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Chapter 7.
Criteria and requirements

Introduction

The Model Law provides for the criteria and requirements applicable to PPPs on several different levels. This chapter examines the ways the supporting documents may need to develop and explain them, discussing some of the central concepts and processes involved. They consist of both the essential features which PPPs need to display – the criteria – to meet the Model Law's requirements for them, and the stages that each project is likely to go through as it is identified and prepared, to ensure that those criteria are being met and the projects properly prepared. The supporting regulations and guidelines under many PPP laws provide for these areas in considerable detail, as they represent some of the most critical aspects of PPP projects and the vital steps involved in defining them before they are implemented. This area can therefore take up a large part of the "manuals" drawn up by some host countries to guide the implementation of their PPP laws.[1]

This chapter is divided into four numbered sections. It starts by summarising the relevant provisions of the Model Law in this area. It then discusses the criteria and requirements applicable to PPPs at a general and abstract level, and goes on to describe in some detail the steps involved in (respectively) identifying and preparing PPPs.

1.Model law provisions

General. Several provisions of the Model Law deal with the criteria and requirements applicable to PPPs on a relatively general and abstract level. The main ones are:

• **Requirements and objectives.** Article 4.1 contains an opening "catch-all" provision that is designed to underpin the comprehensive nature of the Model Law. It states that any PPP project undertaken in the host country shall comply with all the applicable requirements of the law, including the procedural requirements governing its various stages. It must also be designed and structured to accomplish the public interest purposes and objectives referred to in the preamble, and in particular to be compatible with and give effect to the SDG Guiding Principles, with their five specific outcomes. These are: (1) access and equity; (2) economic effectiveness and fiscal sustainability; (3) environmental sustainability and resilience; (4) replicability and (5) stakeholder engagement.

• **Main characteristics.** Article 4.2 summarises a PPP's main characteristics. A PPP project involves a contract structured around functional specifications and performance indicators. It should provide for a fair allocation or sharing of risks and rewards between the parties, based on the common objective of best serving the public interest during the project's life cycle. Compensation is provided by way of a government revenue stream or end-user charges (or perhaps a combination of the two). The project's term is designed to enable the private partner to amortise its costs and make a reasonable return. Both tangible and intangible assets can be involved.

• **Criteria.** Article 4.3 lists the criteria and features which a PPP project must meet or display. These develop the general statements in Article 4.2 with more precision. It shall:

(a) be long-term in nature and based on a contract

(b) if required by the host country, have a minimum initial value established in accordance with any applicable criteria/methodology (if any)

(c) relate to public infrastructure, public services and/or services of general interest

(d) involve the long-term participation of a private partner on a risk-bearing basis, and the sharing of risks between the parties, throughout its life

(e) unless the project is entirely government-funded, involve an element of private finance

(f) be implemented in accordance with its contractual terms, which shall include appropriate functional specifications and performance indicators

• **Term.** Article 8.1 of the Model Law provides that any PPP contract shall have a minimum term of either a specified number of years or one established in accordance with the regulations. The provision is in square brackets, as not all host countries will view this requirement as necessary (many do not, in fact). Article 8.2 says the PPP contract shall set forth its term, which must consider the project's purposes and objectives identified as part of its appraisal and approval process. The term should also take the project business case into consideration, including the asset depreciation period and any relevant competition policies and constraints affecting the infrastructure or sector concerned. Article 8.3 then allows for extensions of the term, in exceptional circumstances, in accordance with either the contract's provisions or where local law otherwise so permits, in circumstances where the contracting

[1] Ukraine's Public-Private Partnership Manual, prepared with the help of the World Bank, is an outstanding recent example. This chapter of the PPP Regulatory Guidelines Collection has drawn extensively on its helpful contents.

authority has acted in the public interest in ways that have a substantial adverse impact on the project's economics. The regulations can set out a methodology for determining any such extension.

Process. The Model Law then deals with the process of identifying, preparing and approving a PPP project, in a range of provisions which are designed to ensure that the criteria and requirements summarised above are met and properly applied to its structure. They are set out in Chapter III. These contain further criteria and requirements, linking back to those listed above.

- **Overview.** Article 11 deals with the subject of initiating, identifying and preparing PPPs. A precise framework is provided for this process, structured around the three distinct stages involved. These are discussed further below. It is usually helpful for the supporting documents to elaborate in detail on these activities, developing the framework procedures and requirements set out in the Model Law to a suitable level of depth, where all the complex tasks involved can be described and explained.

- **Initiation.** A contracting authority or (in the case of unsolicited proposals) its private initiator (11.2) can initiate a PPP. If it moves ahead, the contracting authority must set up a project team (11.3) to manage the process, comprising a suitable range of skills, expertise and experience (including in the SDGs and SDG Guiding Principles). The contracting authority (11.4) must normally carry out or manage the detailed work of identifying and preparing the PPP, although a private initiator can also be closely involved in the case of an unsolicited proposal (USP).

- **Stages.** The Model Law distinguishes between the preliminary phase of identifying and defining a project, and the detailed work of preparation in the next phase. The latter specifies all the project's essential features and so enables it to form the basis of the formal review and appraisal required by the Model Law, and then of firm implementation tender proposals by the private sector (11.5). It envisages that all the detailed steps involved will be set out in the regulations, with flexibility to distinguish between different types and scale of project. The first phase is accompanied by an "identification report" covering fundamental aspects of the project (11.5). These include a summary of scope, relative priority, delivery options, principal features and its acceptability to users and stakeholders. The identification report is subject to the PPP unit's approval, in terms of whether the project is at that stage in compliance with the law's requirements and seems to represent a plausible basis for a PPP (11.6). If approved, the project moves to the next stage of detailed preparation, based around a feasibility study and related assessments and reports (11.7).

2. Criteria and requirements – general

Given the complexity of PPPs and the range of factors needed for a new PPP system to succeed, one of the crucial elements of a PPP law is a requirement for a well-structured, thorough and rigorous planning and preparation phase. This is meant to ensure that each project is properly designed and prepared, and meets the various specific requirements and criteria for it set out in the law.[2] The detailed aspects of this part of the legislation are typically set out in the supporting documents, which can run to dozens or even hundreds of pages (not unusually in the form of a PPP "manual").[3]

The supporting documents should provide an appropriate structure for both the initial identification and definition (early-stage preparation) of the PPP and its subsequent detailed preparation. They should also take account of and link in with the law's mechanisms for mandatory reviews and approvals of the project's assumptions and expectations, allowing both the contracting authority and the competent reviewing body (or bodies) to be confident about the project's viability and suitability as a PPP. The project's underlying studies – especially its feasibility study – should address its economic and financial aspects, including costs and revenues, and its anticipated social and environmental impact. They should highlight its SDG-related features and its application of SDG Guiding Principles. They should specify its outputs, provide a convincing rationale for the investment involved and show how private-sector participation will enable those outputs to be accomplished over the project's entire life cycle. The core studies involved will need to address (among other things) the following:

2.1 Value for money

As the UNCITRAL PPP Legislative Guide explains, the concept of value for money (VfM) is essentially a synthesis, applied specifically to PPPs, of the twin concepts of economy and efficiency, which have long been treated as fundamental aspects of procurement systems. "Economy" (also known as "best value") means "an optimal relationship" between the price

[2] See the discussion of this subject in the UNCITRAL Legislative Guide.

[3] See, for example, Ukraine's PPP manual, referred to in note 1, published in 2021. It runs to several hundred pages.

paid and various other aspects of the project, such as its efficacy and quality. "Efficiency" in procurement, on the other hand, stands for a proportionate relationship between the time and cost of the procurement process and its value. This can be measured on both an individual project basis and a system-wide one. The terms acquire a somewhat broader meaning in the PPP context than in traditional public procurement, given the significantly different structures involved and the different approaches taken by government to project design, award and implementation.

Price is a more prominent test in traditional procurement. It is less so with PPPs, where it usually has to be demonstrated that the project's implementation on a PPP basis will be both more economical and more efficient than the traditional route, that – in the round and taking account of all relevant factors – it represents better value for money. A PPP will often be more expensive in the short term than a traditional procurement due to the higher preparation, transaction and financing costs involved. But it can offer compensating advantages, which constitute vital components of the overall value judgement. These include the more effective deployment of the private sector's skills in terms of management, cost control, innovation and adaptability. The VfM test generally includes both a quantitative and qualitative analysis of the costs, benefits and quality of the project, which conclusively shows that implementing it as a PPP is the best available option. The test is then repeated at the end of the contract award process, to verify the accuracy and consistency of the judgements made. The supporting documents should set out in detail the principles and methodology to be applied to the VfM test.

It should be kept in mind, though, that those principles and methodology are likely to evolve as the country's PPP system develops. They should be reviewed periodically and refined. Conducting accurate and reliable VfM analyses calls for sophisticated public accounting and management techniques and appropriate comparison tools (such as a "public sector comparator"), which may simply not be available in a country initiating PPPs for the first time. Extensive use of expert outside advisers is usually needed, reinforcing a long-term capacity-building programme within government. A great deal of published or accessible guidance on international best practice in this field is now available (and constantly evolving).

The VfM tests should also be combined with "value for people and the planet" tests to reflect the SDGs and the SDG Guiding Principles. PPPs implemented under the Model Law need to further the SDGs, and the fundamental tests applied to them to verify their viability should allow for this. They should seek to result in PPPs which advance the five "outcomes" at the heart of the SDG Guiding Principles,[4] summarised in the preamble to the Model Law, namely (i) access and equity; (ii) economic effectiveness and fiscal sustainability; (iii) environmental sustainability and resilience; (iv) replicability and (v) stakeholder engagement.

There are many ways to achieve this. The United Nations has published a set of detailed guidance materials to do so, called the Evaluation Methodology for PPPs for the SDGs,[5] together with an accompanying self-assessment tool and user's guide, which show exactly how these key outcomes can be measured and realised in the case of individual projects. The five outcomes are in turn filtered down into 22 specific criteria (about four each), and then broken down again into 95 individual indicators. These represent a broad and detailed range – a "smorgasbord" – of tests and factors which are designed to help host governments and private participants to structure and implement SDG-compliant PPPs. They are obviously not all compulsory, in any sense,[6] and do not need to be used in their entirety on any one project. Together, they represent the "catch-all" concept of "value for people" or VfP, translated into a corpus of precise questions and answers, measures and indices which are meant to have concrete, practical results. The more they are reflected in an individual project, the more SDG-compliant it will be.

Each host country should decide to what extent it wishes to build these VfP tests and requirements into its supporting documents. Many of them will already be present in the criteria and studies described below. Others can be added in wherever this is thought to be helpful. The "people-first PPP" concept is evolutionary, not revolutionary. It is about emphasising and heightening the SDG-related aspects of PPPs, not creating something fundamentally new and different.

[4] There are 10 SDG Guiding Principles, but these are then encapsulated in the five outcomes described above. Principle 7 expressly refers to the concept of value for people.

[5] https://unece.org/ppp/em

[6] The work of the UNECE Working Party on PPPs never has a binding legal effect on member states. It consists of guidance and recommendations, model documents and standards.

2.2 Business case

The purpose of a VfM analysis is to confirm the project's business case accurately and convincingly. This requires an examination of its anticipated costs, revenues, risks and liabilities over the course of its life, measured (at least in part) on a commercial basis which is in harmony with the private sector's approach. This is also a necessary part of its financial and fiscal impact assessment. Especially if the PPP is to be project-financed – in the sense of a debt-driven, limited recourse financing structure, where the lenders look primarily to the project's future cash flows to guarantee their repayment – a comprehensive, whole-life business case will need to be drawn up, using an appropriate financial model. Although the bidders for the project will need to prepare their own financial models as part of their tender proposals, the contracting authority will need to develop one itself as part of the project's definition and preparation. This will enable it to select the most suitable funding structure and demonstrate its financial viability.

Closely related to this will be the fiscal impact assessment, which involves an early-stage assessment of the potential impact on the public finances ("fiscal risk") of the project's cost and risks. This involves confirming that the project will not expose the public sector to unexpected and excessive costs in the form of contingent or deferred liabilities, especially ones that have not been properly estimated or accounted for under the relevant budgeting processes. In practice, this analysis often forms part of the VfM assessment. It links in with the "fiscal sustainability" outcome reflected in the SDG Guiding Principles. It is integral to the risk analysis and contractual allocation of risk. The project's budgetary implications throughout its life cycle must be estimated and analysed. Relevant variables will include the contracting authority's fiscal status and sources of funds (for example, central or local government), the payment structures proposed (user charges or government-pay) and the nature and extent of government control over the asset and of any government support being provided.[7]

2.3 Social impact assessment

In addition to the essentially economic and monetary assessments described above, the project should be carefully reviewed during its preparatory phase from the perspective of its impact on society and local communities. This is a fundamental aspect of its SDG compliance and compatibility with the SDG Guiding Principles. The interests and views of the wider stakeholder group must be considered, in addition to those of the commercial parties to the project, as the "stakeholder consultation" outcome requirement makes clear (see above). Popular enthusiasm and support for the project need to be built.

- Is the project compatible with the government's wider policies for social and infrastructure development and public services?
- How effectively does it advance them?
- How can its benefits be enhanced and any harmful consequences be avoided or mitigated?
- How sustainable is it?
- How well-aligned is it with the host country's wider commitments under the SDGs and other ESG priorities and criteria?

2.4 Environmental impact assessment

Closely related to this, a rigorous environmental impact assessment should be carried out, at least where significant construction works or potentially polluting activities form part of the PPP.[8] This is another critical aspect of the project's sustainability, and therefore its SDG/SDG Guiding Principles compliance. The assessment should identify and assess the project's risks and potential impacts on the environment and local communities, taking account of the host country's policies and priorities in this area. The steps needed to avoid or minimise the harmful ones should be described and listed. The process should be open and inclusive (as required by the United Nations Aarhus Convention[9] as well as the SDG Guiding Principles). All affected stakeholders should be drawn in, to ensure their access to the relevant information.

2.5 Competition review

The commercial and financial assessment of the project will also need to examine the extent to which the private partner may need or request exclusive rights to operate it and/or provide the related services. The project's economics may mean that at least some degree of insulation from competition will

[7] See, in particular, the guidance published on this subject by the World Bank and the International Monetary Fund.

[8] As called for by the Rio Declaration on Environment and Development (report of the United Nations Conference on Environment and Development, Rio de Janeiro, from 3 to 14 June 1992).

[9] The UNECE Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, adopted by the Environment for Europe Ministerial Conference in Aarhus, Denmark, on 25 June 1998.

be necessary for sponsors to be confident that their investment will be recovered. Government competition policy and law in relation to the sector and/or activities in question will therefore be important considerations, as well as (conversely) available forms of government support. The review should clearly set out the rationale for any such protections from competition and their scope.[10]

2.6 Risk allocation

PPPs, like the project-finance structures so often used to fund them, are all about risk allocation. The many risks to which a project may be subject need to be identified, evaluated, allocated and mitigated on an appropriate basis, with each borne (as the familiar mantra goes) by the party best placed to manage it. Because this is a well-understood aspect of PPPs, the supporting documents may not need to go too far "back to basics" in explaining it.

But the approach taken to it, and the methodology for carrying it out, may need to be described in detail. As we have seen, the process of preparing and implementing a PPP goes through several different stages and iterations: the initial identification stage, the preparation and feasibility stage, the formal approval stage, the contract drafting and tendering stage, any final negotiations and then the subsequent financing stage. Decisions about specific risks and responsibilities must be made and modified at each stage. It is always an evolving pattern – in other words, subject to repeated refinement. Nevertheless, the early preparation stages need to examine risk reasonably thoroughly and accurately, in a balanced and well-informed way, as assumptions about risks and their allocation must be robust and reliable throughout. This will form an essential part of the VfM assessment and the drafting of the PPP contract. The more competently it is done at an early stage, the more efficient and confident the approval and award processes are likely to be.

Let us now look rather more closely at the steps involved in preparing and implementing a PPP. Many PPP systems subdivide them into four broad phases.[11] These are:

- Identification and initial design
- Detailed preparation and approval
- Procurement
- Implementation

The Model Law's does the same, applying various criteria and/or requirements to each one. The criteria involved are particularly relevant to the first two, however, when a PPP's structure and viability are being established, and its compliance with applicable laws and regulations (including those under the PPP law) confirmed. This chapter focuses on these first two phases. Chapter 5, on Tender Procedures and Requirements, discusses procurement, while implementation of a PPP project is primarily a matter of the terms of the PPP contract for it, which is the subject of separate chapters of both the Model Law[12] and the PPP Regulatory Guidelines Collection.

3. Phase 1. Project identification

As we have seen, Article 11 of the Model Law distinguishes carefully between the preliminary identification phase and the subsequent preparation phase. It envisages an "identification report" being prepared in the first phase, covering fundamental aspects of the project (11.5), which will later be subject to the approval of the competent reviewing body (for instance, the PPP unit). These include scope, relative priority, delivery options, principal features and acceptability to users and stakeholders. The supporting documents should describe and explain clearly and in detail the various steps involved.

Phase 1 should have a number of key objectives, including the following. It should define the project in conceptual terms and show that it represents the most appropriate and attractive solution to the infrastructure and service needs in question from the options available. Its scope and principal features should be set out, a preliminary risk analysis carried out, an initial costing and cost-benefit analysis made, a preliminary socio-economic and environmental assessment conducted, the project's affordability and acceptability to users and stakeholders examined, and its relative priority in the context of the government's wider infrastructure development plans established. If different options for structuring its delivery are available, these should be discussed and compared.

This should lead to preliminary conclusions about whether it is appropriate and worthwhile to implement the project as a PPP. This should all be done in a way that ties in logically with the review and approval criteria to be applied by the relevant reviewing body.

[10] See also the more detailed discussion of this subject in Chapter 6, Forms of Government Support.

[11] See, for example, the selection and preparation stages described in Ukraine's PPP manual, referred to above.

[12] Chapter 5.

It should result in a clear plan and set of issues for further examination in the next phase, Phase 2, which centres around a feasibility/efficiency study. It can be helpful to think of Phase 1 as a pre-feasibility study phase and Phase 2 as a feasibility study phase.

While Phase 1 involves a necessarily preliminary assessment, it still makes sense to carry it out with due thoroughness and accuracy. This will help appropriate early-stage decisions to be made and robust assumptions formed, and so avoid wasting resources in revisiting them unnecessarily during Phase 2 (which is always an expensive exercise anyway). The aim should be to "get it right" as far as possible from the start.

For that reason, it may make sense for Phase 1 itself to be subdivided into two separate stages, namely an initial one, which describes and discusses the project in summary, conceptual terms, followed by a more detailed one, which involves a more in-depth analysis (but which still falls short of a full feasibility study).[13] There could be a concept paper followed by a pre-feasibility study, for example. This will depend in part on the nature of the approvals (if any) that the contracting authority must obtain from the relevant competent body to the project concept and the Phase 1 studies. If a very early-stage approval is required, then a concise summary of what is proposed is likely to be suitable, delineating key features and outcomes, before the time and resources needed for the more in-depth studies are committed. Once a "green light" has been received, the contracting authority can move to the next stage of Phase 1. Conversely, if no external approvals are needed until a full pre-feasibility report has been drawn up, it may be sufficient for the contracting authority simply to structure Phase 1 as it considers most appropriate, to allow resources to be used and decisions made in the most efficient manner.

The supporting documents can break down the different tasks involved in this phase and describe them in as much detail as is thought to be helpful. Note that these tasks are not designed to be performed sequentially, but structured and ordered in relation to each project in a way which makes most practical and organisational sense. They should all be seen as inherently flexible and capable of adaptation to meet project specifics and needs. They should also not be seen as a comprehensive requirement. The host country may prefer to shift some of them into the next stage, Phase 2. Or it may choose to simplify and shorten some of them; that is entirely a matter for it. However Phase 1 is structured, the conclusions reached at the end of it should be fully documented in an appropriate form (an "identification report" in the Model Law). The review and approval process should then aim to confirm the project's suitability as a solution to the infrastructure need or service in question, as well as screening it as a potential PPP structure. Set out below are the main elements of a Phase 1 pre-feasibility study.

3.1 The Infrastructure or service need and options for meeting it

The project's starting point is the infrastructure and/or service need which it is designed to meet. It should be based on a firm understanding of that need and its ramifications, set in the context of the government's wider strategic plans and priorities for infrastructure and social development. The SDGs and SDG Guiding Principles can also be taken into account at this stage.

There will usually be a range of possible options for meeting that need. Each distinct and plausible one should be clearly identified and described. The advantages, disadvantages and principal risks of each option should be compared and contrasted on the basis of a consistent set of criteria. The exact criteria or characteristics involved will to some extent differ from project to project, but are likely as a minimum to include:

- Estimated capital and operating costs
- Affordability
- Resulting benefits
- Major risks and uncertainties
- Construction and/or operating period(s)
- SDG compliance

PPP feasibility will not need to be considered at this stage (except perhaps in a very preliminary sense). A comparative assessment of the available options should then be carried out. This may be done on the basis of a cost-effectiveness analysis, where the costs and risks are relatively certain, or a multi-criteria analysis, where they are not. The supporting documents can elaborate on this methodology. The most convincing and attractive option should then be selected for further development.

[13] "It is widely accepted now in international practice that the first information submitted (formally or informally) by a contracting authority to a higher authority (e.g., PPP unit) describing an intended PPP project should be very short and focus on just the essentials. A simple form or fiche de projet (max. 10 pages) is a more appropriate way to describe it than a report. The reason is that many project ideas (perhaps 50-80 per cent, depending on the country) can be rejected at that stage as simply not being potential PPPs in their present form. Some can then be sent back, highlighting key issues and gaps so the project idea can be reworked and resubmitted." (Chris Shugart written commentary on draft chapter.)

3.2 Pre-screening

Some jurisdictions and PPP systems then require the project selected to be subjected to a PPP "pre-screening", in conjunction with other proposed projects that have reached the same stage. In simple terms, the purpose of this exercise is to carry out a preliminary review of the project's viability as a PPP, to justify moving ahead with its preparation work. The supporting documents can set out and explain the applicable tests and questions precisely and in detail. They are likely to include:

- Adequacy of available data and resources to prepare the project
- The project's compatibility with relevant public-policy and development priorities, including the SDGs and SDG Guiding Principles
- Long-term stability of the project and the facilities or services it will provide or support
- Clear apparent benefits of structuring the project as a PPP, as opposed to a traditional procurement (for example, more effective use of private-sector skills and resources, use of private funding, greater efficiency, opportunities for innovation)
- A preliminary confirmation of the project's technical, commercial, legal and financial viability
- The contracting authority's capacity and resources to prepare, award and implement it as a PPP (with the help of external advisers where needed)
- Extent of stakeholder support for its implementation as a PPP

The exercise is essentially a "filtering tool" to allow the most plausible projects to move forward from among the many proposals that may be under consideration, allowing the available (and inevitably limited) public resources to be allocated to the most promising opportunities. This turns a spotlight on those projects most likely to succeed as PPPs. SDG compliance can be highlighted in this analysis as a major factor. The projects selected can then be "conceptualised" for implementation, and prioritised among themselves. The analysis is a high-level one, using questions which prompt simple "yes/no" answers. All of it will be subject to further review and refinement.

3.3 Initial project scope

The next step is to prepare an outline describing the project's scope and a plan for implementing it. This should discuss the sector, the project's main features and technical aspects, relevant outputs and key indicators (or at least some of them, to the extent they can be identified), its location and site, its likely impact on users and the local community, significant linkages or interfaces with related infrastructure or services, and any other key parameters. This is still a high-level definition, however, which will focus on principal features, standards and benchmarks. This is a good opportunity to apply to the project the relevant SDG tests and the criteria and indicators set out in the UNECE's evaluation methodology tool,

3.4 Project site

If a new site is needed for the project, the available options should be described, their respective "pros" and "cons" summarised, and a process outlined for making a final selection. Legal questions such as ownership, access, third-party interests and acquisition procedures should be considered, as should any clear site-related risks which may affect the project, such as site conditions, antiquities and environmental/contamination hazards. Any expropriation needs should be very carefully considered. These tests will also form an intrinsic part of the SDG-related and SDG Guiding Principles assessment.

3.5 Preliminary legal analysis

A preliminary legal analysis should be carried out to identify any legal parameters which may affect the project's structure and implementation. In addition to site-related issues, these may include sector-specific laws and rules and regulatory requirements.

3.6 Economic analysis

A broad-brush economic analysis should be undertaken to test the socio-economic impact of the solutions under consideration and their positive and negative dimensions. The SDGs should be factored into those dimensions. This will help to rule out options which offer only very limited benefits or do not represent good use of public funds. Public investment projects always need a clear economic justification (regardless of the procurement basis used). Each of the project's main costs and benefits should be assessed on a quantitative and/or qualitative basis. This preliminary cost-benefit analysis will also underpin the financial analysis.

3.7 Social and environmental analysis

A preliminary analysis of the project's social and environmental impact will form another core element of Phase 1. Its purpose is to test whether the project conforms to the host country's social and environmental legislation, policies and standards. This will support the project scope and economic review. The social "limb" of the analysis can examine a spectrum of considerations affecting the way people live and work, such as health and safety, gender and minority rights, working conditions and poverty reduction. The environmental one looks at the way the project may impinge on the surrounding environment and local communities, including air and water quality, biodiversity and ground conditions. The supporting documents should allow for a wide range of studies in this category, as the specific questions asked will vary widely from project to project. The SDG Guiding Principles and the UNECE evaluation methodology can form critical elements of these studies.

3.8 Risk analysis

A preliminary risk analysis will form another core element of the project identification and definition in Phase 1. Again, it will be a relatively crude and high-level analysis at this stage, focusing on the main risks and their allocation which will affect project structure, and any "show-stopping" ones that cast serious doubt on the project's viability. It will be more qualitative than quantitative at this stage, as the data and detailed assumptions needed for the purposes of the latter will only be available in Phase 2. The supporting documents can set out a suitable methodology for carrying it out, including (for example) preparing a risk register listing the principal risks that may impinge on costs and benefits, with a qualitative assessment of their probability and potential impact. This will allow the risks to be ranked in importance and prioritised. An example is given below.[14]

The methodology should explain the process for measuring the significance of risks and prioritising them. The greater the significance of a risk, the more closely it may have to be monitored and managed. This can be done with a simple scoring mechanism (for instance, impact multiplied by probability). The analysis can then be converted into a tabular risk matrix. An elementary risk allocation chart can also be drawn up, using the basic categories of "retain" (by the public partner), "transfer" (to the private partner) or "share".

Skill, experience and judgement are needed in the allocation process, as inappropriate decisions can adversely affect a project's structure and VfM/VfP, and ultimately its financial viability and bankability. If the public partner retains too much risk, the project may not benefit fully from private-sector participation and leave the public sector over-exposed to fiscal risk. If too much risk is transferred to the private partner, on the other hand, the risk premiums factored in by bidders may increase its cost of capital unduly, or undermine its financial viability. VfM may be compromised either way.

The familiar core principles of risk allocation should therefore be carefully observed, with risks being allocated to the party best able to control and manage them. The supporting documents can provide as much guidance on this subject as the host country considers necessary and helpful, with pro-forma tables and examples attached as appendices. The analysis needs to be done comprehensively and perceptively for each project, as each is in some respects unique. It also needs to make proper allowance for the fact that the precise causation of risks when they occur can affect the parties' responsibilities for managing them. (For example, a construction cost overrun caused by poor construction management is a private partner risk, while one caused by political events or certain types of change in law will usually be a contracting authority one.) In any event, the exercise will need to be done

1	2	3	4	5	6	7	8
Risk	Description	Aspect of project affected	Probability	Impact of occurrence	Party responsible for managing	Mitigation measures	Cost impact

[14] Cf Ukraine's PPP manual.

in more detail and more definitively in Phase 2. The Phase 1 exercise is about defining basic parameters and identifying areas that will need more analysis in the feasibility study.

3.9 Preliminary financial analysis

The purpose of this review is to confirm that the project seems financially viable and affordable. Payment mechanisms should be explored and compared, and the financial resources needed should be estimated. The financial analysis is more narrowly focused than the economic one mentioned above. The latter is carried out at the infrastructure planning level, and turns on a socio-economic cost-benefit analysis. The former, on the other hand, concentrates on project costs and cash flows in isolation. If anticipated revenues (inflows) can cover anticipated costs (outflows), especially capital expenditures and operating expenses, the project will look financially viable. The process also allows early-stage judgements to be made about the project's funding requirements – its potential for raising the necessary debt and equity investments – and therefore its bankability. The analysis has several distinct components:

- **Cost estimation.** The project's capital and operating costs should be estimated with reasonable thoroughness, using available industry data and benchmarks. These should cover costs before, during and after construction, including project preparation award, site acquisition, design development and construction, together with the costs of operating, managing and maintaining the project and any other material "life-cycle costs". Sensitivity analyses can be factored into the process.

- **Affordability.** The cost estimates will allow a preliminary view to be formed about the project's affordability at a public-sector level, looking at costs at this point on a traditional procurement basis and comparing them with other relevant government commitments, in a budgetary context, to assess the project's affordability for the government.

- **Funding sources.** The question of how the project should be funded can then be addressed. This refers to its non-recoverable payments to be made by either users or the contracting authority (or a mixture of the two), which are used to repay debt and provide a return on equity investments, as opposed to the recoverable payments represented by the different financing sources involved.[15] Some precision should now be given to these funding sources and mechanisms so their exact nature can start to be understood (for example, user charges, government-pay, demand-based, availability-based, subsidies, cash contributions). Wider affordability notions should also form part of this analysis – for example, the ability and willingness of users to pay charges or the government's capacity to do so ("fiscal scope").

- **Revenue generation.** The project's revenue-generating potential should also be examined, using relevant industry data and benchmarks. Where there is scope for greater asset utilisation (for example, ancillary facilities such as shops and restaurants, rents, advertising), this should also be taken into account.

- **Financial viability.** Preliminary conclusions can then start to be reached about the project's financial viability. Are anticipated revenues sufficient to cover costs or do they fall short of them? What sources and mixture of finance make most sense, how realistic are they and how well do they match payment mechanisms? This will help to determine the project's commercial appeal and the possible need for viability gap funding, as well as for other forms of available government support.

These estimates and calculations can then be reflected in assessments of the net present value and internal rate of return of the cash flows, with costs and revenues compared in a discounted cash-flow analysis. The nature and amount of any government support can also be indicated at this stage, whether in the form of direct or indirect liabilities, asset contributions, supporting infrastructure connections (e.g., utilities and related facilities) and any viability gap funding.[16]

3.10 Stakeholder consultations

Proper stakeholder consultation is a vital part of the success of any PPP project. It is also a key component of today's environmental, social and governance standards, such as those reflected in the United Nations SDGs and SDG Guiding Principles. An initial list of stakeholders who may be directly or indirectly affected by the project or influence its outcome should be drawn up.[17] This will be important to project planning and design and encourage adequate engagement. It will be developed into a stakeholder management plan in Phase 2.

[15] To use recognised World Bank terminology.

[16] See further in Chapter 6, Forms of Government Support.

[17] See the IFC Stakeholder Engagement Handbook 2007.

The list of stakeholders is likely to include users of the infrastructure or service and people affected by it, private-sector participants (developers, contractors, suppliers), affected landholders and local communities, finance sources (investors, development banks, commercial banks), relevant government bodies (ministries, agencies such as the PPP unit), competent bodies with approval powers (for example, an inter-ministerial committee), institutions and civil society representatives (for example, non-governmental organisation and trade unions) and the media. The socio-economic and environmental impact of the project should be fully considered as the list is drawn up. A framework engagement strategy for consulting all those listed should be sketched out, covering needs, potential concerns and channels of communication, to be developed in Phase 2. Preliminary soundings should be taken from the most directly relevant bodies.

3.11 PPP scope and review

Taken together, these studies should make it possible for a preliminary PPP scope to be defined for the project and given an initial validation. This will be refined in Phase 2. The project's compliance with all the applicable criteria and requirements under the PPP law and regulations should be systematically confirmed. A preliminary decision can be made about the most appropriate funding mechanism. Parts of the project that are of doubtful value to its PPP structure can be stripped out and planned and organised separately (for instance, early demolition or ground clearance works, connecting infrastructure or services which the government prefers for policy reasons to retain in public hands – such as clinical services in hospitals or teaching services in schools).

This "scoped" project can then be analysed in terms of a series of qualitative criteria to test and confirm its suitability as a PPP. These should be listed in the supporting documents and can include:

• **Whole-life approach.** How appropriate is a whole-life approach to project implementation? PPPs combine construction/refurbishment works with operation, maintenance and management, under a single contract with single-point responsibility, for the useful life of the asset. This is designed to lead to better results and greater efficiency, compensating for the higher financing cost of using private-sector finance. Whole-life costing becomes possible, which can lower operation and maintenance costs, thus strengthening the project's VfM (and potentially its VfP).

• Output specification. Can suitable output specifications be drawn up for the project? Again, this is fundamental to PPPs, which are designed in terms of "clear, measurable and enforceable" outputs (as the familiar mantra goes) which can be turned into a set of performance indicators in the PPP contract, often tied to the payment mechanism to incentivise performance (at least on government pay PPPs, that is. On user-pay concessions, exposed to demand risk, the performance standards will to some extent be self-policing). The project's many "inputs" are then left to bidders to determine.

• **Project size.** How appropriate is the project size? Is it large enough to appeal to the market, or so large that its financial viability for sponsors and lenders becomes questionable? Conversely, is it too small to attract experienced PPP developers and investors, or to justify the higher preparation and transaction costs typically involved, compared to traditional procurement? PPPs can be complex and slow to design, award and implement, especially when the market is still immature. The benefits and efficiency gains need to outweigh the costs. If the project is too large or too small, it may need to be redesigned or phased (in the case of the former) into more manageable components, or bundled together with other similar projects (in the case of the latter) as part of a larger and more viable whole.

• **Market appetite.** How much interest does there appear to be on the part of the private sector to implement the project and bid for it as a PPP? This raises questions about the depth of the local market, the capabilities of its participants (sponsors, lenders and investors), the extent of any international interest, the project's size and difficulty, and the country's wider economic and political environment. New PPP systems can be very slow to take off and require painstaking efforts to build capacity, market experience and appetite.

• **New technology** If unique or innovative technology is needed to implement the project, this may limit private-sector interest and the room for competitive tendering.

• **Risk allocation.** Does the preliminary risk analysis indicate a pattern of risks which are readily capable of identification, valuation and allocation? Can those risks which rationally should be allocated to the private partner to maximise VfM/VfP be transferred to and managed by it at reasonable cost? Conversely, does the contracting authority need to retain risks and responsibilities, especially to make the project financeable, in a way which undermines VfM and increases fiscal risk to unacceptable levels?

• **Precedents.** Have similar projects been implemented successfully in the host country or similar countries in recent years? A great deal can be learned from helpful precedents.

The extent to which the project satisfies these criteria will determine whether it goes ahead to the next (feasibility study) phase (Phase 2). If it does so adequately, the identification report should be completed with the results of the Phase 1 analyses, and a suitable management plan for Phase 2 included. This should describe the resources and expertise needed to prepare the project fully and carry out the feasibility study, set a budget for it, appoint a team leader, discuss the need for external advisers, and plan and schedule the work involved. The supporting documents can set out precisely how this is done.

3.12 Approving the identification report

The competent body authorised to review and – if required[18] – approve the identification report can then evaluate it. This should be essentially a matter of reviewing the report and confirming that the applicable tests and procedures have been followed and convincing conclusions reached. It would not be appropriate for the competent body to try to second-guess all the analysis carried out by the contracting authority, but self-evident flaws or omissions can certainly be picked up and acted on, perhaps leading to certain aspects of the studies being reconsidered or carried out again. The Model Law allows the PPP unit or (in square brackets) another competent body to carry out this review. Some host countries may prefer to use a higher-level body. But the review need not be as definitive or final as that which comes at the end of Phase 2, or involve a formal approval. The project is still at a preliminary stage. Once the report has been reviewed and/or approved, the contracting authority can move to the next stage, Phase 2, the feasibility study.

4. Phase 2. The feasibility study

The next phase of the preparation of a PPP project, Phase 2, centres on a feasibility (and in some respects an efficiency) analysis. It applies to projects that have been approved at the end of Phase 1 and to unsolicited proposals s that have been accepted for further development. It is sometimes referred to simply as the "feasibility study", although some of the studies and reports it comprises can obviously be undertaken as separate exercises (as the Model Law [Article 11.8 and 9] makes clear. In the interests of simplicity, we refer to them all in this chapter as the feasibility study). It enables firm decisions to be made about a project's viability and sustainability by means of a detailed assessment, which builds on the preliminary one carried out in Phase 1.

Further changes can be made to its design, as appropriate, and its structure then settled for the purposes of procurement and implementation. The feasibility study should review and develop the project's technical, economic, social, environmental, institutional, regulatory and financial elements. This will allow the contracting authority to decide, perhaps with the help of a final "efficiency analysis", whether to implement the project as a PPP and the relevant competent body or bodies (for example, the PPP unit and/or inter-ministerial committee, under the Model Law) to approve it (or otherwise), drawing on the results and conclusions of the feasibility study. Formal approval of the feasibility study is a common feature of PPP systems.

The supporting documents should describe and explain the different tasks comprised in Phase 2 in as much detail and provide as much guidance as are thought necessary or helpful.

4.1 Project team

The first step in Phase 2 is to appoint the professional team ("project team") to carry out the feasibility study. This team will usually go on to lead and manage the next task of procuring and awarding the PPP project and drafting and negotiating the PPP contract. The supporting documents should describe its likely composition, but with sufficient flexibility to allow it to be varied as appropriate in response to the size, nature and characteristics of each project. The project team should include civil servants (two or three, for example) from the contracting authority, reinforced as required by specialist advisers (internal and/or external). Its members should ideally have already been involved in preparing the Phase 1 identification

[18] The Model Law puts the word "approve" in square brackets, as formal approval may not be thought necessary at this still relatively early stage.

report, to make the process consistent and efficient. They should represent a suitable range of skills and expertise covering the various specialisms needed, together with extensive management, project and (ideally) PPP experience. An understanding of the SDGs and the SDG Guiding Principles should be part of the expertise needed.

Where more than one public authority is responsible for the project (as in the case of several municipalities or state-owned enterprises, for example), special institutional arrangements may need to be put in place to constitute the project team and allow decisions to be made. The supporting documents should allow for this. A suitably qualified team leader (project manager) should be appointed and a detailed work plan, timetable and budget drawn up for Phase 2. The available sources of funding for the exercise should be made clear. The supporting documents can describe in detail the functioning of the project team and its procedures.

4.2 Technical requirements

As we have seen, the project's technical components will have to be expressed essentially in terms of an "output specification" and performance requirements that describe what they will be capable of achieving at a technical and performance level, rather than how that is done. These objectives and standards should be "clear, measurable and enforceable", and represent a robust basis for the project's further development and definition. That calls for skill and experience in defining the relevant "outputs", which governments embracing PPPs for the first time and used to the habits of "input" control associated with traditional procurement (that is, defining the "how" as well as the "what") may lack. The supporting documents can provide detailed guidance as to how this should be approached.

Output specifications can embrace a wide range of relevant categories and characteristics. The supporting documents can explain and illustrate them. They typically cover minimum quality, required capacity (for example, volumes of production or usage), the timing and duration of performance, and reliability levels (for example, availability as a given percentage of time). These should be clearly defined for each main, discrete component of the project assets. The output specification is then translated into a series of contractual performance requirements and key performance indicators (KPIs) which enable the private partner's performance to be closely monitored and its remuneration to be adjusted as appropriate. Thought should be given to the question of how far to reflect the SDGs and SDG Guiding Principles in these KPIs. They should be reflected where appropriate in the output spec.

A further costing exercise can be carried out at this stage, based on the design, construction and service requirements, with revised estimates of capital costs, operation and maintenance costs and other life-cycle costs (such as renewals and reinvestments) being prepared. Appropriate risk adjustments can be made to these estimates. The applicable methodology can be set out in the supporting documents.

5. Demand review

Anticipated demand for the infrastructure or service will need to be examined as part of the feasibility study. The supporting documents should explain how this is done. In essence, this means the volume of availability or service that the contracting authority, off-taker or end-user will need from the project over its useful life. This may vary considerably over time, with scoping implications. Affordability and willingness to pay will be intrinsic elements of the analysis (not least because they form important elements of the SDG Guiding Principles). The variables that should be allowed for in the process can be discussed.

6. Economic feasibility

The supporting documents should describe the methodology for reviewing and updating the economic analysis carried out in Phase 1. The economic costs and benefits of the project should be reviewed, using appropriate conversion factors, and verified. This should lead to a more confident economic feasibility assessment with an economic net present value, based on a calculation of the net present value of the stream of costs and benefits over the project's life. This can be a sophisticated exercise, with a range of variables and sensitivity analyses.

7. Financial feasibility

The central purpose of the financial feasibility study is to determine the amount and range of payments (revenues) needed by the private partner to cover all project costs and provide a sufficient return to its investors and lenders, for the project to be financially viable. The tests involved will differ, depending on the payment mechanisms proposed (for example, user-pay or government-pay) and their scope (for example, allowance for revenues from ancillary facilities or greater asset utilisation). The underlying methodologies need clarity, thoroughness and rigour, and should be explained in detail in the supporting documents. They will enable the contracting authority to decide the exact payment mechanism to be adopted and its structure (including possible adjustments, such as those linked to KPIs), taking account of a range of relevant factors. Views can then be formed about whether the project will be self-sustaining (where revenues cover costs) or subject to a funding gap. If the latter, available forms of government support may have to be considered[19] or elements of the project redesigned. The analyses should be detailed, flexible and transparent, showing calculations and assumptions and the conclusions and recommendations reached by the project team.

This part of the feasibility study will also allow recommendations to be made for a suitable term for the project. Various factors will drive this decision, as the Model Law makes clear (Article 8). The decisive one, however, is usually the amount of time needed by the private partner to repay its lenders and offer its investors an adequate return. Other factors include the useful life of the assets, amortisation/depreciation periods, relevant sector policies, competition considerations and any statutory or regulatory limits. Governments often hold firm views about how the project term should be determined. The supporting documents should describe the approaches to be used. They (or the PPP law) may also impose a statutory maximum on any PPP contract's term, in part to prevent abuse.

A critical part of the financial feasibility analysis is the financial model used. The supporting documents should explain when and why exactly it is needed and the detailed methodology involved to prepare and refine it. Pro-forma and/or precise instructions can be attached to them. Various options will be available. It should be made clear that this tool is the financial model used by the public sector to facilitate and support judgements about the project's viability, affordability and VfM, and to define its assumed financial structure. It is also used to calculate the government/budgetary support needed for the project. It is distinct from the financial models the bidders will develop themselves to support their tenders, which often become the basis of the model eventually attached to the PPP contract. But its assumptions and projections will be reflected in the tender documents, and so taken into account by bidders in the meantime.

The project team can use the financial model to delineate a series of cash-flow projections and a business plan. The former should initially be prepared as a "base case", reflecting conservative assumptions. The latter can be used to help define the project's financial KPIs (for example, equity internal rate of return, debt tenor and debt service cover ratio). Various sensitivities can be applied to test the robustness of the project's financial feasibility. The model can be adjusted and refined as necessary during the course of project preparation. All its elements should be capable of revision. Its design should be transparent in all respects, showing inputs and results, technical data, capital expenditure and operating expense data, revenue assumptions, the proposed financial structure (including sources and amounts of finance and any government support), a cash-flow analysis, profit-and-loss statements and a balance sheet. Calculations and the assumptions behind them should be explained and readily capable of analysis. The final version should confirm the project's financial feasibility, affordability and VfM.

8. Fiscal feasibility

This analysis seeks to establish whether the project is affordable for the public sector. The analysis is set in the context of the government's aggregate exposure to PPPs across the board, taking account of all its direct and contingent liabilities under them. If the project exceeds the contracting authority's affordability limits, it may have to be redesigned, cut back or even cancelled. Fiscal affordability and sustainability are important express elements of the SDG Guiding Principles. All the contracting authority's direct and contingent liabilities relating to the project will need to be considered within the parameters set by the public finance procedures and fiscal rules, together with its own competing commitments (if any).

[19] See further in Chapter 6, Forms of Government Support.

Direct liabilities include the sum of all committed payments to be made by the contracting authority to the private partner over the term of the project, whether in the form of availability payments, deferred fixed payments, subsidies or grant funding (for example). These should be calculated in nominal, real and relative terms. Account should also be taken of the value of other contributions to be made by the public sector, such as land acquisition, ancillary construction works, the cost of preparing and awarding the project, the cost of monitoring and managing the PPP contract, and the value of any services to be provided to the project during its term. Any government revenues or savings, such as concession fees or a share of incidental business profits, should also be factored in.

Contingent liabilities are harder to assess, as they are, by definition, uncertain. They can include payments under guarantees (for instance, minimum revenue guarantees), risk-related payments or costs under the PPP contract (for instance, for exceptional or force majeure events, or early termination payments) and additional forms of government support that become necessary during the project's life.[20] There are various ways to measure and calculate them, including "scenario analysis" (based on certain assumptions) and "probabilistic analysis" (based on probabilities).

Once these estimates have been made, their fiscal implications can be worked out and the public sector's capacity to absorb them within its budgetary limits calculated. Again, there are various ways of doing this, which the supporting documents should discuss and compare. One is to compare commitments with projected tax revenues. Another is to compare them with budget appropriations. A third is to examine the project's compatibility with relevant budget constraints. The different options and their pros and cons should be explained.

9. Social and environmental feasibility

The preliminary social and environmental impact assessment carried out in Phase 1 can now be explored in more detail, guided by the project's closer definition and deeper understanding achieved in Phase 2. Its purpose is to review the project's impact on the social and natural environment and to identify the main risks and adverse impacts on it flowing from construction and operation. It is a critical part of the SDG/SDG Guiding Principles assessment. Both direct and indirect (secondary) impacts should be considered.

The analysis needs to look closely at the full range of consequences that the project might have for the local community's society, economy and even culture, together with the natural environment. These can range from employment issues, prices and land values to demographics, minority and ethnic concerns, social disturbances, access to clean air and water, local public services and governance issues. Impacts should be examined as objectively and precisely as possible, and strategies developed to mitigate or avoid the adverse ones. The supporting documents can discuss the range of possible consequences, issues and solutions, and attach examples and pro formas. Comprehensive plans and questionnaires should be drawn up for each project, together with a cost estimate and social and environmental action plan. This can prompt changes to the projects design. The importance and complexity of the assessment, coupled with the need for accurate, full local data, can make it a time-consuming exercise. It should be undertaken without delay as Phase 2 starts. It will also form a vital part of the economic and financial assessments and risk analysis.

Note that the successful bidder for the project will typically have to prepare a further environmental impact assessment, based on its detailed design. This is often a legal requirement of construction works. This does not in any sense, however, qualify the importance of the public sector's environmental impact assessment as the project is being prepared, which will inform the feasibility analysis.

[20] See further in Chapter 6, Forms of Government Support.

10. Risk analysis

In Phase 2, the project team will need to review and update the risk analysis and register prepared in Phase 1, to take account of the risks identified and highlighted in the various feasibility analyses performed in this phase. The aim is to produce a more exact and definitive risk analysis and allocation to support the project's viability; this will then be reflected in the tender documents.

• **Identification.** The supporting documents should describe how to identify and describe the various risks most effectively. It is likely to work best when carried out on a wide-ranging, inclusive basis, with many different experts taking part. Meetings, workshops and discussions can be used as well as written communication. All material stakeholders should be considered and – where feasible – consulted, so risks can be described and understood as accurately and fully as possible (bearing in mind that no two projects are identical). The PPP contract will, of course, reflect project-related risks following its award. This exercise should have a somewhat wider remit, however, capturing ancillary risks such as land acquisition and incidental infrastructure works or service provisions (which may be the public sector's responsibility), or procurement-related ones such as market risk/investor appetite and the scope for competitive tendering. The different risks can then be described in the risk register. Their probability and impact can be examined in a related risk matrix. These documents will need to be periodically updated as the project team works its way through Phase 2.

• **Allocation.** Firm decisions then need to be made about the allocation of the various risks among the parties, giving responsibility (in the usual way) for managing, controlling and mitigating (or eliminating) them to the party best-placed to do so at reasonable cost. The principles underlying this process can be described in as much detail as necessary in the supporting documents (although the fundamental principles at work have been extensively written about and are often well understood). Guidance as to how best to prioritise risks, optimise and value them (for VfM purposes) will be helpful. Subtle variations should also be explained, such as the ways causation can qualify their primary allocation or the payment mechanisms affect or respond to their occurrence and impact.[21] The supporting documents should explain that an appropriate allocation of risks should strengthen the project's VfM, minimise its fiscal risks and allow for healthy private-sector returns on investment.[22] This will help the project to succeed and encourage the wider development of the nascent PPP market.

• **Quantification.** The largely qualitative risk analysis done in Phase 1 can now also be translated into a quantitative one. This may involve estimating the cost implications of each risk, its probability of occurrence and then its probability-weighted cost. The supporting documents can explain the applicable costing and probability methodologies. Sophisticated expertise – which may have to be hired in – is usually required to do this. The quantitative analysis can then be fed into the economic and financial feasibility studies to test their possible impact on the project structure and generate a set of risk-adjusted cost and revenue estimates. This will add further precision to the conclusions being drawn about VfM and forms of government support.

• **Mitigation.** Risk-mitigation measures can then be revisited as appropriate, to firm up decisions about the best steps to manage and control each one. Mitigation tools can include changing the design or scope of the project, optimising data flow, improving due diligence, contractual mechanisms (for example, clarity of responsibilities plus suitable clauses for addressing the unexpected, such as change in law, force majeure or exceptional events), government support (committed and contingent) and contingency funding. These will all form part of a risk-mitigation strategy designed to underscore VfM and strengthen the project's appeal to investors and lenders. Pro formas or examples of such strategies can be attached to the supporting documents.

[21] For example, the less tightly controlled a private partner's remuneration is, at least on a user-pay concession, and the greater its ability to manage and adjust its revenues to absorb the impact of unforeseen events, the simpler it may be to transfer certain risks to it. If the private partner can protect itself against the impact of unforeseen events, by adjusting its user charges, it may not need additional protection from the contracting authority.

[22] "The cost of the project to government should align with fiscal priorities, so thatthe optimal allocation is achieved at the lowest possible cost to taxpayers." (cf Ukraine PPP manual)

11. Value assessments

• **VfM assessment.** The largely qualitative VfM assessment carried out in Phase 1 can now be given a more robust quantitative foundation, taking account of the results of other aspects of the feasibility study and the numerical data available. Many features of the project will have been modified to some extent during its detailed preparation; these will need to be allowed for. The VfM assessment is essentially a comparison of the whole-life costs and benefits of the different procurement options by which a project can be implemented. It uses risk-adjusted, discounted cash flows to produce a net present value for each option, coupled with sensitivity testing and scenario analyses. These provide a basis for comparison. This allows the VfM benefits for the government and society as a whole to be pinpointed and measured, which should allow a judgement to be made about whether the PPP option is a more attractive and efficient basis for implementing the project than any other, such as traditional procurement. It is a sophisticated process, and a challenging one to get right. There can be wide differences of view about the optimal approach to take to some of its elements, such as how to construct and apply a public sector comparator. The supporting documents should therefore set out a detailed methodology for it, reflecting the host country's preferences and showing how exactly it should be carried out. Even then, certain assumptions and matters of interpretation will still form part of the process, giving it a significant subjective element, notwithstanding its quantitative core.

• **People-first assessment.** The SDGs and SDG Guiding Principles should form an intrinsic part of this VfM analysis, which, as we have seen, should ideally be approached as a "VfM/VfP" analysis ("P" referring to "people and the planet"). The extent to which the project promotes the SDGs, and gives effect to the SDG Guiding Principles, should be considered as part of the evaluation, as the benefits for government and society are measured. The PPP evaluation methodology could be an extremely helpful tool in this exercise, as its offers detailed guidance as to applicable outcomes, criteria and indicators in this context, in both a qualitative and quantitative form (it contains a scoring and weighting system). The supporting documents could explain and demonstrate exactly how the evaluation methodology could be applied to the exercise.

12. Market analysis

Another important part of the feasibility study is testing the market's appetite for the PPP project as structured in Phase 2. This may involve consulting the private sector before the procurement phase gets underway. Further adjustments can be made to the project's design in response to feedback received. The project's marketing can effectively start at the same time. The responses received can be collated in a market study report. The project's business case and structure should only be finalised after this has been done, and any consequential adjustments made to its scope, risk allocation and financial assumptions.

As with the stakeholder consultation process, of which it really forms an extension, the exercise should be suitably wide-ranging. It should take in potential developers, contractors, investors and lenders, especially those with relevant PPP experience. This will allow views to be formed about the extent and depth of market interest and the private-sector skills and resources needed to implement the project, as well as the degree of competition likely to be generated by a competitive tendering process. The supporting documents should describe the steps and tools that can helpfully be included in the exercise, such as meetings, presentations, questionnaires, issues on which to focus and a project information memorandum.

The opportunity this offers to start the project's marketing process should be exploited at the same time. This should help to generate interest and so prepare the ground for the competitive tender process (if one is to be used, as it usually will be).[23] A detailed communication plan should be drawn up and periodically updated (this will anyway form part of the stakeholder consultation exercise, as we have seen). Again, explanations, a pro forma and guidance notes can be attached to the supporting documents. The tools involved (for example, conferences, online notices, media statements and advertisements) as well as the target audience will to some extent vary from project to project.

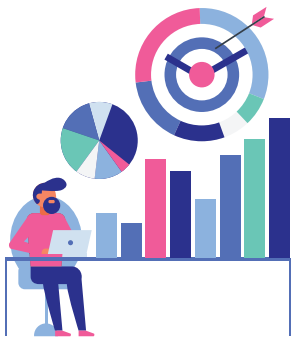
[23] See Chapter 4 on Tender Procedures and Requirements.

13. PPP effectiveness review

The final stage of this phase is likely to be a PPP efficacy or efficiency analysis of some kind, based on the conclusions reached in the feasibility study. The responsible public body (usually the contracting authority) should examine all the component parts of the study and then confirm if it believes the project can and should be implemented as a PPP. The supporting documents should spell out the criteria driving this judgement. They are likely to include[24] questions about whether:

- The project represents a robust, practical and cost-effective technical solution to the infrastructure/service need in question
- The project's social and environmental impacts are acceptable
- The project complies with all applicable laws and regulations
- The project is affordable
- The project's economic benefits outweigh its economic costs
- The project is commercially viable and likely to attract sufficient private-sector interest
- The project is financially viable and bankable
- The project is fiscally sustainable
- The project is sufficiently compliant with the SDGs and the SDG Guiding Principles
- The project is suitable for procurement as a PPP

The supporting documents should then set out the procedure for a further review and approval of this decision by the relevant competent approving body/bodies, in accordance with the Model Law's requirements,[25] specifying precisely what supporting data are required and its documentary, submission and retention requirements. Several different public authorities may be involved in this review (for instance, finance ministry for financial questions, economy ministry for economic ones, environment ministry for environmental ones). One body is likely to be responsible for organising the process, coordinating and compiling the different reviews, and reaching a final conclusion based upon them. Further (minor) design modifications may result from it. At its end, if the requisite approvals have been received, the contracting authority will be in a position to decide to implement the project as a PPP and pass an appropriate implementation resolution (under Article 13 of the Model Law). It can then move to the next phase of the process, the procurement and award stage.



[24] Cf Ukraine PPP manual.

[25] See further in Chapter 8 on Appraisal and approval procedures.