders' initial proposals, and result in proposals that more closely meet the government's requirements. In other cases, governments may negotiate with a single bidder after a preferred bidder has been selected.

For example, in 2004 the European Commission introduced the competitive dialogue procedure for procuring PPPs in the European Union. Under this process, having received initial bids, the government can enter into a dialogue with bidders on all aspects of the RFP, contract, or proposals, before re-issuing a final version of the RFP documents and inviting final bids. The **United Kingdom Treasury's guidance on the competitive dialogue procedure** (UK 2008) provides more details. In Australia, a similar process may be used, called an *interactive tender*. The **Australian National PPP Practitioners' Guide** (AU 2015, 70–71) describes the interactive tender process; protocols for the process are also provided in an appendix.

Kerf et al (Kerf et al. 1998, 110–112) provide further examples of competitive negotiations, and when it may be useful. The **World Bank's water sector toolkit** (PPIAF 2006, 169–170) also describes the advantages and disadvantages of this approach. In general, competitive negotiation has been used less in less developed countries.

Negotiation with bidders: post-bid

Once a preferred bidder has been identified, governments may then enter into **post-bid negotiation**—that is, further dialogue with that bidder to finalize the PPP contract. If negotiating with a preferred bidder—even if a reserve bidder is maintained as a fallback option—the implementing agency can no longer rely on competitive tension to ensure value for money. This may result in clauses that create additional benefits to the private party or reduce performance requirements. Expectations of post-bid negotiation may attract opportunistic bidders, and consequently discourage more serious bidders, reducing competition during the bid process itself. For this reason, most governments limit the extent of post-bid interaction to clarification and fine-tuning of proposals; some do not allow it at all, particularly where transparency of the process is a primary concern. *Table 3.3 - Examples of PPP Procurement Procedures* provides some examples.

The need for post-bid negotiation typically arises for two reasons: because the RFP requirements or draft contract were not clear, or because they were not acceptable to bidders and their lenders (in particular, with respect to the proposed risk allocation). For either reason, bidders may incorporate changes in their proposals, meaning the proposals no longer fully meet the government's requirements. Some legal frameworks mitigate this issue by mandating that conditional proposals will be excluded.

The following resources provide more guidance on the problems with post-bid negotiations, and whether and to what extent to allow for negotiation or dialogue with a preferred bidder:

- **EPEC's Guide to Guidance** (EPEC 2011b, 31) briefly describes what matters should and should not be subject to negotiation post-bid, and the typical elements of a negotiation framework.
- **Yescombe** (Yescombe 2007) also describes on the risks of post-bid negotiations, and why they typically arise.
- **Kerf et al's** Guide for Concessions (Kerf et al. 1998, 123) focuses on the importance of limiting the extent of negotiation in the post-bid phase, and how this can be achieved.

The best way to avoid the need for post-bid negotiation is to prepare a clear and comprehensive RFP and draft contract. Market sounding and pre-RFP consultation with bidders, as well as hiring experienced advisors, can help ensure the contract structure is acceptable to investors. For particularly complex contracts, the competitive negotiation procedure described above could be the best alternative.

Basis for Award

The government needs to evaluate the proposals received, to rank the proposals and select the preferred bidder. The criteria for doing so typically include the technical merit of the proposal, and some measure of their cost—given the overall aim of achieving value for money, or the optimum combination of costs and benefits. There are two, broad options for how proposals will be evaluated and the preferred bidder selected:

- **Selection based on financial criteria**—one approach is to undertake the evaluation in two stages, with the final selection based on the financial bid variable(s). Under this approach, technical proposals are evaluated first, on a pass-fail basis—only bidders that pass the technical evaluation proceed to the financial evaluation. The winning bidder is selected on the basis of the best financial proposal from those that passed the technical evaluation. In certain countries, concerns over corruption lead governments to focus on objective criteria, such as the user fee or annual availability payment. Therefore, they only require a financial proposal—quality is screened through the qualification of bidders.
- **Selection based on financial and technical criteria**—in some cases, proposals are evaluated based on a weighted combination of financial and technical criteria. This more closely encapsulates the idea of maximizing value for money. On the other hand, defining appropriate, quantitative criteria and how they will be weighted can be difficult and rely on subjective judgment by the evaluation team, which can undermine transparency of the tender process. These technical criteria also function as incentives for bidders to focus on particular technical issues when preparing proposals.

The following resources further describe these options, with examples:

- **PPIAF's Toolkit for PPPs in Roads and Highways**, in the section: *Concessions: Main Steps in competitive bidding*, describes

evaluation rules, financial evaluation criteria, and the multiple-parameter approach. This section also presents the evaluation criteria for 13 Latin American road concessions.

- The **Caribbean PPP Toolkit** (Caribbean 2017, Module 5,6) presents and discusses several examples of award criteria for PPP projects.
- **Kerf et al** Guide to Concessions (Kerf et al. 1998, 118–123) has sections on technical and financial proposal evaluation. These describe choices regarding technical and financial criteria, and the pros and cons of a combined score approach, with examples in each case.

The best option, and the specific financial and technical criteria, may depend on project characteristics. It may also depend on the capacity of the public sector to undertake more complex evaluations, or on the risk of corruption, or perceived corruption, which could make transparency the most important objective.

Many governments allow either approach to be used. In **Brazil**, both the Federal Concessions Law (for user-pays PPPs) (BR 1995, Article 15) and the Federal PPP Law (for government-pays PPPs) (BR 2004a, Article 12) allow both approaches. In all cases, the approach and criteria should be set in advance, and clearly communicated to potential bidders. *Section 3.5.4 - Managing the Bid Process* provides more guidance and resources on selecting the specific evaluation criteria.

Bid Bonds

Many governments require bidders to submit a bid bond, to ensure commitment to the process, and prevent the winning bidder from withdrawing without good cause. For example, the **Spanish procurement law** (ES 2011) prescribes that bidders should provide a temporary guarantee to back their proposal and increase it to meet the definitive guarantee once the contract is awarded. The **Philippines BOT Law** (PH 2006, Section 7.1 Clause b (vi)) implementing regulations require a bid bond of between one and two percent of the estimated project cost. **Kerf et al's guide to concessions** (Kerf et al. 1998, 126) provides further examples, and briefly describes the pros and cons of requiring a bid bond. The authors note, for example, that the United Kingdom government discourages the use of bid bonds for PPP projects on the basis that they are expensive, and should only be sought in exceptional circumstances.

Approach to Bid Costs and Payments

Preparing a proposal for a PPP project is an expensive exercise. Equally, running a high-quality procurement process for a PPP is costly to government. Governments have different approaches to dealing with bid costs and commitments.

Governments have found different ways to deal with bid preparation costs. In some jurisdictions, the government may share bid costs, to encourage more bidders to participate. For example, **Australia's** PPP Practitioners' Guide (AU 2015, 29) states that bid costs may be reimbursed, but only in very limited and clearly defined circumstances. Conversely, **Chile** has a mechanism for asking pre-qualified bidders to jointly finance the engineering and other studies needed for the government to prepare for the transaction (CL 2010b). This was an element of the reform to the PPP law that took place in 2010.

A **KPMG review of PPP procurement in Australia** (KPMG 2010) describes typical bid costs for the private party to a PPP in different countries. The report also draws on a survey of PPP practitioners to provide recommendations for how bid costs can be reduced. These recommendations focus on improving the efficiency of the PPP procurement process, as well as touching on the pros and cons of governments contributing to bid costs.

3.5.2 Marketing the PPP

Marketing the PPP helps attract bidders and investors. This is particularly important in the early stage of a PPP program—governments need to make a positive effort to build bidder interest to increase competitive pressure. Marketing also helps identify who might be the potential bidders. This can feed into designing qualification criteria to avoid a situation where no firms qualify—as described in **Kerf et al** (Kerf et al. 1998, 114).

At a minimum, marketing the PPP requires advertising the launch of the tender process. Many governments have requirements for how PPP tenders should be advertised. For example, the **EPEC Guide to Guidance** (EPEC 2011b, 27) notes that EU governments must publish a notice in the *Official Journal of the European Union*. The **South Africa PPP Manual** (ZA 2004a, 24) describes that the procurement must be advertised in the *Government Gazette*, on the institution's website, and through press advertisements. The **Caribbean PPP Toolkit** (Caribbean 2017, Module 5, Section 5) discusses the marketing of PPPs and presents practical examples.

Figure 3.7b Marketing the PPP

Some governments take a more proactive approach to marketing to generate investor interest prior to the official project launch. This could include:

- Conducting investor presentations, meetings, or road shows to present the project. The scale and location of meetings can be tailored to the expected interested investors—for example, whether likely to be local or international.
- Releasing teaser material about the project. This could include publishing material in industry publications, such as Global Water Intelligence, or dedicated project development platforms, such as Zanbato.

There is limited guidance material available on marketing PPP projects. **Farquharson et al** briefly describes the advantage of releasing information about the project prior to the formal launch, to attract bidder interest (Farquharson et al. 2011, 10). It also describes the value of marketing a pipeline of projects, rather than a single opportunity. Particularly for new PPP programs, this gives investors a stronger incentive to engage.

The GI Hub has developed the freely-available *Global Infrastructure Hub Project Pipeline* (GIH 2016b) to assist governments in marketing PPP projects. The Pipeline allows governments to provide the market with early visibility of their projects and choose at what stage of a project's development the marketing campaign should begin. The Pipeline also gives the governments the ability to demonstrate the progress of their projects through different stages of development.

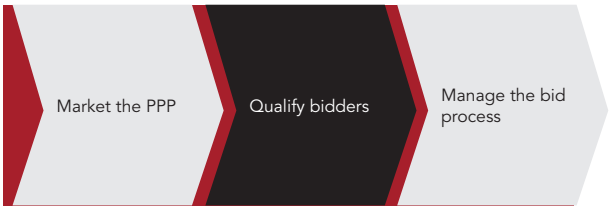
3.5.3 Qualifying Bidders

The next step is often to carry out a bidder pre-qualification process to select the companies and consortia that will be invited to submit proposals. Not all countries select qualified bidders in advance, instead assessing qualifications as part of an open bidding process. The pros and cons the two approaches are described in *Section 3.5.1 - Deciding the Procurement Strategy*.

The pre-qualification process consists of preparing and issuing the Request for Qualifications (RFQ)—along with advertising the launch of the tender process, as described in *Section 3.5.2 - Marketing the PPP*—and evaluating the information received to select a group of qualified bidders.

The **Caribbean PPP Toolkit** (Caribbean 2017, Module 5, Section 6.4) discusses qualification criteria. **Farquharson et al** (Farquharson et al. 2011, 113–120) describes the purpose of pre-qualification, typical types of criteria and processes, and provides brief guidance on project launch. The **EPEC Guide to Guidance** (EPEC 2011b, 27–28) also provides a helpful overview of the pre-qualification process.

Figure 3.7c Bidder Qualification



Preparing and issuing the Request for Qualifications

For procurements that include a pre-qualification stage, the procurement process is officially launched when the Request for Qualifications (RFQ) is issued. The RFQ typically includes enough information on the project for potential bidders to decide whether they are interested, and information on how the project will be procured. It should also clearly set out the process and requirements for the qualification process.

Information on the project at this stage could include an overview of technical and service requirements, key commercial terms (although not typically a draft contract), and a list of the further information that will be made available at the procurement stage. Information on the qualification process typically includes the qualification criteria (see *Box 3.12 - Firm Qualification Criteria*), the information required from firms and the format in which that

information should be presented, and the timeline and process for evaluation. The following resources describe further the typical content of RFQ documents:

- **South Africa PPP Manual procurement module** (ZA 2004a, 23–24) outlines the content of the RFQ document. This includes information about the project, procurement processes, instructions to respondents, information required about bidders, and the evaluation process.
- **Singapore's PPP Handbook** (SG 2012, 56–60) lists RFQ contents, highlighting that it is not required to include the draft contract at this stage.
- **Australia's National PPP Practitioners' Guide** (AU 2015) calls the RFQ Expressions of Interest (EoI). Pages 11–14 list the content that Request for EoIs should include—background, project scope and timetable, financial and commercial information, evaluation criteria, general terms and conditions, and EoI response requirements.
- The **World Bank's toolkit for concessions in highways** (WB 2009a) section on prequalification describes the information that should be included in the RFQ, and the information that should be requested from companies.

The following provide model, or example RFQ documents:

- **India Planning Commission Guidelines for PPPs**: Pre-Qualification of Bidders (IN 2014b) includes a model RFQ, as well as guidance on the steps of a qualification process.
- The **World Bank PPPIRC website** (WB 2009a) includes a page on *Procurement Processes and Standardized Bidding Documents* with a link to a draft standard RFQ for Power Purchase Agreements, as well as links to actual bidding documents, including RFQs.

Some governments require approval of the RFQ documents, before issuing the procurement notice as described in *Section 3.5.2 - Marketing the PPP*. The procurement notice typically advises companies on how to obtain the RFQ package. Governments may also alert investors directly that the RFQ package is available.

Evaluating the information received to identify qualified bidders

Having received statements of qualifications from interested firms, the implementing agency (or the designated evaluation team) must evaluate those qualifications against the pre-defined qualification criteria.

Box 3.12 - Firm Qualification Criteria describes typical firm qualification criteria with resources and examples. These criteria can be defined and applied on a pass/fail basis, or used to rank firms, and qualify a certain number.

Box 3.12 Firm Qualification Criteria

One of the aims of the procurement process is to select a competent firm with the capacity to implement the project. It is important to consider the qualifications of the firms behind each proposal. This can be done through a pre-qualification process to identify bidders, or as part of the first stage of the tender process (sometimes called *post qualification*). In either case, clear qualification criteria should be established before beginning the procurement process.

Firm qualification criteria can be quantitative or qualitative. They typically involve considering the sponsoring firms' financial robustness, previous experience with similar projects, and the experience of key members of the management team.

Careful selection of these criteria is important to avoid excluding firms (for example, smaller firms) that could make good partners; or including firms that are poorly-qualified. The following provide discussion and examples of firm qualification criteria:

- Kerf et al Guide to Concessions (Kerf et al. 1998, 115–6) gives examples of pre-qualification criteria and procedures used in a selection of PPP projects.
- Australia National PPP Practitioner's Guide section *Evaluating Expressions of Interest* (AU 2015, 60–62), which includes a detailed description of the criteria to be applied at the EOI stage.

The Philippines' Implementing Rules and Regulations under the BOT Law (PH 2006, Section 5.4) describes three categories—legal requirements, experience or track record, and financial capability.

Once the evaluation is completed, the implementing agency needs to inform qualified firms or consortia, and those that have been unsuccessful. As described in the **South Africa PPP Manual** procurement module (ZA 2004a, 25), the list of qualified firms is typically published. The agency also needs to make sure it provides sufficient information on the decision to unsuccessful firms.

3.5.4 Managing the Bid Process

The central step of procuring PPP projects is generally managing the bid process. This may follow pre-qualification to select the participating bidders (although not always, as described in *Section 3.5.1 - Deciding the Procurement Strategy*). The bid process ends with the selection of a preferred bidder, with whom the implementing then works to execute the contract and reach financial close.

The steps in managing the bid process will vary depending on the chosen bid process and basis for award, as described in *Section 3.5.1 - Deciding the Procurement Strategy* under *Bid process.* This section describes and provides guidance on the following elements of managing the bid process:

- Preparing and issuing Request for Proposal documents
- Interacting with bidders during the bidding period
- Receiving bids
- Evaluating bids to select the preferred bidder
- Dealing with problems such as receiving only one bid, or no fully compliant bids
- Finalizing the contract with the preferred bidder

Farquharson et al (Farquharson et al. 2011, 121–124) provides an overview of the bid process and highlights some of the important points for implementing agencies to consider at this stage.

Figure 3.7d Bid Process Management

Preparing and issuing Request for Proposal documents

The bid process formally begins when the government issues Request for Proposal (RFP) documents to participating bidders. These documents set out the project structure, requirements, and the details of the bid process. High-quality, detailed, and clear RFP documents are important to ensuring a competitive process and a PPP that achieves value for money. RFP documents typically include the following:

- **Information on the PPP project opportunity**. This could include:
  - An Information Memorandum describing the key features of the project and the commercial terms of the PPP
  - Draft project agreements—that is, the output of the detailed PPP contract design process described in *Section 3.4 - Designing PPP Contracts*
  - Copies of any permits or approvals obtained for the project
  - A description of the detailed technical information amassed during the project preparation stage that will be provided to bidders in a data room
- **Information on the bid process**. This could include:
  - Detailed bid rules and instructions to bidders, setting out the process and requirements
  - A timetable, which should build in enough time to allow bidders to prepare quality proposals
  - *Box 3.13 - Evaluation Criteria*
  - Bid bond requirements (if any), as described in the section on *Approach to bid costs and payments* under *Section 3.5.1 - Deciding the Procurement Strategy*

Table 3.4 - Examples and Guidance on Preparing RFP Documents. For further examples, the **World Bank PPPIRC website** (PPPIRC) page *Procurement Processes and Standardized Bidding Documents* includes a link to a draft RFP for Power Purchase Agreements and a BTO PPP for roads, and links to actual bidding documents from PPP projects. The World Bank has also issued sample bidding documents for output and performance-based road contracts (WB 2006c), along with some guidance in the foreword to the documents.

Interacting with bidders during proposal preparation

After the RFP has been issued, bidders will prepare detailed proposals responding to its requirements. During this process, government needs to define how and to what extent it will interact with bidders as they prepare their proposals. Rules on the channels and permissible topics for interaction with bidders are usually set in the RFP—this is important for transparency.

At a minimum, this interaction involves providing information to bidders and responding to requests for clarification on the RFP. In some cases, the government may consider updating the RFP documents as a result. Typical channels for these types of communication include:

- A data room that is a physical or virtual space where bidders can find all available information that is relevant to the project.
- Question and answer iterations allow bidders to submit questions in writing; the implementing agency responds in writing to all bidders (ensuring that all bidders have access to the same information).
- Bidder's conferences allow the implementing agency to present the project and respond to questions from bidders. Some governments impose limits on when clarifications can be sought to avoid revealing information close to the bid deadline that could benefit some bidders over others

The following provide more information and examples of these approaches to interaction with bidders:

- **PPIAF's Toolkit for PPPs in Roads and Highways** (WB 2009a) in its section "Concessions: Main Steps in competitive bidding" describes what technical information should be available in the data room.
- The **ADB** PPP Handbook (ADB 2008, 71) presents a sample data room index.
- **Australia's national PPP practitioners' guide** (AU 2015, 24–25) briefly describes the use of a data room and a query process.
- The **Singapore** PPP Handbook (SG 2012, 61–62) presents the type of information that will be exchanged during the feedback period when the RFP has been issued.
- In **Colombia, Law 80 of 1993** (CO 1993) states that, after distributing the RFP documents to pre-selected bidders, if any of the bidders requests it, the contracting agency should hold a meeting with bidders to clarify any questions they may have, and listen to their concerns and comments. Based on this meeting the contracting agency may incorporate changes to the tender documents or may extend the submission date up to six days.

As described in *Negotiation with bidders: during bidding process* under *Section 3.5.1 - Deciding the Procurement Strategy*, some governments use an interactive tender or competitive dialogue process involving more extensive engagement with bidders as they prepare their proposals. Under this type of process, bidders typically initially submit technical proposals, which are then the subject of feedback and discussion with the contracting authority, to refine the proposed solutions to meet the authority's needs, before submitting a final proposal. Some bidders may be dropped out of the process at different stages.

For more detail and guidance on this procedure according to EU regulations, see the **Government of the United Kingdom's** Guidance on the Use of Competitive Dialogue (UK 2008). **Australia's National** PPP Practitioners' Guide (AU 2015, 70–71) describes how a similar interactive tender process is typically used in Australia.

Receiving bids

A reliable and credible system to ensure bids are handled confidentially is important, to prevent any opportunity for bid-tampering, and to protect commercially sensitive information in bids.

Often bids are delivered in hard copy in sealed envelopes. Typically, financial and technical bids are delivered in separate envelopes—financial bids are only opened for bidders that pass the technical assessment, and are often opened publicly to avoid any possibility of bid tampering. For example, the **Philippines BOT law rules and regulations** set out a two-envelope system for receiving bids (PH 2006, Rule 7). The **World Bank sample bidding documents** for output- and performance-based road contracts (WB 2006c, 19–21) also describe a sealed-envelope bid system, but allow for use of an electronic sealed bid system as an alternative. One advantage of an electronic system is that it prevents bidders from monitoring or interfering with physical bid delivery.

Dumol's diary of the Manila Water privatization by concession (Dumol 2000, 85–98) includes a detailed description of the process for bid submission and bid opening in practice.

Evaluating bids

As described in the Partnerships Victoria Practitioners' Guide (VIC 2001, 40–42), the evaluation process involves

- Assessing bid completeness and compliance with minimum requirements of bid process;
- Assessing conformity with requirements of the project brief. The Guide notes that conforming bids are evaluated before non-conforming bids—but that non-conforming bids may also be considered, particularly if no conforming bids are attractive;
- Bid clarification, which can involve a bidder presentation and a Q&A session. The guide notes that this should not include any opportunity to change bids;
- Detailed review by evaluation teams, following the pre-defined evaluation criteria. *Box 3.13 - Evaluation Criteria* provides options and guidance for setting evaluation criteria;

Box 3.13 Evaluation Criteria

The selection of evaluation criteria can be key to ensuring the PPP provides value for money. Evaluation criteria should be decided in advance and set out in the RFP documentation. Some countries specify evaluation criteria options in legislation. Evaluation criteria typically incorporate technical and financial elements. These may be evaluated separately—typically with a pass/fail technical evaluation, followed by ranking on financial criteria) or combined and weighted to rank bids (as described in *Section 3.5.1 - Deciding the Procurement Strategy* under *Basis for Award*).

The options for specific criteria depend on the nature of the project, as described (with examples) by Kerf et al (Kerf et al. 1998, 118–122)—for example, whether existing assets are involved, and whether the project will be user-pays or government-pays.

Many PPPs are ranked based on a financial criterion subject to passing other technical and financial requirements. The most common option for a financial evaluation criterion is the remuneration of the private sector. This could be the lowest tariff to users, or lowest cost to government (whether as a government-pays PPP, or subsidy in addition to user charges). The Least Present Value of Revenue criterion, introduced in Chile and Peru for toll roads, is another alternative, described by Engel, Fischer and Galetovic (Engel et al. 2002). Related criteria can include length of concession, or amount of investment.

Where technical requirements have been clearly set out in the proposal, technical evaluation requires checking compliance with those requirements. As Kerf et al (Kerf et al. 1998, 118–119) describe, in some processes bidders are asked to submit project design, business, or investment plans, which are evaluated based on multiple criteria. The authors note the drawbacks of this approach—including the possible subjectivity of assessing plans, and the likelihood of plans changing substantially over the lifetime of the concession.

Procuring authorities should assess, with their transaction advisors, whether the project and the draft contract, as it is, are commercially viable and bankable—avoiding post-bid negotiations, before contract signing or before financial close, that may significantly change the project and its risk allocation, but that were not evaluated in the bid process. The risk-allocation implications of those post-bid negotiations may be far more significant than the user fees and other criteria assessed during the tender process. If allowing bidders to present, in their proposals, changes to the draft contract, procuring authorities should define which specific changes are allowed, and how they will be scored in the bid evaluation criteria.

The following resources provide further guidance and examples on choosing evaluation criteria:

EPEC's *Guide to Guidance* (EPEC 2011b, 23) briefly discusses the criteria that could be used for bidder selection.

Guasch (Guasch 2004, 97–105) describes the choice of award criteria, drawing on his extensive review of the factors leading to renegotiation in concession contracts in Latin America.

The World Bank Toolkit for PPP in the water sector (PPIAF 2006, 171–179) describes and provides examples of evaluation criteria options for awarding a user-pays PPP contract in the water sector including technical, financial, and combined approaches.

Australia's *National PPP Practitioners' Guide* (AU 2015, 62–65) describes a more holistic approach to evaluating bids. It includes quantitative and qualitative Value for Money, commercial and financial evaluation, service delivery evaluation, and project design evaluation.

- Preparation of evaluation reports, detailing the process followed and the analysis of the evaluation teams. Comprehensive reporting is important to the transparency of the process. In some cases, bidders may be invited to formally comment on a draft report, with the evaluation team required to address comments in the final version.

Partnerships Victoria Practitioners' Guide (VIC 2001, Chapter 19.2) provides tips for evaluation, and lists what should be included in an evaluation report. **South Africa PPP Manual** Module 5: Procurement (ZA 2004a, 45–51) also provides detailed guidance on how to evaluate bids, as well as a description of South Africa's approach to defining evaluation teams.

Dealing with issues—only one bid received

If only one bid is received, this can raise concerns about whether that bid will provide value for money. As described in **EPEC's Guide to Guidance** (EPEC 2011b, 29–30) there are two broad options in this case, depending on the reason for only receiving one bid:

- **Re-package and re-tender** may be the best approach if the low turnout seems to be because of deficiency in the tender.
- **Conduct thorough due diligence and select the sole bidder** may be a better option if it appears that the bidder believed the process would be competitive, and is in full compliance with the requirements.

World Bank procurement guidelines (WB 2011b, 25) note that rejection of all bids is justified where there is a lack of effective competition, but says "even when only one bid is submitted, the bidding process may be considered valid, if the bid was satisfactorily advertised, the qualification criteria were not unduly restrictive, and prices are reasonable in comparison with market value." The **United Kingdom Government's guidance on the competitive dialogue procedure** (UK 2008, Box 5.7) provides further guidance.

Table 3.4 Examples and Guidance on Preparing RFP Documents

Jurisdiction	Reference	Description
Australia	National PPP Practitioners' Guide (AU 2015, 17–22)	Details the content of the RFP.
Brazil	Federal PPP Law (BR 2004a, Law 11079, Article 11)	Describes the minimum information that the tender documents must include. These are a draft PPP contract, the proposal guarantee required from the bidder (up to one percent of total contract amount), the conflict resolution procedures, and the guarantees that that government will make available to ensure its payments.
Chile	Concessions Law (CL 2010b)	The Chilean PPP Unit housed within the Ministry of Public Works provides access to the complete RFP of all their PPP projects.
Colombia	Law 80/1993, General Statute for Procurement by the Public Administration (CO 1993, Articles 14 and 30)	**Article 24** describes the information that PPP tender documents must include. This includes: requirements to be eligible to participate as a bidder, rules for preparing bids, cost and quality of goods, works and services needed to carry out the project, term of the contract, and bidder selection rules. **Article 30** sets out the tender process—including the rights and responsibilities of the actors involved, and deadlines and timeframes for each step.
Colombia	Law 1150 (2007) Law to Introduce Efficiency and Transparency Measures in Law 80 of 1993 (CO 2007, article 8)	Establishes that the contracting agency must publish a preliminary version of the tender documents. This is a non-binding activity—that is, the contracting agency is not forced to carry out the tender after publishing these preliminary documents.
India	Ministry of Finance Model RFP Document (IN 2014a)	Provides a full generic model RFP, intended for use by contracting authorities at the national level.
South Africa	PPP Manual module on procurement (ZA 2004a, 27–41)	Describes first how bidders can participate in finalizing the RFP; then describes in detail the content of the RFP.

Dealing with issues—no clear preferred bidder or no conforming bids

In some cases, despite multiple bids being received, there may not be a clear preferred bidder. For example, this could be because no bids conform to requirements; or because a non-conforming bid appears to present a better value-for-money option than conforming bids.

One common cause of this problem is poor clarity or quality of the RFP documents—the references listed above under *Preparing and issuing Request for Proposal documents* provide guidance on preparing a clear, comprehensive, and well-structured RFP. The multi-stage and competitive dialogue procedures described in *Section 3.5.1 - Deciding the Procurement Strategy* also help avoid this issue, by enabling changes to the RFP during the bid process that help ensure final bids are all comparable and compliant.

One option if no bids conform, and none appear to be of high quality, is simply to re-package and re-tender the project. The alternative is to extend the procurement process, to identify a preferred bidder—typically, through discussions with the higher-ranked bidders on the points where the bids do not conform, often followed by asking for a revised bid.

For further guidance, see **Australia's** National PPP Practitioners' Guide (AU 2015, 27–28), which describes two options in cases where no preferred bidder can be selected—entering into a *Best and Final Offer* (BAFO) process with two bidders, or structured negotiations. The **South Africa PPP Manual Module 5** (ZA 2004a, 51–56) also describes in detail when and how to run a BAFO process, if no clear preferred bidder can be identified.

Finalizing the PPP contract with the preferred bidder

Once the preferred bidder has been selected, governments sometimes enter into further discussion to finalize the PPP contract. Extensive negotiation at this stage can undermine the competitive tender process, as described in *Section 3.5.1 - Deciding the Procurement Strategy* under *Negotiation with bidders: post-bid.* However, some level of negotiation may be necessary to clarify elements of the proposal or contract, particularly when the bid process has not included significant interaction. If financing arrangements have not already been finalized, lenders may also have demands at this stage that create pressure to negotiate on elements of the contract and risk allocation.

Many governments define and limit the extent of negotiations possible at this stage. For example, the **EPEC's Guide to Guidance** (EPEC 2011b, 31) describes a European Union rule that no issues that are material to the procurement can be changed—that means that no change that could have resulted in a different result from the bidding process should be incorporated during the post-bid negotiation phase. Where changes are allowed at this stage, the final contract is often subject to further approval.

The following resources provide guidance on carefully managing post-bid negotiations:

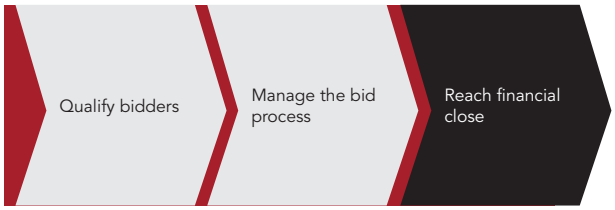
- **Australia's National PPP Practitioners' Guide** (AU 2015, 30) provides guidance on setting up a negotiation framework that includes, among other things, defining the negotiation issues and the timetable, setting the dispute resolution processes, and ensuring that the participants have the authority to make decisions on behalf of their organizations.
- **South Africa PPP Manual** Module 5 (ZA 2004a, 59–61) describes principles for negotiation, and the negotiation process.
- **ADB PPP Handbook** (ADB 2008, 79–80) briefly describes important elements for negotiation—including having a fall-back plan (which may be the second-place bidder).

3.5.5 Achieving Contract Effectiveness and Financial Close

Once the government and the preferred bidder have signed the PPP contract, they are contractually committed to implementing the PPP. However, there are several additional steps before project implementation can begin. The preferred bidder may need to finalize the financing agreements for the PPP and will likely need to sign contracts with other parties in the PPP structure—for example, sub-contractors and insurers. The implementing agency typically also has tasks to fulfill, such as finalizing permits. Detailed contract management protocols and manuals are often also developed during this period (see *Section 3.6 - Managing PPP Contracts* for more details).

The PPP contract typically includes completion of (some of) these elements as Conditions Precedent, which must be met for the contract to become effective. PPP contracts often specify a final date by which the contract terminates, and/or a bid bond is forfeited, if the Conditions Precedent are not met. As noted in the **PPIAF Toolkit**

Figure 3.7e Financial Close



for PPPs in Roads and Highways (WB 2009a) section on Contract Award, failing to specify requirements and stipulate a period for financial close can hold up project implementation for years.

Finalizing financing agreements

EPEC Guide to Guidance (EPEC 2011b, 31–33) describes the range of financing agreements for a typical PPP. These financing agreements are often not finalized until after the contract has been awarded. In most cases, interested lenders are identified at the proposal stage. However, before those lenders will commit to provide finance, they often carry out detailed due diligence on the project and PPP agreements (as described in **Farquharson et al** (Farquharson et al. 2011, 124–125). There are risks associated with this process—lenders may require changes in the PPP agreements before agreeing to finance the project, or financing terms may change from what was assumed in the proposal. One way to mitigate these risks can be to ask for firm financing commitments at the proposal stage—but this can be difficult and expensive to procure, and risk reducing competition.

Section 1.3 - How PPPs Are Financed provides more information on the risks associated with PPP financing and reaching financial close.

Meeting conditions for contract effectiveness and financial close

Financial close occurs when all the project and financing agreements have been signed, all conditions on those agreements have been met, and the private party to the PPP can start drawing down the financing to start work on the project. As noted in **Yescombe**, financial close conditions are often circular—the PPP contract does not become effective until funding is available for draw down (that is, funding availability is a Condition Precedent for contract effectiveness), and vice versa (Yescombe 2007).

The **EPEC Guide to Guidance** (EPEC 2011b, 34) briefly describes common Conditions Precedent, and includes a checklist for governments on finalizing the PPP contract and reaching financial close. Example requirements include:

- Finalizing all project agreements and contracts
- Securing final approval from relevant government entities—for example, review and approval of the procurement process and final contract
- Securing permits and planning approvals
- Commencing or completing project land acquisition

This process often requires a lot of detailed work and effort by both the public and private parties to bring the transaction stage to a close and begin project implementation.

Did you know....?

Most urban infrastructure in London was built under long-term lease contracts

In 17th century London, some landlords divided their estates into units that were leased to builders under 99-years BOT contracts. Private investors constructed the housing and streets in each unit, including a public square, a market and a church, and then leased the houses. After 99 years, the houses would become property of the landlord. Areas such as Queen Square, Russell Square, Torrington Square, and many other London squares were not the result of an urban plan, but of private initiatives and long-term contracts.

Source: Peter Ackroyd, London: A Biography (Chatto & Windus, 2000)

Key References: Managing PPP Transactions

Reference	Description
WB. 2009a. "Toolkit for Public-Private Partnerships in Roads and Highways." World Bank. Website.	Module 5: "Implementation and Monitoring, Stages 3: Procurement," and 4: "Contract Award."
Farquharson, Edward, Clemencia Torres de Mästle, E. R. Yescombe, and Javier Encinas. 2011. *How to Engage with the Private Sector in Public-Private Partnerships in Emerging Markets*. Washington, DC: World Bank.	Chapter 9: "Managing Procurement" talks through each stage of the procurement process. Includes a case study of the Inkosi Albert Luthuli Central Hospital, South Africa describes the procurement process for the hospital, which included a multi-variable bid evaluation approach.
Kerf, Michael, R. David Gray, Timothy Irwin, Celine Levesque, Robert R. Taylor, and Michael Klein. 1998. "Concessions for Infrastructure: A guide to their design and award." World Bank Technical Paper No. 399. Washington, DC: World Bank.	Section 4: "Concession Award" provides detailed guidance and examples on choosing the procurement process, pre-qualification and shortlisting, bid structure and evaluation, and bidding rules and procedures.
GIH. 2016b. "GI Hub Launches Project Pipeline." Press release. Global Infrastructure Hub. December 6. Website.	The GI Hub Pipeline is a freely-available platform on which governments can market their PPP projects to prospective bidders, lenders and other key private sector stakeholders.
PPIAF. 2006. *Approaches to Private Sector Participation in Water Services: A Toolkit*. Washington, DC: Public-Private Infrastructure Advisory Facility.	Section 9: "Selecting an Operator" provides guidance on choosing a procurement method, setting evaluation criteria, managing the bidding process, and dealing with other issues.
EPEC. 2011b. *The Guide to Guidance: How to Prepare, Procure, and Deliver PPP Projects*. Luxembourg: European Investment Bank, European PPP Expertise Centre.	Section 2: "Detailed Preparation" includes information on selecting the procurement method and bid evaluation criteria. Section 3: "Procurement" describes the bidding process, through to finalizing the PPP contract, with detailed information on reaching financial close.
UK. 2008. *Competitive Dialogue in 2008: OGC/HMT joint guidance on using the procedure*. London: UK Government, HM Treasury.	Describes and provides guidance on carrying out the competitive dialogue procurement procedure. Describes some challenges—such as receiving only one bid. Also describes the post-bid stages, with guidance on issues that may be resolved post-bid.
Yescombe, E.R. 2007. *Public-Private Partnerships: Principles of Policy and Finance*. Oxford: Butterworth-Heinemann.	Section 6.5 "Due Diligence" describes some of the issues the implementing agency should check before contracting is completed—including describing the requirements to reach financial close.
KPMG. 2010. *PPP Procurement: Review of Barriers to Competition and Efficiency in the Procurement of PPP Projects*. Sydney: KPMG Australia.	Draws on a survey of PPP practitioners, to provide recommendations for how the efficiency of PPP procurement processes can be improved, and barriers to entry reduced. The recommendations focus on improving the efficiency of the PPP procurement process, as well as touching on the pros and cons of governments contributing to bid costs.
ADB. 2008. *Public-Private Partnership Handbook*. Manila: Asian Development Bank.	Section 7: "Implementing a PPP" describes several aspects of PPP procurement, including selecting the process, pre-qualification, bid evaluation, and preparing the tender documentation.
WB. 2011c. *Guidelines Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits and Grants by World Bank Borrowers*. Washington, DC: World Bank.	Sets out the procurement procedures that any project receiving World Bank funding must use.
Dumol, Mark. 2000. *The Manila Water Concession: A key government official's diary of the world's largest water privatization.* Washington, DC: World Bank.	Describes in detail the entire process of the Manila water concession, from deciding on the best option for privatization, to running the tender process, to dealing with the many issues that emerged.

Reference	Description
Engel, Eduardo, Ronald Fischer, and Alexander Galetovic. 2002. "A New Approach to Private Roads." *Regulation* 25 (3).	Describes and explains the advantages of the Least Present Value of Revenue criterion introduced in Chile's toll road program.
Guasch, José Luis. 2004. *Granting and Renegotiating Infrastructure Concessions: Doing it right*. Washington, DC: World Bank.	Chapter 7 provides guidance on optimal concession design, drawing from the preceding analysis of the prevalence of renegotiation of concession contracts in Latin America. Includes guidance on selecting appropriate evaluation criteria.
BR. 2004. *Lei No. 11.079 de 30 de dezembro de 2004*. Brasília: Presidência da República, Casa Civil.	Clarifies process for PPPs, including describing the contents of the RFP documents, and the possible evaluation criteria.
BR. 1995. *Lei No. 8.987 de 13 de fevereiro de 1995*. Brasília: Presidência da República, Casa Civil.	Sets out the tendering procedures for (user-pays) concessions in Brazil (which also apply to government-pays PPPs).
CL. 2010b. *Ley y Reglamento de Concesiones de Obras Públicas: Decreto Supremo MOP Nº 900*. Santiago: Gobierno de Chile, Ministerio de Obras Públicas.	Chapter III sets out in some detail the procurement process for PPPs, including pre-qualification, the bid process, possible evaluation criteria, and processes for contract award.
EG. 2011. *Executive Regulation of Law No. 67 of 2010, Issued through Prime Minister Decree No. 238 of 2011*. Cairo: Government of Egypt.	Part Three sets out in detail the tendering, awarding, and contracting procedures for PPPs, including pre-qualifications, tender stage, competitive dialogue, and awarding and contracting procedures. Also specifies an approach for appeals.
IN. 2007. *Panel of Transaction Advisors for PPP Projects: A Guide for Use of the Panel*. New Delhi: Government of India, Ministry of Finance.	This users' guide describes the processes and the tasks involved in appointing a transaction advisor for a PPP transaction using the panel.
MX. 2014. *Ley de Adquisiciones, Arrendamientos y Servicios del Sector Público.* Mexico City: Gobierno de México, Cámara de Diputados.	Sets out the rules for carrying out tender processes in Mexico. It includes the possible contracting options—public tenders, sole sourcing, and direct invitations to bid to at least three potential bidders.
PH. 2006. *The Philippine BOT Law R.A. 7718 and its Implementing Rules and Regulations*. Revised 2006. Manila: Public-Private Partnership Center.	Implementing Rules 3-11 set out in detail the procurement process and requirements at each stage: pre-qualification, bid process and evaluation, when and how a negotiated procedure may be used, dealing with unsolicited proposals, and contract award and signing.
ZA. 2004a. *Public Private Partnership Manual*. Pretoria: South African Government, National Treasury.	Module 5: Procurement sets out the procurement process and guidance: including pre-qualification, issuing the RFP, receiving and evaluating bids, negotiating with the preferred bidder, and finalizing the PPP agreement management plan.
AU. 2015. *National Public Private Partnership Guidelines - Volume 2: Practitioners' Guide*. Canberra: Commonwealth of Australia.	Sets out key project phases, including three procurement phases: Expressions of Interest, Request for Proposal, and Negotiation and Completion. Also provides guidance and protocols for the interactive tender process.
SG. 2012. *Public Private Partnership Handbook. Version 2*. Singapore: Government of Singapore, Ministry of Finance.	Section 3 sets out PPP procurement process options and principles.
IN. 2014b. *Public-Private Partnership Request for Qualification: Model RFQ Document*. New Delhi: Government of India, Planning Commission.	Sets out a model RFQ, with an explanatory introduction.
PPPIRC. Accessed March 9, 2017. "Public-Private Partnerships in Infrastructure Resource Center website." Website.	Provides a library of PPP documents, including a selection of model and example procurement documents.

Reference	Description
WB. 2006c. *Procurement of works and services under output-and performance-based road contracts and sample specifications. Sample bidding documents*. Washington, DC: World Bank.	Includes a comprehensive, sample bidding document, as well as sample specifications in an annex. A foreword also provides some overview guidance.
CO. 1993. *Ley 80 de 1993*. Bogotá: Congreso de Colombia.	General procurement law, which also applies to PPPs, defines who is authorized to carry out tender processes transparency requirements, and the contents of the tender documents, and sets out the structure of the awarding procedures.
CO. 2007. *Ley 1150 de 2007*. Bogotá: Congreso de Colombia.	Sets out rules to ensure the objective selection of the winning bid, procedures to verify the veracity of the information presented by bidders.
IN. 2014a. *Public-Private Partnership Model RFP Document*. New Delhi: Government of India, Planning Commission.	This report provides a Request for Proposal for PPP Projects template as well as a short memorandum on the guidelines for invitation of financial bids for PPP projects.
IN. 2014c. *Model Request for Proposals (RFP): Selection of Technical Consultant*. New Delhi: Government of India.	Sets out a model RFP with an explanatory introduction.
VIC. 2001. *Practitioners' Guide*. Melbourne, Australia: Victorian Department of Treasury and Finance, Partnerships Victoria.	Sets out project phases, as described above, as they apply in the State of Victoria, Australia's PPP program. Similar to the national approach; includes more detail on the bid evaluation phase.

3.6 Managing PPP Contracts

Managing PPP contracts involves monitoring and enforcing the PPP contract requirements; and managing the relationship between the public and private partners. The contract management stage spans the lifetime of the PPP agreement from the effective date of the contract to the end of the contract period.

Managing PPP contracts differs from managing traditional government contracts. PPPs are long term and complex, and contracts are necessarily incomplete—that is, the requirements and rules in all scenarios cannot be specified in the contract. Therefore, the management of PPP contracts must be flexible in both available resources and skills to meet the whole-life expectations of the contract. The aims of contract management for PPPs are to ensure

- Services are delivered continuously and to a high standard, in accordance with the contract, and payments or penalties are made accordingly;
- Contractual responsibilities and risk allocations are maintained in practice, and the government's responsibilities and risks managed efficiently;
- Changes in the external environment—both risks and opportunities—are spotted and acted on effectively; and
- The efficiency expectations of the contract are achieved and the handback provision in the contract are met.

These aims of contract management are elaborated in the **4ps Guide to Contract Management for PFI and PPP Contracts in the United Kingdom** (4ps 2007, 5). The **South Africa PPP Manual section on PPP Agreement Management** (ZA 2004a, Module 6, 11–12) describes what is needed and what is meant by successful management of a PPP contract, as well as what can go wrong, and why. **EPEC's 2014 Guidance for Managing PPPs** (EPEC 2014b) condenses European experiences on the topic. The **Caribbean PPP Toolkit** (Caribbean 2017, Module 6) presents Caribbean examples and discusses contract management best practices.

The foundations for effective contract management are laid early in the PPP implementation process. Many aspects of contract management—such as procedures for dealing with change, and dispute resolution mechanisms—are set out in the PPP agreements, as described in *Section 3.4 - Designing PPP Contracts*.

This section describes four key aspects of putting contract management into practice for PPP projects:

- **Establishing contract management institutions**—defining and establishing the key responsibilities and communication

mechanisms that will enable a proactive, effective relationship between the public and private partners to the contract.

- **Monitoring PPP delivery and risk**—monitoring and enforcing contract compliance and service performance by the private party, ensuring the government delivers on its responsibilities under the contract efficiently, and monitoring and mitigating risk by the implementation of frequent and robust reporting mechanisms during the whole-life of the contract.
- **Dealing with change**—putting into practice the mechanisms described in *Section 3.4 - Designing PPP Contracts* to deal with contract adjustments, dispute resolution, and contract termination, as well as deciding whether, when and how to renegotiate.
- **Managing contract expiry and asset handover**—managing the transition of assets and operations early enough to ensure that the handback criteria or contracted handback condition of the asset is met at the end of the contract term.

The **United Kingdom Treasury's Operational Taskforce**, part of the PPP Unit, has produced comprehensive guidance notes covering several topics on contract management for PPPs (UK 2006a).

3.6.1 Establishing Contract Management Structures

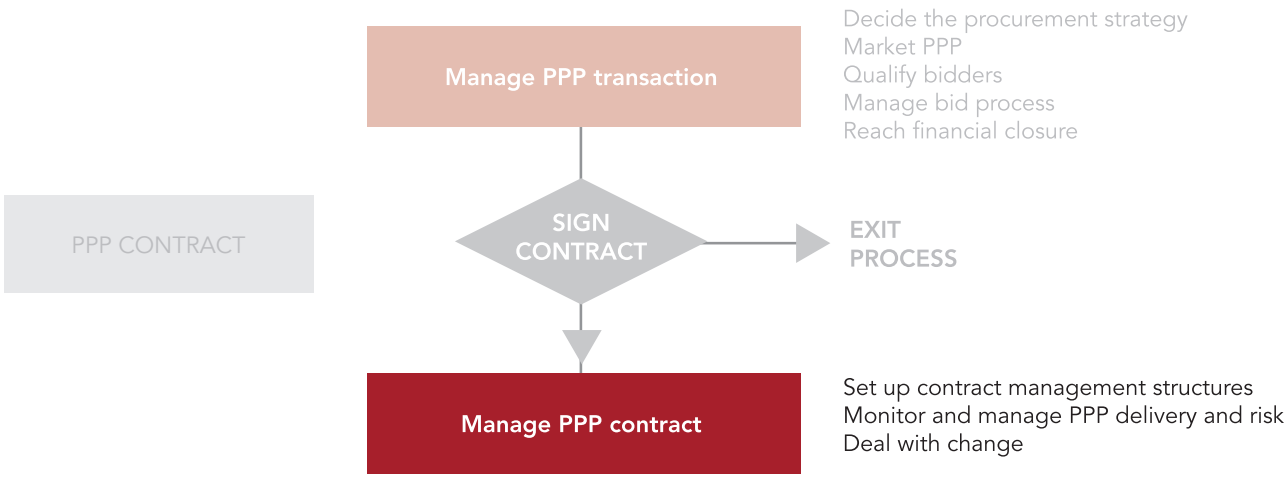
Establishing the contract management structures means defining responsibilities for contract management within government, and how the relationship with the private party will be managed. It also entails taking consideration of the long term and cyclic operational nature of PPP contracts where different contract management skills will be required at different times during the contract's life. This includes designating a PPP contract manager (or management team) within the implementing agency who will be dedicated specifically to the management of the PPP contract, as well as defining the roles of other entities within government in managing the PPP. Commitment, collaboration and coordination are needed to manage a PPP contract effectively. The government will need to be clear on where the contract manager has autonomy, and can act with discretion, and where it needs to consult or gain approval from someone else—a higher level officer, or another entity such as a Finance Ministry. It also requires establishing communication and contract management protocols for the relationship with the private party.

The **United Kingdom Treasury Operational Taskforce project transition guidance** (UK 2006a) is a helpful overview of the resources that are needed to establish efficient contract management institutions. The guide covers resource planning for contract management, setting up monitoring and management arrangements, and establishing the communication approach.

Designating a PPP contract manager and management roles

The implementing agency typically has primary responsibility for contract management throughout the life on the contract. This responsibility is often centered on a designated PPP contract manager—the main point of contact within government for all matters relating to the PPP.

Figure 3.8 Contract Management Stage of PPP Process



Some countries allocate responsibility for procurement to a specialized team or agency, benefiting from specialized knowledge on PPP tendering and negotiation. The rationale behind this approach is that contract negotiation requires highly specialized skills that are different from those required for contract management. However, in this configuration, it is important that the institutional memory concerning the history of the contract be documented and transmitted to the contract management team. In particular, the history of the discussions concerning the drafting of critical clauses of the contract may provide valuable information to the contract management team.

The PPP contract typically designates a particular public sector entity as the contractual counterpart—for example, a health board for a new hospital. The contract may also specify the individual contact point (and should provide for this to be changed simply, by notice to the private party) and articulate the duties and responsibilities of the contract point or counterpart. In practice, there is a lot more to contract management than these statements in the contract. The PPP contract manager—or management team—needs:

- **Sufficient resources**. Depending on the complexity of the contract—and resources available—the manager may be supported by a team, with members responsible for different aspects of contract management. The same individual or team could also manage more than one PPP contract. **Farquharson et al**'s chapter on contract management (Farquharson et al. 2011, 136–137) highlights the need for the implementing agency to budget for the cost of the team and their training.
- **Appropriate skills**. The **4Ps Guide to Contract Management** for PFI and PPP Projects in the United Kingdom (4ps 2007, 15–16) provides a typical job profile and skills required for a contract manager. The **United Kingdom Operational Taskforce guidance** (UK 2006a, 2) emphasizes five key skills: communication, negotiation, change management, financial competence (to understand the payment mechanism), and analytical skills. This taskforce was set up to address concerns about a lack of commercially-skilled contract managers in public authorities.
- **Appropriate seniority**. The **South Africa PPP Manual** module on contract management (ZA 2004a, 15–16) notes that the contract manager should be senior enough to have the ear of senior staff at the implementing agency and other government entities. Seniority is also required to give the counterparty the confidence that decisions can be made quickly and effectively.

The **4Ps Guide to Contract Management for PFI and PPP Projects** (4ps 2007, 8–10) describes the process of setting up a contract management team. Drawing on the experience of contract managers in the UK, the guide emphasizes the benefit of having the contract manager involved early—ideally when contract management provisions in the contract are being designed. Continuity is also important during the contract lifetime, since the contract will most likely outlast its management team. The guide describes how careful succession planning, supported by a detailed contract management manual, can help ensure continuity (4ps 2007, 19).

Roles of other entities in contract management

Several other entities within government can also have roles to play in managing a PPP contract, typically working with the contracting authority and designated contract management team. These can include:

- **Sector regulators**, who often have responsibility for monitoring service standards and managing changes in tariffs for PPP companies providing services directly to the public (see *Section 2.3 - PPP Processes and Institutional Responsibilities*). For example, in **Peru**, contract management responsibilities in the transport sector are mostly allocated to OSITRAN—the agency in charge of regulating and supervising the management of public transport infrastructure. OSITRAN oversees monitoring the concessionaire's compliance with the concession contract. This includes monitoring economic, commercial, operation, investment, administrative, and financial aspects of the contract. OSITRAN also has the authority to resolve controversies between users and the concessionaire. Similar regulatory agencies exist in other infrastructure sectors in Peru.
- The **Finance Ministry** is often involved, particularly where potential changes to the contract could have a fiscal implication. In Chile, the Concessions Law (updated 2010) states that any changes introduced to the PPP contract during implementation must be done through a supreme decree of the Ministry of Public Works, and that the decree must be approved by the Ministry of Finance (CL 2010b).
- **Central PPP units** or other specialized support units may have a role in supporting the contracting authority's contract management team. **Farquharson et al** notes this can be particularly useful for dealing with complex issues, such as a refinancing,

that may only occur once in a project lifetime (Farquharson et al. 2011, 137–138). For example, the United Kingdom has a central PPP unit that reports directly to the UK's Treasury and works across all other central UK government departments involved with PPP contracts. The PPP unit provides help and guidance to public sector managers of PPP projects on contract management strategies and implementation, benchmarking, technical operational compliance, achieving whole life value for money, and refinancing of operational contracts.

The **World Bank's Water PPP Toolkit** (PPIAF 2006, 126–130) describes a range of options for institutional structures for monitoring and managing PPPs, focusing on PPPs providing services to users, with examples. It also sets out criteria for choosing the most appropriate institutions.

Other actors within and outside government may also be drawn on to fulfill particular roles. For example, private contractors and end users can play a role in service monitoring, as described in *Section 3.6.2 - Monitoring and Managing PPP Delivery and Risk*. Independent expert advisors or panels are also often used to help deal with change or operational compliance disputes in the PPP contract, as described in *Section 3.6.3 - Dealing with Change*. In **Chile**, a permanent PPP advisory board (Panel técnico de concesiones) provides recommendations in case of dispute between the parties, by request of any party (CL-Panel).

Communication and contract management protocols

Besides establishing institutions, the government needs to specify the structure for communication between the public implementing agency and the private party. This often requires relationships at different levels of both organizations—from the more senior levels (if dealing with emerging problems with the contract), through those primarily responsible for contract management, to the day-to-day operational staff. For example:

- The **4ps Guide to Contract Management for PFI and PPP Projects** in the United Kingdom (4ps 2007, 11–13) describes the set-up recommended for municipal councils in the United Kingdom, which comprises a partnership board at the most senior level; a contract management board, and an operational management team to deal with day-to-day management. The guide describes how often each would meet and the types of issues they would deal with.
- **The South Africa PPP Manual** module on contract management (ZA 2004a, 13–17) describes a similar structure, setting out the focus and typical parties to communication at the strategic, business, and operational level.

Some governments formally establish the communication and relationship management arrangements in a contract administration manual, or plan. The **4ps Guide** (4ps 2007, 19–20) describes and provides suggested contents for an operational contract manual, which includes defining the governance structure and communication approach.

The relationship between the government agency and the private party is also important. The **United Kingdom Operational Taskforce note on project transition** describes the importance of building good relations with the contractor (UK 2006a, 21–22). The **4ps Guide** (4ps 2007, 26) also describes the need for trust, while also setting boundaries and being ready to challenge. The guide emphasizes the need to avoid developing a 'cozy' relationship that could lead to opportunism.

Regulation by contract

Most governments implement PPPs without creating an overall sector regulatory regime. A common approach to sector regulation is to address tariff and service standards directly through the contract with a private service provider. In this approach, no special tools or regulatory bodies are required. The contract itself sets out the service standards to be reached.

In the case of a concession contract, the contract will also establish the tariff, and rules and processes for adjusting the tariff. In a lease or affermage contract, tariff setting powers may be retained by the government, but the payment to the operator—which is also linked to the amount of the service supplied—is set in the contract. This approach is used in many countries. For example:

- Urban water concession, **Senegal**—in 1995, the government implemented reforms to bring in private operators under an affermage and performance contracts to improve the performance of the water sector. Provisions within the contracts outlined performance standards and indicators, allowed for monitoring by a committee, and included an effective dispute resolution mechanism. The private operator was legally obliged to meet the standards—such as water quality, access, non-revenue water—set out under the contract (WB 2006b).

- Manila water concessions, **Philippines**—when the Government of the Philippines decided to end a water crisis in Manila by offering two concession contracts for supply of water in the city, it considered establishing an independent statutory regulator. However, it decided that going to congress to pass the necessary laws would be too time-consuming and risky. It therefore created a regulatory office for the two concession agreements within the public utility (which remains the asset owner and counterpart to the PPP contract). A clause in the concession agreement required the private operators to cooperate with the regulatory office, which in turn was responsible for interpreting the regulations in the agreements (Dumol 2000).
- The Bucharest water concession, in **Romania**, also provides an interesting example of a regulatory structure created under contract. The concession had two different regulatory bodies—a technical regulator created to monitor the technical performance of the private operator against the indicators set out under the concession contract, and an economic regulator to approve tariff adjustments according to the formula set out by the concession contract.

For further discussion of issues specific to regulation by contract and case studies, refer to **Regulation by Contract: A New Way to Privatize Electricity Distribution?** (Bakovic et al. 2003) and **Explanatory Notes Series on Key Topics in Regulation of Water and Sanitation Services** (Groom et al. 2006).

3.6.2 Monitoring and Managing PPP Delivery and Risk

To achieve the whole life value for money promised by a PPP, government needs to make sure that the planned allocation of responsibilities and risks is put into practice, monitored, recorded and continually analyzed and verified. Throughout the lifetime of the contract, the contract manager needs to:

- Monitor contract compliance and service performance by the private party, and ensure penalties or bonuses are paid appropriately
- Monitor and ensure compliance by government with its responsibilities under the contract
- Monitor and mitigate risks
- Evaluate and allocate risk to the appropriate party resulting from contract change

The actual activities undertaken and skills required will differ between implementation stages—design, construction, implementation, preparation for contract close and project close. For an overview of service delivery management—including key elements of risk management and performance management, see the **South Africa PPP Manual** module on contract management (ZA 2004a, 20–28) and **Fortea et al's** Seguimiento de una Concesión (Fortea et al. 2011) which describes the project monitoring process in Spain.

Monitoring and enforcing service performance and contract compliance

The implementing agency needs to ensure the private party meets its obligations under the partnership by monitoring outputs or service and performance standards. This does not generally involve detailed monitoring of construction, which is the responsibility of the private party. Instead, it means monitoring against the performance indicators established in the contract, as described in *Section 3.4.1 - Performance Requirements*. In many cases, infrastructure and equipment are certified to obey the contractual specifications by reputable independent engineering firms under careful public sector scrutiny. The **4ps guide to contract management for PPPs** (4ps 2007, 28–36) provides an overview of managing service performance (focused on government-pays PPPs), and a checklist of key issues.

As described in *Section 3.6.1 - Establishing Contract Management Structures*, monitoring service performance and contract compliance is often the responsibility of the contract manager and management team. For PPPs in sectors that are regulated, the sector regulator may also undertake some or all monitoring responsibility. In either case, sources of monitoring information can include:

- **Data provided by the private party**. Typically, the private party is responsible for providing project performance data in regular reports to the contracting authority. The content, format and frequency of these reports should be specified in the contract. For example, the **Partnerships Victoria Contract Management Guide** (VIC 2003, 54–55) describes how reporting requirements can be specified, including suggested templates for the different contract stages. The usefulness of data provided by the private party depends on auditing and checking by the public sector.

- **Independent experts** can be used to carry out checks on construction, maintenance on service standards, while avoiding concerns of bias in results. For example, the **Partnerships Victoria Contract Management Guide** (VIC 2003, 55) describes how independent reviewers are used at construction and service delivery stages. **India's guidelines on monitoring PPP projects** (IN 2012) also describe the use of an independent engineer to monitor compliance during design, construction, and operations.
- **Service users** have a wealth of information on the quality of service and the prevalence of faults, which the government can draw on by setting up processes for feedback. The **4ps Guide to Contract Management** (4ps 2007, 33) describes a maintenance helpdesk, to be established by the service provider, as a good practice. Another good practice is collecting user feedback, creating a contractual obligation on the contractor to have frequent customer satisfaction surveys—at least annually.

These arrangements should be specified in the contract, as described in *Section 3.4.1 - Performance Requirements*.

The implementing agency also needs to ensure enforcement mechanisms are implemented as appropriate based on the monitoring information received. This could include adjusting payments (for government-pays PPPs) following the rules in the contract, or in severe cases, calling performance bonds. It also includes communicating with the contractor and monitoring attempts to rectify performance shortfalls. To avoid an accumulation of unnecessary disputes, good practice recommends creating an escalation ladder from day-to-day contract management discussions, senior management discussions, arbitration, and on to the formal dispute resolution mechanisms. When all else fails, contract enforcement will be require a judicial ruling. Finally, it could include identifying if and when trigger points are reached for default, step-in by the lenders or the public party, or termination (see *Section 3.6.3 - Dealing with Change*).

Monitoring and managing government responsibilities and risks

A crucial element in ensuring good performance and sustained service delivery under a PPP contract is monitoring and managing the risks and responsibilities allocated to government. A central tool often used by implementing agencies in doing so is a risk management plan.

A risk management plan lists each risk and associated responsibilities borne or shared by the government; it identifies those that may undermine sustainability of the PPP, and so lead to risk of default, or poor performance. For each risk, the plan should also identify the information needed to monitor the risk, and possible actions to mitigate the risk or its impact. These information requirements should also be part of the reporting requirements defined in the contract. **Farquharson et al** provides a sample extract of a risk management plan for a PPP, which lists risks, and for each risk describes the owner, status, estimated impact, comments, mitigating actions, target dates for action, and current risk status (Farquharson et al. 2011, 153–158).

Some risks that are contractually allocated to the private party may also require monitoring by the public party, if they could put it at risk. For example, if lifecycle and maintenance activities are not implemented according to plan, long-term performance and asset handback may be at risk and could impact the public sector.

The risk management plan should be developed by the contract manager prior to the start of the contract. It should then act as a resource and guide through the duration of the contract. The contract manager typically collects the relevant risk monitoring information from the private party, and relevant external information (such as on economic trends), to regularly update the plan. The contract manager then needs to:

- Monitor indicators against expected levels, to identify emerging risks. For example, traffic levels failing to climb as projected may indicate a risk that a minimum traffic payment will be triggered.
- Take the planned mitigating actions, where there are risks that the implementing agency can control (or ensuring private party is doing the same). For example, if government is responsible for associated infrastructure that is falling behind schedule, the plan may be to transfer responsibility for that infrastructure to a higher level team in government, or to the private party.
- Even where risks cannot be controlled, consider possible actions and responses. For instance, if floods threaten critical water service facilities, government may start work with the private party on an emergency response, including alternative supplies, rationing, and a service re-instatement plan.

Box 3.14 - Example of Weak Risk Monitoring—Victoria Trams and Trains provides an example of weak risk management, where the government's contract monitor collected risk information, but failed to act on it.

The following resources provide further guidance and examples of risk management approaches:

- The **South Africa PPP Manual** module on contract management (ZA 2004a, 20–24) describes how risk monitoring and management should center around a risk management plan.
- The **Partnerships Victoria Contract Management Guide** (VIC 2003, 49–54) describes the monitoring information—beyond KPIs—that the government will typically collect, to monitor risks to the sustainability of the contract.

3.6.3 Dealing with Change

Over the life of a typical PPP contract—10 to 30 years—developments will occur that could not have been predicted when the contract was signed. It is also likely that the parties will dispute contract interpretation, or whether both parties have been performing as agreed. In some cases, these disputes may result in early termination of the contract. These risks cannot be avoided—but they can be managed.

Some general guidance material that is available on dealing with change in PPPs is:

- The **United Kingdom's National Audit Office publication** on managing the PFI relationship (NAO 2001), which emphasizes the need for public authorities to address the question of contract management early in the project preparation and the presence of appropriate skills within the public authority. It also highlights the importance of an open and cooperative attitude.
- A shorter overview on similar topics is provided in **Quick's article on managing PPP contracts** (Quick 2003), which also adds an Australian perspective.
- **UNESCAP's PPP guidebook** (UNESCAP 2011, Chapter 6) offers an overview of contract management intended for developing countries. It focuses on institutional arrangements for contract management, and mechanisms for dispute resolution.

These materials do not provide the detailed guidance that would benefit government officials. Therefore, this section also provides examples of where these issues have come up, and ways in which they have been handled, from which practitioners can draw lessons. These change situations can usefully be discussed in four categories:

- Planned reviews and adjustments
- Renegotiations
- Disputes
- Contract expiry or termination

Planned reviews and adjustments

Well-structured PPP contracts build in adjustment mechanisms for dealing with the more common types of unexpected change, as described in *Section 3.4.3 - Adjustment Mechanisms*. In addition to being aware of, and following, the rules in the contract, contract managers need to make sure required institutional elements are in place, as described in the **EPEC Guide to Guidance** (EPEC 2011b, 37–38). For example, this could include ensuring expert panels have been identified and are qualified, and all steps are clear to all parties involved.

Renegotiation or contract variations

Many PPP contracts are renegotiated, often early, as described by **Guasch in his book on renegotiation in PPPs** (Guasch 2004). *Renegotiation* refers to changes in the contractual provisions, rather than through an adjustment mechanism provided for in the contract. Renegotiation is something to avoid where possible. Good use of adjustment provisions, as outlined above, can obviate the need for renegotiation.

Still, renegotiations will from time to time be needed, and governments will benefit from understanding good policy for conducting them. **Partnerships Victoria's Contract Management Manual** (VIC 2003, Section 7.3) describes the understanding that public parties should have of the private party's financial health, as well as project performance. While not focused specifically on renegotiation, having this information and understanding will benefit government as it considers decisions that could result in renegotiation.

Some examples of renegotiations that may offer some insights into good practice, and which have been documented include:

- **The Melbourne Tram and Train concessions**. When these concessions were in financial difficulty, the government decided to renegotiate rather than terminate, as this was expected to provide better value for money—see **Ehrhardt and Irwin** (Ehrhardt and Irwin 2004). To provide transparency and quality assurance on the process, the government announced early in the process that, after the negotiations were complete, they would be subject to an ex-post value for money analysis. This analy-

sis was published as an **Auditor General's report** (VIC 2005), which describes the renegotiation process and results.

- **The United Kingdom National Air Traffic Services (NATS) PPP**, also described by **Ehrhardt and Irwin** (Ehrhardt and Irwin 2004), was a more controversial restructuring. The PPP Company faced falling revenue because of a sharp downturn in air travel after the 9/11 terrorist attacks in the United States. The company looked certain to default on its debt. The Board of the Civil Aviation Authority (the public party to the PPP) was split. The Board member directly responsible for the contract insisted the government should not renegotiate, stating the solution was a private sector financial restructuring, in which the lenders to the company would bear some of the losses. The majority of the Board disagreed, however, and instead agreed to change the terms of the contract as part of a package deal that also involved some debt restructuring.

In contrast to the United Kingdom NATS experience, the **Government of New South Wales** managed to avoid renegotiating the PPP contract for a highway tunnel under Sydney's central business district when it went into financial distress. Instead, the matter was resolved entirely through a private sector financial restructuring. **Johnston and Gudergan** subsequently reviewed the experience to draw lessons for PPP governance (Johnston and Gudergan 2007). An **OECD paper on PPP renegotiation in the US** (Gifford et al. 2014) presents renegotiation cases in the United States and shows how they are linked to opportunism and may affect infrastructure development.

Road contract renegotiations in **Portugal** and **Spain**, during the recent economic and financial crisis, present an interesting case of renegotiation under fiscal stress—but lessons have not yet been reported. The British National Audit Office (NAO 2013b) reported on similar renegotiations for reducing service levels and obtaining project savings.

Box 3.14 Example of Weak Risk Monitoring—Victoria Trams and Trains

The trams and trains franchises in Melbourne, Australia provide an educational example of the implications of inadequate risk monitoring. The government awarded a series of franchises for the city's urban transport system. Demand risk was largely borne by the private parties. Demand turned out to be substantially lower than expected, resulting in financial difficulties for the companies. The government's contract monitor was receiving information from the private parties, which showed deteriorating financial performance. However, the monitor failed to hear the alarm bells or take any remedial action. Performance continued to deteriorate to the point that the private parties' best option was to walk away from the contract, and the government had no option but to renegotiate.

Source: (Ehrhardt and Irwin 2004)

Disputes

Contractual disputes arise when one party believes the other has not done something it was contractually obliged to do, but the other party disagrees as to what its obligations were, or what should be done to remedy the situation.

The **Partnerships Victoria** Contract Management Guide (VIC 2003, Section 8.3) includes a section on dispute resolution. A helpful distinction is made between issues and disputes, as set out in *Table 3.6 - Distinction between Service Delivery Issues and Disputes*.

The **Partnerships Victoria Contract Management Guide** also contains sample templates for specifying how issues may be escalated (VIC 2003, Template M) and disputes resolved (VIC 2003, Template N). The practical advice offered focuses on the desirability of speedy informal resolution of disputes, understanding the other side's position, and avoiding inappropriate dispute processes, since these can damage the long-term relationship.

Focusing on finding practical solutions quickly, and taking into account the other side's position, often yields positive outcomes when trying to resolve disputes. However, countries do not necessarily find it appropriate to seek resolution through informal mechanisms. For a variety of reasons, they often prefer to follow the formal steps set out in the contract. Whichever route they choose to follow, they should seek to reach a practical solution.

There are numerous examples of the costs that governments end up bearing because of choosing inappropriate dispute resolution methods. For example, the Government of **Tanzania** was justifiably dissatisfied with the performance of the private firm operating the water system in Dar es Salaam. The PPP contract provided a

dispute resolution mechanism under which the government could very likely have achieved the redress it sought, and won damages from the contractor. However, as described in a review of the dispute case (Triantafilou 2009, 6):

"While the contractual relationship was headed inevitably towards dissolution, Tanzanian government officials, motivated by electoral concerns, among others, took a series of drastic measures that went far beyond the contractually mandated process for termination of the Project Contracts. In May 2005, Tanzanian government officials, causing public furor, repudiated unilaterally and rather publicly the lease agreement with City Water while calling on the performance bond posted by BGT, reinstated the previously waived VAT on purchases by City Water, repossessed forcibly the assets previously leased to City Water, and deported City Water's BGT-appointed management."

Cases of PPP disputes and how they have been handled are available on the website of the International Center for the Settlement of Investment Disputes (ICSID, a part of the World Bank Group)—see *Box 3.10 - International Centre for Settlement of Investment Disputes*. In July 2010, an ICSID arbitration tribunal ruled that the Argentinian government unfairly refused to allow the private concessionaires to raise tariffs during the period after the devaluation of the Argentine peso in 2001 and awarded damages to the private companies—see *Box 1.6 - When PPPs fail—The case of the 1993 water concession in Buenos Aires* on this conflict.

Overly also provides a critical review of the use of international arbitration, in a range of PPP and similar cases (Overly 2010). Many of these cases suggest that governments can minimize the costs of disputes to the public sector if they:

- Act quickly when problems start to arise
- Have teams with the right skills and appropriate levels of decision-making authority working on resolving the issue
- Follow processes set out in the contract
- Look for win-win solutions, considering the broader public interest and the private parties' options

Resolve the issues at the lowest level possible and only escalate if they are not resolved

3.6.4 Contract Expiry and Asset Handover

The final task in managing a PPP contract is to manage the transition of assets and operations at the end of the contract term. The approach to this transition should be clearly defined in the contract. As set out in *Section 3.4 - Designing PPP Contracts*, this typically includes defining how quality of the assets will be defined and assessed, whether a payment will be made on asset handover, and how the amount of any payment will be determined. Options include clearly specified handover requirements, or the involvement of independent assessors.

A principle of a PPP contract is to achieve value for money during its whole life. Whole-life value for money includes achieving the contracted handback criteria, which must be managed in a timely and robust manner. Contract management teams must be aware of the expected contract handback conditions and ensure that prepa-

Table 3.5 Distinction between Service Delivery Issues and Disputes

Service Delivery Issues	Disputes
Need not involve any difference of opinion or position between the parties	Involves a difference of opinion or position between the parties (by definition)
Interruption or other disturbance to service delivery	Need not involve any interruption or other disturbance to service delivery
May trigger an abatement of service fees, or other remedies	Generally, will not in themselves trigger an abatement of service fees

Source: (VIC 2003)

ration works, maintenance and asset management has been completed and any post-contract conditions will be met.

As noted in **The World Bank's Toolkit for PPPs in Roads and Highways** section on handover of facilities at contract end (WB 2009a, Module 5, Stage 5), there has been relatively limited practical experience in completion of PPP agreements. Equally, there is limited practical guidance on dealing with this stage of contract management.

The final task in managing a PPP contract is to manage the transition of assets and operations at the end of the contract term. The approach to this transition should be clearly defined in the contract. As set out in *Section 3.4 - Designing PPP Contracts*, this typically includes defining how quality of the assets will be defined and assessed, whether a payment will be made on asset handover, and how the amount of any payment will be determined. Options include clearly specified handover requirements, or the involvement of independent assessors.

A contract can be terminated regularly, that is, at the end of the agreed concession period, or it can also be terminated prematurely (either by the public agency or the concessionaire) in the case of serious, pre-defined events, for instance:

- Extended *Force Majeure*
- Concessionaire default
- Insolvency or bankruptcy of the concessionaire
- A serious deficiency in service provision (e.g. where health or safety is jeopardized) that is not promptly remedied
- Voluntary termination by the contracting authority

Section 3.4.5 - Termination Provisions discusses the several types of early termination and corresponding contractual provisions. This possibility of early termination implies that, from inception, the contract manager needs to have a plan for termination.

Regular Termination

The most important element of termination is handing over project assets and services back to the contracting authority at the end of the PPP contract period. Transferring assets to the public agency requires a thorough assessment of the quality of the assets at handover. Typically, the PPP contract will include quality standards that the assets and facilities are required to meet at the end of the contract period.

An audit will assess the state of the assets several years before the termination date. The audit indicates which assets need to be improved before handover can occur. This procedure is particularly relevant because the project will represent an asset for the contracting authority after the expiration of the PPP contract. As such, the contracting authority should have a financial incentive to ensure the asset is returned in the best condition possible.

Sometimes the concessionaire is required to issue a specific bond or guarantee to cover the last few years of the contract period. The bond should have a minimum value that ensures the concessionaire has sufficient financial incentive to continue the contract until the contracted end date and hand over the assets at the defined quality.

Early Termination

The PPP contract must include clear procedures and provisions for early termination of the project. The contract should describe in detail the specified circumstances that allow the contracting authority to terminate the contract. It should also include possible compensation—to both parties. A breach of contract must be fundamental in nature and should (where possible) be subject to a cure period.

Usually (but not necessarily) there is a payment from the public authority to the concessionaire. This payment, or compensation from the concessionaire to the procuring authority, should be based on rules clearly stated in the PPP contract.

Early termination is a serious event as the contracting authority might suddenly be required to take over implementation or operation of the service. As early termination might also influence future PPP projects negatively, this should be the last resort—poor performance and poor communication among partners should be carefully addressed by the contract manager to avoid, if possible, degenerating into early termination.

Key References: Managing PPP Contracts

Reference	Description
4ps. 2007. *A Guide to Contract Management for PFI and PPP Projects*. London: Public-Private Partnerships Programme.	Provides guidance intended for local authorities in the United Kingdom responsible for monitoring PPP contracts: from setting up the contract management approach, to managing service performance, relationships, and contract administration. Includes checklists and a troubleshooting guide.
ZA. 2004a. *Public Private Partnership Manual*. Pretoria: South African Government, National Treasury.	A comprehensive guide to PPP agreement management in South Africa, from setting up the institutional framework, to managing over the project lifetime, dealing with change, through to the end of the contract. Describes two key tools: the PPP Agreement Management Plan, and the PPP Agreement Management Manual.
UK. 2012d. "Operational Taskforce website." Infrastructure. HM Treasury Website Archives. Website.	Provides detailed guidance for PPP implementing agencies on four elements of PPP contract management: benchmarking and market testing; project transition, which covers setting up a contract management framework; managing contract variations; and managing contract expiry.
Farquharson, Edward, Clemencia Torres de Mästle, E. R. Yescombe, and Javier Encinas. 2011. *How to Engage with the Private Sector in Public-Private Partnerships in Emerging Markets*. Washington, DC: World Bank.	Chapter 10 provides an overview of what is needed for successful contract management after signing, with an emphasis on experience in emerging markets. Includes tips on managing contracts and a case study on contract management for a water concession in Sofia, Bulgaria.
PPIAF. 2006. *Approaches to Private Sector Participation in Water Services: A Toolkit*. Washington, DC: Public-Private Infrastructure Advisory Facility.	Section 7 provides guidance on developing institutional arrangements to manage the PPP contract relationship. It includes guidance on how to decide which government institution should be allocated which role, on relationship management, and tools to deal with change.
Fortea, Carlos Sorni, Emilio Gardeta Torrodellas, Sergio Herrán Vitoria, Juan Pablo Matute Tejerina, and Jorge Vitutia San Millán. 2011. "Proyecto Fin de Master: Seguimiento de una concesión." Universidad Politécnica de Madrid. Website.	Describes the Spanish methodology for the monitoring of PPP projects.
VIC. 2003. *Partnerships Victoria Guidance Material: Contract Management Guide*. Melbourne, Australia: State of Victoria, Partnerships Victoria.	Describes key elements of effective relationship and contract management and provides detailed guidance, templates and tools on all stages of contract management.
IN. 2012. *Institutional Mechanism for Monitoring of PPP Projects: Guidelines*. New Delhi: Government of India, Planning Commission.	Describes institutional frameworks for monitoring PPPs and includes annexes with sample monitoring reports.
NAO. 2001. *Managing the Relationship, to Secure Successful Partnership in PFI Projects.* Report by the Comptroller and Auditor General HC 375. London: National Audit Office.	This report was based on a survey of contractors and government officials on what makes for successful PFI contract management. It emphasizes the need for public authorities to address the question of contract management early in the project preparation; appropriate skills in the public authority; and an open and cooperative attitude.
Quick, Roger. 2003. "Long-Term Ties: Managing PPP contracts." *Public Infrastructure Bulletin* 1 (2).	Briefly describes key features of successful contract management arrangements, drawing on Australian experience.
UNESCAP. 2011. *A Guidebook on Public-Private Partnership in Infrastructure*. Bangkok: United Nations Economic and Social Commission for Asia and the Pacific.	Chapter 6 provides guidance on contract management intended for developing country governments, focusing on institutional arrangements and dispute resolution.

Reference	Description
Groom, Eric, Jonathan Halpern, and David Ehrhardt. 2006. "Explanatory Notes on Key Topics in the Regulation of Water and Sanitation Services." Water Supply and Sanitation Sector Board Discussion Paper 6. Washington, DC: World Bank.	Note 4 describes the relationship between sector regulation and PPP contracts.
EPEC. 2011b. *The Guide to Guidance: How to Prepare, Procure, and Deliver PPP Projects*. Luxembourg: European Investment Bank, European PPP Expertise Centre.	Chapter 4: Project Implementation, Section 4.1: Contract Management describes and provides links to references on some key issues in contract management, including attributing management responsibilities, managing project delivery, managing change, dispute resolution, and termination.
PURC. 2012. "Body of Knowledge on Infrastructure Regulation." University of Florida, Public Utility Research Center. Website.	Section IV: Price Level Regulation describes key issues in tariff regulation, and guides readers in accessing a wide range of references.
UK. 2006b. *Benchmarking and Market Testing in NHS PFI projects: Code of Best Practice*. London: National Health Service.	Provides guidance intended for contract managers on how to use market testing exercises to review the cost of soft services in health sector PPPs.
Guasch, José Luis. 2004. *Granting and Renegotiating Infrastructure Concessions: Doing it right*. Washington, DC: World Bank.	Reviews the occurrence and drivers of re-negotiation in PPP contracts in Latin America, and provides some policy lessons for reducing the prevalence of early renegotiations.
Ehrhardt, David, and Timothy C. Irwin. 2004. "Avoiding Customer and Taxpayer Bailouts in Private Infrastructure Projects: Policy toward Leverage, Risk allocation, and Bankruptcy." World Bank Policy Research Working Paper 3274. Washington, DC: World Bank.	Describes the experience of default and re-negotiation in several PPP contracts including the Melbourne Tram and Train Concession, and the United Kingdom National Air Traffic Services PPP.
Johnston, Judy, and Siegfried P. Gudergan. 2007. "Governance of Public-Private Partnerships: Lessons learnt from an Australian case?" *International Review of Administrative Sciences* 73.	Reviews the experience of the Sydney Cross-City Tunnel PPP contract, drawing lessons for PPP contract management.
Triantafilou, Epaminontas E. 2009. "No Remedy for an Investor's own Mismanagement: The Award in the ICSID Case Biwater Gauff v. Tanzania." *White & Case International Disputes Quarterly* Winter 2009, 6-9.	Reviews the international arbitration settlement of a water service PPP in Tanzania.
Overly, Megan Shepston. 2010. "When Private Stakeholders Fail: Adapting Expropriation Challenges in Transnational Tribunals to New Governance Theories." *Ohio State University Law Journal* 71 (2).	Describes challenges in international arbitration mechanisms, with case studies of arbitrations.
WB. 2009a. "Toolkit for Public-Private Partnerships in Roads and Highways." World Bank. Website.	Module 5: Implementation and Monitoring includes a section on hand back of facilities at contract end, which describes some key considerations at this stage.

3.7 Dealing with Unsolicited Proposals

An unsolicited proposal (USP) is a proposal made by a private party to undertake a PPP project, submitted at the initiative of the private firm, rather than in response to a request from the government. By managing USPs appropriately, governments may benefit from this approach while reducing potential risks. However, unsolicited proposals may also create challenges that risk providing poor value for money, particularly if the government chooses to negotiate a PPP directly with the project proponent; and they may risk diverting scarce financial resources to non-priority projects.

- *Section 3.7.1 - Benefits and Pitfalls of Unsolicited Proposals* discusses strengths and weaknesses and describes how some countries have introduced specific policies for dealing with unsolicited proposals for PPPs. These policies are designed to provide incentives to private proponents (to varying degrees) to submit high-quality PPP proposals; to deter poor quality proposals; to introduce competitive tension; and to promote transparency.
- *Section 3.7.2 - Creating Competitive Tension* describes how competition can be introduced, while rewarding the original proponent with some form of advantage or compensation.
- *Section 3.7.3 - Dealing with Intellectual Property and Confidentiality* provides guidance and resources on dealing with requests for confidentiality.
- *Section 3.7.4 - Defining Clear Policy and Processes* describes and provides examples of processes for receiving, appraising, and implementing unsolicited proposals for PPP projects.

3.7.1 Benefits and Pitfalls of Unsolicited Proposals

Considering unsolicited proposals allows governments to benefit from the knowledge and ideas of the private sector. For example:

- USPs may allow governments to identify and prioritize projects, help overcome challenges related to early stage project identification and assessment, and generate innovative solutions to infrastructure challenges.
- An appropriately designed USP process that allows private entities to propose project ideas that are in line with a government's infrastructure plan can harness the private sector's interest in developing commercially viable project solutions.
- When governments do not have the technical and financial resources to develop preliminary feasibility studies, a well-designed USP process can require the USP proponent to include these studies as part of the USP submission. This can reduce bottlenecks at an early stage of the PPP process.
- USPs also can also widen the range of potential solutions available to address infrastructure gaps. Private providers of technology often possess greater knowledge about potential solutions to infrastructure challenges than public sector officials leading the planning process.

However, unsolicited proposals also create substantial challenges:

- Most PPPs require government fiscal support: the government typically accepts risks, and the associated contingent liabilities, even if direct subsidies are not needed. As described in the **PPIAF Toolkit for PPPs in Roads and Highways** (WB 2009a, Module 5, Stage 3: "Procurement"), experience suggests that proposals submitted by private companies often do not adequately assess the risks associated with the project, which may be borne by the government.
- Unsolicited proposals do not originate as part of a government planning process, and, in some cases by definition, are not part of sector plans. This raises the question of whether the service proposed is sufficiently integrated with other sector plans for demand and benefits to be robust to changing circumstances and priorities.
- Unsolicited projects may divert government attention from a planned approach to infrastructure as a whole. In a government planning process, public agencies identify projects that respond directly to infrastructure plans and previously identified societal and economic needs. The primary motivation of a private entity submitting a project idea is, however, to further its own interests, which may not be aligned with those of the government or society. The role of the government is to ensure that the proposed USP project is structured to meet societal needs and can be tendered to ensure fair terms, conditions and pricing.
- Negotiating with a project proponent based on an unsolicited proposal in the absence of a transparent or competitive procurement process can create problems. It could result in poor value for money from the PPP project, given a lack of competitive

tension, or provide opportunities for corruption. Even if there are no clear indications of corruption, if a company is seen to benefit from a PPP without opening the opportunity to competitors that could nonetheless give rise to complaints about the fairness of the process. This lack of transparency can undermine the legitimacy and popular support for the PPP program.

Box 3.14: *Costs of Direct Negotiation—Independent Power Tanzania* provides an example of a power project in Tanzania that was directly negotiated following an unsolicited approach by the private investor, which under arbitration was found to have provided poor value for money, and possibly been corrupt.

The **PPIAF Toolkit for PPPs in Roads and Highways** section on unsolicited proposals (WB 2009a, Module 5, Stage 3: "Procurement") further describes these challenges of unsolicited proposals. It sets out the view of the World Bank as follows:

"*…there is a place for genuine and innovative [unsolicited] proposals, but these are the exceptional case. The private sector must put up strong independently analyzed cases for unsolicited proposals at an early stage, before governments are sucked in to supporting projects that are financially weak, high risk, will take up significant human resources of the government, and will likely take a longer than normal time to implement because of these difficulties."*

3.7.2 Creating Competitive Tension

Many private companies submit unsolicited proposals with a view to directly negotiate a contract for the proposed project—creating the problems described in *Section 3.7.1 - Benefits and Pitfalls of Unsolicited Proposals*. *Box 3.11 - Competitive Procurement or Direct Negotiation* describes some circumstances in which entering into direct negotiations may make sense, as well as some less well-founded arguments often presented for doing so. *Box 3.16 - Direct negotiation of unsolicited proposals* describes several preparation requirements for those procuring authority that wish to directly negotiate an unsolicited proposal.

The alternative is to subject unsolicited proposals to a competitive process. Some countries accept proposals and simply follow the normal competitive procurement process. However, this is relatively unlikely to generate large numbers of USPs, since the proponent receives no direct return on its investment in the project idea other than the benefits of more familiarity with the project than potential competitors in a tender and potential reputational benefits.

Box 3.15 Costs of Direct Negotiation—Independent Power Tanzania

The Government of Tanzania and the Tanzania Electricity Supply Company entered into contractual agreements with Independent Power Tanzania Limited (IPTL) of Malaysia for the supply of 100 megawatts of power over a 20-year period. This transaction was directly negotiated following an approach by the private investors during a power crisis. The transaction was contested by some government officials, the international donor community, and other interested stakeholders. The grounds of the contest were that the wrong technology (heavy fuel oil instead of indigenous gas) was used, that it was not part of the least-cost generation plan, that it was not procured on a transparent and competitive basis, and that the power was not needed.

The government ultimately submitted the case to arbitration. Under the final arbitral ruling, the project costs were reduced by about 18 percent. Even so, the costs remain well above international comparators. In the arbitration hearings, the government alleged that the contract award had been corrupt, but failed to produce evidence to satisfy the Tribunal of this. The government has not subsequently pursued the corruption investigation. However, legal disputes between the IPTL and the government continued.

Sources: (WB 2009b); (Eberhard and Gratwick 2010)

Other countries adapt the competitive tender process, to provide some advantage or compensation to the project proponent for developing a project, while retaining competitive tension and ensuring transparency. There is no international consensus on the best way to subject unsolicited proposals to competition and at the same time allow sufficient incentives for the private sector to submit USPs. Several approaches have been adopted to incentivize the USP proponent:

- **Automatic short-listing**—a two-stage bid process is used, in which the highest-ranked bidders from the first stage are invited to submit final proposals in a second stage (see *Section 3.5.4 - Managing the Bid Process*). The proponent is automatically in-

cluded in the second stage. This approach is used in the **South Africa** roads sector, as set out in a **South Africa Roads Agency policy note** (ZA 2004a).

- **Bid bonus**—the proponent receives a scoring advantage—typically defined as an additional percentage added to its evaluation score—in an open bidding process. This approach is used in **Chile**, where the bid bonus can be between 3 and 8 percent of the financial evaluation score (in addition, the proponent is reimbursed for the cost of detailed studies (CL 2010c).
- **Right to match**— The **right to match** (also known in some countries as 'Swiss challenge') has presented significant anti-competitive properties—in the **Philippines** under the right to match approach, all 11 PPP contracts awarded from unsolicited proposals by 2006 went to the original proponent. It operates like this: Following an unsolicited approach, an open bidding process is conducted. If unsuccessful, the proponent has the option to match the winning bid and win the contract.
- **Developer's fee**—the proponent is paid a fee by the government or the winning bidder. The fee can simply reimburse some project development costs, or be defined to provide a return on developing the project concept and proposal. This is one option for dealing with unsolicited proposals permitted in **Indonesia under the presidential regulations governing PPP** (ID 2005). It is to be noted that the developer's fee option is different from the other incentives presented above in the sense that it does not apply as an advantage during the bidding process.

Table 3.5 - Examples of Procurement Strategies for Unsolicited Proposals provides further examples and references. These alternatives have not all proved equally effective at enabling competition. **Chile**, for example, is a clear exception—of 19 concessions awarded from unsolicited proposals as of 2015 only seven were awarded to the original proponent.

3.7.3 Dealing with Intellectual Property and Confidentiality

Legal provisions for the protection of proprietary information and intellectual property rights encourages investors to submit innovative unsolicited proposals. At the same time, the government needs to be careful not to allow proponents to claim confidentiality of (elements of) their proposal too easily, with the sole aim to limit competition.

Intellectual property is typically protected by law. Whereas governments should obviously respect intellectual property rights in the management of unsolicited proposals, this typically does not require specific additional protection.

There are different approaches to dealing with intellectual property in an unsolicited proposal, which may depend on the nature of the proposal. For example, the **UNCITRAL Legislative Guide for Privately-Financed Infrastructure Projects** section on unsolicited proposals (UNCITRAL 2001, 91–97) describes two options:

- Where possible, the government can competitively tender the project by specifying required outputs and not the required technology to deliver those outputs. This approach is consistent with good practice in defining output-based performance requirements for *Section 3.4.1 - Performance Requirements*.
- In cases where intellectual property is crucial to the project, such that it could not be implemented otherwise, the UNCITRAL guidance suggests direct negotiation may be warranted, along with procedures to benchmark project costs.

The **Partnerships Victoria Practitioner's Guide** (VIC 2001) also provides guidance, and takes a slightly different approach. Proponents must identify any confidential information they wish to protect (subject to agreement with government). The project is then tendered based on output specifications without revealing technology information if possible. If the intellectual property is "crucial to the existence of the service need," the government negotiates with the proponent to obtain the rights to the necessary intellectual property, before procuring the project competitively.

Information that does not strictly qualify as intellectual property can still be considered commercially sensitive or confidential. In general, governments are encouraged not to protect such information and disclose all information included in an unsolicited proposal. By doing so, governments create an incentive for the proponents to not include the information they deem confidential in the unsolicited proposal, which would then avoid any further disclosure and confidentiality issues.

To the extent that exceptions to this approach are strictly necessary, governments are advised to reach agreement with the proponent on non-disclosure of specific elements of the unsolicited proposal prior to moving on to the next phase of project implementation. Where governments decide not to disclose information that is considered confidential (based on the arguments provided by the proponent), the perception of corruption by stakeholders

may increase. This challenge is particularly relevant in the case of USPs that include innovative technologies or alternative technical solutions. Guidance on intellectual property and confidentiality concerns is further provided in the **World Bank report on the Framework for Unsolicited Proposals** (WB 2017d).

3.7.4 Defining Clear Policy and Processes

The World Bank report on the Framework for Unsolicited Proposals (WB 2017d) discusses the need for a clear framework on USPs. Governments must first decide whether to allow USPs as part of their PPP program. This decision should be based on an informed understanding of the advantages and disadvantages of USPs. A government's decision on USPs need not be permanent. However, the government's position should be clear and well-publicized to ensure that:

- Private entities only expend resources when they know the government will consider their proposals.
- Public agencies know whether to accept such proposals and how to respond to them.

The effectiveness of a USP Policy will be influenced by the wider institutional and political environment for both privately and publicly initiated PPPs. Governments must ensure that the panied with:

- Effective PPP policies and regulations that follow international best practice
- An effective institutional organization governing both publicly and privately initiated PPPs
- The development of institutional and human capacity for the public officials and agencies tasked with PPP development and implementation.

The success of the USP Policy will be in part determined by the effectiveness of the PPP legal and policy framework. A USP Policy is not expected to replace PPP policies or procurement laws but rather complement them in areas that are specific to privately initiated PPPs. Governments are advised to rely on the standard PPP process for elements that are common to both publicly and privately initiated PPPs.

Adopting a USP policy should be accompanied by an assessment of the effectiveness of the institutional structure that handles both publicly and privately initiated PPP projects. The institutional structure includes the government agencies involved in PPP initiation, preparation, implementation, and oversight. Each of these entities should have a clear role and mandate at each stage of the PPP process to avoid duplication of tasks and ensure that the necessary checks and balances are integrated into the institutional structure.

The effectiveness of the USP policy will also depend on the capabilities and experience of the public officials responsible for handling USPs. Governments are therefore advised to assess the levels of experience of the relevant public officials prior to accepting USPs and, if necessary, devise strategies for increasing institutional capacity over time.

The purpose of the USP policy is to ensure clarity, predictability, transparency, and accountability for both public agencies and private sector entities. Governments must decide how to incorporate the USP Policy in their existing legal framework. Governments may incorporate a USP policy in various legal instruments, including:

- In regular procurement laws used for conventionally delivered projects (non-PPP-specific)
- In PPP-specific laws or policy documents
- As a standalone document

Governments are advised to consider their country's unique circumstances before defining their USP legal framework. Context-specific factors have a significant impact on the choice of USP policy features. These context-specific factors may include:

- The current state of the country's infrastructure and its future infrastructure needs
- The government's human, institutional, and financial capacity to deliver infrastructure projects
- The extent to which a PPP enabling environment is in place
- The government's experience with both publicly and privately initiated PPPs

There are multiple ways in which the government may define the parameters of USPs that it receives:

- Public definition of project concept: The public agency identifies and defines the project concepts and allows private firms to submit proposals for the implementation of the same projects.

Table 3.6 Examples of Procurement Strategies for Unsolicited Proposals

Jurisdiction	Reference	Key Features
Chile	Public works concession regulations (CL 2010b, Title II: Bids Submitted by Private Parties)	Two-stage process for accepting unsolicited proposals—initial proposals are screened; if accepted, the private party must conduct detailed studies and prepare a detailed proposal. The government then prepares bidding documents based on the detailed proposal, and puts the project out to competitive tender. • Costs of carrying out studies are reimbursed (paid by the winning bidder; or by the government if project never proceeds to bid stage). Costs agreed at initial project approval stage. • Proponent receives a bid bonus of a pre-defined percentage (between 3 and 8 percent depending on the project) added to financial evaluation score.

Colombia	National PPP Law (CO 2012a, Law 1508, Title III)	• Unsolicited proposals that do not modify existing projects or pertain to a project that has already been promoted by a state entity are accepted.
		• There is a two-stage process for accepting unsolicited proposals:
		  • Pre-feasibility—Private party must submit documents detailing the proposed project (including project scope, estimated cost and specifications). If accepted, private parties begin the feasibility stage.
		  • Feasibility—Private party must prove their capability to implement the project and conduct multiple project studies (i.e. risk, environmental and social, technical feasibility).
		• If their proposal is accepted, private party will be informed of the project conditions and granted an additional amount to compensate study costs.

Indonesia	Presidential Regulation 56 (ID 2011, Chapter IV)	Unsolicited proposals welcomed for projects not already in priority list. Accepted proposals are put through normal competitive process. Proponents may either be awarded a **bid bonus**, of up to 10 percent, or paid a **developer's fee** for the proposal. The approach is set by the contracting authority, based on an independent appraisal.
Italy	Legislative Decree no. 163 (IT 2006, Articles 153–155)	Contracting authorities publish three-year plans on an annual basis; private companies are invited to make proposals for infrastructure listed in these plans (following clear content requirements—including detailed studies—and timeline). Proposals are evaluated by the contracting authority. • A type of **right to match** process is used to procure the project. A first stage is used to identify two competing bidders, who together with the proponent enter into a negotiated procurement procedure. If a competing proposal is preferred, the proponent is given the right to match that proposal, in which case the proponent is awarded the concession.
Mexico	Ley de Asociaciones Público Privadas – amended (MX 2012, chapter 3)	Unsolicited proposals will be accepted for non-existent/completed projects. • Proponents must submit a feasibility study outlining the project with their proposal. • If accepted, the proponent will be compensated for study expenses and may receive up to 10 percent **developer's fee** and a competitive bidding process will begin.

Jurisdiction	Reference	Key Features
Philippines	BOT Law 1994 (Republic Act No. 7718) Rules and Regulations (PH 2006, Rule 10) – last amended with Executive Orders 8 (PH 2010) and 136 (PH 2013).	Unsolicited proposals welcomed for projects not already in priority list. • The contracting authority must advertise the opportunity for at least three weeks, and invite competing proposals within a 60-day time limit. • If competing proposals are received, a **right to match process** is followed—if the proponent is not the winning bidder, it is given the opportunity to match the winning bid and win the contract. • If no competing proposal is received, the authority may negotiate with the proponent.
South Africa (roads sector)	SANRAL policy for unsolicited proposals (ZA 1999a); USPs specifically addressed in National Treasury Practice Note No 11 of 2008/2009	Unsolicited proposals must comply with clear content requirements, and are evaluated by the Agency. • If the proposal is accepted the Agency and the developer enter into a Scheme Development Agreement, under which the private party is responsible for detailed development of the PPP, including developing tender documentation. The agreement includes a **developer's fee** payable by the winning bidder to the proponent. • The project is put out to competitive tender, in a two-stage **best and final** offer process. The top two bidders from the first round are invited to re-submit best and final offers; the proponent is also invited, if not already in the top two.
South Korea	ADB review of PPP experience in the South Korea (Sanghoon n.d., 67–69)	Unsolicited proposals must be evaluated by the contracting authority and the PPP unit (PIMAC). • The opportunity is published and alternate proposals are requested, within a 90-day time limit. • The proponent receives a **bid bonus** of up to 10 percent, added to the overall bid evaluation scores. The proponent may modify its original proposal at the bidding stage, but its bonus is reduced to a maximum of five percent. Bonuses are disclosed in the request for alternate proposals. • Losing bidders are compensated in part for proposal costs, to encourage competition.
Uruguay	Article 37 of Law Number 18.786 (UY 2011) – last amended in 2015	Proponent is entitled to a **bid bonus** of up to 10 percent of the final evaluation score. • Proponent is reimbursed for the cost of detailed studies only if not successful in winning the contract.
Commonwealth of Virginia, United States of America (highways sector)	Virginia PPP Implementation Guidelines (VA 2005)	Proposals are welcome that comply with the detailed requirements set out and are evaluated in the same way as government-originated projects. • Proposals for PPPs requiring no government oversight or support are advertised for 90 days; those for PPPs requiring government support for 120 days. If no competing proposal is received, the government may negotiate directly with the proponent.

- Public definition of infrastructure need: The public agency defines a wider infrastructure need or priorities and allows private firms to submit proposals for specific projects that respond to those needs.
- Open solicitation: The public agency does not provide guidance and considers any type of privately initiated proposals regardless of whether they correspond to a previously defined project concept or infrastructure plan.

These options are not mutually exclusive and may be combined within a USP policy.

Clear processes for handling unsolicited proposals are important for transparency, helping build confidence among all stakeholders that projects developed from unsolicited proposals deliver value for money. Clear processes can also help incentivize private developers to invest resources in developing good-quality project proposals, and encourage potential competitors to engage in the bidding process.

The World Bank report on the Framework for Unsolicited Proposals (WB 2017d) describes a well-defined process to assess, approve and bid out a project from an unsolicited proposal, as illustrated in Figure 3.9: USP Process Flow.

First, a private company submits an unsolicited proposal. A well-articulated submission framework helps to ensure that the USP meets the government's requirements and is processed efficiently. It also provides guidance to USP proponents in developing quality proposals that comply with the public agency's requirements.

Then, the public agency evaluates the USP and determines whether to develop it in greater detail. A well-articulated USP evaluation process ensures that only projects that meet public objectives and basic feasibility criteria are considered for the project development stage.

During the project development stage, the feasibility studies will be developed in more detail than the (preliminary) feasibility studies developed by the USP proponent as part of its USP submission. At the end of this stage, the public agency reassesses the project against the same evaluation criteria used during the evaluation stage. Based on the assessment, the public agency determines whether the project should enter the procurement stage.

Governments will need to decide on the extent to which the USP proponent will be involved in this process. There are two main options regarding the role of the USP proponent in project development:

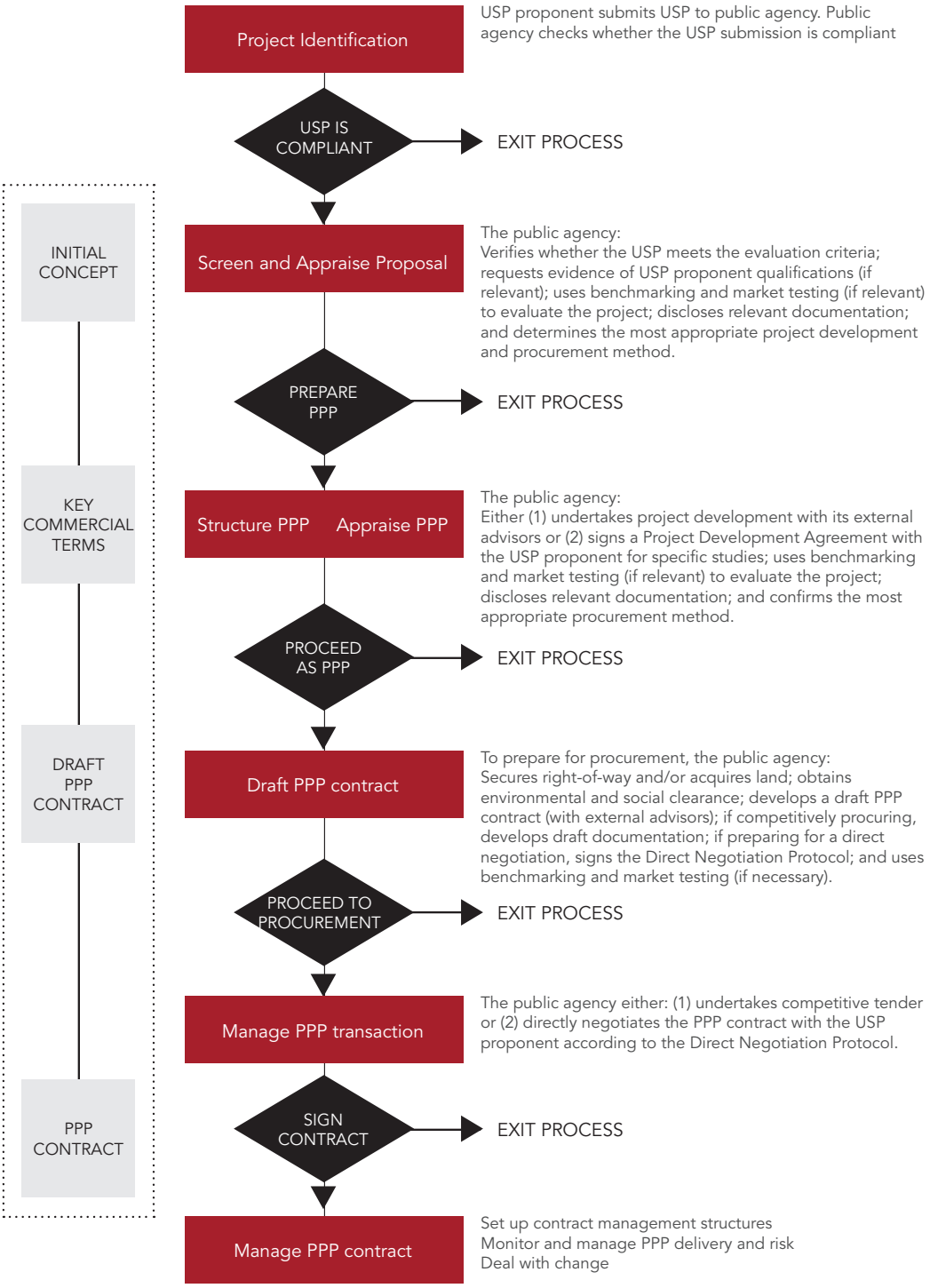
- Project development by the public agency: The public agency undertakes project development with support from external advisors. This option maximizes competition and retains maximum government control of the project development and structuring. This option is most likely to maximize value for money and public interest considerations.
- Project development by the public agency & USP proponent: Allows public agencies to engage the USP proponent for specific feasibility studies. By involving the USP proponent, however, the public agencies will likely struggle to generate competition during a competitive tender process as competing bidders may perceive that the USP proponent has an undue advantage due to involvement during the project development stage.

During the procurement stage, the public agency prepares and undertakes the procurement process. An effective procurement process ensures that the PPP contract represents a fair market price and protects the interests of the government and society throughout the life of the project, including through a sustainable and robust risk allocation. A transparent and accountable procurement process also ensures stakeholder support and minimizes the likelihood of legal or political challenges to the project at a later stage.

In most cases, a competitive tender will enable the government to achieve lower final project costs and generate greater value for money. However, some governments may choose to allow USP projects to be directly negotiated with the USP proponent under specific circumstances. Governments also need to determine if any incentive is given to the proponent.

For further details on for the development of a USP policy and for the management of USPs, please refer to the **World Bank report on the Framework for Unsolicited Proposals** (WB 2017d).

Figure 3.9 USP Process Flow



Key References: Dealing with Unsolicited Proposals

Reference	Description
WB. 2017d. *Guidelines for the Development of a Policy for Managing Unsolicited Proposals in Infrastructure Projects*. Washington, DC: World Bank and Public-Private Infrastructure Advisory Facility.	These guidelines provide advice and recommendations for governments that are considering the development and realization of an unsolicited proposal (USP) policy in infrastructure projects.
PPIAF. 2014. *Unsolicited Proposals—An Exception to Public Initiation of Infrastructure PPPs: An Analysis of Global Trends and Lessons Learned*. Washington, DC: Public-Private Infrastructure Advisory Facility.	Recommends measures that countries can adopt to better manage USPs, recognizing that countries have different levels of capacity to identify, prioritize, prepare and procure projects; competency in PPP project implementation; and maturity of their PPP markets and frameworks.
WB. 2009a. "Toolkit for Public-Private Partnerships in Roads and Highways." World Bank. Website.	Module 5: "Implementation and Monitoring, Stage 3: Procurement" includes a section on unsolicited proposals, which describes their benefits and challenges, and provides examples of both successful and unsuccessful PPPs from unsolicited proposals.
PPPIRC. Accessed March 9, 2017. "Public-Private Partnerships in Infrastructure Resource Center website." Website.	Section on procurement processes and standardized bidding documents briefly describes the World Bank's view on unsolicited proposals, and provides examples from and links to some countries' relevant law and policies.
UNCITRAL. 2001. *Legislative Guide on Privately Financed Infrastructure Projects*. Vienna: United Nations Commission on International Trade Law.	Section E provides guidance on both policies and procedures for dealing with unsolicited proposals. Distinguishes between proposals that do or do not require proprietary technology.

Key References: Dealing with Unsolicited Proposals (Examples)

Reference	Description
ZA. 1999a. *Policy of the South African National Roads Agency in Respect of Unsolicited Proposals*. Pretoria: The South African National Roads Agency.	Describes the policy and sets out the procedure for dealing with unsolicited proposals for national roads PPPs. Includes a description of the required content of the proposal, the process for detailed preparation of the PPP and tender documents, and the tender process that will apply.
ID. 2005. *Peraturan Presiden Republik Indonesia Nomor 67 Tahun 2005*. Jakarta: President of the Republic of Indonesia.	Chapter IV states that unsolicited proposals will be accepted for projects not already on a priority list, and briefly outlines the process and procurement approach. The English version of regulation 56 is available on Bappenas's website, (ID 2011).
CL. 2010b. *Ley y Reglamento de Concesiones de Obras Públicas: Decreto Supremo MOP Nº 900*. Santiago: Gobierno de Chile, Ministerio de Obras Públicas.	Title II of Regulation Number 956 of the Public Works Concessions describes in detail the process and for dealing with unsolicited proposals, including the required content of initial proposals, how detailed studies will be managed, how proposals will be evaluated, and procured.
IT. 2006. *Decreto Legislativo 12 aprile 2006, n. 163*. Rome: Presidente della Repubblica.	Articles 153–155 describe when unsolicited proposals are accepted, how they are evaluated, and the procurement process that applies.
Kim, Jay-Hyung, Jungwook Kim, Sunghwan Shin, and Seung-yeon Lee. 2011. *Public-Private Partnership Infrastructure Projects: Case Studies from the Republic of Korea. Volume 1, Institutional Arrangements and Performance*. Manila: Asian Development Bank.	Pages 61–69 describe the implementation procedures for PPP projects, including those originated as unsolicited proposals.

Reference	Description
PH. 2006. *The Philippine BOT Law R.A. 7718 and its Implementing Rules and Regulations*. Revised 2006. Manila: Public-Private Partnership Center.	Rule 10 states that unsolicited proposals will be accepted for projects not already on a priority list, sets out how proposals should be evaluated, how competing bids will be invited (under a Swiss Challenge process), and how the government may negotiate with the proponent in the absence of competing bids.
VA. 2005. *Public-Private Transportation Act Guideline*. Richmond: Commonwealth of Virginia, Virginia Department of Transportation.	Sets out the process for developing and implementing PPPs, both from solicited and unsolicited proposals. Includes detailed guidance on the required content of unsolicited proposals.
UY. 2011. *Ley Nº 18.786: Contratos de Participación Público-Privada para la Realización de Obras de Infraestructura y Prestación de Servicios Conexos*. Montevideo: Gobierno de la República Oriental del Uruguay, Poder Legislativo.	Article 37 discusses the advantages granted to the proponent submitting an unsolicited proposal.
VIC. 2001. *Practitioners' Guide*. Melbourne, Australia: Victorian Department of Treasury and Finance, Partnerships Victoria.	Section 21: "Unsolicited Proposals" sets out how intellectual property in unsolicited proposals will be dealt with.
CO. 2012a. *Ley 1508 de 10 de enero de 2012*. Bogotá: Congreso de Colombia.	Title III discusses the treatment of unsolicited proposals.
MX. 2012. *Ley de Asociaciones Público Privadas*. Mexico City: Gobierno de México, Cámara de Diputados.	Chapter 3 outlines the unsolicited proposal selection process.

Key References: Practical Guidance on Implementing PPP Projects - PPP Program Material

Reference	Description
AU. 2015. *National Public Private Partnership Guidelines - Volume 2: Practitioners' Guide*. Canberra: Commonwealth of Australia.	Detailed guidance material for implementing agencies on how to implement PPP projects under the national PPP policy, including project identification, appraisal, PPP structuring, the tender process, and contract management. Includes detailed guidance in annexes on technical subjects.
CO. 2014. *Manual de Procesos y Procedimientos para la Ejecución de Proyectos de Asociación Público-Privada*. Bogotá: Gobierno de Colombia, Ministerio de Hacienda y Crédito Público.	A guide for civil servants from national, regional and local governments that sets out in detail the processes and requirements for identifying, assessing, preparing, tendering, and implementing PPP contracts.
IN. Accessed March 15, 2017. "PPP Toolkit for Improving PPP Decision-Making Processes." Public-Private Partnerships in India. New Delhi: Government of India, Ministry of Finance.	Online toolkit describing PPP process and providing sector-specific guidance and tools for practitioners on all stages of managing a PPP.
RJ. 2008. *Manual de Parcerias Público-Privadas - PPPs*. Conselho Gestor do Programa Estadual de Parcerias Público-Privadas. Rio de Janeiro: Governo do Estado do Rio de Janeiro.	A guide for civil servants of the State of Rio de Janeiro on developing and implementing PPPs. Defines PPPs and provides guidance on drafting a preliminary proposal, carrying out detailed technical studies, managing the tender, and managing the contract.
ZA. 2004a. *Public Private Partnership Manual*. Pretoria: South African Government, National Treasury.	Manual for implementing agencies setting out in detail the process and requirements for developing and implementing PPPs in accordance with national PPP regulation. Includes modules on PPP Inception, the PPP Feasibility Study, PPP Procurement, and Managing the PPP Agreement. Includes tools and templates in annexes for use at each stage.

Reference	Description
PPIDB. Accessed March 7, 2017. "Private Participation in Infrastructure Database." The World Bank. Website.	A detailed Methodological Guidebook for PPPs that sets out the rationale for PPPs; the process for developing and implementing a PPP; and provides detailed guidance for each step.
APMG. 2016. Accessed March 19, 2017. *PPP Certification Program Guide*. In eight chapters. APMG-International. Website.	A comprehensive manual that describes in detail the basics of PPPs and the processes for developing and implementing them.
Caribbean. 2017. *Caribbean PPP Toolkit*. Washington, DC: World Bank, Inter-American Development Bank and Caribbean Development Bank.	Discusses PPP policy and institutional structures, project identification and screening, business case development and project structuring, transaction implementation and tender processes, and post-implementation project monitoring. Also covers how to protect the public interest while attracting private investment. Draws on experiences with PPP projects in the Caribbean and globally, drawing out lessons of experience and highlighting accepted best practices.

Key References: Practical Guidance on Implementing PPP Projects, Other Guidance and Toolkits

Reference	Description
Kerf, Michael, R. David Gray, Timothy Irwin, Celine Levesque, Robert R.Taylor, and Michael Klein. 1998. "Concessions for Infrastructure: A guide to their design and award." World Bank Technical Paper No. 399. Washington, DC: World Bank.	Describes and provides examples on several of the important steps in developing and implementing PPPs—focusing on user-pays PPPs, or concessions. Includes sections on detailed design, the tender process, and the institutional (regulatory) structure for contract management.
Farquharson, Edward, Clemencia Torres de Mästle, E. R. Yescombe, and Javier Encinas. 2011. *How to Engage with the Private Sector in Public-Private Partnerships in Emerging Markets*. Washington, DC: World Bank.	Describes and provides guidance on the whole PPP process, highlighting the experience of developing countries. Briefly covers project selection; the focus is on preparing and bringing the project to market and engaging with the private sector.
WB. 2009a. "Toolkit for Public-Private Partnerships in Roads and Highways." World Bank. Website.	Module 5: Implementation and Monitoring provides guidance and links to further material on project identification, feasibility studies and analysis, procurement, contract award, and contract management.
PPIAF. 2006. *Approaches to Private Sector Participation in Water Services: A Toolkit*. Washington, DC: Public-Private Infrastructure Advisory Facility.	Provides guidance on the PPP process, from planning and upstream policy, to the detail of structuring a PPP and implementing a transaction. Focus is on user-pays PPPs in the water sector.
WB. 2007a. *Port Reform Toolkit. 2nd ed*. Washington, DC: World Bank.	Provides guidance on several aspects of PPPs in the port sector—including guidance on risk identification, financial analysis, contract structuring, and contract management approaches.
Flanagan, Joe, and Paul Nicholls. 2007. *Public Sector Business Cases using the Five Case Model: A toolkit*. Westchester, Illinois: Healthcare Financial Management Association.	Provides guidance on how to produce business cases. It is intended to help anyone involved with, or overseeing, a project to understand the work that is necessary to prove a case for investment.
IN. Accessed March 15, 2017. "PPP Toolkit for Improving PPP Decision-Making Processes." Public-Private Partnerships in India. New Delhi: Government of India, Ministry of Finance.	An online toolkit designed to improve decision-making for PPP practitioners across India.
IN. 2013b. *Guidelines for Formulation, Appraisal and Approval of Central Sector Public Private Partnership Projects*. New Delhi: Government of India, Ministry of Finance.	A compendium which brings together the guidelines notified by the central Government of India for the formulation, appraisal and approval of central sector PPP projects. Also provides a template with a checklist for financial support to PPPs in infrastructure under the Viability Gap Funding Scheme.