PUBLIC PRIVATE PARTNERSHIP GUIDANCE MANUAL

PPP UNIT
MINISTRY OF FINANCE AND ECONOMIC DEVELOPMENT
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This Manual contains guiding information designed to assist Government to identify and implement PPP projects and to structure sound deals with private partners for improved public service delivery. Its preparation has been inspired from PPP best practices in other countries namely South Africa, Ireland and Australia amongst others, with a view to establishing an international benchmark for PPP practice in Mauritius.

Additional information and clarification are available from:

The Public-Private Partnership (PPP) Unit
Ministry of Finance and Economic Development
Port Louis
Tel No: 201 1577/201 1591
Fax No: 212 4124
E-Mail Address: pppsecretariat@mail.gov.mu

Preface

The year 2002 saw the introduction of the PPP (Public-Private Partnership) Scheme in Mauritius which

I. defined Government's policy on PPP as an alternative means of financing public infrastructure and other major capital projects;
II. provided for the enactment of a new enabling legislation; and
III. provided for a Joint Task Force on PPP, supported by a PPP Unit at the Ministry of Finance and Economic Development, to develop the legal and organisational framework of the PPP.

The PPP Policy Statement published in May 2003, sets out the frame work for using PPP in Mauritius. The PPP Policy Statement focuses on four key considerations identified as critical in delivering successful outcomes. They are affordability, the legislative environment, institutional arrangements and capacity building.

Contracting authorities will need to give due importance to the selection of potential PPP projects, ensuring always that their choices are in line with Government's policy priorities and objectives. Government's PPP programme should not be seen simply as an opportunity for public bodies to undertake projects that would ordinarily not get approval through normal budgetary approval processes.

The new PPP legislation sets up the necessary legal and administrative framework for the efficient and transparent implementation of PPP agreements. It also provides an opportunity for establishing a set of general principles and rules for PPP procurement that all public bodies will be expected to comply with, thereby ensuring some degree of consistency in approach across sectors. It also defines the respective roles and responsibilities of each stakeholder in the PPP process.

International experience suggests that identifying and establishing clear and unambiguous institutional functions in relation to PPP early on in the onset of a county's PPP programme can greatly assist in successful PPP implementation. Some of the key stakeholders in the PPP process are the Ministry of Finance and Economic Development through the PPP Unit, the contracting authority, the Central Tender Board (CTB) and the private party.

The Ministry of Finance and Economic Development, through the PPP Unit, will have as main task to assess projects on the basis of well-defined criteria. These are, respectively, affordability, value for money and appropriate risk transfer, which constitute the three basic principles of PPP project appraisal. The PPP Unit will advise Government on the formulation of policy, and on the development of best practice guidelines and administrative procedures in relation to PPP projects.

Contracting authorities, on the other hand, will have ownership of their PPP projects from inception right through to the end of the partnership agreement. Besides identifying, developing and monitoring their implementation, they will be also arrange for relevant

feasibility studies to be carried out to demonstrate comparative advantage of implementing a particular project under PPP.

While the role of the Ministry of Finance and Economic Development will remain essentially a regulatory one, the Central Tender Board will ensure the legitimacy and transparency of the procurement process

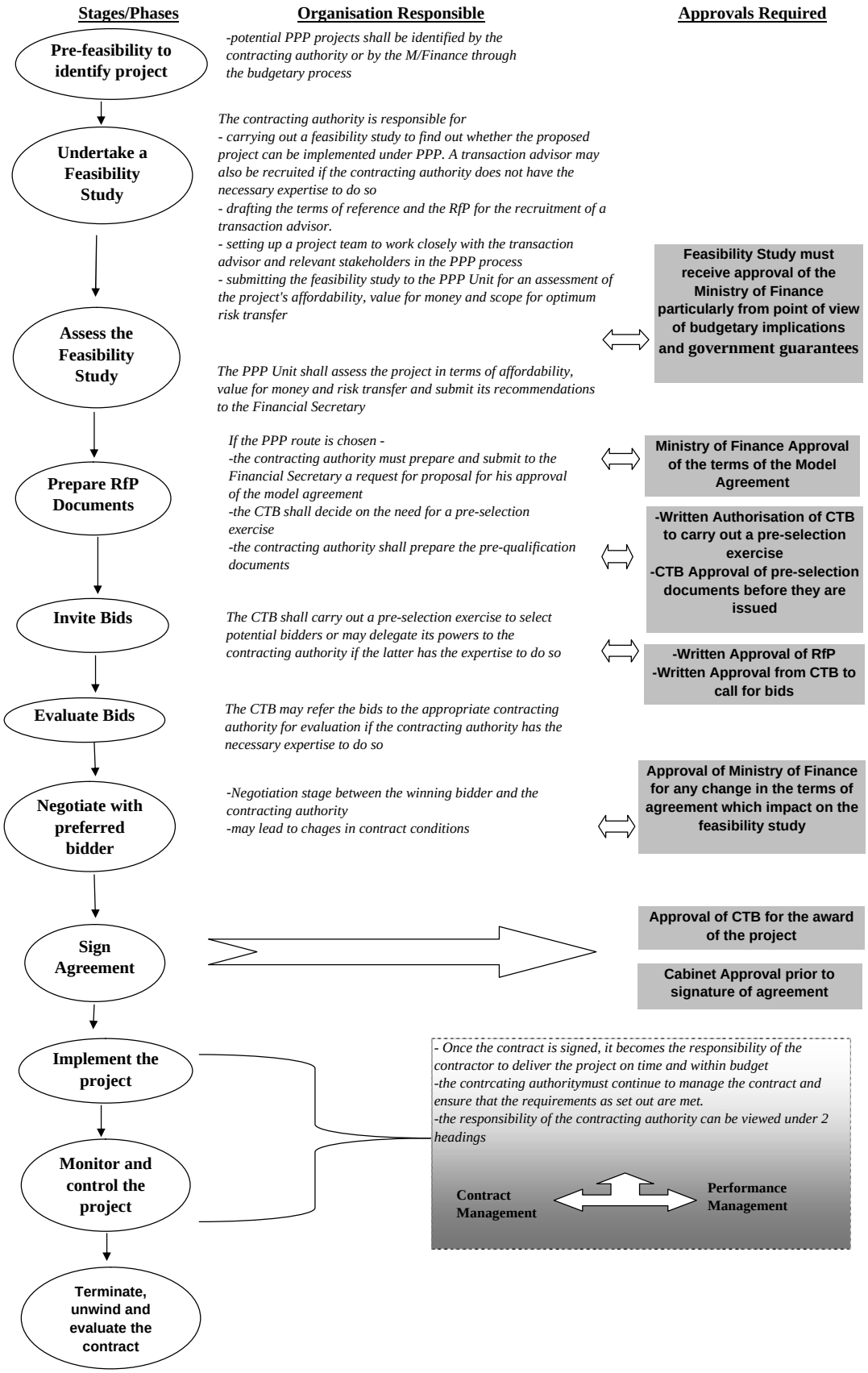
Since PPP represents a new paradigm for Government, capacity building will be imperative for all stakeholders in the PPP process. The success of the PPP programme will depend largely on the development of appropriate skills within the public and private sector. This can be achieved through the dissemination of PPP information via newsletters and the PPP website, and the organisation of regular workshops.

List of Abbreviations

BOI - Board of Investment
BOO - Build Operate Own
BOT - Build Operate Transfer
CTB - Central Tender Board
DBOF - Design Build Operate Finance
DBO - Design Build Operate
EOI – Expression of Interest
NPC – Net Present Cost
PPP - Public-Private Partnership
PSC - Public Sector Comparator
REOI – Request for Expression of Interest
RFP - Request for Proposal
RFQ – Request for Qualification
SPV - Special Purpose Vehicle

Sequence of Activities for Undertaking a PPP Project

The PPP Project Life Cycle



Section 1: The PPP Concept

Section 1 defines the PPP concept, its underlying principles and key drivers. It explains the various forms of PPP and sets out the criteria for identifying good PPP projects. The problems arising from unsolicited proposals as well as Government's decision for allowing open competition are also outlined in this section.

1.1 What is PPP?

A PPP is a contractual agreement between a public entity and a private entity, whereby the private entity performs part of a government organisation's service delivery functions, and assumes the associated risks for a significant period of time. In return, the private entity receives a benefit/financial remuneration according to predefined performance criteria, which may be derived:

- Entirely from service tariffs or user charges;
- Entirely from Government budgets;
- A combination of the above.

The public sector retains a significant role in the partnership project, either as the main purchaser of the services provided or as the main enabler of the project. It purchases services and specifies the service outputs/outcomes required as well as the performance criteria for payments. The private party commonly provides the design, construction, operation and possibly financing for the partnership project and is paid according to performance. Risks are identified and placed with the party best able to bear and manage them at a lower cost.

The essential aspects of a PPP arrangement, as distinct from the direct delivery of a public service by a Ministry are:

- A focus on the services to be provided, not the assets to be employed;
- A shift of the risks and responsibilities to a private provider for the activities associated with the provision of services.

The key difference between ***traditional procurement*** and ***PPP*** is that PPP requires the use of an output specification by Government to describe the outputs the private sector must provide as part of the complete service. Conventional procurement involves the procurement of distinct elements of a particular project though an input-based specification, whereas a PPP requires Government to focus on output not assets.

1.1.1 PPP is <u>not</u> privatisation

The essence of privatisation is the transfer of an existing business currently operating within the public sector into a private sector entity in terms of ownership and operation. PPP differs from privatisation in that the public sector retains a substantial role in PPP projects, either as the main purchaser of the services provided, or as an essential enabler of the project.

There are a few key components to the PPP process which clearly depict the difference between PPP and privatisation

- The first is that the process is ***"Output Based"***. PPP focuses on the outputs required to achieve policy objectives. It is about "What" is to be delivered rather than "How" it is to be delivered. By focusing on the "What", as few constraints as possible are placed on the entity that will ultimately deliver the service.
- The second key component relates to the ***whole life, risk-adjusted cost*** of delivering "the output". This means that the long-term consequences of the decision to provide a particular service includes every item of direct cost of the delivery process as well as the costs of all the risks retained by the public sector.
- The third area of focus is the ***allocation of risks*** inherent between the public and private sectors. Risks should be allocated to the party best able to manage and control them.
- The fourth important feature of the PPP process is the development of the ***payment mechanism***. This implies paying only for the service received and then modified to include reduction in payment in case of loss of quality of service.

1.1.2 Reasons for using PPP

PPPs can have a number of benefits, which include:

- Operational gains - These can be achieved by focusing on outputs rather than processes: by generating economies from integrating design, building, financing and operating phases through a more inventive use of assets.
- Strategic clarity - Partnership contracts enhance accountability by clarifying responsibilities and focusing on the key deliverables of a service. The managerial efficiency of a Ministry can benefit significantly as existing financial, human and management resources can be refocused on more strategic functions.

For a PPP project to be considered, the gains from the private operator's efficiency must be greater than the difference in borrowing costs, as the costs of private borrowing is normally higher than conventional government borrowing.

The real benefit of PPPs is the ***value for money*** derived from operational and strategic benefits. Value for money means that the private provision of a government function/service results in a net benefit to government, defined in terms of costs, price, quality, quantity or risks transfer, or a combination thereof. Value for money depends on at least 3 conditions:

- An operational need for private sector skills to deliver the service
- An identifiable market of private sector bidders prepared to compete for the project
- The appropriate allocation of risk.

1.1.3 Forms of PPP

A wide range of PPP arrangements exists, differing in purpose, service scope, legal structure and risk sharing. One end of the spectrum would be an outsourcing of some routine operation, while the other could involve the private sector conceiving, designing, building, operating, maintaining and financing a project, thereby taking a considerable proportion of risks.

Service Contract
Service contracts are usually for short periods of time and they are used to take advantage of private sector's technical abilities. However, coordination and investment responsibility is left with public sector management. The government bids out the right to deliver a specific service and sometimes provides the assets needed.

Management Contract
Management contracts are similar to service contracts in that the length of the contractual period typically varies around three to five years. The responsibility for operation and maintenance is transferred to the private sector while investment responsibility rests with Government. There are little incentives for cost minimisation and quality improvements, as management contracts do not usually transfer any commercial risks to the contractor.

Leasing
Leasing effectively involves buying the right to the profit flow of the operation of the system. With leases, most commercial risks of the operations are assumed by the private provider, and the profits of the private operator depends on how much he can reduce costs.

Concession
Concession contracts are similar to design, build, operate and finance arrangements, except that the private sector contractor recovers its costs either through direct user charges or through a mix of user charging and public subvention. Concessions give the private sector responsibility not only for the operation and maintenance of the service but also for investments and infrastructure improvement. The government usually retains property and residual rights of all assets, and the latter return to Government at the end of the contract, which is usually after 25 or 30 years. The Concession contract usually covers issues such as coverage, quality and investment objectives, tariff regime, penalties and fines as well as conflict resolution mechanisms. The award criteria for the concession are usually based on maximum payment for the concession or minimum tariff to users.

Build Operate Transfer (BOT)/Build Operate Own (BOO)
BOT contracts are generally used for new and relatively independent projects. A typical BOT agreement includes the construction of a new generation plant, which is operated for a given number of years.
In the case of the BOT, the private sector finances the construction of the facility but the facility is owned by the public sector, while in the case of BOO, legal ownership rests with the contractor.

Design, Build, Operate (DBO)
DBO contracts are arrangements between the public sector and the private sector for the design, construction and operation of public facilities and infrastructure. The private sector contractor designs and builds the facility to meet public sector performance requirements and retains responsibility for operating and maintaining the facility for a predefined period. The facility remains vested with the public sector throughout the duration of the contract.

Design, Build, Operate, Finance (DBOF)
DBOF contracts are arrangements between the public sector and the private sector for the design, construction, operation and financing of public facilities and infrastructure. The private sector is responsible for designing, building, operating and financing the facility and recovers its costs solely out of payments from the public sector. At the end of the contract, ownership of the facility commonly transfers back to the public sector.

1.1.4 Criteria for a Good PPP Project

- The project must have clear boundaries and measurable performance in output terms;
- The project must be of a scale and value to be of interest to private sector contractors;
- The project must have a significant element of service or operating content;
- There must be scope for cost effective allocation of risk to the private sector;
- There must be scope for innovation;
- There must be scope for the generation of additional third party revenue.

1.2 Unsolicited Proposals

An unsolicited proposal is a written proposal that is submitted to a contracting authority on the initiative of the submitter for the purpose of obtaining a contract with the Government.

In many countries unsolicited proposals have not been allowed because they encourage public sector corruption and opportunistic behaviour by private sector components. In many cases it has been difficult to handle unsolicited bids because of their inherent risks. The public sector often finds itself in a vulnerable position at the proposal stage itself, particularly in terms of evaluation of new technologies and insufficiently tested systems. The private sector proposer is also vulnerable in terms of security and confidentiality of proprietary ideas, technologies and systems.

1.2.1 Government's Policy regarding Unsolicited Proposal

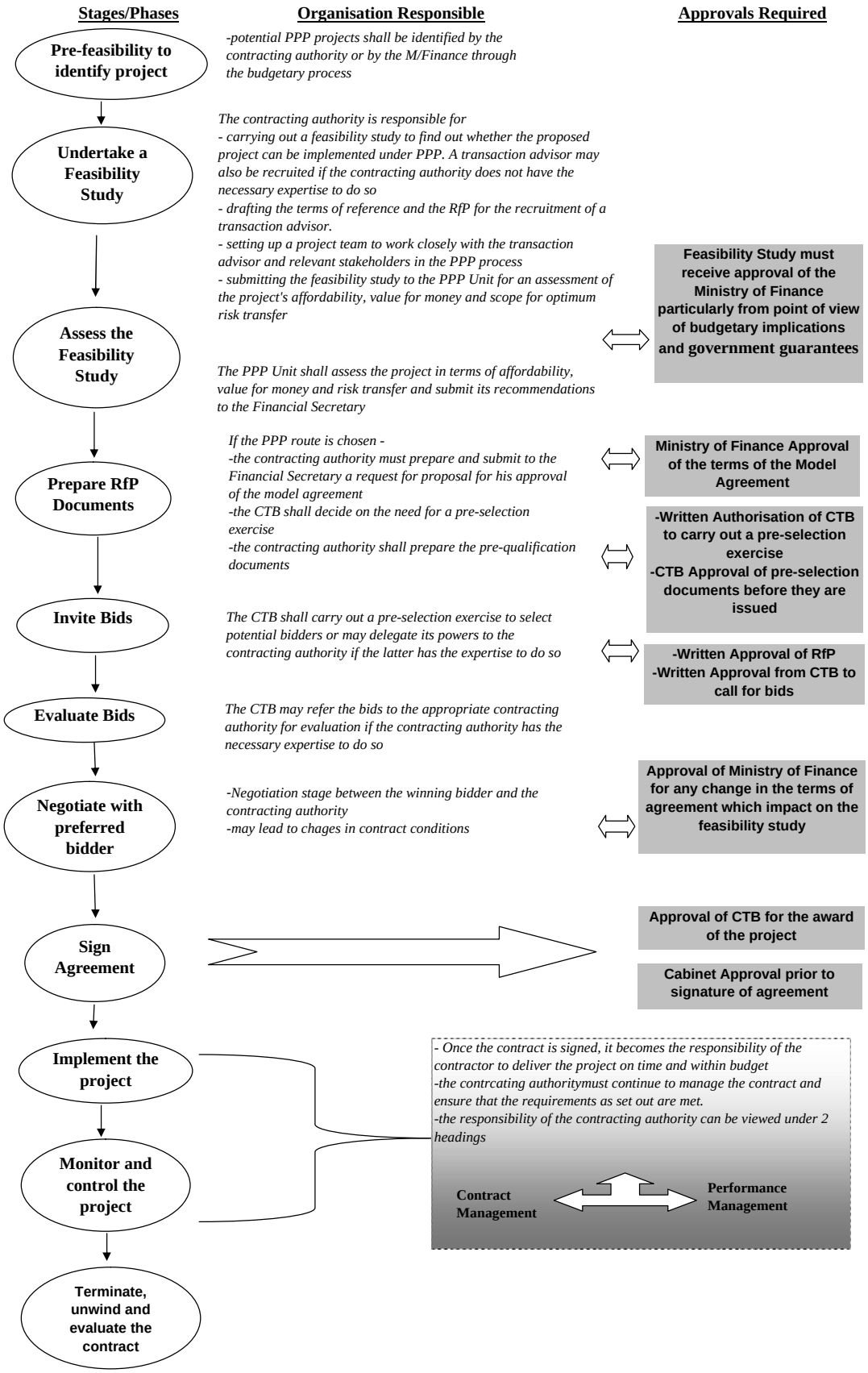
The previous legislation made provisions for the award of projects solicited by Government, through open competition. It also made provision for the award of project without bidding, whether solicited by Government or not, subject to specific conditions. These conditions were technological, strategic or security characteristics of the project which required that no bidding procedure be adopted, or if the whole or part of the

finance was coming from a grant or a concessionary loan from a foreign institution or state.

The difficulty remains in getting the right balance between encouraging private companies to submit project ideas without losing the transparency and efficiency gains of a well-conceived competitive tender process. In view of the above, it is government's intention, in the early years of its PPP programme, to proceed cautiously. The PPP Act 2004 ***(Appendix 1)*** does not make any provision for unsolicited proposals.

Sequence of Activities for Undertaking a PPP Project

The PPP Project Life Cycle



Section 2 outlines the PPP process and expands the main provisions of the PPP Act 2004. It sets out all the steps involved in the PPP process right from identification to project implementation and monitoring. The PPP process is clarified by a PPP Project Life Cycle which is a diagrammatic representation of procedures and approvals required at each stage of PPP project implementation.

Steps in the PPP Process

2.1 The first step in the PPP Process is to undertake a pre-feasibility study to identify potential PPP projects on the basis of their affordability and their potential to generate value for money through appropriate risk transfer. This stage should give the contracting authority an early indication of the project's suitability for implementation under PPP. Where a project's viability depends on marketing aspects, it might be useful to carry out as part of the pre-feasibility study, a market sounding exercise to assess the market potential and attractiveness of the project. As far as possible, Contracting Authorities should develop the necessary skills in house to carry out their own pre-feasibility studies.

2.1a PPP projects can be identified either during the budget exercise with the Ministry of Finance and Economic Development if the project has public finance implications or by the Contracting Authority itself, at any other time particularly if the project is financially free standing. Project identification may be based on a specific needs assessment or arise out of a regular review of investment opportunities and programme requirements.

2.2 Once the need or opportunity has been clearly identified, the contracting authority shall carry out a feasibility study (*see Section 4)* to determine whether the proposed project is in its best interests. If the Contracting Authority does not possess the requisite skills for carrying out the feasibility study, it may appoint a Transaction Advisor (*see Section 3)* to do so.

2.2a More specifically, as soon as a contracting authority identifies a potential PPP project, it must

(a) inform the Financial Secretary of the expertise within its institution to implement a PPP project and

(b) if the Financial Secretary so requests, appoint a specialist consultant/transaction advisor for carrying out the feasibility study.

2.3 The contracting authority may wish to appoint a project officer or set up a project team from within or outside the institution who is capable and appropriately qualified to manage the project. The project team shall be responsible for –

(a) conducting the feasibility study under section 5 of the PPP Act;

(b) approving the deliverables of the transaction advisor if the latter carries out the feasibility study;

(c) overseeing project development budgets and expenditures;

(d) ensuring that the progress of the project is effectively communicated within the institution and to the public where required;

(e) reviewing and endorsing document to be submitted to the Financial Secretary for approval;
(f) evaluating bids at the pre-selection and selection stage;
(g) negotiating with the preferred bidder under section 10(1) of the Act; and
(h) any other assignment as may be required by the contracting authority.

2.4 On the basis that the potential for the use of a PPP approach is under active consideration for the particular project, the contracting authority may wish to undertake some market soundings especially if is an unusual project which has not been brought to the market before. The contracting authority shall examine areas such as financial standing, technical capacity, management expertise and private sector experience in the area to measure the interest and capabilities of potential partners.

2.4a It is to be noted that at this stage in the process, no sensitive information should be divulged by either side, and no commitments should be entered that would compromise the procurement.

2.5 The Contracting Authority must submit the feasibility study to the PPP unit, which after making an assessment of the project will put forward its recommendations to the Financial Secretary as to whether the project is affordable to the contracting authority, provides value for money and enables an optimum transfer of risks.

2.5a Affordability in relation to a PPP agreement means that the contracting authority must be able to meet any financial commitment incurred in relation to the PPP agreement from its existing or future budgetary funds. Any project for which there is no financial or contingent liability shall be exempt from the approval of the Financial Secretary.

2.6 The contracting authority is not allowed to proceed with the procurement phase of a PPP without written approval of the Financial Secretary on the feasibility study. After receiving approval on the feasibility study, the contracting authority must prepare and submit to the Financial Secretary a request for proposal for his approval of the financial terms of the model agreement.

2.7 The PPP unit will examine the Request for Proposal to ensure conformity with the approved feasibility study.

2.8 After receiving approval of the Financial Secretary on the terms of the model agreement, the contracting authority must submit the request for proposal to the Central Tender Board to obtain its written authorisation to advertise, invite, solicit or call for bids.

2.9 The contracting authority must consult the CTB to obtain its written authorisation to conduct a pre-selection exercise. The contracting authority must prepare the pre-selection documents including a public invitation for applicants to apply for pre-selection and submit them to the CTB for approval before they are issued or published.

The CTB will carry out a pre-selection exercise to select the future potential bidders or may delegate its powers to the contracting authority where it considers that the contracting authority has the necessary expertise to undertake the pre-selection exercise.

2.10 The contracting authority must prepare and submit to the CTB for written approval, a request for proposal. The request for proposal shall be advertised/published by the contracting authority. The bids shall be received and opened by the CTB. In relation to the examination and evaluation of bids, the CTB may refer the bids to the appropriate contracting authority for examination and evaluation provided that the contracting authority has the necessary expertise to do so. The contracting authority shall then be responsible for examining and evaluating the bids and submitting to the CTB its findings within such time as may be determined by the CTB.

2.11 Once evaluation has been completed several steps typically remain in finalising the project. There is often a negotiation stage between the winning bidder and the government to clarify some issues that arise as a result of gaps or lack of clarity in the contract documents or as a result of counterproposals made by the preferred bidder. These post bid procedures can be lengthy and may sometimes lead to changes in contract conditions which may have implications for the bidding process. Extensive opportunities for post bid negotiations should therefore be avoided, as they can cast doubt on the transparency of the process. Bidders may submit overly optimistic proposals to win the bidding if they are confident that they can secure changes in their commitments during subsequent contract negotiations.

2.12 Following negotiation, if carried out, any change in the terms of the agreement which impacts on the approved feasibility study shall be submitted by the contracting authority to the Financial Secretary for the approval of the relevant proposed changes to be brought to the terms of the agreement.

2.13 Upon receipt of the approval of the Financial Secretary, the contracting authority shall seek the final approval of the CTB for the award of the project.

2.14 The contracting authority, as a matter of normal procedure, will ensure that Cabinet approval is obtained prior to signature of the agreement.

2.15 Once the contract is signed, it becomes the responsibility of the private contractor to deliver the project on time and within budget. At the same time, the contracting authority must continue to manage the contract and ensure that the requirements as set out in the contract are met.

2.16 The responsibility of the contracting authority can be viewed under 2 headings:

- Contract management - to ensure that the roles and responsibilities of each party are understood and fulfilled according to the provisions of the project agreement.
- Performance management – to perform as part of its management function a day-to-day assessment of the service provided.

2.16a The contracting authority may set up a contract management team whose role is to

- Monitor service delivery and assess the performance of the project relative to the standards specified in the project agreement;
- Ensure the provision of a quality service to the end of the operating period by spot-checking and monitoring performance throughout the life of the project;
- Ensure that the level of risk transfer specified in the project agreement is adhered to. Failure of the contractor to comply with standards should result in enhanced monitoring, proposals for rectification or payment reduction;
- Monitor during the construction phase the development of the facility both in terms of quality and time scales;
- Ensure the availability of the asset during the operational phase and the provision of services in accordance with the output specification. In the event of underperformance the contracting authority shall, following the provisions of the contract, impose payments penalties or may even terminate the contract.

2.16b The contracting authority may also appoint a contract manager who shall be the formal point of contact between the contracting authority and the private partner for the duration of the construction and operational phases. The contract management role commences at the award of the contract stage and extends to the end of the operating period.

2.16c The contract management structures should be put in place at the procurement to ensure that those involved are familiar with the details of the project and the project agreement.

2.16d The contract management role shall commence at the award of the contract stage and shall extend to the end of the operating period.

2.17 During the construction phase, the contract management team's function will be to monitor the development of the facility both in terms of quality and time scale. During the operational phase the team's concerns will include the availability of the asset, the provision of services in accordance with the output specification. In the event of underperformance, there should be provisions for payment penalties and ultimately for the termination of the contract by the contracting authority.

2.18 The key to the successful management of any PPP contract is the setting up of monitoring and control systems to ensure that the performance standards set out in the contract are met.

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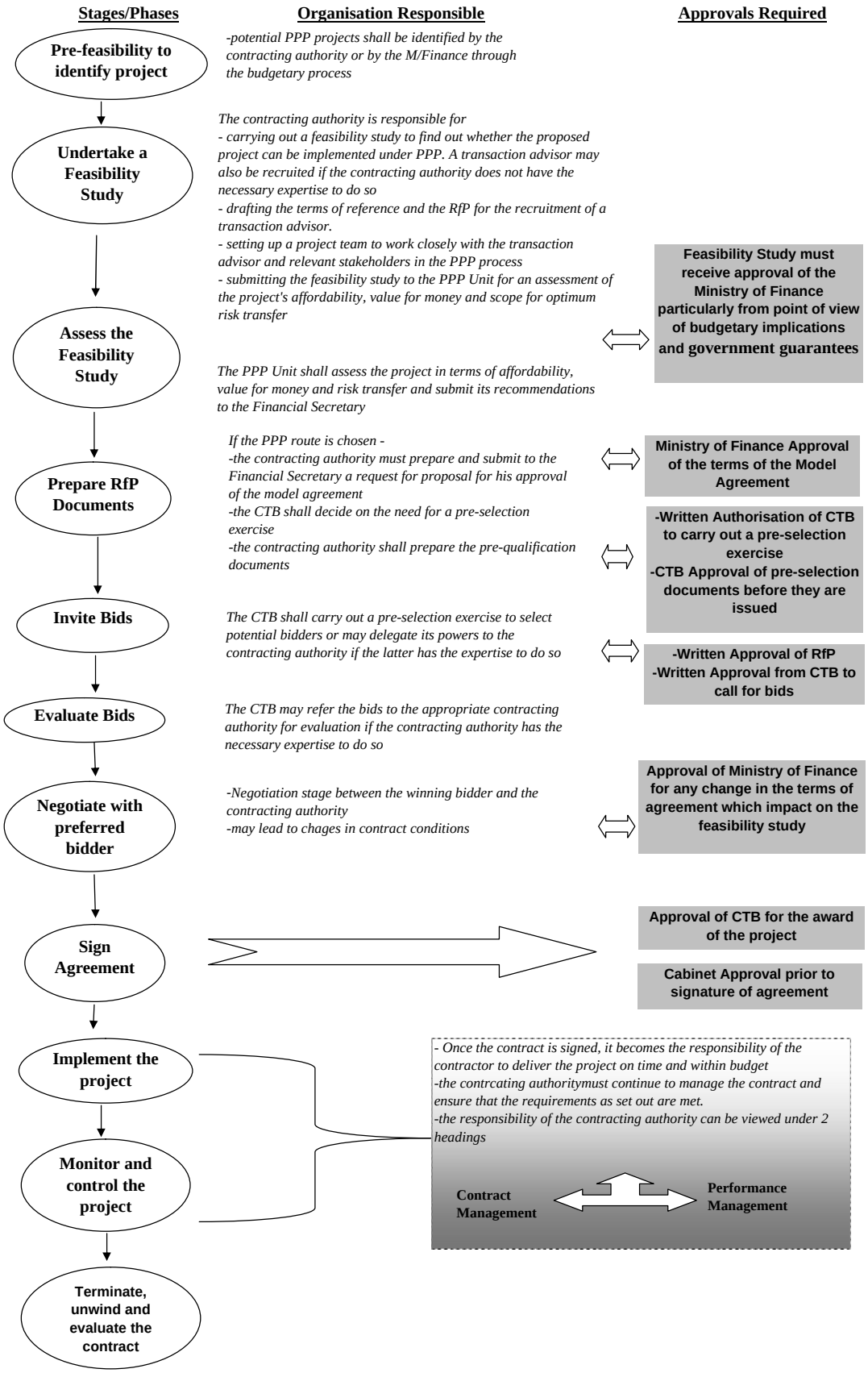

Section 3 is useful for contracting authorities that do not have the expertise in house to carry out the feasibility study and as a reason would need to recruit a Transaction Advisor to do so. This section outlines the procedures for selecting Transaction Advisors and provides guidelines for the evaluation of the technical and financial proposals.

3.1 Definition of a Transaction Advisor

A transaction advisor is a person or group of persons (firm or company) that either possesses or has access to professional expertise in financial analysis, economic analysis, legal analysis, environmental impact analysis, contract documentation preparation, tender processing, engineering or cost estimating. A transaction advisor assists in bringing a PPP project from the concept stage through public bidding and award to actual execution.

3.1a A well-structured and properly marketed transaction will ensure the success of the PPP and maximise the proceeds to Government/minimise payments to the private contractor. This is why transaction advisors are a useful investment and not an unnecessary expense.

3.2 Procedure for Selecting Transaction Advisors

The selection of transaction advisors should preferably be on the basis of proposals submitted in accordance with a comprehensive RfP. Usually for large projects, companies are asked to submit Expression of Interest to obtain the RfP packages. The Expression of Interest will outline in broad terms the qualifications and experience of the transaction advisor. These can be used by contracting authorities for producing a preliminary shortlist of firms who will receive RfPs.

3.2.1 Prospective transaction advisors could preferably be required to submit proposals in two sections:

(a) A Technical Proposal;

The technical proposal should normally carry the highest weighting of 60-70 percent of the overall assigned scores for evaluation. The technical proposal should consist of the following sections:

- Company and staff experience (about 75 percent of the total weight assigned to the technical proposal)
- Proposed execution plan (around 10 percent of the total weight assigned to the technical proposal)
- Understanding of transaction requirements (some 15 percent of the weight assigned to the technical proposal).

The technical proposal should be supported by the following documents amongst others:

- A summary of transactions that the firm claims as experience;

- A detailed curriculum vitae of each proposed staff member, which provides a detail of his/her verifiable transaction accomplishments and availability for the project;
- Audited company financial statement for the last three years;
- Corporate registration documents.

It could be useful to establish a threshold in terms of which a prospective transaction advisor's proposal must achieve a minimum number of technical evaluation points for that bid to be further evaluated on the basis of its financial proposal. This is to avoid the selection of inadequate proposals on the basis of cost alone. The threshold would depend largely on the technical complexity of the transaction.

(b) A Financial Proposal

For the evaluation of the financial proposal, the maximum number of points is awarded to the proposal with the lowest total tendered cost, this could be the aggregate of a retainer and a success fee. The retainer fee consists of the sum disbursed regardless of the success or financial closure of the project. The success fee on the other hand, is contingent on the success or financial closure of the project.

The other proposals are awarded on a pro rata number of points, calculated on the percentage difference in cost between their tendered costs and the lowest tendered total cost.

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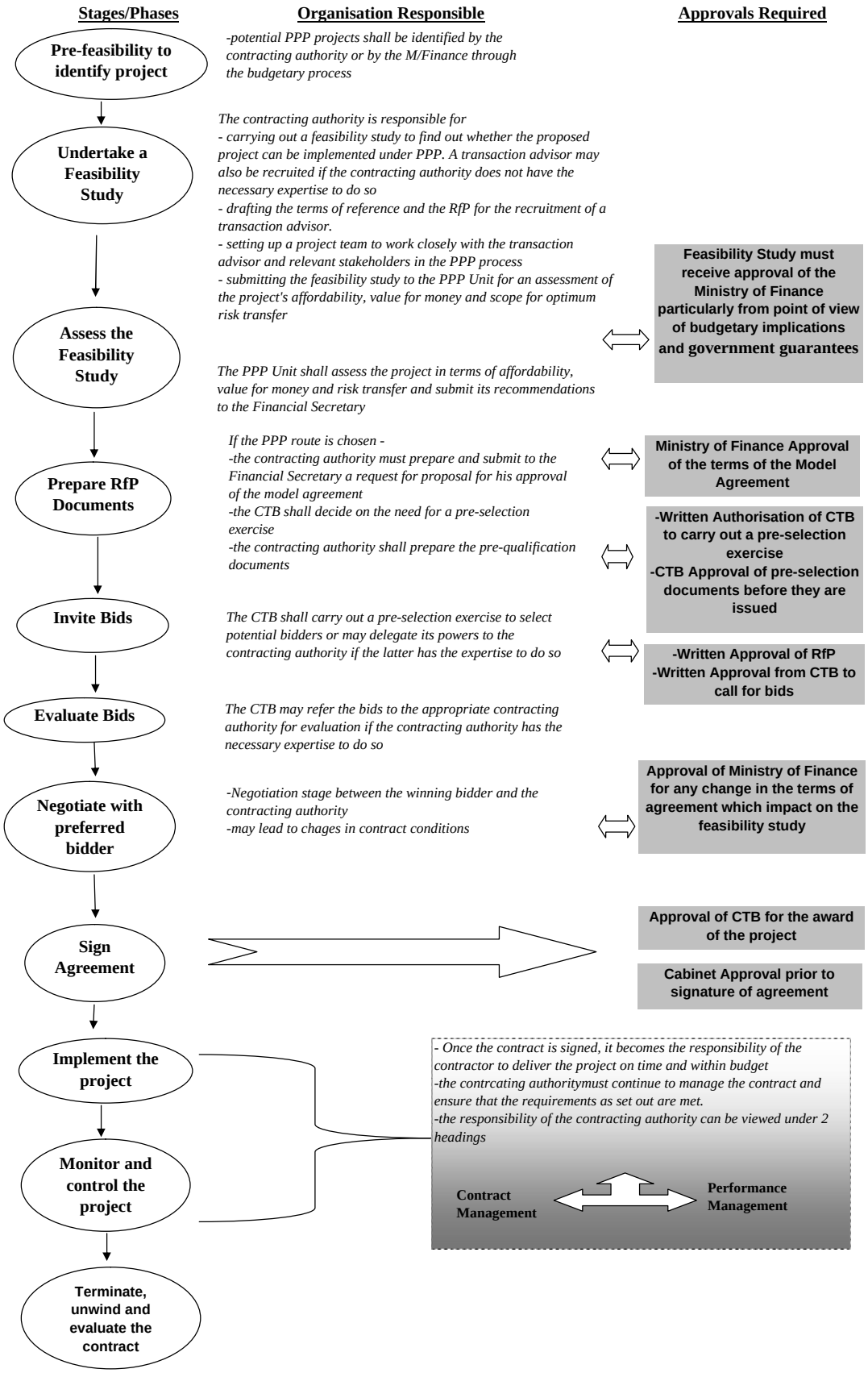


Section 4 outlines the role of the feasibility study in the PPP process. It explains the various stages involved in conducting the feasibility study namely the sector needs assessment, the output specification, the analysis of suitable procurement options, the construction of the Public Sector Comparator, the demonstration of affordability and the preparation of a benchmark for assessing value for money.

4.1 The Role of the Feasibility Study

The feasibility study demonstrates "affordability", and gives an early indication of how value for money will be achieved, through appropriate risk transfer.
The feasibility study will have to

1) *clearly demonstrate comparative advantage in terms of strategic and operational benefits of undertaking the project under the PPP agreement;*
2) *describe in specific terms -*

- the contracting authority's functions, the specific functions being considered in relation to the project and the expected deliverables;
- the extent to which these functions can both lawfully, effectively and by nature be performed by a private party in terms of a PPP agreement; and
- the most appropriate form by which the contracting authority may implement the project under a PPP agreement.

3) *Demonstrate that the PPP Agreement will*

- be affordable to the public body;
- provide value for money; and
- transfer appropriate technical, operational and financial risk to the private party.

4) *explain the capacity of the contracting authority to effectively enforce the agreement, including the ability to monitor and regulate project implementation and the performance of the private sector provider in terms of the agreement.*

4.2 Conducting the Feasibility Study

Best practice suggests that the feasibility study should comprise the following key sections:

- **Sector needs assessment**
- **Output specification**
- **Options analysis**
- **Construction of the Public Sector Comparator (PSC)**
- **Demonstration of affordability**
- **Preparation of a benchmark for value for money**

In practice and especially during the initial stages of PPP experience development, the feasibility study will normally be conducted with the help of a transaction advisor.

4.2.1 Sector needs assessment

Sector policies and priorities should be reviewed and assessed to know how the project fulfills sector needs. Prioritisation of the project is based on a number of issues including:

- how the project contributes to the implementation of government policy;
- the capacity and ability of the contracting authority to render the services;
- the relative size of the project;
- potential cost savings to the public body;
- market interest in providing the services;
- capacity of the private sector in providing the services;
- complexity of the project;
- requirements of the public;
- prospect for meeting the "affordability" and "value-for-money" criteria based on preliminary analysis.

4.2.2 Output specification

Once the project has been selected based on the criteria set out under the sector-needs assessment, the next step is to define it with respect to the services the contracting authority requires and the level of risk to be transferred to the private sector. Output specification is a statement of the needs to be satisfied and defines the services and outputs required by the contracting authority. For example, when a public body procures a prison on a PPP basis, it no longer simply procures an asset or prison, but it is procuring on-going custodial services from the private sector for the duration of the PPP contract. Under the PPP approach, private firms become long-term providers of services rather than simply upfront asset builders, combining the responsibilities of designing, building, operating and possibly financing assets in order to deliver the services demanded by the public sector.

To facilitate the development of an initial output specification, the project objectives should be specified in terms of the outputs that the project is required to deliver, and they should be specific, measurable, achievable, realistic and time-bounded.

The outputs specified should be capable of being assessed against clear and measurable performance criteria and defined in ways that allow their subsequent achievement to be evaluated. Describing objectives in terms of the outputs and deliverables that a project requires, will help to open a wide range of solutions and promote innovation amongst private sector tenderers.

The initial output specification should also reflect the specific constraints on the project, as it is these constraints that will set the boundaries on how the outputs can be delivered. In particular, the initial output specification should be affordable to the public sector in both capital and operating terms.

The preparation of an initial output specification provides a clear basis for comparing the characteristics of a project against the characteristics of different PPP options. In this way, a well-defined initial output specification will enable the most appropriate form of PPP to be more readily identified.

4.2.3 Options Analysis

The options analysis is conducted to select the most appropriate form of procurement - traditional procurement or PPP. The selection of the most appropriate option would be based on the ease of implementation, maximisation of benefits to stakeholders, and the ability to control and manage risks.

(a) The Option Appraisal Stage

For those projects that have been identified as having the potential to be procured under PPP, the Option Appraisal stage will involve mainly:

- **Project Appraisal;**
- **PPP Assessment; and**
- **Statutory Process Assessment**;

In simple terms, project appraisal involves the identification of suitable options to meet service objectives, and the selection of a preferred option. Options are appraised through constraints studies and preliminary reports, which provide economic evaluations, cost estimates, outline requirements and site selection. The process of undertaking project appraisals for PPP projects will be the same as for traditional projects, unless statutory risk is to be transferred to the private sector. In such circumstances, the project appraisal will be required but possibly at a higher level of detail.

- **PPP Assessment**

A key driver of the PPP programme is the desire to increase value for money in infrastructure procurement. To ensure that value for money is achieved, there must be a clear justification for the project, a competitive procurement and it should be clearly demonstrated that the option selected offers better value for money than the alternatives. Whilst post procurement reviews will ultimately show whether value for money is being achieved through PPP, procedures must be in place to ensure that the options being developed are likely to deliver value for money.

The purpose of the PPP Assessment is to assess, at the Option Appraisal stage, the potential for a PPP to deliver improved value for money compared with traditional procurement. The PPP Assessment addresses two key issues in detail:

- ***Does the project have potential to be procured as a PPP?***
- ***Which form of PPP provides the greatest potential for improved value for money?***

The PPP Assessment is therefore a fundamental tool in deciding whether or not to proceed with a PPP procurement. Some key elements of a PPP Assessment are:

- An initial output specification, which is based on the conclusions of the Project Appraisal and provides a high level definition of what is required in terms of delivery.
- A value for money assessment, involving the identification of factors that will determine whether a project is likely to represent value for money, and a qualitative assessment of the potential of the project to deliver those factors, using tools such as precedent review and market sounding.
- A preliminary risk assessment, including the identification and quantification of key risks, initial allocation of risk between the public and private sectors, and an assessment of whether sufficient risk transfer is possible to merit a PPP approach. Preliminary views on the key contractual issues should also be included.
- A bankability assessment of any project that may be partly or wholly financed by the private sector. The bankability assessment should establish the financing issues that need to be addressed prior to a procurement proceeding as well as those that will need to be reflected in contract documentation.
- A legal viability assessment, to assess whether the public body has the legal ability to enter into a PPP contract. The legal viability assessment should also consider the legal implications of the project in relation to existing employees, assets and contracts.
- A PPP option selection, involving the selection of the contractual form and scope of PPP that most closely meets the strategic objectives of the project and offers greatest scope for value for money.
- Identification of the parameters to be used at the end of the procurement process to test whether the preferred PPP tender represents value for money. In some cases this will involve the construction of a Financial Comparator.
- An indicative implementation plan describing the organisational structures required to manage the procurement, and setting out an indicative timetable with target completion dates for the main activities involved in the procurement of the project.

The PPP Assessment will vary according to the type and complexity of the project. Small, relatively straightforward projects will not require the same level of work as large and complex projects, and the resources allocated to complete the PPP Assessment will need to be tailored accordingly.

It is to be noted that the "options analysis" determined at this point may well change after the affordability test has been conducted. If affordability is not demonstrated, it may be necessary to revisit the original option.

- **Statutory Process Assessment**

This refers to an assessment of the potential to allocate to the private sector contractor the risks associated with the statutory process as part of the PPP arrangement. The decision on whether or not to allocate statutory process risk will depend upon a range of factors including the nature of the project itself and the value for money that may be gained or

lost through statutory risk transfer. For example, a contracting authority is in a better position than a private party to manage the risks associated with land acquisition where Compulsory Purchase Orders are likely to be required.

4.2.4 Construction of the Public Sector Comparator (PSC)

The PSC is a risk-adjusted costing, of what the output would have cost to government, had the government provided it through traditional procurement. It is based on the recent actual public method of providing that defined output and takes full account of the risks it would encounter, including risks associated with known or probable inefficiencies encountered in the public sector (delays, cost overruns etc.).

The PSC should be expressed in nominal terms, that is, it should take account of current and projected inflation. The level of complexity of the PSC model will vary depending on the level of complexity of the project being considered.

4.2.5 Demonstrating Affordability

Affordability relates to whether the cost of the project over the whole project life can be accommodated in the government's budget, given its existing commitments. "Affordable", in relation to a PPP agreement, refers to the ability of the public body to meet any financial commitment incurred in relation to the PPP agreement from its existing or future budgetary funds. A particular PPP contract may not be affordable even though it brings value for money. If a project is unaffordable, it undermines the Government's ability to deliver other services and should not be pursued. At the initial stage of the project, a budget estimate would be made on what it would cost the Government should it decide to undertake the project under traditional procurement process. As a starting point for determining the project budget, contracting authorities should refer to the medium term expenditure estimates, but should also explore their own detailed budgets to determine the amount available for the project/output specification. In determining the available budget, contracting authorities should include all the applicable amounts from the budget (i.e. direct and indirect costs as well as third party revenues).

The Affordability Test

To determine whether a project will meet the "affordability test", it is important to compare the budget with the PSC cash flows. However, the risk-adjusted PSC is not the appropriate comparator with the budget, as this assumes that the contracting authority is the supplier of the output specification. The PSC must therefore, be adjusted to form the PPP-reference. The PPP-reference is the PSC adjusted for risks and cost of capital. These adjustments are meant to reflect the costing of an output specification by the private sector as a supplier. The risk-adjusted PSC would have to be modified as follows:

a) Adjust for risk - the private sector will price risk transferred to it in terms of the PPP contract. This will be reflected in the bids received. However, the private sector is invariably better positioned to manage certain risks than the

public sector, and the financial impact of the risks (i.e, the costs of the risks) will have to be modified to reflect this. In making this adjustment, it will be necessary to draw on appropriate benchmarks from similar projects, in order to develop accurate costing.

b) Adjust for the cost of capital - for the private sector, capital would be raised through debt and equity. Therefore, the cost of capital of the private sector should not be linked to the government borrowing cost, but should reflect the weighted cost of capital to the private sector.

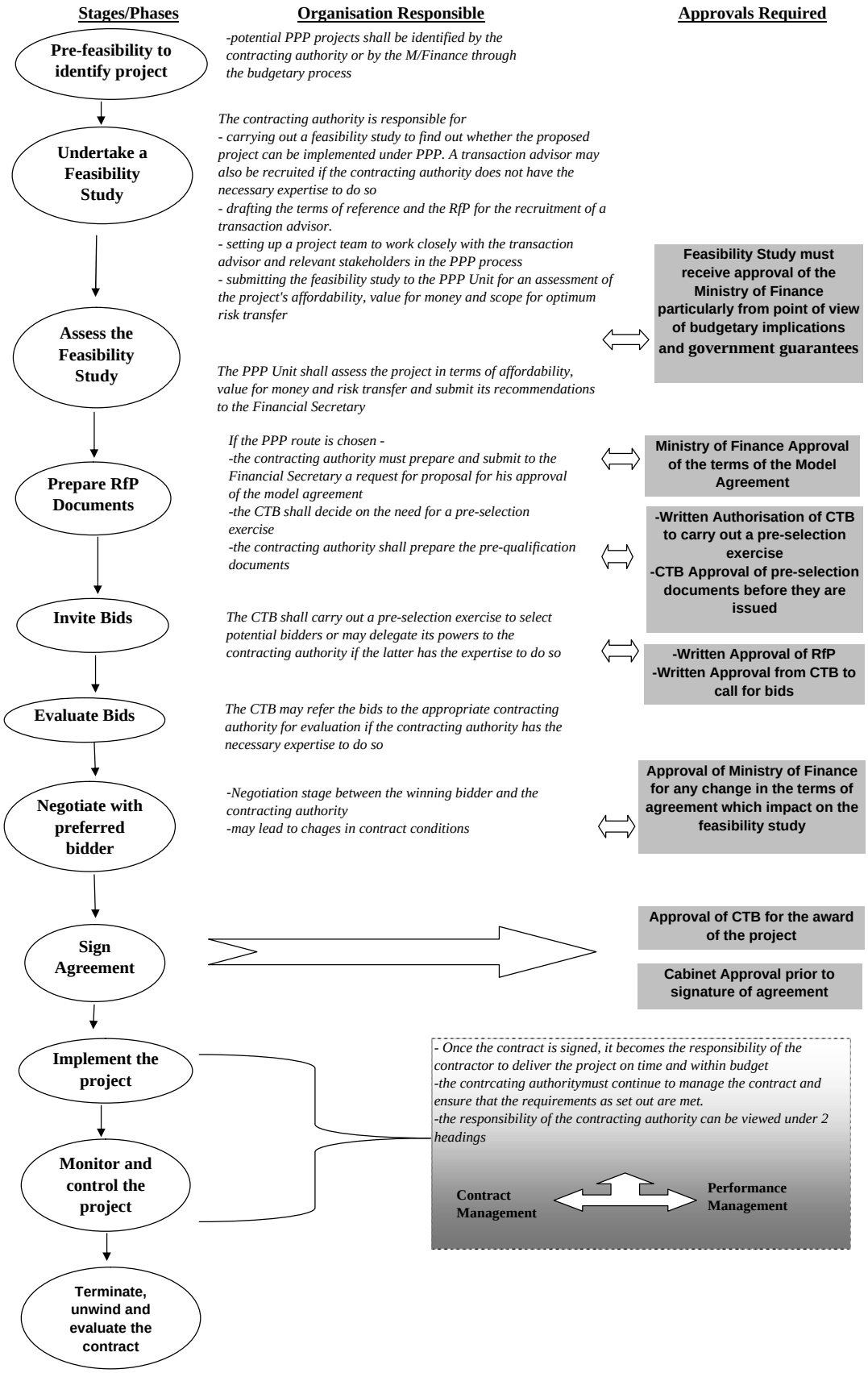
c) Adjust for project revenues - the project may generate third party revenues to the private sector. While these should not be included in the PPP-reference, any taxes or concession fees that accrue to Government as a result of the project should be accounted for.

Once the PPP-reference has been constructed, it is required to compare the costs to the government budget to assess affordability. If affordability cannot be demonstrated, Ministries will be advised to abandon the project or re-examine and modify the output specification in order to meet the affordability test.

There will be a number of qualitative benefits associated with the implementation of the project that may not be quantifiable and hence not considered as factors to offset the costs. These qualitative factors will not be taken into account in the PSC. While financial considerations are likely to drive the "affordability" test, it is important that these qualitative factors be identified in the feasibility study.

Sequence of Activities for Undertaking a PPP Project

The PPP Project Life Cycle



Section 5 defines the concept of value for money and its various determinants. It also explains two main tools that can be useful in identifying potential sources of value for money namely, precedent review and market sounding. This section also provides practical tips on how to prepare the market sounding exercise in order to maximize its effectiveness.

5.0 Definition of Value for Money

Value for Money in PPP projects is gained through the engagement of private sector efficiency, effectiveness, and economy and through the appropriate allocation of risks in the project. The assessment of the potential to secure value for money is a key element of the PPP assessment. The conclusions on value for money potential will inform Government on whether or not to proceed with a PPP procurement, and if so, the form of PPP to be used.

The final assessment of whether a PPP procurement represents improved value for money can only be made at the conclusion of the competitive tendering process. The assessment of the potential for a PPP to deliver value for money has two parts:

1. **Identification of the factors that will determine whether a project delivers value for money; and**
2. **An assessment of the potential of the private sector to deliver value for money with regard to those factors.**

The outcomes of the value for money assessment will help to inform not only the potential for a PPP to deliver value for money, but also:

- selection of the most appropriate form of PPP;
- identification of the optimum scope of the PPP; and
- identificatio n of the parameters that should be used at the end of the procurement process to assess whether the preferred PPP tender represents value for money.

5.1 Factors that determine value for money

The factors that determine whether a project delivers value for money will vary by type of project and by sector. Some factors will be common to a number of projects, and may relate to the strategic objectives of Government. In general, PPP can generate improved value for money through a number of ways including *inter alia*:

- **Reduced whole life costs** - This can be achieved through the integration of infrastructure design, construction and operation; by facilitating private sector innovation in design; though the avoidance of over-specification and through improved maintenance scheduling;
- **Better allocation of risk** - Cost effective transfer of risk to the private sector enables efficiency benefits to be generated across the term of the contract; sometimes, certain risks cannot be totally transferred to one party and have to be shared.

- **Faster implementation** - The transfer of design and construction risks, together with the principle of no payment until the commencement of service delivery, will provide significant incentives for the private sector to deliver infrastructure projects within short construction timeframes;
- **Improved quality of service** - This results from better integration of services with supporting assets, improved economies of scale, introduction of new technology, innovation in design, and the performance incentives and penalties included in a PPP contract; and
- **Generation of additional revenue** - more intensive exploitation of assets to generate additional revenues, for example from shared use of facilities or the sale of surplus assets.

Other factors will be project specific, and may be identified by considering the experience of similar projects, including projects constructed and operated using the traditional approach, and projects constructed and operated using PPP approach.

5.2 Assessing Value for Money Potential

The potential of the private sector to deliver value for money through PPP may be considered in terms of the experience of similar projects, particularly those that have been operational for a number of years. Such experience may be accessed through either desk-based research, or through consultations with potential private sector operators.

Two main tools to identify potential sources of value for money, and to assess the potential of the private sector to deliver value for money, are ***precedent review*** and ***market sounding*****.**

Precedent review

The key issues to be investigated within the precedent review and market sounding exercise will vary from project to project. However, in general, experience of similar projects should be investigated and the views of the private sector should be established in relation to the factors described above, and in particular in relation to:

- the scope of the project, including the balance between asset provision and service delivery;
- the potential for cost effective risk transfer, particularly in relation to statutory process risk, demand risk and residual value risk;
- the scope for user charges, third party revenues and alternative asset uses that might reduce the cost of the project to Government; and
- the potential for value for money, measured in terms of the main sources of value for money (in monetary and non-monetary terms) that were identified at the end of the procurement of similar projects, and evidence that value for money has actually been achieved in these areas during the construction and operation stages.

For the pilot PPP projects, it may be possible to obtain some of the above information for international projects from published reports and relevant contacts. For future PPP

projects, it will be important to establish and maintain a database of information on the pilot projects to ensure that the experience of those projects is taken into account in the development of future PPP.

Where there is an established market for the development of an asset or the provision of a service, it is desirable to undertake a review of precedent prior to commencing a detailed market sounding. The precedent review should examine experience in both local and international markets.

The review of precedent will be useful in providing background information on the level of market interest, and the capabilities of the private sector, the key risks associated with projects and the willingness of the private sector to accept those risks. The market sounding process can then focus on particular issues arising out of the precedent review, and issues that are specific to the infrastructure project in question.

At the extreme, the review of precedent could highlight such a wealth of experience and information (including the results of previous market soundings) that further market sounding is not considered necessary. However, unless a project is very standard in nature, there is normally benefit to be gained from conducting at least a limited market sounding exercise to investigate the particulars of the project under consideration.

Market Sounding

A PPP project is only practicable where there are contractors able to deliver the required service and willing to accept sufficient risk transfer. Therefore, once the essential characteristics of an infrastructure project have been defined and an initial output specification produced, the nature and extent of market interest in a PPP solution should be established by means of a market sounding exercise.

Private sector interest may be known on the basis of previous market soundings or from earlier projects. However, for large, innovative or complex projects a separate market sounding exercise should be conducted as part of the PPP assessment. The market sounding should focus on issues that are specific to the project in question. There are a number of elements to be considered as part of the market sounding exercise, including the strength of the private sector market for the project, the private sector's scope for achieving economies of scale, and its relevant expertise. The most important factors will be the likely level of interest in the project, and the capability of the market to undertake the project.

To maximise the effectiveness of the market sounding process, private sector organisations need to be provided with a Project Prospectus that sets out an indication of the likely *scope and scale of the project*, its *service content*, its anticipated *key contractual terms* and *preliminary risk allocation*. The discussions should also be supplemented with a Project Questionnaire in order to provide a formal record of responses to key questions. To ensure the widest possible participation in the market sounding exercise, a Prior Information Notice can be placed in an official journal inviting

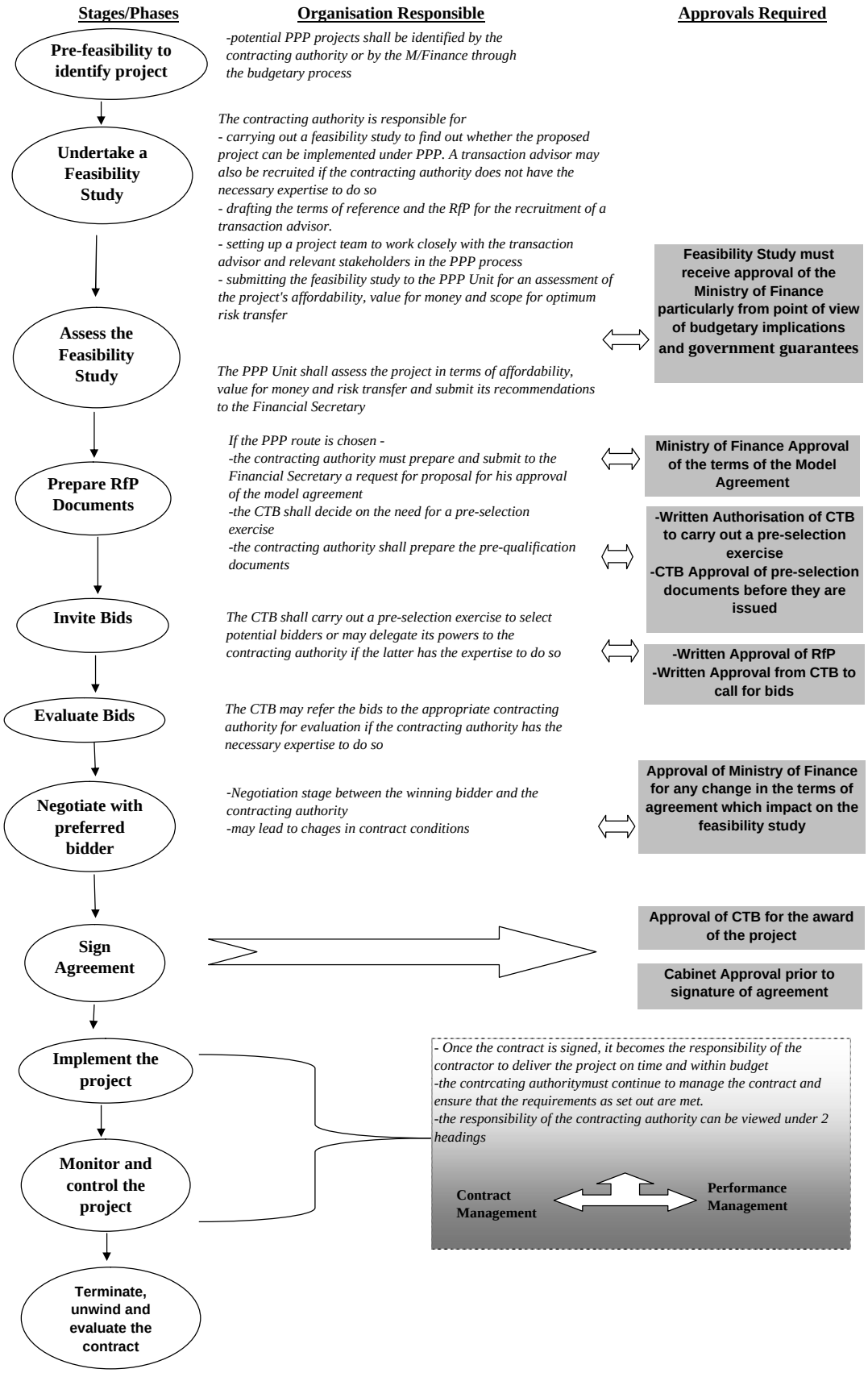
potential private sector suppliers to express their interest in participating in the market sounding exercise.

Some tips on Preparing for a Market Sounding.

- Investigate whether a similar scheme exists for which interest levels are already known.
- Set clear objectives for the exercise. What do you hope to achieve? What information do you want potential bidders to supply at this stage?
- Prepare a list of organisations you may wish to contact. Think broadly about the project, and aim to contact as wide a range of potential bidders as possible. For example, for an IT scheme, consider:
  - Hardware manufacturers
  - Software companies
  - Telecommunications companies
  - Sector specific specialists etc
- Seek assistance for drawing up the contact list.
- Arrange for face to face meetings. You may begin with a telephone call, but try to encourage interested parties to come to see you.
- See individual companies separately or collectively, but make it clear that this is an informal discussion, with no commitment on either part.
- Allow enough time for discussions to take place, and for information to be exchanged. For a discussion with a group of 4 to 5 companies, expect to allow in the region of 2-3 hours.

Sequence of Activities for Undertaking a PPP Project

The PPP Project Life Cycle



Section 6 defines the term "risk" and identifies the various types of risks inherent in infrastructure projects. It sets out the objectives of risk transfer and outlines the steps involved in undertaking a preliminary risk assessment from identification to quantification and allocation. Section 6 also provides guidelines to help contracting authorities establish a Risk Management Plan to manage the risks that they retain.

6.1 Definition of Risk

A risk can be defined as any factor, event or influence that threatens the successful completion and operation of a project in terms of cost, time or quality. One of the principles of PPP is that risk should be allocated to the party best able to manage it. Cost effective allocation of risk between a contracting authority and the private operator will result in lower cost of construction and operation for infrastructure projects, and will provide enhanced value for money when compared to traditional procurement. In a PPP project, the degree of risk transfer to the private sector will be determined by the nature of the project and will by definition vary from project to project.

6.2 Objectives of Risk Transfer

Within a PPP project, the primary objectives of transferring risks from a contracting authority to a private sector contractor are to:

- reduce the long-term cost of a project by allocating a risk to the party that is able to manage it in the most cost effective way;
- provide an incentive to the contractor to deliver a project on time, to the required standard and within budget;
- improve the quality of customer service and increase revenue through a better management of risk; and
- provide a more consistent and predictable profile of the contracting authority's expenditure on a project, by converting variable capital and operating costs into more consistent and predictable unitary payments.

6.3 Purpose of Risk Assessment

Risk assessment is required to enable the objectives of risk transfer to be achieved. It is a determining factor in many of the activities that have to be undertaken during the course of a PPP project. The purpose of assessing risk within a PPP project is to:

i. enable the selection of the most appropriate form of PPP for a project;
ii. allow the development of contract documentation for a project;
iii. facilitate negotiation between the Contracting Authority and the short listed bidders (where the negotiated procedure is followed);
iv. facilitate the comparison of tenders; and
v. facilitate an assessment of value for money provided by the preferred tender when compared to traditional procurement.

6.4 Categories of Risk

The risks associated with infrastructure projects are commonly categorised under the following headings:

- planning risk – including the risk that planning permission for the construction project may be refused, the risk that unacceptable conditions may be applied to any planning permission granted, and the risk that the planning process may take longer than anticipated and cost more than expected;
- design risk – including the risk that the design solution adopted may not work satisfactorily and may fail to meet the requirements of the contracting authority, the risk that new technical standards may be introduced during the design phase, and the risk that the design process itself may take longer than anticipated and cost more than intended;
- construction risk – including the risk that factors such as changes in labour and material costs, inadequate cost management, adverse site and weather conditions, and the failure of contractors to perform may lead to construction time and cost overruns;
- operating risk – including the risk that factors such as high demand volumes, shortage of skilled labour, inadequate cost management, poor maintenance scheduling, late delivery of equipment, poor public relations and labour disputes may result in operating costs being more than intended and the required standards of performance and availability not being met;
- demand risk – including the risk that usage of the service varies from the level forecast, and the risk that revenues generated from users (e.g road tolls) are lower than expected;
- financial risk – including the risk that factors such as fluctuations in exchange rates, variations in financial costs and changes in indexation assumptions may lead to operating or capital losses. A key element of financial risk is the residual value risk, which is the risk that the value of an asset (e.g. land and buildings) at the end of the contract term is different from that anticipated at the start of the contract term.
- legislative risk – including the risk that a regulatory or legislative change may be made that significantly affects the ability of the contractor to continue to meet its contractual obligations.

Through the process of risk assessment, the contracting authority is able to explore each of the above categories of risk in detail, identify and quantify the most significant risks within each category, and allocate these risks between the contracting authority and the private sector contractor.

6.5 Undertaking the preliminary risk assessment

A preliminary risk assessment is required to identify the potential risks in a project and to consider how they might best be allocated between the Contracting Authority and a private sector contractor. This preliminary assessment will facilitate the selection of the most appropriate form of PPP for the project. It will support the development of a fully

costed Financial Comparator, which may be used at the end of the procurement process to determine whether the preferred tender represents value for money.

6.5.1 The steps in a preliminary risk assessment are:

	Step Description	**Outcome**
Preliminary Risk Identification	Identification of the principal risks associated with the design, construction and operation of an infrastructure project	Preliminary list of risks
Preliminary Risk Allocation	Formation of an initial view as to whether the Contracting Authority or the Contractor is likely to be better able to manage each risk. Risks are then either allocated to the Contracting Authority, the Contractor, or identified as risks to be shared.	Preliminary risk allocation
Qualitative Risk Assessment	Qualitative assessment of the potential significance or impact of each risk. The results of the qualitative assessment are combined with the list of risks and the risk allocation to provide a preliminary risk matrix for the project. A risk management plan is prepared for those risks that are to be retained by the Contracting Authority.	Risk management plan
Preliminary Risk Quantification	Preliminary assessment of the monetary value of the most significant risks identified in the preliminary risk matrix. The monetary value of the most significant risks transferred to the Contractor is included in the Financial Comparator.	Risk-adjusted Financial Comparator

In general, the preliminary risk assessment should be informed through discussions with potential private sector contractors and experience both nationally and internationally. A market sounding exercise should provide information on the main risks associated with particular types of project, the probability of occurrence, the scale of their impact, and the respective ability of the public and private sectors to manage these risks.

6.6 Preliminary Risk Identification

The identification of risks may be undertaken by means of a brainstorming exercise in a workshop or series of workshops. The purpose of the workshop should be purely to identify risks at this stage, without attempting to quantify them. The process of identifying risk is:

- select the parties for the brainstorming session carefully and include those that are responsible for quantifying and managing project risks
- use a generic list of risks to structure the brainstorming session
- focus on risks that are specific to the project
- focus on the most significant risks
- provide a clear and unambiguous description of each risk identified
- check for missed risks and duplicated risks
- categorise risks

6.7 Preliminary Risk Allocation

The guiding principle of risk allocation is that risk should be allocated to the party better able to manage it. At the Option Analysis stage, the price charged by a Contractor for taking on a risk will not be known. The preliminary risk assessment should therefore focus on determining in principle, whether the Contracting Authority or the Contractor is better able to manage the risk, or whether the risk should be shared.

In considering the most appropriate allocation of risk, the following issues should be taken into account:

i. the capacity of the Contracting Authority to manage the risks and its ability to control them
ii. the capacity of private sector contractors to manage the risks and their ability to control them
iii. the preferred allocation of risk, given any public interest issues.

The preliminary allocation of risk should reflect the specific characteristics of the project and the underlying strengths and weaknesses and capacities of each party. The degree of risk transfer to the private sector will vary on a project by project basis and will be informed by the precedent review and market sounding exercise. Moreover, the preliminary allocation of risk will influence the selection of the preferred form of PPP. The process for risk allocation is as follows:

- focusing on deciding which party is best able to manage each risk
- using the results of the market sounding

- using either a typical risk allocation or an actual risk allocation for a similar project as a starting point documenting the reasoning behind the preliminary risk allocation so that it can be referred to at the procurement stage.

6.8 Qualitative Risk Assessment

Qualitative risk assessment enables the potential significance or impact of risks to be considered without the need for detailed quantification. Qualitative risk assessment is undertaken in two phases:

- assessment of the potential impact of the risk – this is a subjective measure of how sensitive the project is to a particular risk, classified into high, medium and low impact, according to the extent to which the project is put at risk. The following table can be used as a guide:

Assessment of the Potential Impact of Risk

Scale of Impact	Description	Value (% of Baseline Project Cost)
High	Critical to continued service	> 50%
Medium	Serious impact	5% - 50%
Low	Small impact	< 5%

- assessment of the probability of occurrence – this is a subjective indication of how likely the risk is to occur, classified into high, medium and low probability. The following table can be used as a guide.

Assessment of the Probability of Occurrence

Probability	Description	Value (% of Project Cost)
High	Likely to occur	Probability > 10%
Medium	Occasionally occurs	Probability 1% - 10%
Low	Unlikely but possible	Probability < 1%

The probability of occurrence and estimation of each risk is then combined using the following matrix to provide a measure of significance of the risk.

Assessment of the Significance of a Risk

			Probability	
		H	M	L
Impact	H	1	1	2
	M	1	2	3
	L	2	3	3

1= greatest significance/impact
3= least significance/impact

The numbers in the boxes show the level of priority that risks falling in that box have. The closer to the top left hand corner of the matrix that a risk is placed, the more

significant the risk is likely to be, and the more important it is to focus on it. In this way, the qualitative assessment provides an indication of the most important risks that should be quantified and subjected to further data collection.

A preliminary risk management plan should then be prepared for all the risks that are likely to be retained by the Contracting Authority. In preparing a risk management plan, greatest effort should be spent on planning and undertaking risk management activities for the most significant risks (as identified by the qualitative assessment) that are likely to arise first (e.g planning risks). Risk management should be assessed in terms of their likely cost and effect (i.e the extent to which probability and/or impact of a risk will be reduced). The cost of a risk should not exceed the probable cost of the risk occurring (as estimated by the preliminary risk quantification).

6.9 Preliminary Risk Quantification

The objective of risk quantification is to express the potential impact of risk in monetary terms. The quantification of risk in monetary terms facilitates better understanding of the potential impact of risks and provides a strong rationale for the Contracting Authority to ensure that significant risks are managed efficiently and in a cost effective way. Risk quantification is also required for the development of the PSC-reference.

There are a number of approaches that can be used to quantify and analyse significant risks, involving increasingly rigorous analysis. Some of these approaches are listed below:

6.10 Approaches to Risk Quantification

Method of risk quantification	Method of analysis	Suitable projects
Range of values for selected risk factors (e.g maximum and minimum demand)	Sensitivity analysis to look at individual risks. Scenario analysis to look at combinations of risks	Projects where there are no data to facilitate more detailed analysis. Projects for which there is no flexibility in how risks can be managed. Projects which will go ahead regardless of the risk analysis.
Point estimates	Root-Mean-Square Methods	Projects for which crude estimates of the probability and value of risk is known, and risks are independent and follow normal distributions.
Consider full range of outcomes	Monte Carlo analysis	Projects for which there is a reasonable understanding of the likely probability and value of risk. Monte Carlo analysis is the most suitable

		method of analysis where a rational cost contingency needs to be estimated, where the likelihood of various outcomes needs to be understood, where several ways of managing risk need to be compared, or where risks combine in complex ways. Monte Carlo analysis is the recommended approach to risk assessment on large/complex PPP projects.

At the Options analysis stage, the primary output from the preliminary risk quantification is an assessment of the probable cost of each of the significant risks associated with the project. The outputs of the preliminary risk quantification should be used to review and update risk allocations and risk management plans, and the total cost of all the significant risks that are allocated to the private sector should be included in the PSC-reference.

6.11 Risk Assessment and the Value for Money test

The primary purpose of undertaking the final risk assessment is to ensure that the bid selected provides the best value for money possible. This is achieved in two ways:

- by allocating risk to the party best able to manage it in the most cost-effective way
- by providing incentives for contractors to deliver infrastructure projects on time, to the required standard and within the budget

The risk assessment undertaken at this stage should build on the risk assessment carried out at the Options analysis stage. In some circumstances the range and expected value of risk will have changed as a result of new information, and therefore, at the stage of conducting the value for money test, the Contracting Authority should consider:

- any additional risks that have become apparent
- any risks that may no longer be appropriate
- any changes to the expected value resulting from greater uncertainty or the availability of accurate information.

Risk assessment is required during the procurement process to inform:

- contract terms and payment mechanism – the main way of allocating risk to a private sector contractor is through the contractual incentives and penalties incorporated within the payment mechanism. The design payment mechanism requires a detailed understanding of the types of risk involved in the construction and operation of an infrastructure project, and the value that the Contracting Authority attaches to such risk.
- negotiation – if the negotiated procedure is used, then the risk assessment is required to establish the full cost (including risk) of items under negotiation, and to determine whether the cost of such items is minimized by transferring responsibility to the Contractor or retaining responsibility with the Contracting Authority
- PSC-reference – all those risks to be transferred to the Contractor should be quantified and included in the PSC-reference. The net present cost of the PSC-

reference is then compared to the net present cost of the preferred tender. This monetary comparison is one part of the assessment to determine whether the preferred tender represents value for money.

6.12 Negotiated Procedure

For projects that are procured under the negotiated procedure, the assessment of risk comprises 5 steps, as follows:

	Step description	Outcome
Update risk matrix	The risk matrix is updated, included in the Invitation to Negotiate and sent to short listed bidders	Updated risk matrix
Obtain views of tenderers	Short listed bidders are asked to comment on the risk matrix prior to submission of bids. If appropriate, the risk matrix may be adjusted and amendments to the bid documents issued	Updated risk matrix
Finalise risk matrix and PSC-reference	The quantification of risk is updated and included in the final PSC-reference prior to the submission of bids	Updated PSC-reference
Negotiate significant risks	Significant risks that have a direct impact on the overall cost of the project are the subject of negotiation. The risk matrix and the PSC-reference are continually updated to reflect the outcomes of the negotiations.	Updated risk matrix and PSC-reference
Evaluate risk management proposals	Bidders are asked to submit proposals with their bids, and these are evaluated as part of the formal bid evaluation. The Contracting Authority's management plan should also be updated at this stage and included in the Report on the Tendering Process.	Updated risk management plan

6.13 Risk Management Plans

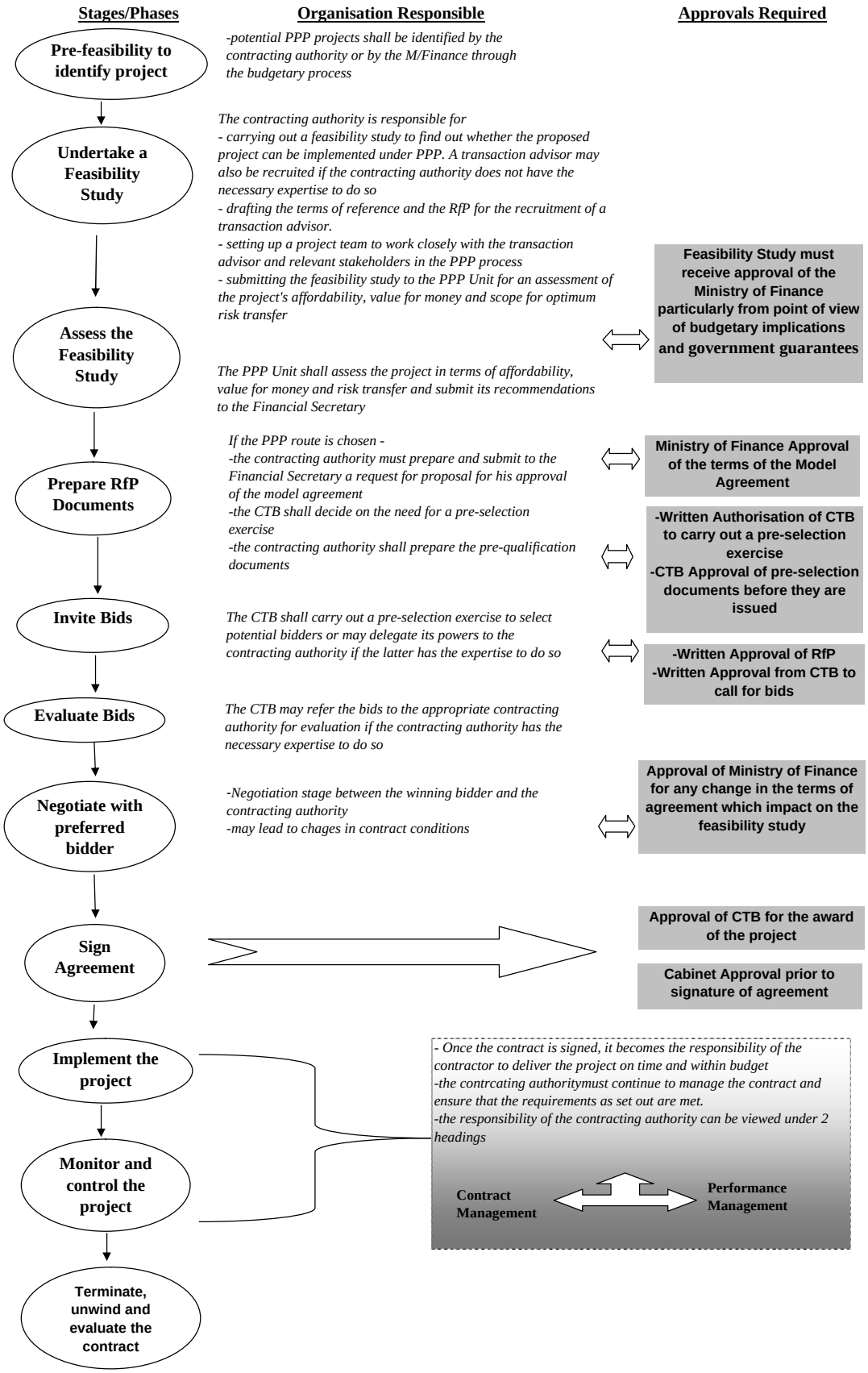
Infrastructure projects that are procured using PPPs will commit contracting authorities to significant investment throughout the duration of the PPP Agreement. It is therefore important that contracting authorities establish appropriate plans to manage the risks that they retain. These plans should set out how the retained risks will be monitored so that their likely occurrence can be identified at an early stage. It should also set out the actions that will be taken by the Contracting Authority to manage risks if and when they occur, and identify the resources that will be required to implement the risk management plan. For those risks transferred to the Contractor, the risk management plan should demonstrate how the contract facilitates the transfer of such risks, and set out the plans of the Contractor to manage those risks that have been allocated to it. The risk management plan should confirm that there are no outstanding issues affecting the allocation and management of risk between the Contracting Authority and its appointed Contractor.

The report should include details of the final risk matrix including:

- The methodology used to quantify the risk
- A description of risk
- The quantification of risk
- The allocation of risk
- A statement of how risks are transferred in the Contract
- A statement of how retained risks will be managed.

Sequence of Activities for Undertaking a PPP Project

The PPP Project Life Cycle



Section 7 is a step by step explanation of how to construct the Public Sector Comparator, which provides a benchmark to compare the private bids with the true and full cost to Government of meeting the output specification. Section 7 is also complemented by Appendix 2 to clarify the construction of the PSC by making use of a working example. It also outlines the steps involved in valuing risks so as to reflect a meaningful test for value for money.

7.1 Definition of Public Sector Comparator

The PSC estimates the hypothetical risk-adjusted cost if a project were to be financed, owned and implemented by government. The PSC is based on the most efficient form and means of government delivery and is developed according to the required output specification. The PSC should represent the full and true cost to government of meeting the output specification under a public procurement delivery method.

7.1.1 Some Key Characteristics of a PSC

- It is expressed as the Net Present Cost (NPC) of a projected cash flow based on the specified government discount rate over the required life of the contract;
- It is based on the most recent or efficient form of public sector delivery for similar infrastructure or related services;
- It includes Competitive Neutrality adjustments so that there is no net financial advantage between public and private sector ownership;
- It contains a realistic assessment of the value of all material and quantifiable risks that would reasonably be expected to be transferred to bidders if the project is implemented under a PPP scheme; and
- It contains an assessment of the value of the material risks that are reasonably expected to be retained by government if the project is implemented under a PPP scheme.

To clarify the PSC construction process, the PSC can be categorised into the following four core elements namely:

- ***Raw PSC***

The Raw PSC includes all capital and operating costs, both direct and indirect, associated with building, owning, maintaining and delivering the service (or underlying asset) over the same period as defined in the project proposal and to a defined performance standard as required under the output specification.
The Raw PSC does not include any valuation of risks to which government remains exposed.

- ***Transferable Risk***;

The value of Transferable Risk to government needs to be included in the PSC to allow for a like-with-like value for money assessment with private sector bids.

- ***Competitive Neutrality***;

Competitive Neutrality adjustments remove any net competitive advantages that accrue to a government business by virtue of its public ownership. All the circumstances surrounding the project and the market for potential bidders should be reviewed, to identify any material advantages or disadvantages peculiar to government under a public sector delivery method.

- ***Retained Risk***.

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

PSC = Transferable Risk + Competitive Neutrality + Raw PSC + Retained Risk

7.2 The PSC Reference Project

The Reference Project is the most likely and efficient form of public sector delivery that could be used to satisfy all elements of the output specification, as outlined in the Project Brief.
The Reference Project should:

- reflect the most likely and achievable procurement approach by the relevant department to satisfy all elements of the output specification if the project were to proceed on a traditionally funded basis;
- provide the same level and quality of service as expected to be provided by bidders to enable a like-with-like comparison; and
- be framed to be a conforming bid as if it were part of the bidding process.

7.3 Format for constructing the PSC

The following format can be used as a guide when calculating the PSC:

1 Formulate the output specification
2 Define the Reference Project
3 Identify all Raw PSC components
4 Assign direct costs
5 Assign indirect costs
6 Calculate Raw PSC [A]
7 Competitive Neutrality inclusion [B]
8 Identify all material risks
9 Quantify consequences of risk
10 Estimate probability of risks

11 Calculate value of all risks
12 Identify desired risk allocation
13 Calculate Transferable Risk [C]
14 Calculate Retained Risk [D]
15 Calculate PSC = [A] + [B] + [C] + [D]

7.4 Discounted cash flow

Discounted cash flow analysis is central to the PSC calculation. It contains a stream of expected cash flows discounted to give a single Net Present Cost (NPC) for a common start date. This allows comparison between a PSC and the competitive bids on single cost basis. One important component of the discounted cash flow calculation is the discount rate. The discount rate is used to convert future costs into present costs. The discount rate reflects government's time value of money plus a premium for the systematic risk inherent in the project. The systematic risk premium is the measure of the extent to which a project's returns are likely to vary relatively more than a portfolio of projects. In theory, systematic risk will vary from project to project but in practice, for government evaluation purposes there may be merit in using a common discount rate (or a common rate across an industry sector) unless the systematic risk factor is so significantly different for a particular project.

7.5 Treatment of inflation in the calculation of the PSC

- The discount rate used in the PSC should generally be nominal and before income tax. The numerator cash flows should also be expressed in nominal terms (i.e, inclusive of inflation) to match the discount rate.
- Appropriate adjustments should be made to costs that are expected to increase at a different rate to the general inflation rate. Labour is an example of a cost that may inflate at a different rate from the project agreed inflation rate.
- All costs and expected revenue streams should be adjusted for inflation, except where government expects to enter into contractual agreements that would inflate at a different rate than the inflation rate. An example of this would be if government entered into a fixed price contract for the construction of a building, in which case, the contractor would include the inflation risk within the fixed price.
- The inflation rate specified in the PSC should also be incorporated into the bids, even if the bidder is expected to take the financial (inflation) risk. This is to ensure a fair comparison of the bids against the PSC.

7.6 The treatment of depreciation in the calculation of the PSC

The PSC is calculated on a cash flow rather than on an accrual basis, so that non-cash items such as depreciation should not be included in the PSC. The only exception to this is where depreciation may affect tax payments, where post-tax cash flows are used.

7.7 Calculation of the Raw PSC

The Raw PSC represents the base cost to government of producing and delivering the Reference Project. The Raw PSC comprises the following components:

- Direct costs: costs that can be traced or assigned to a particular service;
- Indirect costs: other costs incurred that are not directly related to the production of the services. They are costs that contribute to the production of a service, but are not incurred exclusively for that one service;
- Less any identifiable third-party revenue.

The Raw PSC should not include any valuation of risks to which government remains exposed. These risks should be considered under either the Transferred Risk or Retained Risk PSC category, whichever is applicable. The Raw PSC will include the values of risks that would be transferred to commercial insurers or external parties providing inputs to government were government to undertake the Reference Project

7.7.1 Steps in calculating the PSC

Step 1 Identify Raw PSC costs
- Forecast all material costs over the life of the project
- Focus on cash flows rather than accruals

Step 2 Assign all direct costs
- Identify all direct costs
- Value direct costs (size, timing)

Step 3 Assign indirect costs
- Identify all indirect costs
- Calculate the indirect cost allocation (size, timing)

Step 4 Calculate Raw PSC
- Aggregate all cash flows for each period
- Deduct any third party revenue

7.7.2 Valuing Direct Costs

Direct costs are those that can be traced or assigned to a particular service. The nature of these costs will depend on the type of service required and the method of delivery specified in the Reference Project.

For example, for the construction of a new school, the government has a number of options under public procurement, including building the school using its own internal resources, or engaging an external provider to deliver the school under a contract (e.g. design and construct). Where the construction is performed internally, the direct costs

could include salaries and wages, materials, transport and other equipment. However, if an external provider is engaged, direct costs to government would for the most part be reflected in the price of the contract.

7.7.3 Direct Capital Costs

Direct capital costs are costs that can specifically associated with the production of any services. They may include:

- Costs incurred in designing the project;
- Land and other development costs (purchase, lease);
- Raw materials;
- Payments to external providers (contract price);
- Costs of the public procurement process (including project development, documentation and contract management);
- Payments to external consultants and advisers regarding project construction (financial, legal, engineering, patronage, other); and
- Plant and equipment.

7.7.4 Capital Receipts and direct capital costs

Receipts from upfront sale, lease or disposal of any assets owned by the government should only be deducted from the Raw PSC where the decision is driven by the Reference Project and the same opportunity is available to bidders, i.e, the PSC and the private sector bids should be constructed in accordance with the same Project Brief. For e.g, where the Project Brief permits the sale of excess land, the bidder will be able to include the price of the sale of land in its reduced service charges to the government.

7.7.5 Direct Maintenance Costs

Maintenance costs are generally recurrent and are associated with maintaining the capability and quality of the existing asset rather than upgrading, improving or expanding the asset. These typically include:

- Raw materials;
- Tools and equipment; and
- Labour required for maintenance (wages and salaries).

In general, a trade-off exists between capital and maintenance costs. Low levels of maintenance may require earlier and potentially larger capital upgrades. The following factors should generally be considered when determining capital and maintenance costs:

- Upfront capital costs;
- Periodic maintenance requirements (usually influenced by the nature and quality of the asset provided);
- Capital improvements and upgrade to existing facilities; and
- Capital expenditure on existing facilities (expansion), if part of the Reference Project.

7.7.6 Direct Operating Costs

Direct operating costs are associated with the daily operation of the infrastructure and related services.
Direct operating costs typically include the following:

- cost of inputs;
- employees directly involved in the service provision:
  - wages and salaries
  - employees entitlements
  - work cover and other applicable insurance
  - training and development
  - annual, long-service leave, expected redundancy payments
  - Travel

- Direct management costs; and
- Insurance.

For example, the types of direct costs that might be included in typical accommodation services are:

- Direct capital costs: land; stamp duty; land tax; buildings; refurbishment; furniture
- Direct operating costs: council rates, building services.

7.7.7 Applicable indirect costs

Indirect costs are other costs not directly related to the provision of services. They include:

- Operating costs
  - Corporate overheads:
    - ancillary running costs (e.g. power, cleaning, stationery)
    - non-core IT and equipment (e.g. used for administration)

  - administrative overheads:
    - employees not directly involved in the service provision
    - facilities management
    - overall project management.

- Capital costs:
  - Partial commitment of plant and equipment
  - Partial usage of new administration buildings.

7.7.8 Methods for allocating indirect costs

Indirect costs can be allocated using 2 broad methods:

A. Traditional indirect cost allocation method

This involves considering the extent to which the indirect cost contributes to, or was caused by the services. Whatever is identified as driving the cost is then used as the basis for allocating indirect costs to the services. For example, a cost driver for allocating accommodation rental costs would be the ratio of floor space occupied by each person or work group to total space.

B. Activity-based costing method

Under this method, the activities that comprise the production process culminate in the delivery of services. Activity-based costing examines the activities undertaken within an organisation, determines why they are used in the production process, and then assigns costs to services according to the consumption of each activity in the production of the services. Each activity is costed on the basis of the resource consumed.

7.8 Third-party revenue and the PSC

Third-party revenue may be generated where:

- Third-party demand exists for the infrastructure or related services;
- Service capacity exists above government requirements;
- Government allows third-party utilisation.

Expected third-party revenue over the life of the Reference Project reduces the net cost to government and should be deducted from total operating costs in the Raw PSC.

Raw PSC = (operating costs - third party revenue) + capital costs

Since forecasting likely third-party revenue can be particularly difficult, the need for specialist advisers and market testing should reflect the materiality and reliability of the amounts involved. Consideration should also be given to the following sources:

- Applicable government policy or guidance relating to fees and charges payable by third-party users; and
- Historical demand and prices charged for the same or similar services.

7.9 Competitive Neutrality

Competitive neutrality removes the net competitive advantages that accrue to a government business by virtue of its public sector ownership. This allows a like-with-like value for money assessment between a PSC and private bids, by removing the effects of public ownership and including equivalent costs that would otherwise be incurred.

Competitive advantages from public sector ownership typically include taxes, such as land tax, that are only levied on private enterprises. Competitive disadvantages may also arise from public sector ownership and these are typically heightened public scrutiny and reporting requirements not faced by a public enterprise.

If Competitive Neutrality inclusions are not made, the PSC may be artificially lower than the private bids and may not reflect the true cost to government as a whole under the Reference Project, and may lead to a sub-optimal procurement decision;
Competitive neutrality does not include differences in performances or efficiencies that arise in a competitive market and should be distinguished from differences in cost levels between the public and private sector.

7.9.1 Steps in calculating Competitive Neutrality

Step 1: Identify the effects of government ownership

- Identify areas where financial advantage is derived
- Identify areas where a financial disadvantage is derived

Step 2: Assess net advantages

- Estimate the value of removing net Competitive Neutrality effect

Step 3: Calculate Competitive Neutrality inclusion

- Forecast all net material costs of the life of the Reference Project
- Focus on cash flows rather than accruals

A realistic assessment of Competitive Neutrality inclusions requires a proper understanding of the output specification and a clearly defined Reference Project

It is to be noted that:

- Competitive Neutrality inclusions in the PSC are made on a cash flow basis; and
- The cost of capital is not included in the Competitive Neutrality component of the PSC numerator, but is reflected in the discount rate used to calculate the NPC.

The PSC is a cash flow calculation and thus Competitive Neutrality inclusions should be based on cash flow adjustments, rather than on an accruals basis. Non-cash adjustments such as depreciation therefore would not form part of Competitive Neutrality.

7.9.2 The need for Competitive Neutrality inclusions

Competitive Neutrality inclusions generally fall into two categories:

- Differences in state taxation obligations faced by virtue of public sector ownership;
- Differences in state regulatory costs imposed by virtue of public sector ownership.

Treatment of taxation:

- State taxes represent an additional cost to bidders that government may not incur under the Reference Project.
- State taxes are added to the PSC, as government exemption represents an advantage to the Referred Project.

Treatment of regulation

Competitive Neutrality inclusions may also arise where the Reference Project is exempt from complying with legislation, regulation or other material requirements which the bidders must satisfy (e.g. building permits). The inclusion is measured as the costs of compliance to the same standard as required by the bidders.

7.10 Identifying and Valuing Risk

For the PSC to reflect a meaningful test for value for money against the private bids, it must include a comprehensive and realistic pricing of all quantifiable and material risks. The value given to a risk in a PSC, measures the expected cost of that risk to government if the project were delivered under a public procurement. This also represents an estimate of what government would be willing to pay to transfer a risk to bidders in a PPP arrangement. Once all material risks have been identified and valued, they can then be classified between Transferable and Retained Risks depending on which of those risks government would allocate to the bidder (Transferable Risks) or which risks government would "take back" (Retained Risks) if the project were to be delivered under a PPP arrangement, instead of a public procurement.

7.11 Steps in valuing risk

Step 1: Identify project risks

- Identify all risks for a project

Step 2: Quantify consequences of each risk

- Identify consequences of each risk eventuating
- Consider timing issues
- Record assumptions made

Step 3: Estimate probability of each risk eventuating

- Estimate probability of each risk eventuating
- Record assumptions made

Step 4: Calculate value of risk

- Value of each risk = consequence **x** probability **+** contingency factor

[A contingency factor is usually included in each major risk category e.g, construction, operations and maintenance, to account for any unobservable costs which would otherwise lead to an undervaluation of identifiable and quantifiable risks. The amount of the contingency that should be added to the major risk categories depends on a number of factors including the accuracy of information used in valuing the particular risk and the degree of uncertainty for completeness. For example, the contingency for the design and construction of a tunnel under a river would be higher than a simpler terrain. For instance, when assessing design and construction risk, there may be a possibility that not all the potential consequences of risk have been identified. If the underlying construction cost for the project is Rs100 million, a contingency factor of 2 percent may be applied, resulting in a contingency amount included in the value of the risk of Rs 2 million].

In quantifying risk, there is a range of possible sets of outcomes. The PSC is calculated to provide a single point estimate of the value of risk based on a weighted set of most likely outcomes. However, there are a set of potential outcomes, and a balanced approach to the concept of risk should be adopted where appropriate. This may require a detailed sensitivity analysis of some of the key variables.

7.12 Sensitivity Analysis

Sensitivity analysis should be performed on key cash flows and assumptions to determine the robustness of the PSC to potential changes in assumptions, risk components and the forecast operating environment over the term of the project.

Sensitivity analysis can be used for the following purposes:

- Comparison with bids to identify the changes in base assumptions which would result in a different evaluation decision being reached; and
- Determine the relative robustness of the PSC to bids. This may be assessed as a qualitative factor if the PSC is close to the lowest bid.

Sensitivities on key financial and operating assumptions should be undertaken through a number of likely scenarios, such as low/base/high cases. This will provide a more accurate reflection of the potential spread of the total cost to government under the PSC and also enable a more comprehensive evaluation against bids. Sensitivities can be performed by varying individual assumptions or by considering simultaneous changes in a number of variables. This allows both the impact of key factors to be considered, as well as examining a range of realistic scenarios where there is considerable interaction between variables.

Variables that are typically analysed using sensitivity analysis:

- length of the project (both construction and concession periods);
- periodic inflation rate;
- construction costs, schedule and completion dates (both in the raw PSC and the pricing of risk);
- total service demand;
- total operating costs;
- third-party revenue; and
- residual value.

7.13 The Calculation of Transferable Risk

After identifying and valuing all material risks, each risk should be identified as either Transferable or Retained Risk, depending on whether it should be transferred to the bidder or retained by government under a PPP arrangement.

Transferable Risks are those that are likely to be transferred to bidders under a PPP arrangement. The decision to allocate a risk to the bidder depends on whether the bidder is best able to manage it.

7.14 Steps in valuing transferable risk

Step 1 : Analyse all material and quantifiable risks

- Ensure all risks have been identified and comprehensively valued

Step 2: Identify optimal risk allocation

- Assess which party is best suited to manage each risk under a partnership agreement
- Allocate between Transferable and Retained Risks

Step 3: Calculate Transferable Risk

- Sum value of all Transferable Risks over each period
- Calculate present value of Transferable Risk

7.15 Identifying the optimal level of risk transfer

Each risk should be allocated to the party best able to manage it at least cost, taking into account public interest considerations. This requires an optimal rather than maximum transfer of risk. It is determined by assessing the ability of each party to reduce the probability of a risk occurring, and to minimise the consequences if that risk eventuates.

Risk allocation should be determined separately for each project to deliver the best outcomes. Factors to be considered include:

- The nature of the project;
- The respective strengths and ability of each party to manage a risk;
- Flexibility of the output specification;
- Previous levels of risk transfer (this indicates the historical success of each party in managing risk);
- Prevailing market attitude towards risk;
- Public interest factors; and
- Other policy considerations.

An optimal allocation of risks allows government to obtain greatest value for money by harnessing the respective skills of all parties. However, if too much risk or the wrong risks are transferred to the bidder, government may pay more than if they are retained. For example, government is often in a better position to manage part of regulation risk while the bidder may be better suited to hold construction and operations risk where it has generated considerable expertise providing similar services in the past.

7.16 Calculating Retained Risk

Retained Risks are those risks that government proposes to bear itself under a PPP arrangement. Valuing Retained Risk represents the final stage in the construction of a PSC. The process can be summarised in the following steps:

Step 1: Analyse all material and quantifiable risks

- Ensure all risks have been identified and comprehensively valued

Step 2: Identify optimal risk allocation

- Assess which party is best suited to manage and control each risk under a partnership arrangement
- Allocate between Transferable and Retained Risks

Step 3: Calculate Retained Risk

- Sum value of all Retained Risks over each period
- Calculate present value of Retained Risk

The types of risk that should be borne by government need to be assessed individually for each project. Retained Risk may typically include:

- State change in law risk;
- The portion of commissioning or defect risks that may be caused by the output specification; and
- The portion of demand risk which government may assume, for example if the output specification contains a base level of demand.

Government may generally be suited to managing parts of state change in law risk due to its unique understanding and role in the regulatory process. A proper assessment of the impact of key regulations/legislation influencing a project, and the likely impact of changes to the current regulatory framework is essential in valuing law risk.

All material Retained Risks should be included and valued to provide a comprehensive measure of the full cost to government under a PSC. Where a material risk is difficult to quantify objectively, a reasonable subjective assessment may need to be made. However if Retained Risks are not expected to be significant, it may be agreed, following the recommendation of the procurement team and the Ministry of Finance and Economic Development that a specific valuation of Retained Risk may not be necessary.
For projects where Retained Risk is included in the PSC, it should also be added to each of the private bids to allow a meaningful comparison with the PSC.

Assessing the bids against the PSC provides a quantitative answer to the value for money question. However, a complete value for money assessment requires consideration of qualitative factors as well. Since qualitative factors are not accurately quantifiable, they are not fully costed in the PSC. However, to arrive at a fully informed evaluation process, they need to be considered in connection with the PSC.

7.17 The Evaluation of Bids using a fully informed process

Step 1: Analyse and evaluate quantitative factors

- Evaluate private bids against the PSC
- Identify the least cost procurement option (and the next best alternatives)

Step 2: Consider the impact of qualitative factors

- Identify material factors which have not been included in the PSC
- Consider the impact of qualitative factors on the private bids

Qualitative factors may typically include:

- Material costs including risks that are not capable of being quantified for a project;
- The reputation of the bidder;
- Any differences in the deliverable service which cannot be quantified;
- Any wider net benefits or costs that a PPP approach may bring, like the benefits of earlier provision of a hospital under a PPP.

Qualitative factors can be particularly important either where the lowest bids are close to the PSC or where an important consideration cannot be quantified for the PSC.

7.18 PSC and Value for M oney Assessment

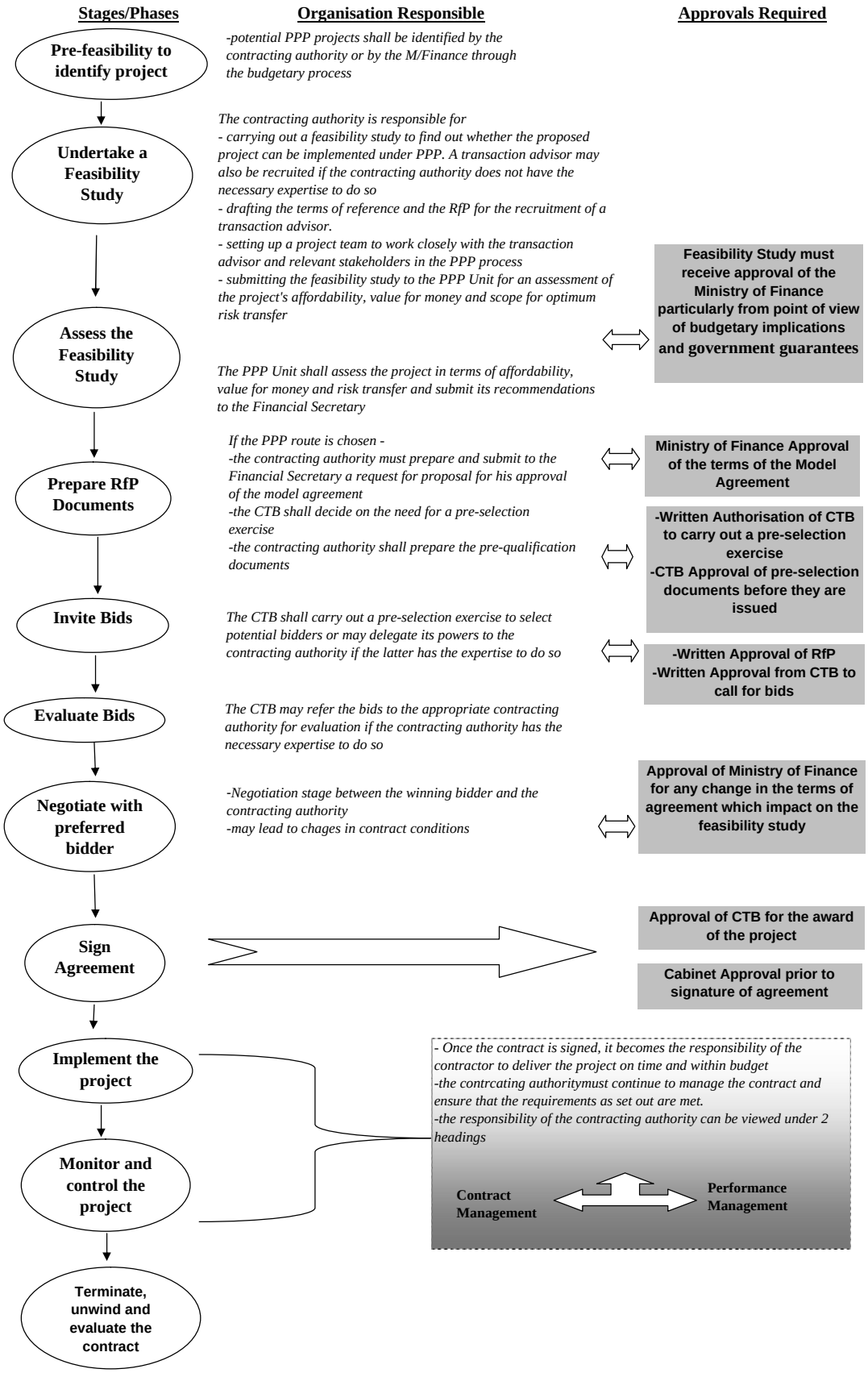
Bidders will be required to bid on an individual Project Brief that includes an output specification and a contract, setting out the risks expected to be allocated to the bidders. The bids should first be assessed against the Project Brief to determine whether they are conforming bids, and secondly against the PSC.

Conforming bids are those that have adhered to the requirements of the Project Brief. This also includes compliance with the risk allocation proposed by government and the output specification.

Ignoring qualitative considerations, value for money is achieved where the NPC of service charge for a bidder is lower than the NPC of the expected cost to government under the PSC. It is to be noted that since the conforming bids may not necessarily present the best outcome for government, the non-conforming bids should also be considered.

Sequence of Activities for Undertaking a PPP Project

The PPP Project Life Cycle



Section 8 provides guidance on the preparation of the Request for Proposals for PPP projects. It is complemented by Appendix 3 which is a diagrammatic representation of the RFP process. Section 8 outlines the main differences between traditional and PPP procurement and hence the differences in the stages of PPP implementation. It explains the main steps involved in the selection exercise and summarises the contents of the tender documents.

8.1. Introduction

8.1.1 Procurement procedures under PPP are very similar to those under traditional procurement since both use competitive tendering. Many of the tender procedures followed under traditional procurement would therefore still apply for PPP.

8.2 How PPP is different to traditional procurement?

8.2.1 Input v/s Output Specifications

8.2.1.1 There are various differences between PPP and traditional procurement. One main difference is a more flexible delivery of services by the private party. **Performance-based output specifications** rather than **input specifications** are prescribed under PPP. Bidders are invited to propose solutions for the services required by the Contracting Authority. One obvious advantage with output specification is that the private party is encouraged to come with more innovative ideas.

8.2.2 Duration of Contract

8.2.2.1 Another difference is in the duration of contracts which is likely to be longer under PPP. For instance, for a construction project under PPP, the private entity may in addition to design and construction also be required to maintain the facility and perform the day-to-day running for a period of say fifteen or more years.

8.2.3 Allocation of Risks

8.2.3.1 Under PPP, the public and private parties allocate risks to the party which is in a better position to manage them. For instance, the private party may keep time overrun risk since it has more influence over the construction completion time. Optimum allocation of risk is expected to reduce the cost of the project.

8.2.3.2 The RFP is the means by which the risks are allocated. The simplest means of allocating risks is the use of a risk matrix. All identified risks are listed in the matrix, as well as the extent to which they are allocated to each party. Certain risks may be categorized as negotiable and the private sector may be allowed to make deviations to the risk allocation. A more detailed explanation of risks is given in section 6 of this Guidance Manual.

8.2.4 Modality of payment

8.2.4.1 PPP agreement provides for payment to the private party only when the project is completed and operational. The payments, which are financed either from Government budget or from users, are effected on the basis of pre-agreed performance criteria, over the life of the project. Penalties are deducted from payments if the services are below the acceptable performance level.

8.3. The Selection Exercise

8.3.1 Pre-conditions

8.3.1.1 As per the PPP legislation a PPP feasibility study is mandatory for the Contracting Authority to decide on whether to use PPP for a project. The PPP Unit assesses whether the study has been carried out correctly on the basis of value for money, affordability and risk transfer and makes recommendations to the Financial Secretary. Upon obtaining approval from the Financial Secretary, the Contracting Authority should seek Cabinet approval for the project before embarking on the tendering stage.

8.3.2 Documents to be prepared

8.3.2.1 The Contracting Authority has the possibility of either inviting an RFP directly from the public or carry out a pre-selection exercise by launching a Request for Expression of Interest (REOI). An intermediate stage of Request for Qualification (RFQ) is also possible and is discussed in sub-section 8.3.4. If one or both of the REOI or RFQ stages are omitted, the information described in this guidance note for these stages may be included in the RFP documents.

8.3.2.2 The Contracting Authority who is the owner of the project has to prepare all the documents pertaining to the bidding process, including the REOI, RFQ and the RFP. If it does not have the necessary expertise to prepare the documents, it may recruit a transaction advisor to help in the process. The recruitment of Transaction Adviser is explained at length in Section 3 of this Guidance Note.

8.3.3 Invitation for Expression of Interest

8.3.3.1 After the REOI documents are prepared, the Contracting Authority has to consult the Central Tender Board (CTB) to obtain its written authorisation to conduct the pre-selection exercise. The CTB is responsible for the invitation, examination and evaluation of all the bids. It may however entrust the Contracting Authority with this task provided it is satisfied that the relevant expertise is available within the Contracting Authority. Invitation from the public may be carried out by placing notices in local and foreign newspapers. The Mauritian Embassies in foreign lands may be contacted to advertise in foreign newspapers.

8.3.3.2 The aim of the Request for Expression of Interest (REOI) is to obtain a list of interested bidders who have relevant experience and capacity to undertake the project. The REOI may comprise the following components:

Sub-title	**Content**
1. Overview	• Background to the project • Scope of the project
2. Overview of the selection process	• Selection process stages (request for expression of interest, Request for qualification, Request for proposals) • Selection process anticipated time-frame
3. Instructions to interested parties	• Contact person • Submission location and submission time • Expression of interest requirements *comprising format of the EOI, number of originals and copies, an overview of the evaluation process, and the procedure for selection, including, reference checks.*
4. Additional information sources	• Where additional information may be obtained: website and/or hard copy with contact person • If any: access to the Contracting Authority's business directory to interact with other parties seeking business arrangements or to place contact information
5. Evaluation criteria	Where applicable, evaluation criteria may be set to evaluate one more of the following capability: • design capability • construction capability • operations and management experience • previous or current ownership of similar facilities • capacity to invest equity • infrastructure financing experience
6. Rules of procedure	• Need to direct everything through the contact person only • Procedure for clarification of REOI • Addenda • Responsibility for cost of preparing EOI. • Clarification of EOI • Notification of success at the REOI stage • Reservation of rights (e.g. modification of selection process, reject of any EOI without any obligation to the interested party) • Limitation of damages caused to the interested party by submitting the EOI • Confidentiality from the part of the Contracting Authority • Conditions for disqualification
7. Glossary of terms	

Schedules	• Form of Cover Letter • Expression of Interest Form • Further Information on Evaluation Criteria • Receipt Confirmation Form

8.3.3.3 All correspondences by the CTB or the implementing Contracting Authority should be carried out using its official letterhead or e-mail. A record of the exact timing of the incoming and outgoing correspondences has to be kept.

8.3.3.4 The bidders may send their Expression of Interest (EOI) any time prior to the deadline. These EOI's are opened by the CTB or the Contracting Authority at the time, date and location which are set either by the REOI or an official bid bulletin extending that date. The proposing entities should be invited to attend. The names and addresses of the EOI received should be announced and recorded. The bids received before the deadline should be opened. The members of the evaluation team (see sub-section 8.6.3) should sign on the original documents submitted.

8.3.3.5 Each bid opened should be checked immediately against a checklist of compliance items, for instance, that all the required documents have been submitted. This checklist should be prepared before the opening by the implementing Contracting Authority. Further compliance, such as, proper formats will be examined later on by the evaluation team. In case a bid is not compliant with the REOI, it is rejected. These procedures also apply for the Request for Qualification and the Request for Proposal.

8.3.4 Request for Qualifications

8.3.4.1 Following the selection of interested bidders on the basis of the evaluation criteria described in the Invitation for EOI, the Government may invite them to respond to a Request for Qualifications (RFQ) or to the RFP stage as indicated in the REOI document.

8.3.4.2 The aim of the RFQ is to evaluate the interested bidders on the basis of commercial and technical criteria. The RFQ may contain the following components:

Sub-title	**Content**
1. Overview	• Background of the RFQ • Scope of the Project • Access to the Contracting Authority's Business Directory (if any) • Information Package which will be issued to the retained bidders
2. Overview of the selection process	• Selection process stages • The RFQ Stage • The RFP Stage • Presentations by RFQ or RFP proponents

	• Selection Process Anticipated Time-frame
3. Instructions to RFQ Proponents	• Contact Person • RFQ Response requirements (format, number of copies, mandatory requirements) • Submission location and submission time • Revisions to RFQ Responses Prior to the submission time
4. Evaluation process and criteria	• Overview of the Evaluation Process • Evaluation committee • Evaluation criteria and reference checks
5. Rules of procedure	• No unauthorized contact • Clarification of RFQ • Addenda • Cost of Preparing RFQ Response • Clarification of RFP Response • Notification of Success • Reservation of rights • Limitation of damages • Confidentiality from the part of the Contracting Authority • Right to verify and conduct Background Investigations • Disqualification • Dispute Resolution • No representation or warranty from the part of the Contracting Authority of the RFQ • Removal/Replacement or Addition of Team Members or Core participants
6. Glossary of terms	
Schedules	• Commercial Evaluation criteria • Technical Evaluation criteria • Specimen Bonds • Insurance Requirements
Forms	• RFQ Response Declaration • Contact Details and RFQ Proponent Form • Relationship Disclosure Form • Letter of Availability

8.3.4.3 Some examples of the commercial evaluation criteria for the RFQ are given below:

- Project management and Public Private Partnerships (PPPs) Understanding: this includes skills on optimum risk allocation, PPP innovation, team integration and internal and external communications; and experience on management of multi-disciplinary development projects.
- Capacity to invest equity (at least a minimum equivalent to the project value): this includes evaluation of access to equity, liquid assets of investors, credit capacity and financial commitments.
- Infrastructure financing experience: this includes accessing debt and equity markets or project financing of similar or greater size and complexity; experience of the proposed financial advisor in arranging debt or equity finance as part of a successful PPP; and financing strategies to demonstrate knowledge of financial markets and PPP financing techniques.
- Bonding and insurance capacity: The RFQ proponent has to submit an original confirmation letter from a surety of its ability to obtain bonding in respect of the Project. Similarly, there is a need to submit also an original confirmation letter from a recognized insurance broker that the RFQ Proponent would be able to obtain appropriate insurance coverage to obtain appropriate insurance coverage.

8.3.4.4 The RFQ proponent must be requested to submit information regarding its past projects using a standard format. The format in **Box I** may be used.

Box I **Format for Information on Projects**
(a) General Details
• name of the project/facility ("Facility"); and
• location of the Facility
(b) Facility Description:
• type, size, scope; and
• and other special features
(c) Role with Respect to the Facility:
Please detail the RFQ Proponent's, Team Member's or Core Organization's role, as applicable (e.g. sponsor, borrower or advisor). If more than one role, please detail all roles and identify the primary role (if applicable) in **bold font**. If the RFQ Proponent, Team Member or Core Organization, as applicable acted as advisor, please identify the Firm/Person whom they advised.
(d) Team member(s) or individuals involved and their role.
(e) Financing Details:
• type of financing raised for the Facility; and
• amount of financing raised for the Facility.
(f) Relevant Details
• date of financial close
(g) Reference Contact:
Please provide the following details for an independent reference contact available to verify the information provided: • name of reference contact • company or agency • address • email address • telephone number; and • facsimile number

8.3.4.5 Some examples of technical evaluation criteria for the RFQ are given below:

- Corporate knowledge, experience and capacity relevant to the project
- Corporate design experience and engineering resources to carry out the design and construction of the Project
- Construction experience to carry out the design and construction of the Project
- Facility maintenance and asset management experience to operate the project
- Provision of suitably qualified and experienced personnel. The following information may be requested for each individual:
    - Position
    - Name
    - Roles and responsibilities
    - Qualifications
    - Years of experience

- Relevant experience

8.3.4.6 The short list obtained after the RFQ exercise should be kept, if possible, to a minimum of three and a maximum of five organizations. Given the high cost of submitting proposals, this gives a high chance of success to the short listed bidders.

8.3.4.7 The procedures for opening of the RFQs and their evaluation is same as for REOI which are described in sub-sections 8.3.3.4 and 8.3.3.5.

8.3.5 Preparation and Issue of the RFP Package

8.3.5.1 Introduction

8.3.5.1.1 The next step is for the implementing body to prepare and issue the Request for Proposal (RFP). The RFP consists of the tender documents under the official letter of the implementing Contracting Authority. Where pre-qualification exercise is not appropriate (that is, REOI and RFQ), the Contracting Authority may invite RFP directly. The structure of the RFP is explained in detail in sub-section 8.4.

8.3.5.1.2 The period of time allowed for the preparation of proposals has to be included in the RFP. The time depends on the size, nature and complexity of the project.

8.3.5.2 Pre-bid meeting

8.3.5.2.1 The implementing Contracting Authority may set up a date to organize a meeting whereby the latter as well as the bidders have the opportunity to seek clarifications. This helps them to have an understanding of the issues related to the project.

8.3.5.2.2 The meeting may be held between 21 and 45 days after the issuance of the RFP. During the meeting, the Contracting Authority provides the prospective bidders with specific information, clarifies the bidding procedures, and gets feedback from the bidders. A site inspection is organized if applicable to the project. There is a written record of the meeting which is distributed to the participants preferably on the same day. If the Contracting Authority receives any question from a bidder after the conference, it should send a copy of the response to all the pre-qualified bidders.

8.3.5.3 Questions from bidders: The Contracting Authority sets a date limit for the receipt of questions from the bidders, usually, 14 days prior to scheduled proposal submission.

8.3.5.4 Submission date: The submission date may be delayed by the Contracting Authority if the latter has a valid reason for doing so.

8.3.5.5 Cancellation of the bidding exercise: The Contracting Authority retains the right to cancel the whole bidding exercise at any time.

8.3.5.6 Evaluation of the bids: After the receipt of bids, the evaluation team proceeds with their evaluation. The most common method for dealing with the technical and financial evaluation is to ask bidders to submit their technical and financial offers in two separate envelopes. The technical offers are first evaluated. Their points for each criterion are aggregated and matched against the minimum qualifying points. The financial offers of those who have exceeded the minimum points are then opened and evaluated. The financial offers of the disqualified bidders are returned without being opened. The evaluation of proposals is discussed in detail in **sub-section 8.6**.

8.3.5.7 Negotiation

8.3.5.7.1 The CTB may recommend the Contracting Authority to enter into negotiations with the preferred bidder. There are various dangers which must be avoided in this exercise:

(i) negotiations may create an entirely new scope for the project. The Contracting Authority should stick to its needs and focus only on issues such as risk transfer, price mechanisms and affordability gaps;

(ii) the private sector has more negotiating skills on PPP projects and may influence the project affordability and value for money. In order to mitigate this danger, negotiation may be limited to pre-determined items and the Contracting Authority should clarify its position on these before negotiations start; and

(iii) there is a lack of structure for conducting negotiations. The negotiating team may not be constituted with the right members or negotiations may take a long time. This may be solved by setting out the negotiating structure prior to the commencement of negotiations.

8.3.5.7.2 In case there are changes in the terms of the agreement which have a significant impact on the feasibility study, the Contracting Authority will have to seek the approval of the Financial Secretary.

8.3.5.8 Award of the Project

8.3.5.8.1 After the evaluation exercise has been completed and negotiation completed, the next stage is for the Contracting Authority to seek Cabinet Approval for the award of the project to the selected private body. The PPP Agreement between the Contracting Authority and the private body is signed at this stage.

8.3.5.8.2 Prior to the signature of the Agreement, the following issues should be taken into consideration:

- any major issue that may come up and affect the execution of the contract must be resolved
- all measurable outputs required are clearly stipulated in the Agreement

- the Contracting Authority should ensure that it has complied with any pre-conditions on its part

8.3.5.8.3 Within receipt of advice from the Contracting Authority that all requirements for award are fully complied with, the private body must sign the Agreement within the prescribed period (usually 7 days or less). In the event of refusal, inability or failure of the private body to enter into Agreement with the Contracting Authority within the time allotted, the bid security should be forfeited.

8.4 Structure of the RFP

8.4.1 Description of RFP

8.4.1.1 The South Africa Guidance Notes provides the following description of RFP:

> The RFP is a package of official project documents which serve to define exactly what the implementing department wishes the proposers to bid on. The RFP must be comprehensive, complete and well thought out by the implementing department, in advance of any announcements or release of documents. The documents comprising an RFP are sometimes referred to as the "Tender Package" or "Bid Package".

8.4.1.2 The RFP should provide guidelines on the format of the bidders' proposals. The advantage of having a similar structure for all proposals is that reviewing and scoring of bids become easier.

8.4.1.3 The rules and schedule of the bidding process should be spelt out clearly so that bidders are not eliminated simply because of misunderstanding.

8.4.1.4 The RFP may contain the following sections:

- Introduction
- Project Background
- Output Specification
- Project Milestones
- Instructions to Bidders
- Form of Contract
- Bid Forms
- Supplemental Information

8.4.2 Introduction

8.4.2.1 The introduction section should describe the intent of the Contracting Authority for this project. It might include:

- A definition of terms that may not be common or defined elsewhere
- Specific objectives of the project
- Any information of interest to the private sector or that might help attract the private sector to bid on the project

8.4.3 Description of the Project

8.4.3.1 The RFP should provide in this section extensive detailed information on the project. The information may be taken from the feasibility study. The section may be subdivided into the following headings:

(a) Background: describing briefly on what the project is about, history of the project and decisions which have already taken place.

(b) Project Profile: This may include the following:

- Description of the project site
- Description of the phases, for example, financing, design, build, modernize, manage, operate and transfer
- Existing facilities, supplies or resources
- Project output
- Project end users or beneficiaries

(c) Legal Framework: The project may be related in some way or other to the laws, regulations or policies in the Republic of Mauritius or abroad. A description of these should be given in this section.

(d) Standards: The material and performance standards to be met by the private body have to be specified in this section. Related local and international standard specifications have to be listed.

(e) Property Acquisition: Any issues relating to the acquisition of property has to be explained in this section, for instance, who would be responsible to acquire land not belonging to the State.

8.4.4 Output Specification

8.4.4.1 As described in sub-section 8.2.1, the RFP for PPP projects specify output specifications as compared to the prescription of inputs in traditional procurement. An output specification states the needs to be satisfied by the procurement of external resources.

8.4.4.2 The procedure for output specification varies from project to project but there are certain core principles which need to be followed. These are described below.

8.4.4.3 The output specification must be specified in such a manner as to reflect the core objectives identified in the feasibility study. The performance specifications will flow naturally from these objectives. An example for a Department acquiring office accommodation is to specify the core objectives in terms of the number of staff, minimum space requirements as well as the maintenance, cleanliness and security level.

8.4.4.4 Output specification allows for private sector innovation: innovation will automatically occur if the private party is invited to provide output specifications in accordance with the Contracting Authority's objective, without specifying how those objectives are to be achieved.

8.4.4.5 All performance and output constraints whether environmental, social or technical should be stated.

8.4.4.6 Two methods may be used in the Output specification section to address the affordability issue:

I A fixed performance standard is set and the evaluation of proposals is based on price only.

II The project budget is included as part of the output specification. This allows the bidders for reductions in project cost through deviations to the performance standards.

Method I has the advantage of market competitiveness ensuring maximum value for money. Method II, on the other hand, informs the bidders about the budget so that they may compromise on the value for money. There may also be difficulty in controlling and evaluating deviations to the performance standards.

8.4.4.7 The RFP explains on the methodology that will be used to monitor the performance of the private body. If the latter supplies a service below the minimum permitted, it will be subject to a penalty in terms of payments.

8.4.5 Project Milestones

8.4.5.1 The major activities of the procurement process which are applicable to the bidders should be mentioned here. This may include the following:

- Date of issuance of the RFP
- Date, time and location of Pre-bid meeting
- Last date when written questions will be received
- Bid submission and bid opening date
- Date for announcement of award

8.4.6 Instructions to Bidders

8.4.6.1 This section of the RFP provides bidders with a guidance on the preparation of their proposals. The following sub-titles may be used.

8.4.6.2 *Selected Pre-qualified Entities*: the short-list of bidders who have been invited for the bidding exercise may be listed in this section.

8.4.6.3 *Proposal Process*: a description may be made under this section of the process through which proposals will be received by the CTB or the implementing Contracting Authority.

8.4.6.4 *Packaging of proposal and the number of copies*: the way the proposal is packed is described in this section. For instance, the description of the two-envelope system and the content of each envelope is made herein. What should be written on the envelope is also mentioned in this section: address, reference, or any other detail. The number of originals and copies to be sent by the bidders are also specified in this section.

8.4.6.5 *Language of Proposal*: The language of the proposal, usually English, must be specified.

8.4.6.6 *Criteria for rating of proposals*: The bidders must be informed on the method which will be used for evaluating and scoring the proposals. A description is given in brief.

8.4.6.7 *Conferences and site visits*: Details have to be given of the time, date, and location of the Pre-bid conference as well as the name and address of contact person to whom the bidders must register their intent to attend.

8.4.6.8 *Supplemental Notices*: Copies of any correspondence between the Contracting Authority and any of the pre-selected bidders concerning clarification should be sent to all the bidders. This is done officially by numbered bid bulletins. The process to be used is described in this section of the RFP.

8.4.6.9 *Withdrawal/Modification of Proposals*: This section sets the rule for withdrawal or modification of proposals. Bidders are allowed to withdraw or modify their proposals in writing before the closing date. They are not allowed to do so after the closing date.

8.4.6.10 *Qualifications to the tender*: Bidders often submit proposals which are different from what was requested in the RFP. These differences are known as "qualifications to the tender". Some of the qualifications may be beneficial to the Contracting Authority. The bidders are hereby required to set aside a section to list all the qualifications to tender.

8.4.6.11 *Withdrawal of a member*: If a member of the private body decides to withdraw from the project prior to the award or implementation of the contract, the offer of the private body may be cancelled. In that case, its security deposit is forfeited. If it is found that the other members may still continue with the project without the withdrawing member, the Contract may be awarded to the private body.

8.4.6.12 *Validity of proposal*: This section states the number of days the proposal must remain valid. This may vary from 60 to 90 days depending on the size and

complexity of the project. The award of the Contract must be made within the period of validity.

8.4.6.13 *Proposal Security*: the bidder is required to submit together with its proposal, a security or bid bond. The amount and form of the security or bid bond have to be specified in the RFP.

8.4.7 Term Sheet: Conditions of Contract

8.4.7.1 The bidders must understand what type of agreement they are expected to sign right before they make a proposal. That part of the RFP which specifies the important conditions of the Contract is known as the "Term Sheet".

8.4.7.2 The term sheet includes the basic obligations of both parties. It also specifies the form of the Contract. For instance, the contract may range from a simple Management contract to a complex Design-Build-Finance-Manage-Operate-Transfer.

8.4.7.3 A bidder may accept all the conditions in the Term Sheet or it can propose changes. After the private party is selected, during negotiation, the clauses of the contract are then finalized.

8.4.8 Bid Forms and Contract Exhibits

8.4.8.1 In order to maintain uniformity in all the bids, a bid forms may be supplied to the bidders. A list of forms is given below. Some of these forms may not be applicable for some RFP while additional forms may be required for others depending on the nature of the contract.

(i) Form of Tender
(ii) Appendix to tender
(iii) Qualification to Tender
(iv) Form of Agreement
(v) Performance Guarantee
(vi) Surety Bond
(vii) Guarantee for Advance Payment
(viii) Targeted Procurement Data Sheets
(ix) Joint Declaration (if applicable)
(x) Checklist (envelope contents)

8.4.8.2 A number of exhibits may be required to describe or control the work.

8.4.9 Supplemental Information

8.4.9.1 For certain projects there is the need to provide some further information, such as, feasibility studies, design analyses, forecasts, drawings, maps, or other data as part of the RFP. These information may be requested under this section.

8.5. Contractual provisions

8.5.1 *Introduction:* Contractual clauses vary from project to project. The clauses and exact wordings have to be written cautiously, by consulting legal experts, if necessary. The following provides some guidelines on what may be included.

8.5.2 *Interpretation*: This section includes definitions of terms used in the contract.

8.5.3 *Description*: A general description of the project is hereby made.

8.5.4 *Term of project*: The commencement date and the expected duration of the contract are hereby given. The commencement date of the service, if applicable, is also given.

8.5.5 *Role of the Implementing Department*: The roles of the implementing Contracting Authority should be well defined. It should not be involved in the implementation of the components for which the risks and responsibilities have been passed on to the private body. For instance, if the responsibilities and risks of design and construction have been given to the private body, the Contracting Authority should not be involved in supervision of works.

8.5.6 *Quality Assurance*: The Contracting Authority should have the right to audit the contractor's quality management system. It may be able to examine or inspect works or activities to verify the adequacy and accuracy of the documentation obtained.

8.5.7 *Acceptance and Service Commencement*: At certain points of the contract, the contractor should be under the obligation to demonstrate that the arrangements put in place will meet the output specification in the contract. For instance, there may be a need for this before service commencement or when there are significant changes in the service.

8.5.8 *Design*: Since the Contracting Authority is the owner of the project, it has the right to receive copies of all designs, designs reports, drawings, maps and related design documents.

8.5.9 *Construction*: If the project includes construction, then the Contract may have to specify the following:

- Adherence to national codes and construction standards
- Adherence to specifications approved for the project
- Provision of "as-built" drawings to the private body
- Retention of all test results during and after construction
- Provisional and final acceptance certificate

8.5.10 *Existing facilities*: In case the project concerns the improvement of an existing facility and/or its operation, the contract has to provide for an efficient and non-disruptive

transfer of the facility to the private entity. The clause may include transfer plan for the facilities; operation of the facilities during preparation period, protection of government's interest in the facilities; and taxes.

8.5.11 *Performance Bonds*: For construction project, the private body has to provide for a performance bond as a form of guarantee for completion. The private body and the financier may on their turn require a performance bond from the construction sub-contractor.

8.5.12 *Long-Stop Date*: In case there is a long delay in service commencement, the Contracting Authority may bring the contract to an end in order to take remedy action. A long-stop date has to be indicated in the Contract. However, there may be an extension in the long-stop date if the cause of the delay is due to a compensation event, relief event or force majeure. These delays are further explained in the following sub-sections:

8.5.12.1 Compensation events are events which are at the Contracting Authority's risk and in respect of which the private body should be compensated. For instance, this may occur when there is breach from the part of third parties, like teachers for a school project. It may also occur due to changes in the legislation.

8.5.12.2 A relief event occurs when a risk which is better managed by the private party materializes. The private party bears the financial risk in terms of higher costs or lower revenue. It is not worthwhile to terminate the contract since any other private party recruited thereafter will be faced with a similar situation.

8.5.12.3 Force Majeure is an event which occurs without the fault of any of the two parties.

8.5.13 *Information warranties*: The extent to which the information provided by the Contracting Authority has to be verified by the bidders has to be mentioned in this Contract clause. Who bears the risk when the information provided are not exact, influences the bid prices of bidders as the changes in the information may have a direct impact on the cost of the project.

8.5.14 *Implementing Department Warranties*: This clause specifies that the Contracting Authority will warrant only those information which are relevant to the project.

8.5.15 *Latent Defects Risk*: The Contract has to specify which party would bear latent defects risk in assets transferred by the Contracting Authority to the private body.

8.5.16 *Service Requirements And Availability*: The contract should specify the penalty to the private body if the service is unavailable at any point in time during the term of the contract.

8.5.17 *Maintenance*: The purpose of the RFP is for the Contracting Authority to procure output based on a certain performance level. The private body should plan on how to do

the maintenance in order to keep the standard. It has to take decisions on how and when to perform the replacement of the assets. The parties may establish a planned preventive maintenance programme so that they know when parts of the service are permitted to be unavailable without any payment deductions being made.

8.5.18 *Performance Monitoring*: Since the private party will be paid based on output performance, the Contract has to specify the performance required, the means by which the Contracting Authority will be verifying the performance and the consequences if the private body does not meet the expected level.

8.5.19 *Consequences of Poor Performance*: The contract has to specify the approach which will be used by the Contracting Authority to penalize the private body if the latter does not meet the minimum performance. One approach is to specify performance points for each failure with the number of points varying according to the seriousness of the failure. When the aggregated number of points exceeds the threshold level, then the penalty in terms of reduced payments will apply.

8.5.20 *Price And Payment Mechanism*: This clause of the contract follows from the other sections on performance and allocation of risks. The payment mechanism depends on the type of projects but generally include the following:

- no payments should be made until the service is available
- there should be a single unitary charge for the service
- the single unitary charge should be paid only to the extent that the service is available
- if the private party provides substandard service, the payment mechanism will make deductions in proportion to the severity of the failure to keep to the required standard

8.5.21 *Payments And Set-Off*: The contract should, in line with the section on "Price and Payment Mechanism" allow for the Contracting Authority to apply the penalty by reducing the payments to the private body. This should also apply for any other debts or liabilities owed to the Contracting Authority.

8.5.22 *Change in Service*: The Contract should take into consideration the current as well as the future service requirements of the Contracting Authority. The Contract should, however, allow for changes to the service which could not be anticipated or quantified at the signature of the contract. Similarly, changes in the service due to a change in the delivery method of the private body may be allowed after consultation and agreement of the Contracting Authority.

8.5.23 *Change in law*: The private body has to abide with all legislation. The price quoted should take into consideration the current legislation. It is natural for changes to occur in the legislation of a country. If the legislative changes relate directly to the project, then the risk has to be taken by the Contracting Authority. In case the changes relate to the general regulation, such as changes in tax, then the private body may be asked to bear the risk.

8.5.24 *Price Variations*: The contract will set the Unitary Charge for the whole of the contract term. However, it is in the interest of both parties to make provision for varying the Unitary Charge in certain specified circumstances. This enables the private party to charge less since there is the possibility of recouping the increases in costs due to unpredictable situations.

8.5.25 *Termination*: A contract may terminate naturally at its expiry date or as a result of early termination. Early termination may be caused by Public or Private body default, force majeure or corruption. In case of termination, the contract should here specify what will happen to the assets and how much the private body will have to compensate, if applicable. Early termination may occur due to the following reasons:

8.5.25.1 Termination on Contracting Authority Default: The private body should be given the right to terminate the contract where the Contracting Authority acts in a way which renders their contractual relationship untenable or completely frustrates the private body's to deliver the service. The level of compensation payable upon termination must be set out in the contract.

8.5.25.2 Termination on private sector Default: The contract should specify the events of private body's default that may lead to termination. The amount of compensation payable on private sector default should be specified.

8.5.25.3 Termination on Force Majeure: The force majeure events that can lead to the termination of the contract have to be defined in the contract. In case the force majeure occurs, the Contracting Authority should pay compensation to the private body reflecting the principle that the force majeure is neither party's fault and the financial consequences should be shared.

8.5.25.4 Termination on Corrupt Gifts and Fraud: The contract must be terminated if it has been found that there has been corrupt acts or fraud involving members of the private party and the Contracting Authority.

8.5.25.5 Voluntary Termination by Contracting Authority: In case the Contracting Authority is no longer able to continue the relationship for any reason, for instance, policy change, it may wish to keep the right to terminate the contract voluntarily, provided the private body is compensated in full.

8.5.26 *Indemnities, Guarantees And Contractual Claims*: The Contracting Authority has in many cases to enter into contract with a private body which is a special purpose vehicle (SPV) with no track record of service delivery. The Contracting Authority therefore requires comfort that the SPV and its sub-contractors will be able to meet their contractual obligations. With a PPP contract, where the private body is not paid until service is delivered, an extensive direct comfort is not necessary. However, the Contracting Authority may still request for a guarantee in order to ensure continuity of service supply is maintained even if the private body is insolvent. The private body may

also be required to indemnify the Contracting Authority against certain costs. The Contracting Authority may also seek a collateral warranty from sub-contractors so as to claim them directly under certain circumstances.

8.5.27 *Financiers' Security*: The private body may be asked to have a security package from the Senior Lenders in return of providing the necessary debt finance. The security may consist of an assignment of the private body's rights under the project documents, collateral warranties and performance bonds from the construction sub-contractor, guarantees from the shareholders in the private body.

8.5.28 *Damages Claims*. This clause establishes a limit to the ability of both the Contracting Authority and the private body to make claims against each other. The idea is to ensure that there is an incentive to perform. Any deduction should reflect the lost due to additional cost or decrease in revenue stream.

8.5.29 *Insurance*. The private party's insurance arrangements have to be specified here. Professional insurance advice must be sought to know what requirements should be imposed on the private party.

8.5.30 *Dispute Resolution*. A dispute resolution procedure must be specified in the Contract. The following three-stage process may be used:

a) the public and private parties consult each other for a fixed time period in an attempt to come to a mutually satisfactory agreement;
b) a third party expert may be appointed as specified in the contract to take decision; and
c) if either party disagrees with the expert's decision, it may refer the matter to the court for a final and binding decision.

8.5.31 *Authority Step-in*. "Step-in" refers to the right for the Contracting Authority to take over some or all of the obligations of the private body for a period. This may arise if there is a risk to health, safety or the environment to discharge a statutory duty due to matters outside the scope of the work of the contractor or due to the private body being in breach of certain of its obligations under the contract.

8.5.32 *Project Supervisory Committee*. The contract should specify the membership of a Project Supervisory Committee with whom the selected private body can interact.

8.5.33 *Management of Special Project Company*. The contract should specify the management team for the private body as proposed in the technical proposal and finalized prior to preparation and signing of the agreement. The contract should stipulate the following:

- President/Director
- Senior management
- Independent auditors (outside firm)
- Management and operations plan

Any changes to the structure must be approved by the Contracting Authority.

8.5.34 *Financial Reports and Audits*. The financial year of the project company should be stated in this section as well as its obligation to submit quarterly and annual financial statements.

8.5.35 *Finance*. This section includes general statements regarding the plans for the financing to be arranged by the private body.

8.5.36 *Personnel*. The policies guiding the employment of current employees of the facility as well as the employment of people of the project company must be specified.

8.5.37 *Pre-conditions*. The Contract should list all the obligations which must be satisfied before responsibilities of the parties under the agreement become enforceable. This may include, for instance, acquisition of property, way-leave for the project, Government authorizations, proof of financing, registration of the consortium or joint venture, etc.

8.6 Evaluation of proposals

8.6.1 *Introduction.* Since PPP projects are long-term undertakings, it is critical to carry out a proper evaluation of the proposals received. This section proposes the use of a point-scoring approach.

8.6.2 *The role of the Central Tender Board (CTB)*. The PPP Legislation in force in Mauritius clearly defines the role of the CTB in the evaluation process. At section 13 (2) (b) the Legislation states that the CTB "shall examine and evaluate all the bids received". The CTB may, however, delegate this responsibility to the implementing Contracting Authority as stated at Section 10 (2) (c) of the Legislation:

> *The Board may, in relation to the examination and evaluation of bids, refer the bids to the appropriate Contracting Authority for examination and evaluation provided that the Board is satisfied that the Contracting Authority has the necessary expertise to do so.*

8.6.3 *Evaluation Team.* An evaluation team including the necessary expertise has to be set up under the chairmanship of the CTB or the Contracting Authority as per the decision of the former.

8.6.4 *Means of Proposal Evaluation*

8.6.4.1 The project procurement team must determine if selection of the bidder will be evaluated on technical considerations as well as financial consideration, or if final selection will be based on price considerations only. The evaluation should be carried out on the basis of allocation of marks. Some examples of possible weightings are:

- For a project where technical aspects are just as important as price, the split of technical/financial procurement might be (50/50).

- For a project where technical aspects are not as important as price, the split of technical/financial might be (30/70).
- For a project where price or contract value only are the determinants, the split of technical/financial procurement might be (pass-fail/100).

8.6.5 Technical Proposal Evaluation

8.6.5.1 Technical Proposal Evaluation: Whether evaluation is done on the basis of both Technical and Financial proposals or on the basis of Financial Proposals only, the technical proposal still needs to be evaluated using weighted points. For the pass/fail option a threshold, for instance of 70, must be assumed. Once a bid passes the technical test, it is evaluated only on the basis of the financial bid.

8.6.5.2 If the evaluation procedure assigns weight to Technical as well as Financial proposals, then the points scored out of a possible 100 will, by proportion, determine the ultimate score of the Technical Proposal. For example, if the technical proposal has been assigned 40 points, and the financial proposal 60 points, then a score of 70 points for the technical will result in a weighted score of 28 points for the technical evaluation [(70/100) x 40 = 28 points].

8.6.6 Financial Proposal Evaluation

8.6.6.1 The criteria used will vary from project to project and may include the following:
- Capital structure of the bidder
- Sources of funds for project
- Financial analysis for project
- Integrity of capital investment plan
- Credibility of revenues estimates
- Residual value of facility
- Insurances offered

Appendix 1

Note:- ***This version of this Act is for information only. The authoritative version is the one published in the Government Gazette of Mauritius No. 113 of 27 November, 2004.***

THE PUBL1C-PRIVATE PARTNERSHIP ACT 2004

Act No. 37 of 2004

I assent

SIR ANEROOD JUGNAUTH
24th November 2004 *President of the Republic*

ARRANGEMENT OF SECTIONS

Section

An Act

To provide for the implementation of public-private partnership agreements between contracting authorities and private parties and to establish a set of rules governing public-private procurement

ENACTED by the Parliament of Mauritius, as follows –

1. Short Title

This Act may be cited as the Public-Private Partnership Act 2004.

2. Interpretation

In this Act-

"affordable", in relation to an agreement, means that the contracting authority shall meet any financial commitment likely to be incurred in relation to that agreement, from its existing or future budgetary funds;

"agreement" means a public-private partnership agreement;

"asset" includes an existing asset of a relevant contracting authority or a new asset to be acquired for the purposes of entering into an agreement

"Board" has the same meaning as in the Central Tender Board Act;

"contingent liability" includes Government guarantee for loan and foreign currency transfer and step-in function in the event of default by the relevant contracting authority;

"contracting authority" means any Ministry or Government department, local authority or statutory corporation;

"local authority" has the same meaning as in the Local Government Act;

"Minister" means the Minister to whom responsibility for the subject of finance is assigned;

"Ministry" means the Ministry responsible for the subject of finance;

"private party", in relation to an agreement, means a party to the agreement other than a contracting authority;

"project" means a project to be implemented under an agreement;

"public-private partnership agreement" means an agreement between a contracting authority and a private party, approved in terms of this Act, in terms of which -

(a) the private party undertakes to perform a contracting authority's function on behalf of the contracting authority for a specified period;

(b) the private party receives a benefit for performing the function by way of
  (i) compensation from a revenue fund;
  (ii) charges or fees collected by the private party from users or customers of a service provided by it; or
  (iii) a combination of compensation and charges or fees;

(c) the private party is liable for the risks arising from the performance of its function;

(d) state facilities, equipment or other state resources may be transferred or made available to the private party;

"request for proposal" means the specific terms of the project requirements, the procedures for submission of bids, the criteria for the evaluation of bids and includes a model agreement

"unit" means the Public-Private Partnership Unit established under section 3;

"value for money" means the provision by which the contracting authority's functions under an agreement shall result in a net benefit to the consumers in terms of cost, delivery, price, quality, quantity or risk transfer, or a combination thereof.

3. Public-Private Partnership Unit

(1) There shall, for the purposes of this Act, be a unit within the Ministry to be known as the Public-Private Partnership Unit which shall deal with all matters relating to a public-private partnership project.

(2) The unit shall —

(a) make an assessment of a project submitted to it and give its recommendations to the Financial Secretary, as to whether the project

  (i) is affordable to the contracting authority;
  (ii) provides value for money; and
  (iii) presents optimum transfer of technical, operational and financial risks to the private party;

(b) examine the request for proposal to ensure conformity with the approved feasibility study;

(c) advise Government on administrative procedures in relation to public-private partnership projects;

(d) develop best practice guidelines in relation to all aspects of public-private partnership

(e) formulate policy in relation to public-private partnership projects; and

(f) develop public-private partnership awareness in the country.

4. Responsibilities of contracting authority

(1) Subject to subsection (2), a contracting authority shall for the purposes of this Act -

(a) identify, appraise, develop and monitor a project to be implemented under this Act;

(b) undertake or cause to be undertaken a feasibility study where it considers that a project may be implemented under an agreement;

(c) submit the feasibility study to the unit for its approval;

(d) prepare a request for proposal on the approval of the feasibility study and, where the terms of the model agreement impact on public finance, seek the approval of the Financial Secretary.

(2) Any project for which there is no financial or contingent liability for Government shall be exempt from the approval of the Financial Secretary.

5. Feasibility study

(1) Every contracting authority shall undertake or cause to be undertaken a feasibility study where it considers that a project may be implemented under an agreement, to assess whether the proposed project is feasible as a public-private partnership project.

(2) The feasibility study shall -

(a) demonstrate comparative advantage in terms of strategic and operational benefits for implementation under a public-private partnership agreement; (

(b) describe in specific terms –

(i) the nature of the contracting authority’s functions, the specific functions to be considered in relation to the project, and the expected inputs and deliverables;

(ii) the extent to which those functions can lawfully and effectively be performed by a private party in terms of an agreement; and

(iii) the most appropriate form by which the contracting authority may implement the project under an agreement;

(c) demonstrate that the agreement shall –

(i) be affordable to the contracting authority;

(ii) provide value for money; and

(iii) transfer appropriate technical, operational or financial risk to the private party;

(d) explain the capacity of the contracting authority to effectively enforce the agreement, including the ability to monitor and regulate project implementation and the performance of the private party in terms of the agreement.

6. Public-private partnership agreement

(1) Notwithstanding any other enactment hut subject to this Act, a contracting authority may enter into an agreement with a private party for the performance of one or more of the functions of that contracting authority.

(2) Every agreement shall -

(a) identify the responsibilities of the contracting authority and the private party;

(b) specify the relevant financial terms;

(c) ensure the management of performance of the private party;

(d) provide for the return of assets, if any, to the contracting authority, at the termination or expiry of the agreement, in such manner as may be provided for in the agreement;

(e) provide for the sharing of risks between the contracting authority and the private party;

(f) provide for the payment to the private party by way of compensation from a revenue fund or of charges or fees collected by the private party from users or customers of a service provided by it;

(g) provide for its duration; and

(h) contain such other information as maybe prescribed.

(3) Every agreement shall be governed by and construed in accordance with the laws of Mauritius.

(4) Every agreement shall provide for disputes between the private party and the contracting authority to be settled by arbitration, according to the rules defined in the agreement.

7. Referral to Central Tender Board

Where the Financial Secretary approves the terms of the model agreement pursuant to section 4(1)(d), the contracting authority shall submit a request for proposal to the Board to obtain its written authorisation to advertise, invite, solicit or call for bids.

8. Pre-selection of bidders

(1) The contracting authority shall consult the Board to obtain its written authorisation to conduct a pre-selection exercise.

(2) The pre-selection document shall be prepared by the contracting authority and shall include a public invitation for applicants to apply for pre-selection.

(3) Every pre-selection document shall be subject to the written approval of the Board before its issue and publication.

(4) The Board shall carry out a pre-selection exercise to select potential bidders or may delegate its powers under this subsection to the contracting authority where the Board considers that the contracting authority has the necessary expertise to undertake the pre-selection exercise.

(5) In the exercise of its powers under this section the Board shall strive for the highest standard of equity by ensuring that all bidders are afforded equal opportunity and are treated fairly.

9. Invitation to bid

(1) The contracting authority shall prepare and submit to the Board for its written approval, a request for proposal.

(2) No document pertaining ta a request for proposal shall be issued to pre-selected bidders or bidders unless approved by the Board.

10. Powers of the Board

(1) The Board-

(a) shall be responsible for ensuring transparency and equity in the bidding procedures;

(b) shall examine and evaluate the bids received;

(c) shall make recommendations to the contracting authority for entering into negotiations with the preferred bidder; and

(d) may approve the award of the project.

(2) In the discharge of its functions under this Act, the Board may -

(a) commission any study relevant to the determination of the award of a project;

(b) request any professional or technical assistance from any appropriate body or person in Mauritius or elsewhere;

(c) in relation to the examination and evaluation of bids, refer the bids to the appropriate contracting authority for examination and evaluation provided that the Board is satisfied that the contracting authority has the necessary expertise to do so.

(3) Where bids are referred to a contracting authority under subsection (2)(c), the contracting authority shall examine and evaluate the bids and submit to the Board its findings within such time as may be determined by the Board.

(4) The Board may -

(a) request the Chairman, supervising officer or chief executive officer of a contracting authority -

(i) to furnish any information or produce any records or other documents relating to a project;

(ii) to answer all relevant questions;

(b) to examine such records or other documents and take copies or extracts therefrom.

(5) Any person to whom a request is made under subsection (4) who -

(a) fails to comply with the request; or

(b) refuses to answer or wilfully gives any false or misleading answer to any question lawfully put by the Board,

shall commit an offence and shall, on conviction, be liable to a fine not exceeding 50,000 rupees andto imprisonment for a term not exceeding 8 years.

(6) Where the Board makes recommendations in terms of subsection (l)(c), any change in the terms of the agreement which impacts on the approved model agreement shall be submitted by the contracting authority to the Financial Secretary for the approval of the changes to be brought to the terms of the agreement.

(7) Where the Financial Secretary approves a change submitted under subsection (6), the contracting authority shall seek the final approval of the Board for the award of the project.

11. Award of project and signature of agreement

No contracting authority shall award a project or sign an agreement unless -

(a) the award of the project has been approved by the Board; and

(b) the agreement relating to the project has been approved by Cabinet.

12. Regulations

(1) The Minister may make such regulations as he thinks fit for the purposes of this Act.

(2) Any regulations made under subsection(l) may provide for the levying of fees and charges.

13. Consequential amendment

The Central Tender Board Act is amended by inserting immediately after section 6, the following new section -

6A Award of public-private partnership project

Notwithstanding the provisions of this Act, the Board -

(a) shall approve all documents relating to the bid;

(b) shall authorise, approve and carry out pre-selection exercises;

(c) shall authorise the advertisement, invitation locally or internationally, as the case may be, and call for bids;

(d) shall examine and evaluate bids; and

(e) may approve the award,

of a public-private partnership project in the manner provided for under the Public-Private Partnership Act.

14. Act not applicable

This Act shall not apply where a contracting authority has, before the commencement of this Act, issued a request for proposal in respect of a project.

15. Commencement

(1) This Act shall come into operation on a date to be fixed by Proclamation.

(2) Different dates may be fixed for the coming into operation of different sections of this Act.

Passed by the National Assembly on the ninth day of November two thousand and four.

Ram Ranjit Dowlutta
Clerk of the National Assembly

Appendix 2

A Simple Worked Example: Public Sector Comparator

This part of the Guidance Notes provides a step by step guidance on the calculation of the Public Sector Comparator through a **fictitious** government accommodation project.

It is assumed that the project is on state land. The private sector is expected to design, construct, finance and maintain the building. It has to provide for the air conditioning system as well as the lift and all building facilities management which includes activities such as power supply network, telephone network, computer routine repair and maintenance, building upkeep and safety infrastructure, for example, fire alarm extinguishing systems.

In order to calculate the Public Sector Comparator (PSC), an estimate has to be made of the cost of the reference project if it is implemented by the Government. The estimates of the sub-components are usually based on past Government projects, for which the Ministry of Public Infrastructure may have the necessary expertise and experience. The construction cost has to be accurately estimated on a component by component basis. We assume the following estimates for the project:

Assumptions	
Total construction cost	Rs 700 million
Construction time	24 months
Design and supervision costs	10 % of construction cost
Annual maintenance cost of building	Rs 15 million
Duration of contract	20 years
Average inflation rate	5 %

The PSC also takes into consideration the occurrence of risks. A workshop has to be organized with all the relevant parties so as to identify possible project risks. The probabilities of these risks occurring have to be estimated as well as their monetary impacts. The outcome of the workshop may be summarized in a risk matrix as follows:

Project risks	Probability of actual value being lower than expected	Average Impact	Probability that actual value stays as expected	Average Impact	Probability of actual value being higher than expected	Average Impact
Time overrun	10 %	100 %	50 %	0 %	40 %	100 %
Construction cost overrun	0 %	0 %	50 %	0 %	50 %	15 %
Maintenance overrun	0 %	0 %	50 %	0 %	50 %	10 %

It is assumed for this example that all these risks are completely transferable, in other words, there are no retained risks. In case there are retained risks in a project these are included in the calculation of the PSC and excluded in the calculation of the PPP-Reference.

The interpretation of the above matrix may be made as follows:

- Second row: time overrun refers to the risk that the project is completed with a time period different to the planned 24 months. "10 %" which is a percentage of the total construction time represents the risk that the construction is completed earlier. The 100 % in the third column refers to the percentage reduction in rental cost per month due to earlier completion. The risk of lower cost due to early completion may be calculated as follows:

  10 % X 100 % X rental cost [1]

  Similarly, the additional costs of completing on time or with delay may be calculated as follows:

  On time: 50 % X 0 % X rental cost [2]

  with a delay: 40 % X 100 % X rental cost [3]

  For the sake of simplicity it is assumed that there is no contingency factor. Otherwise, for a contingency factor of C %, the total cost overrun would have been calculated as follows:

  Cost overrun = (100 + C)% X ([2] + [3] - [1])

  In this example, it is assumed that C is zero.
- The third row refers to the risk that the project ends up with a different construction cost due to other factors than completion time. The fourth row refers to the risk that the project incurs a maintenance cost different from what was estimated. The calculations for the third and fourth rows are carried out in the same manner as for the second row.

There is a need to adjust the PSC for competitive neutrality. Under traditional procurement, the private contractor pays a tax on the profit made on their different contracts (for example, construction and maintenance). Under PPP, tax is paid on the profit made by the private party on the basis of the rental received over the years. The difference in the tax paid for the two procurement methods has been calculated and included in the calculation of the PSC.

The total capital cost is calculated as per **Table 1**. The different components are the construction cost, time overrun, design and supervision cost and cost overrun. Construction cost is obtained by estimating and summing up the direct capital costs, direct operating costs and indirect cost. A checklist of detailed costs that may be used for this exercise is given in **Table 6**. Time overrun and cost overrun are obtained as per the explanation given above. Design and construction cost is calculated as a percentage of construction cost after it is adjusted for time overrun.

The calculation for total cost is shown in **Table 2**. One component of the recurrent costs is the maintenance cost, which has been adjusted for inflation and maintenance risk. The

other component is loan reimbursement. The total recurrent cost has been discounted so as to obtain an estimate of the value of the project as at the beginning of the project.

The Public Sector Comparator (PSC) is normally adjusted to reflect third party revenue. In this project there is no third party revenue since it is assumed that the building denies access to the public. PSC is calculated by summing up all the different costs including the risks and the competitive neutrality which are discounted in order to calculate their present worth. The PSC amounts to Rs 1042 million.

Table 1

	Rs m
Construction cost	700,000,000
Time overrun	36,000,000
Sub-total	*736,000,000*
Design and Supervision cost	73,600,000
Cost overrun	52,500,000
Total construction cost	**862,100,000**

Table 2

Total Cost

	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Capital cost		862																				
Maintenance cost before adjustment	*0*	*0*	*15*	*16*	*17*	*19*	*21*	*23*	*26*	*28*	*31*	*34*	*38*	*42*	*46*	*51*	*56*	*62*	*68*	*75*	*83*	*91*
Effects of inflation on maintenance cost	*0*	*0*	*0*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*2*	*2*	*2*	*2*	*2*	*3*	*3*	*3*	*3*	*4*	*4*	*5*
Maintenance risk	*0*	*0*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*2*	*2*	*2*	*2*	*2*	*3*	*3*	*3*	*4*	*4*	*4*	*5*
Maintenance cost after adjustment	0	0	16	17	19	21	23	26	28	31	34	38	42	46	51	56	62	68	75	83	91	101
Sub-total	0	862	16	17	19	21	23	26	28	31	34	38	42	46	51	56	62	68	75	83	91	101
Corporate tax (traditional)	*0*	*65*	*1*	*1*	*1*	*2*	*2*	*2*	*2*	*2*	*3*	*3*	*3*	*3*	*4*	*4*	*5*	*5*	*6*	*6*	*7*	*8*
Corporate tax (PPP)			*5*	*5*	*6*	*6*	*6*	*6*	*7*	*7*	*8*	*8*	*8*	*9*	*9*	*10*	*10*	*11*	*11*	*12*	*12*	*13*
Competitive Neutrality	0	65	-4	-4	-4	-4	-4	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
Total cost	**0**	**927**	**12**	**13**	**15**	**17**	**19**	**21**	**24**	**26**	**29**	**33**	**37**	**41**	**45**	**51**	**56**	**63**	**70**	**77**	**86**	**95**
Discount rate	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%	11%
Discount factor	1	0.9	0.8	0.7	0.7	0.6	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
Discounted recurrent cost	**0**	**835**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**11**	**11**	**11**	**11**	**11**	**11**	**11**	**11**	**11**

The PSC has to be compared to the cost of the project if it is implemented under the PPP. The actual cost of the PPP may be obtained only after the tendering stage. However, a proxy known as the PPP-Reference may be calculated from a financial model similar to the one used for the PSC. Figures for the private sector may be obtained from the market in order to calculate the PPP-Reference.

For our example, we assume that all the figures are the same except the following: construction cost and maintenance of building are cheaper at Rs 600 million and Rs 11 million respectively; interest rate on loan is more expensive for the private sector at 10 %. The private sector will also expect a rate of return of 20 % of the capital in addition to the above in order to cover the risk of financing the project.

The risk matrix for the private sector is assumed as follows:

Project risks	Probability of actual value being lower than expected	Average Impact	Probability that actual value stays as expected	Average Impact	Probability of actual value being higher than expected	Average Impact
Time overrun	20 %	100 %	70 %	0 %	10 %	100 %
Construction cost overrun	0 %	0 %	80 %	0 %	20 %	15 %
Maintenance and operation overrun	0 %	0 %	80 %	0 %	20 %	10 %

It is also assumed that the private party has to fund its project by using a loan with an interest rate of 8 % and a reimbursement period of 12 years. Reimbursement of interest starts as from the date loan is contracted that is as from the first year of the project. Reimbursement of capital starts as from the first year of operation.

On the basis of the above assumptions the PPP-Reference is Rs 1,103 million. The calculations are shown in Tables 3, 4 and 5. The PPP option is more expensive than traditional procurement by around 6 %.

Table 3

Capital cost

	Rs m
Construction cost	600
Time overrun	-60
Sub-total	*540*
Design and Supervision cost	54
Cost overrun	18
Total construction cost	**612**

Table 4

Loan

	-1	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Loan balance (year start)	612	612	612	561	510	459	408	357	306	255	204	153	102	51
Loan balance (year end)	612	612	561	510	459	408	357	306	255	204	153	102	51	0
Capital repayment	0	0	51	51	51	51	51	51	51	51	51	51	51	51
Interest repayment	49	49	45	41	37	33	29	24	20	16	12	8	4	0
Total loan repayment	49	49	96	92	88	84	80	75	71	67	63	59	55	51

Table 5

Total Cost

	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Maintenance cost before adjustment	0	0	11	11	12	13	14	15	16	17	18	19	21	22	24	26	27	29	31	34	36	39
Effects of inflation on maintenance cost	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2
Maintenance risk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
Maintenance cost after adjustment	0	0	11	12	13	14	15	16	17	18	19	21	22	24	26	27	29	31	34	36	39	41
Loan reimbusement	49	49	96	92	88	84	80	75	71	67	63	59	55	51								
Total Recurrent cost	**49**	**49**	**107**	**104**	**101**	**97**	**94**	**91**	**88**	**85**	**83**	**80**	**77**	**75**	**26**	**27**	**29**	**31**	**34**	**36**	**39**	**41**
Discount rate	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Discount factor	1	0.9	0.9	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3
Discounted recurrent cost	**49**	**46**	**95**	**87**	**80**	**73**	**66**	**61**	**55**	**51**	**46**	**42**	**38**	**35**	**11**	**11**	**12**	**12**	**12**	**12**	**12**	**12**

Total Discounted recurrent cost	919
PPP-Reference	1103

The financial model may be used to carry out various sensitivity tests. For instance, changes in interest rates and risks may be tested:. The effects due to changes in the interest rate on loan negotiated by the private sector are shown below:

	6 %	8 %	10 %
PSC (Rs m)	1046	1042	1038
PPP-Reference (Rs m)	1014	1103	1191

The figures show that for a lower interest rate on loan, the PPP option become more attractive and vice versa.

If the private sector were to incur the same amount of risks as for Government, the scenario will be as follows:

	Risks as per assumptions	Risks same as Government
PSC (Rs m)	1042	1018
PPP-Reference (Rs m)	1103	1604

The sensitivity figures demonstrate that savings of risk by the private sector is a major reason why the PPP may become attractive despite the fact that the private party has a higher cost of finance and charges a rate of return.

The above worked example has made various assumptions so as to allow an easy reading. In practice, however, the necessary estimates have to be carried out more comprehensively in order to have a more accurate feasibility study. For example, possibilities of third-party revenue should be investigated. All risks involved must be quantified as far as possible.

Table 7

	Rs
Direct Costs	
Construction	
Demolition	
Design	
Equipment	
External Advisors	
Inspection	
Land	
Life Cycle renewals	
Material	
Modification	
Permits	
Plant	
Procurement Process	
Project Management	
Transition	
Upgrades	
Others	
Indirect Costs	
Accounting	
Human Resources	
IT Support	
Management Support	
Project Management	
Shared services	
Space, if co-located with other units	
Others	

Appendix 3 Summary of RFP Process