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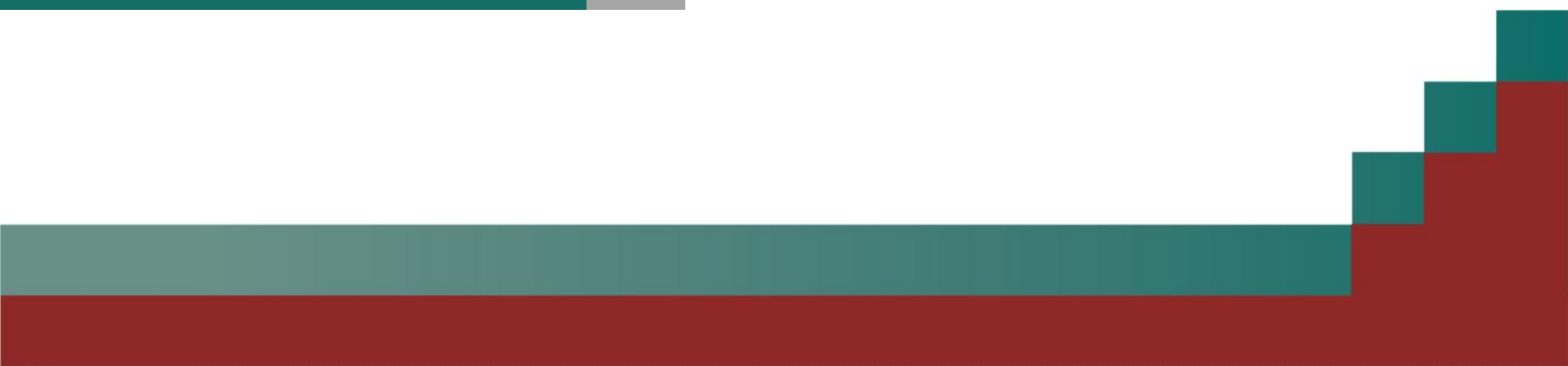
CRISIL Risk and Infrastructure Solutions Limited

# Infrastructure Development Department, Government of Karnataka

## Guidelines for PPP projects under Competitive Bidding Route

Final Report

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## Abbreviations

Acronym	Definition
BOT	Build, Operate and Transfer
CRIS	CRISIL Risk and Infrastructure Solutions Limited
CRISIL	CRISIL Limited
DEA	Department of Economic Affairs
DPR	Detailed Project Report
EIRR	Economic Internal Rate of Return
EOI	Expression of Interest
HLCC	High Level Clearance Committee
ICB	International Competitive Bidding
IDD	Infrastructure Development Department
IIFCL	India Infrastructure Finance Company Limited
IIPDF	India Infrastructure Project Development Fund
IRR	Internal Rate of Return
KIPDF	Karnataka Infrastructure Project Development Fund
KIT	Karnataka Infrastructure Transformation
LCM	Least Cost Method
LCS	Least Cost Selection
LIB	Limited International Bidding
LRTS	Light Rail Transit System
MFC	Memorandum for Consideration
MRTS	Metro Rail Transit System
MSW	Municipal Solid Waste



Acronym	Definition
NCB	National Competitive Bidding
NPV	Net Present Value
PDF	Project Development Fund
PIU	Project Implementation Unit
PPIAF	Public-Private Infrastructure Advisory Facility
PPP	Public Private Partnership
PSC	Public Sector Comparator
QCBS	Quality Based Selection
RFP	Quality and Cost Based Selection
RFQ	Request for Proposals
RTP	Request of Qualifications
SHLC	Request for Technical Proposal
SHLCC	State High Level Committee
SIA	Social Impact Assessment
SLSLWA	State Level Single Window Agency
SPV	Special Purpose Vehicle
SWA	Single Window Agency
TOC	Table of Contents
VAT	Value Added Tax
VFM	Value for Money
VGf	Viability Gap Funding



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# 1. Part 1 – Process and Institutional Procedures

## 1.1 Preamble

Under Para 9 of the Preamble of the New Infrastructure Policy, 2007 of the Government of Karnataka (GoK), it has been clearly provided that as far as is possible, all new investments in infrastructure, the option of implementing the project through Public Private Partnerships (PPPs) would be considered first. GoK would directly invest in a project only after satisfying itself that the same cannot be implemented through a PPP. Exceptions would be projects in backward areas, or project with high social relevance, but which is prima-facie not financially viable.

The instant guidelines have been developed to operationalize para 9 of the New Infrastructure Policy, 2007. The present guidelines provide the procedural and institutional framework that will be followed for undertaking projects on a PPP basis through competitive bidding route.

The relevant department in the first instance would conduct a pre-feasibility analysis for the project and if the pre-feasibility results indicate that the project is financially viable for private sector investment, the Department will approach the Cabinet for its approval to proceed forward with a detailed technical and financial feasibility of project.

Based on the technical and financial feasibility of the project, if the project is found to be feasible, the Department will approach the Sub-Committee of the Single Window Agency (SWA) for seeking its approval to place the project before the SWA or the State High Level Clearance Committee (SHLCC) as may be applicable. After securing the approval of the Sub-Committee, the project will be placed for SWA/SHLCC consideration and approval to proceed with procurement of a private sector partner.

After securing an approval of the SWA/SHLCC, the Department will initiate the procurement procedure based on para 27 of the New Infrastructure Policy. The criteria used for procurement will be in accordance with the criteria laid out in para 28 of the New Infrastructure Policy.

After the successful selection of the private sector partner, the Department or the Sponsoring Authority shall monitor the contract and manage the overall delivery process from the GoK's side.

These Guidelines articulate the applicability, institutional framework and processes with reference to development and approval of PPP projects under the Competitive Bidding route as stipulated in Para 9 of the New Infrastructure Policy, 2007, as amended from time to time.

## 1.2 Definitions

In the context of the instant guidelines, the following definitions will form a part of the instant guidelines:

**Administrative Department:** The Department of GoK that has Jurisdiction over the affairs of the sector under which the project is proposed

**Bid:** Bid shall mean the submission made in response to the RFP

**Bidder:** Any entity which has submitted a proposal to undertake an Infrastructure Project under Public Private Partnership

**Bid Security:** Bid Security shall mean a security furnished by the Bidder to the Sponsoring/Contracting Authority to secure the performance of any obligation under the RFP and





includes such arrangements as bank guarantees, surety bonds, stand-by letters of credit, cheques on which a bank is primarily liable, cash deposits, promissory notes and bills of exchange

**Central Government:** Government of India

**Company:** Any entity incorporated under the Companies Act, 1956

**Concession Agreement:** the contract entered into between the Sponsoring Authority and Preferred Bidder for implementing a PPP Project

**Concessionaire:** A private entity to which a PPP Project is awarded

**Conditions Precedent:** The obligations which the Contracting Authority or the Concessionaire may be required to fulfil prior to financial close of the PPP Project, unless waived in writing by the relevant party in accordance with the terms of the Concession Agreement

**Developer:** Any private sector participant who has entered into a contract for an Infrastructure Project with the Government/Government Agency

**Department PPP Cell:** Special Cell constituted by the Administrative Department to facilitate and coordinate infrastructure projects under the PPP route for the instant Administrative Department

**Government:** Government of Karnataka

**Government Agency:** Any statutory authority, urban local body, or body corporate, owned or controlled by the Government holding greater than 50% of the paid-up share capital in such entity

**High Level Clearance Committee:** Committee constituted by Government under the Chairmanship of Chief Minister under Section 3 of the Karnataka Industries Facilitation Act, 2002.

**Infrastructure:** Any public work relating to facilities for utilization of natural resources or provision of services, by way of physical structures or systems

**Infrastructure Project:** A project in Infrastructure, in the sectors delineated in the New Infrastructure Policy, 2007.

**State PPP Cell:** Special Cell constituted by Government at the State level to facilitate and coordinate infrastructure projects under the PPP route; for Karnataka the State PPP Cell means the PPP Cell established at the Infrastructure Development Department

**Single Window Agency for PPP:** Agency constituted by Government at the state level for approval of projects up to Rs. 50 crores and for recommending projects beyond Rs. 50 crores to High Level Clearance Committee

Private Sector Participant: Means any other person than:

- Central Government or Central Government Agency
- Government or Government Agency
- Any joint venture between Central Government, Central Government Agencies, Government and/or Government Agencies, where there is no shareholding from private / retail investors

**Sponsoring/Contracting Authority:** The State Government, a State Government Department or an agency of the State Government, or a statutory authority or an entity under control of the State Government or a state public sector undertaking, which is a signatory to the Concession Agreement

**Public Need:** Means that a substantial or obvious community need for the proposed project based on all attendant circumstances as compared to a mere convenience. The determination of "Public Need" shall be taken by the relevant administrative department after considering (a) Common use and



needs of the community; (b) Appropriateness of the project in relation to the development plans of the Administrative Department; and (c) Possibility of the project otherwise not coming up

**Public Private Partnership:** Construction / Renovation / Rehabilitation and Operation & Maintenance, or Operation & Maintenance of an Infrastructure Project of the Central Government / Government / Central Government Agency / Government Agency for common use where a Private Sector Participant:

- Has an investment; and
- Is responsible for such construction / renovation / rehabilitation and operation & maintenance, or operation & maintenance for a period of not less than 3 years, in each case

### 1.3 Applicability

The instant guidelines on PPP projects via Competitive Bidding route will be applicable to all projects in the following sectors and subsectors as defined in Section III-Applicable Sectors, para 13, of the New Infrastructure Policy, 2007:

- Agri-infrastructure
  - ◆ Agriculture and horticulture Markets; Floriculture parks and markets; Agro-food processing and allied infrastructure including common-user cold storage facilities
- Education: Infrastructure and facilities for education institutions, not on a purely commercial basis, but which satisfy a Public Need
- Energy
  - ◆ Power generation, including captive power generation, as per provisions of the Electricity Act, 2003, and co-generation projects, transmission, distribution and power trading services
  - ◆ Oil and Gas (origination, terminals, transmission and gas works)
  - ◆ Renewable and non-conventional energy sources (Wind, Hydro, Solar, Tidal, Biomass and MSW)
- Healthcare
  - ◆ Infrastructure and facilities for healthcare, not on a purely commercial basis, but which satisfy a Public Need
- Industrial infrastructure
  - ◆ Industrial parks (including Biotechnology and Information technology parks)
  - ◆ Special Economic / Free Trade and Export Promotion Zone
  - ◆ Industrial estates and townships
- Irrigation
  - ◆ Canals, dams and weirs
- Public Markets
  - ◆ Infrastructure facilities for public markets, but not on a purely commercial basis, but which satisfy a Public Need
- Tourism
  - ◆ Amusement, Entertainment and Theme parks



- ◆ Hotesl / Resorts
- ◆ Convention and Exhibition Centres
- ◆ Trade fairs
- ◆ Cultural centres
- Transportation & Logistics
  - ◆ Roads including bridges, interchanges, and flyovers)
  - ◆ Railway systems
  - ◆ Urban transport systems viz. MRTS, LRTS, Monorail, High-capacity bus systems
  - ◆ Airports and airstrips
  - ◆ Minor ports and harbours,
  - ◆ Inland water transport
  - ◆ Bus/ Truck/ Urban Transport Terminals and associated public facilities such as Public Amenities Centres
  - ◆ Warehousing infrastructure (including container freight stations, container depots, cold storage facilities and tank farms)
  - ◆ Mechanised and Multi-storey Parking facilities
- Urban and Municipal Infrastructure
  - ◆ Township development
  - ◆ Commercial development with common-user facilities
  - ◆ Water Supply and Sewerage;
  - ◆ Desalination
  - ◆ Underground drainage; Solid waste/ Bio-medical waste/ Hazardous waste: Collection, transportation, treatment and disposal facilities)

### 1.3.1 Procedure for PPP Projects via Competitive Bidding Route

Any project being contemplated under the PPP framework will need to go through the following stages:

**Figure 1-1: Stages for PPP projects via Competitive Bidding**

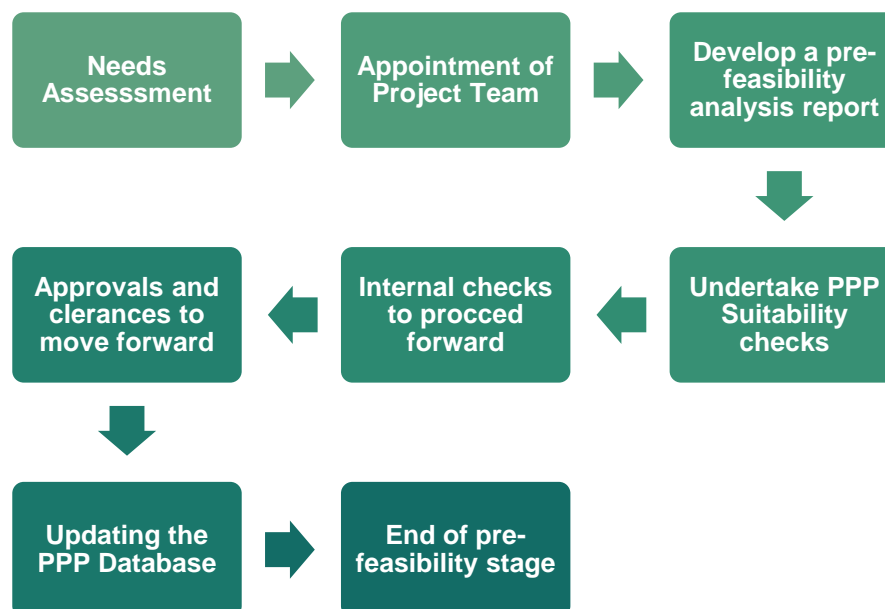


The current guidelines are focused primarily on the first three stages i.e. PPP identification and inception, PPP feasibility analysis and PPP procurement.



## 1.4 PPP Identification and Inception

The following graphic summarizes the process that needs to be followed for PPP Identification and Inception stage:



### 1.4.1 Need assessment for the project

The Administrative Department (AD) or Government Agency (GA) contemplating a project will first identify the need for the project and whether the proposed project will result in an improved level of service for the public.

For a detailed explanation on how the needs assessment should be carried out and the constituents of the needs assessment, please refer *Section 2.1.1 - Assess the service needs*.

### 1.4.2 Appoint a Project Team

Once the need for the project has been established, the AD or GA will identify a Project Team for the proposed project. The identification should also include clearly determining who will be the Project Manager for the same. The Project Manager/Team will interact with the Department PPP Cell (if the project team is different from the PPP Cell) and detail out a project management framework and will determine the timelines that will be followed for various stages of the project.

For details on what should be key points of consideration for appointment of project team, please refer *Section 2.1.2 - Appoint the project team*.

### 1.4.3 Conduct pre-feasibility analysis

The project team will then undertake a pre-feasibility analysis for the proposed project. The pre-feasibility analysis will help the project team make a decision on whether they should move to the next stage of the proposed project. The pre-feasibility analysis can be done either in-house or through hiring a reputed consultant/consulting firm.

The pre-feasibility analysis should be carried out based on the template for pre-feasibility analysis provided in *Section 3.1 - Pre-feasibility report template*.



Upon completion of the pre-feasibility analysis, the project team should present the findings to the Administrative Department's/Government Agency's Head (Principal Secretary/Secretary or Chief Executive Officer as may be applicable) and a few select officers of the Administrative Department/Government Agency.

Once the AD's/GA's Head and select officers have provided a go-ahead on the project, the Department PPP Cell will send across the project proposal to the Finance Department and the State PPP Cell for their comments.

Upon receipt and incorporation of comments of the FD and the State PPP Cell, the Department PPP Cell will move the project proposal for approval from the Cabinet. The project can move to the development phase only after the Cabinet has accorded its approval to the project.

Upon securing the Cabinet approval, the Department PPP Cell will update the project information in the PPP Database developed by State PPP Cell. This database can be accessed at <http://119.226.79.212/pppdb/home.aspx>.

## 1.5 PPP Feasibility Study

Upon receiving the approval of the Cabinet, the Department PPP Cell along with the Project Team will prepare a concise plan for the development phase which will entail the following:

- Appointment of Transaction Advisor (TA) for full feasibility analysis, design of bid documents and bid process management
  - ◆ Timeline for appointment
  - ◆ Timeline for completion of feasibility study, bid documents and bid process management

Where complex projects are involved, the Department PPP Cell should ensure that a separate technical feasibility is carried out for the project. The technical feasibility should be carried out by an independent technical consultant and should not form a part of the TA's scope.

The Department PPP Cell would appoint the TA from among the list of empanelled consultants with the IDD. If such an empanelled list is not available, the Department PPP Cell should float a tender in the open market for appointment of TAs. The scope of work for a TA is highlighted in Section 2.2.2.1 - Scope of work for TA.

The feasibility studies should be carried out using the template provided in *Section 3.3 - Full feasibility report template*.

Stakeholder consultations will form an important part of the feasibility assessments. The TA should ensure that all relevant stakeholders are identified and consultations are organized with them to ensure that any and all concerns that may be prevalent are identified and adequately addressed in the feasibility study.

The TA should also develop a procurement plan as part of the feasibility study. The procurement plan will essentially lay out timelines starting from drafting of bid documents to selection of preferred bidder.

The AD/GA should ensure that all clearances/approvals necessary for the project such as environment, forests etc. have been secured by the AD/GA by the time the feasibility study has been completed. The AD/GA should also ensure that land acquisition process, if applicable, has been completed by the time the feasibility study is completed.



Once the full feasibility study has been completed, the Department PPP Cell will place the project proposal to the Sub-Committee of the Single Window Agency. For the ease of reviewing projects across sectors, it is proposed that the following sub-committees will be formulated:

- **Economic Infrastructure:** Energy, Industrial Infra, Agri Infra, Irrigation etc.
- **Social Infrastructure:** Health, Education, Tourism
- **Transportation Infrastructure:** As per the New Infrastructure Policy
- **Urban Infrastructure:** As per the New Infrastructure Policy (including the Public Markets)

The sub-committee will evaluate the project and provide a clear decision on whether the project can be placed for the approval of the SWA or the State High Level Clearance Committee (HLCC). If the sub-committee has observations on the project, the Department PPP Cell will incorporate the observations and will then proceed to place the project before the SWA or the SHLCC as may be applicable.

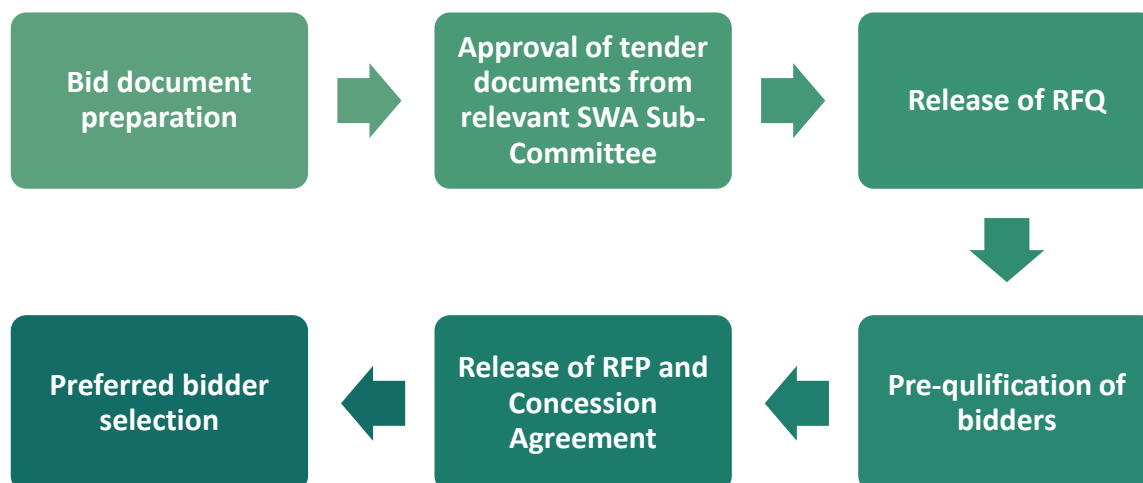
The SWA/SHLCC will review the project and provide a go-ahead on whether the project can proceed to the Procurement stage. If the SWA/SHLCC has observations or concerns relating to the project, the Department PPP Cell will incorporate measures to address the concerns in the project and will seek SWA/SHLCC approval to proceed with procurement.

The project will move to the procurement stage only upon a clear go-ahead from the SWA/SHLCC.

## 1.6 Procurement

The following are the steps that need to be followed for procurement of private sector partner for a project:

**Figure 1-2: Stages of procurement of private sector partner**



The Department PPP Cell will work with the TA and follow the above steps and move towards procurement of the private sector partner.

### 1.6.1 Bid document preparation

Based on the transaction structure, the TA will prepare the bidding documents for the purpose of inviting bids from private sector players.



The bidding documents should be based on the Model Request for Qualifications as well as Model Request for Proposals (along with Model Concession Agreement) issued by the Department of Economic Affairs, Ministry of Finance, Government of India. The documents are available on the PPP in India website [www.pppinindia.com](http://www.pppinindia.com).

The Department PPP Cell will actively work with the TA to ensure that all key aspects of the transaction structure have been incorporated in the bidding documents.

### **1.6.2 Approval of bidding documents**

Once the Bidding Documents have been prepared, the Department PPP Cell will place them before the relevant SWA Sub-Committee for their approval. The Department PPP Cell (along with the TA) will brief the Sub-Committee on the key aspects of the transaction structure, the bidding parameter being utilized, the overall bidding process and its relevant stages, the key concessions being provided, the key obligations of the Concessionaire, key obligations of the Authority and the timelines associate with the procurement process.

Any further action on the procurement process will take place only upon the approval of the Sub-Committee to go ahead with the transaction process.

### **1.6.3 Release of RFQ and shortlisting of bidders**

The first step in the bidding process would be a pre-qualification of the potential bidders. A Request for Qualification (RFQ) will be released. The RFQ will outline the qualification criteria for technical and financial capacity expected and will provide formats in which pre-qualification documents need to be submitted.

Upon receipt of the documents, the Department PPP Cell will evaluate the pre-qualification documents of each bidder (with assistance from the TA) and will finalize a short-list of bidders that can take part in the Request for Proposal (RFP) stage.

The qualified bidders will be notified through a letter issued by the Department PPP Cell and will be intimated on the date of release of the RFP document.

### **1.6.4 Release of RFP**

On the specified date, the RFP documents will be released to the short-listed bidders. The RFP document will essentially request for the financial proposal. The bidding criteria will be specified in the RFP documents and any limits thereof should also be specified.

The bidders will be asked to submit their final bids on the E-Procurement portal of the state. During this stage, the bidders should be allowed adequate time to make detailed assessments related to the project and submit their bids.

### **1.6.5 Selection of preferred bidder**

Upon the receipt of the bids in response to the RFP, the bids will be opened publically on pre-specified date and time. The bidder will be selected based on the Least Cost method as specified in the Karnataka Transparency in Public Procurement Act.

In case of receipt of a single bid, as per the SWA/SHLCC guidelines issued in previous cases, the AD/GA should examine the bid vis-à-vis the estimated value and should satisfy itself that the bid is



within the reasonable limits of the estimated value before going ahead and issuing a Letter of Award (LoA).

Once the preferred bidder is selected, the Department PPP Cell shall initiate negotiations with the preferred bidder. The negotiations will be on technical aspects only and shall not involve financial negotiations. Once negotiations have been concluded, the Department PPP Cell shall place the facts of the procurement process before the Cabinet for securing approval for issuance of LoA. The LoA can be issued to the successful bidder only upon securing the approval of the Cabinet.

Once the Cabinet approval for issuance of LoA is in place, the Department PPP Cell shall issue the LoA and will move towards signing the Concession Agreement with the preferred bidder and eventually move towards the Contract Management stage.

Detailed implementation steps for each of the stages in the procurement process have been outlined in Section 2.3 - Procurement.

## 1.7 Monitoring and reporting for projects

The purpose of monitoring is to ensure that the concessionaire meets the agreed level of performance. Most of the monitoring roles will be carried out by the Sponsor, either by the Contract Management Team or by an Independent Engineer. However, it is important to remember that the private partner will also be monitoring the Sponsor's performance to be sure it also upholds its end of the agreement.

The performance requirements will reflect the agreed risk allocations. Part of the purpose of monitoring performance against these standards is to ensure that risk is actually shouldered by the party who the risk was allocated to. These allocations will be different for different projects. Accordingly, performance requirements, criteria and monitoring roles will also vary.

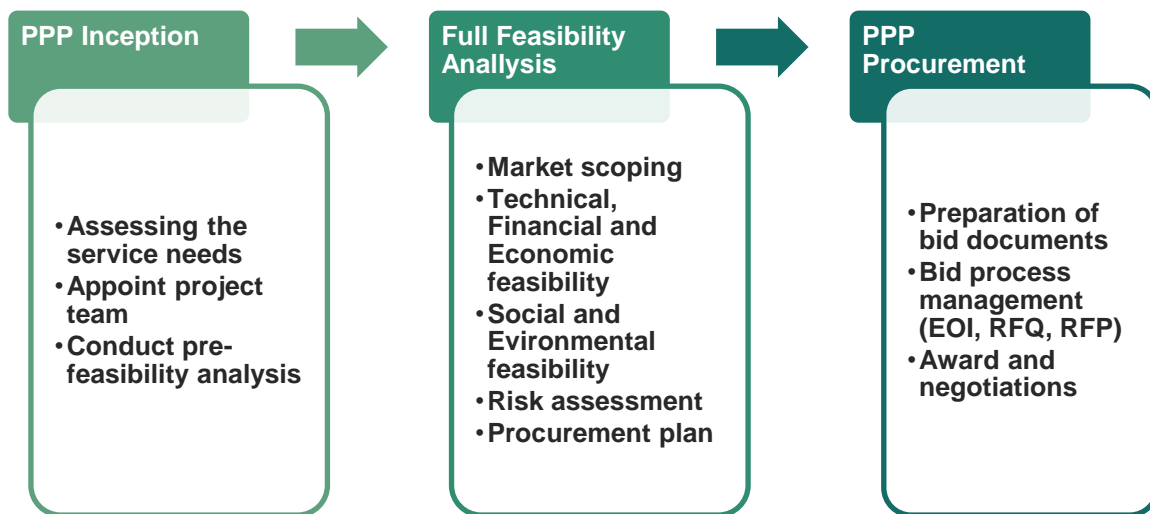
The PPP Database update on regular basis will ensure that adequate information is available to both report and monitor progress of the project.





## 2. Part 2 A – Implementation Guidelines

The implementation guidelines for PPP under the Competitive Bidding route have been segregated into three stages i.e. PPP Inception, PPP Feasibility and PPP Procurement. The overall components/activities that need to be undertaken under each phase have identified and has been represented below:



The current section laying out the guidelines has been organized in the following manner:

- Section 2.1 discusses the PPP Inception phase and details out each of the activities that are required to be undertaken during this phase. The chapter also discusses the review and approval mechanism to advance to the next stage. Further the chapter also discusses the availability of project development funding support both at the Centre as well as at the State level.
- Section 2.2 discusses the next stage of a PP project where a full feasibility study is undertaken. The chapter discusses the contents of the full feasibility study briefly. The chapter also highlights the approval process that has been put in place to advance the project to the next stage.
- Section 2.3 discusses the Procurement stage where various procurement methods as well as procurement instruments have been discussed. The chapter also briefly discusses the negotiation process as well as project finalization and financial closure aspects.

### 2.1 PPP inception

The obvious question to answer before taking the PPP route for a project is whether there is a need for undertaking the project on a PPP basis. If the instant service in question can be provided by the private sector without any Government of Karnataka (GoK) participation, as far as is possible such projects should be left to the private sector to execute and manage.

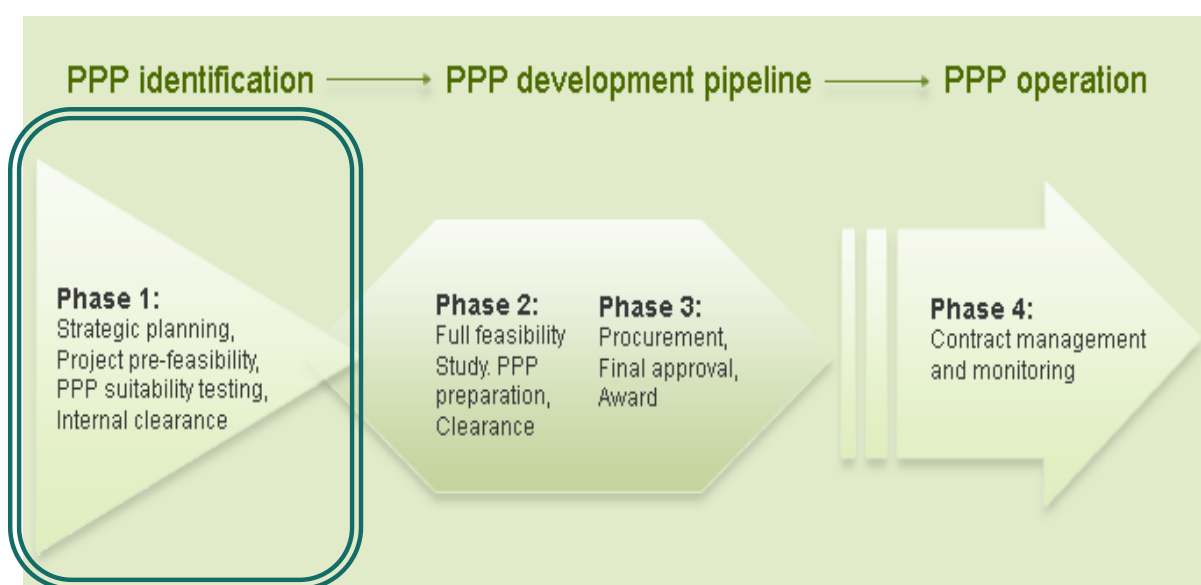


The New Infrastructure Policy, 2007 clearly states as far as is possible, for all new infrastructure investments, the option of implementing the project through PPPs would be given priority. Only in cases where the project cannot be implemented through a PPP contract, the GoK would directly invest in the project.

The first step towards initiating a project on a PPP basis is the identification phase. The PPP toolkit of Government of India clearly lays out the activities that need to be undertaken as part of the PPP identification process.

Source: *PPP toolkit for improving PPP Decision-making processes*, online toolkit available at [www.toolkit.pppinindia.com](http://www.toolkit.pppinindia.com)

The PPP Identification process is carried out in stages as has been detailed out in the subsequent sections.



### 2.1.1 Assess the service needs

The key drivers for planning an infrastructure programme are the service needs of the end-users. The foremost part of the PPP identification process is to identify and prioritise infrastructure service needs within the State and identify a set of potential projects. A research should be conducted for sectors, sub-sectors and across the State to reveal the States (or jurisdiction under the implementing agency) preliminary infrastructure needs including those that might be met with public sector projects or using PPPs.

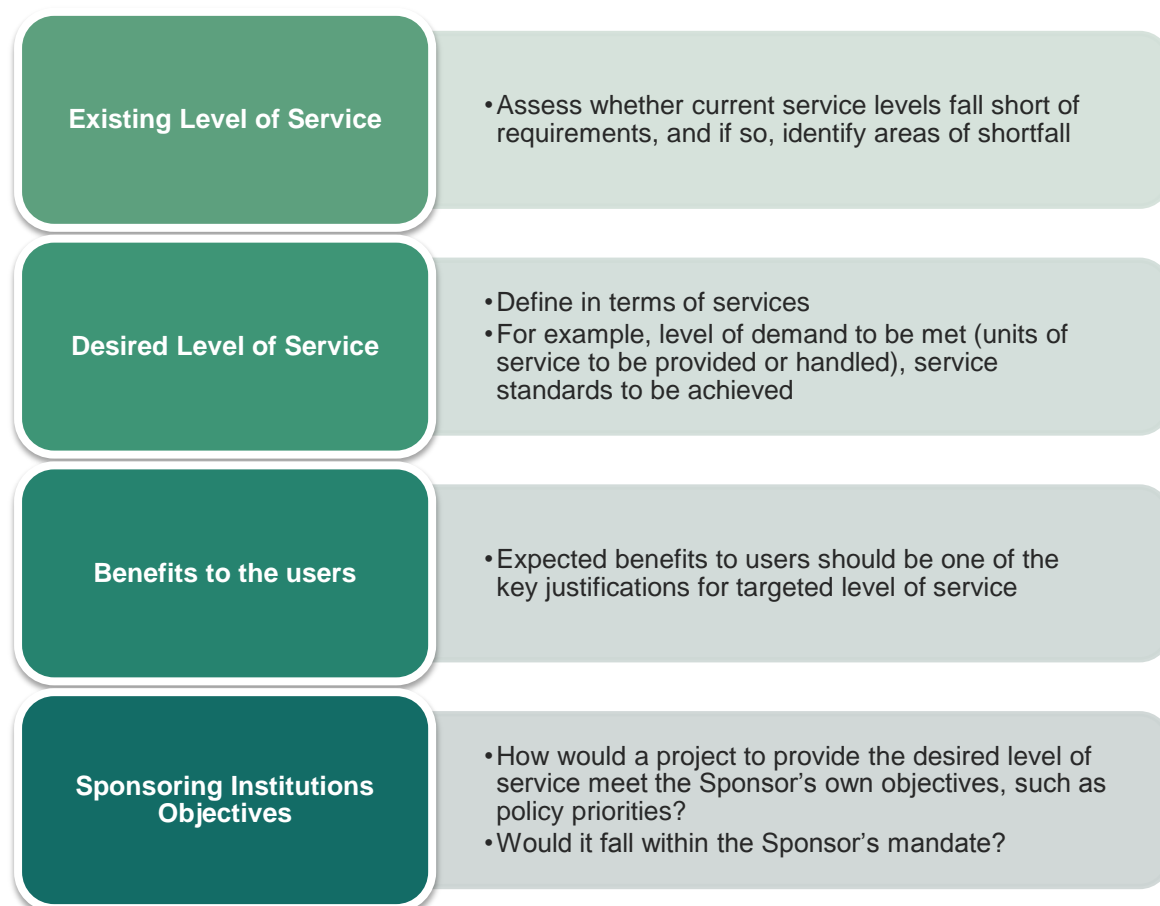
Infrastructure services can be defined and measured in total for all users and broken down into totals for specific groups of users. The study should provide at least a preliminary assessment of needs for user groups that would be served by particular infrastructure assets or integrated systems.

The needs assessment should be carried out taking account of the types of services users will need, total user demand for those services, and all sources of existing and planned delivery of services. It includes an assessment of the current infrastructure situation, including the delivery capacity in existing infrastructure and existing plans for service expansion. The identified infrastructure needs usually translate into a set of several or many individual infrastructure project interventions.



The needs analysis must have a focus on the services required by end-users. Areas that should be assessed in the needs analysis include those in the table below.

**Figure 2-1: Elements of a service needs analysis**



A preliminary service delivery options analysis should be carried out at the pre-feasibility stage. The options analysis asks the question: which delivery options are best for meeting the identified needs.

### 2.1.2 Appoint the project team

The next step in taking the PPP Project identification process forward is appointing a Project Team dedicated to the PPP Project preparation process.

Responsibility for the management of the PPP development process within the Sponsoring Authority should be clearly assigned from an early stage. The concerned institution will require a strong team to lead and monitor the project from the start. A Project Officer (or Project Manager) should be available to lead the preliminary analysis and checks, possibly supported by a small team comprising of officials who can provide both strategic and technical support to the project officer. These officials should ideally have previous experience in PPPs and knowledge of the finance, legal, planning, and technical aspects of the proposed projects. Technical or financial consultants are likely to be engaged to carry out the pre-feasibility analysis.

Both the project manager and members of the Project Team would usually be from the staff of the Sponsoring Authority. This team would be the key entity driving the PPP project. It should remain



together at least until technical close in the PPP Procurement Phase. Such a Project Team is sometimes also called a Project Implementation Unit (PIU).

Under Phase I of the Karnataka Infrastructure Transformation (KIT-I) programme, Department PPP Cells have been formed in 12 Departments/Entities. The Department PPP cells should lead the overall effort on a PPP project and can draw in members from the Department/Entity who may be necessary for a particular project.

The Department PPP Cells acting as the Project Team will guide the project through the PPP process. Their role will include

- Overall project management, ensuring the process is delivered according to schedule and containing costs
- Engaging advisors, including determining their terms of reference; managing advisors to ensure they deliver, and assessing their services
- Championing the project and submitting the application for approval

External support may be used to provide specialist advice and to bolster the capacity of the Institutions' Project Team. Support may be provided through a Project Development Agency, by the Department PPP Cell, or by engaging consultants<sup>1</sup>.

#### **2.1.2.1 Prepare a project plan**

One of the important functions of the Department PPP Cell/Project Team will be to plan the process of the PPP development and procurement in advance. A well-thought out process will be useful as the development moves forward since the Department PPP Cell/Project Team will be able to anticipate issues before they arise. This will have a large impact on the success and quality of the PPP development and procurement.

A Project Plan, prepared by the Department PPP Cell/Project Team at the outset of the process, can be a useful planning tool and would specify:

- Project timetable, showing key steps and tasks in project development, plans for consultations, and critical decisions and approvals required
- Key roles within the project, including decision-making authorities, and sources and funding for assistance

#### **2.1.3 Conduct preliminary analysis**

Projects can be selected for analysis from the set of possible projects identified in the sector. The PPP process for individual projects begins from this stage.

Selected projects that might become PPPs should be analysed for their quality as a project and checked for their suitability to being developed as a PPP:

- Project pre-feasibility analysis
- PPP suitability checks

Pre-feasibility analysis is a necessary stage in the evaluation of an individual PPP project.

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<sup>1</sup> The State PPP Cell has an empanelled set of consultants available who can provide a range of services. The procurement of consulting services should preferably be from the empanelled consultants



Suitability checks are made to ensure that supporting environment for the project exists and aspects such as legal, institutional and market capacity are well-defined. The purpose is to weed out poorly suited projects early, before more resources are used on developing them as PPPs.

For the purpose of suitability checks, the Toolkit developed by the Department of Economic Affairs, Government of India should be utilized.

### 2.1.3.1 Pre-feasibility analysis

A typical pre-feasibility analysis leads to a clearer understanding of the following:

- Needs and options analysis
- Legal feasibility
- Technical feasibility
- Scoping social/environment safeguards analysis
- Preliminary financial viability including expectations of required Government financial support
- Institutional capability analysis
- Identification of next steps required

A preliminary analysis typically helps enough to guide a decision of whether to proceed further and is different from a full feasibility analysis where the level of analysis is much more detailed.

Normally, the pre-feasibility analysis should be carried in-house by the Department PPP Cell/Project Team of the Sponsoring Agency/Department. However, if the complexity of the project demands, external advisors should be engaged to conduct the analysis.

- A panel of pre-qualified consultants has been identified by the Government of India as well as by Government of Karnataka. These advisors have been assessed for their ability to provide services required for PPP development. The services for pre-feasibility analysis can be hired from amongst these panels
- While requesting bids from the open market is also an option for selecting advisors for conducting pre-feasibility studies, it is advisable that the pre-feasibility is conducted in-house and that advisors are hired if the pre-feasibility indicates the possibility of moving forward

The pre-feasibility should address both the technical as well as financial viability aspects. For this purpose, sufficient technical and survey work should be undertaken to develop a cost estimate for the project.

The technical pre-feasibility should highlight:

- Engineering and technical aspects of the project
- Manageability of the operational aspects of the project
- Assessment of all likely technical and operational risks

The preliminary financial and economic viability of the proposed project should include an assessment of:

- Cost recovery/income generation assumptions of the project
- Likely private sector interest in the project
- Overall project cost (capital + operations + maintenance costs)
- Possible financial risks
- Likely economic benefits generated by the project

A draft Table of Contents (TOC) has been placed at Annexure 1. This TOC should be adopted as far as is possible for all pre-feasibility analysis.



Annexure 2 contains an appraisal checklist for the pre-feasibility report. This appraisal is critical to examine whether the pre-feasibility analysis conducted provides enough decision making directions. This appraisal checklist is also very helpful when the in-house capacity is limited and external advisors have been hired to prepare the pre-feasibility analysis.

### 2.1.3.2 PPP suitability checks

The PPP suitability checks have been developed as part of the PPP Toolkit by the Department of Economic Affairs, Ministry of Finance, Government of India. Projects that might be developed as a PPP should be tested for their suitability to the PPP approach. This is to ensure only projects that have potential to be quality PPPs go forward for further development.

The Suitability Filter is the key tool for testing whether the project is suitable for entering the PPP development pipeline. The Suitability Filter has a series of questions grouped under five major issues that impact on the suitability of a project for being developed as a PPP. These major issues are:

- How supportive is the public sector environment?
- How supportive is the private sector environment?
- How significant are the potential barriers to a PPP?
- How well suited are the project characteristics to a PPP?
- How do other factors impact on PPP suitability?

The results from the Suitability Filter will vary between Very Difficult as a PPP to Very Attractive as a PPP. These results allow making the choice of whether to move forward with a project or whether to look at possible alternatives for the projects.

The Suitability Filter is available at the following link <http://toolkit.pppinindia.com/module3-suitability-filter.php?links=tools1&token=>

### 2.1.4 Review and approval to proceed further<sup>2</sup>

If the results from both the pre-feasibility report as well as the suitability filter are positive and indicate that procurement through PPP route is recommended, the project should be subjected to internal checks and approvals of its readiness as well as preparation quality.

#### 2.1.4.1 Internal checks by Director, Department PPP Cell

Upon completion of the project pre-feasibility, the Director, Department PPP Cell will review the results of the pre-feasibility study based on the assessment template provided in Part 2 B – Annexures of these Guidelines.

Once the Director, Department PPP Cell has thoroughly reviewed the project and finds that the analysis as well as results is adequate to push the project forward towards the development phase, she/he shall forward the same to the State PPP Cell as well as Finance Department for review and comments.

#### 2.1.4.2 Review by State PPP Cell and Finance Department

Once the project has been cleared after internal checks, the project should be submitted to the State PPP Cell as well as the Finance Department for review and comments.

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<sup>2</sup> This section has been drafted based on discussions with the State PPP Cell



Upon receipt of comments from both these sources, the comments should be incorporated and the project should be placed before the Cabinet for approval to proceed further.

### 2.1.4.3 Approval by Cabinet to proceed further

The Cabinet will review the project and may provide comments on the same. If comments are provided, the same shall be incorporated and the project will proceed to the Development phase.

The project shall not move forward until the approval of the Cabinet to move forward has been secured.

*The Transaction of Business Rules of Government of Karnataka warrant that any project where the estimated capital outlay is more than Rs. 5 crores, will necessarily require an approval of the Cabinet.*

*Thus, it will be mandatory for all PPP projects with anticipated capital costs of over Rs. 5 crores to seek an approval of the Cabinet before moving forward.*

### 2.1.5 Updating the project on the PPP Database

In accordance with Rule 13 of the Draft PPP Rules, 2012 issued by the Department of Economic Affairs, Ministry of Finance, Government of India, the pre-feasibility stage shall be considered complete only after the project pursued has been registered either with the DEA Database of the State Database as may be applicable.

The Infrastructure Development Department has developed a Database for PPP projects being undertaken in the state. This Database can be accessed at <http://119.226.79.212/pppdb/home.aspx>.

Once the approvals from the approving authorities have been secured, the Department PPP Cell shall enter the details of the project in the PPP Database.

The pre-feasibility stage shall be considered complete once the details of the project have been entered into the PPP Database. The project will then move towards the development stage.

### 2.1.6 Monitoring of PPP Projects

PPP Projects which have been initiated require constant monitoring. For this purpose it is critical to ensure that monitoring mechanisms are put in place. For the purpose of PPP Projects through a Competitive bidding route, the Agency/Department Head shall monitor the project progress on a monthly basis.

Additionally, a monthly monitoring of the projects will also be done by the SWA with the assistance of SWA secretariat (State PPP Cell).

The Director, Department PPP Cell will provide updates on the progress of the projects through the above mechanisms.

### 2.1.7 Project development funding support<sup>3</sup>

A Project Development Fund (PDF) may be available to provide financial assistance to enable a PPP sponsor to engage external advisors. A PDF provides a financing window only – it does not get

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<sup>3</sup> This section has been drafted based on discussions with the State PPP Cell





involved with the project development. The line agency is expected to manage the development with periodic monitoring by the PDF.

### **2.1.7.1 Indian Infrastructure Project Development Fund**

At the Central level the Indian Infrastructure Project Development Fund (IIPDF) provides funding assistance for the engagement of consultants and transaction advisors. IIPDF will provide up to 75% of the project development costs as a loan to be repaid through a fee charged to the successful bidder. IIPDF is managed by Department of Economic Affairs' PPP Cell.

To seek project development funding from the IIPDF, the Sponsoring Authority will apply to the PPP Cell in DEA through the Memorandum for Consideration (MFC, an application to be made by the Sponsoring Authority to seek project development funding from the India Infrastructure Project Development Fund set up by the Department of Economic Affairs, Ministry of Finance). Disbursements by the IIPDF will be made in instalments based on milestones achieved. These milestones will be those set out in the Memorandum for Consideration (MFC) and approved by the Empowered Institution (EI)

The PPP Cell has published guidance material on using the IIPDF, which is available for download here and from [www.pppinindia.com](http://www.pppinindia.com).

### **2.1.7.2 Karnataka Infrastructure Project Development Fund (KIPDF)**

The KIPDF is a Karnataka state version of the IIPDF. The primary objective is to fund project development expenses including costs of engaging consultants and transaction advisors; thus increasing the quality and quantity of successful PPPs and allowing informed decision making by the Government based on good quality feasibility reports.

The KIPDF will assist projects that closely support the best practices in PPP project identification and preparation as set out in the detailed guidelines issued by the State PPP Cell. The operation of KIPDF is administered by the State Level Single Window Agency headed by Chief Secretary. The state PPP unit (Public Private Partnership Cell) of the Infrastructure Development Department (IDD), Government of Karnataka provides the required support for administration of KIPDF.

It is envisaged that the approval process for KIPDF funding by the competent authority would be communicated within 30 days of the receipt of the completed application by the nodal agency. The SLSLWA would set milestones for disbursing and recovering (wherever appropriate) the funding.

### **2.1.7.3 Which fund should be approached when?**

With the availability of two options for seeking monetary support for studies related to PPP projects, clarity is necessary on which projects should be placed under the KIPDF and which under the IIPDF.

In order to simplify and expedite funding availability for undertaking studies, it is recommended that all projects where the estimated capital cost of the project is less than Rs. 50 crores should approach the KIPDF. The KIPDF administration facility will scrutinize the projects and provide approval for funding requested. The Sub-committee (as discussed in the previous section) of the SWA will review the KIPDF application and provide approvals on the same.

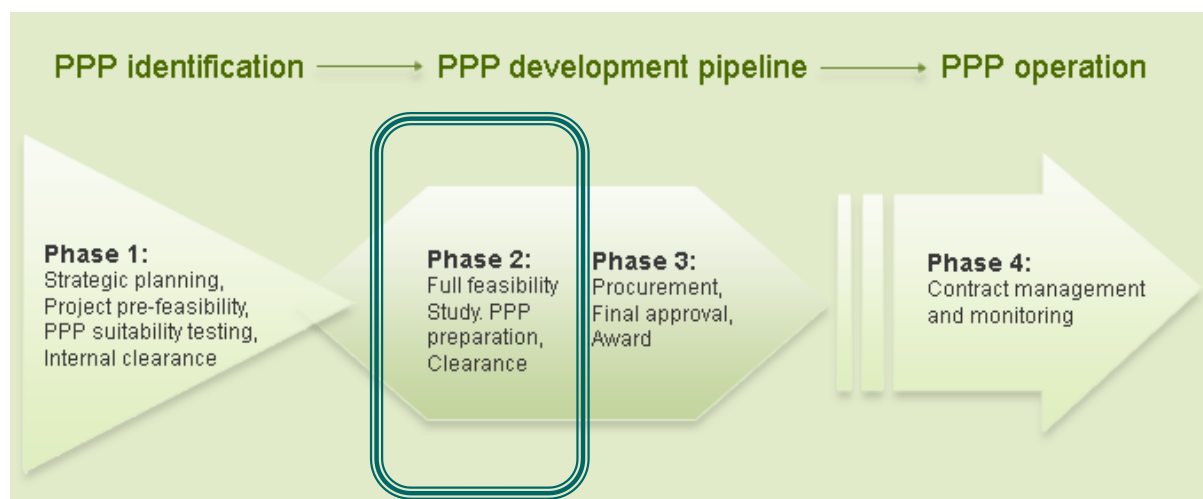
For projects with estimated capital costs greater than Rs. 50 crores, the IIPDF facility should be accessed.





## 2.2 Full feasibility study

Once the preliminary analysis has been conducted and the project has been cleared to be taken forward on a PPP basis, the next key step is to develop the full feasibility study and evolve the principles of procurement.



Source: PPP toolkit for improving PPP Decision-making processes, online toolkit available at [www.toolkit.pppinindia.com](http://www.toolkit.pppinindia.com)

### 2.2.1 Appointing the right advisors

Typically, there have been varying opinions on whether the Fully Feasibility Study should be combined with the scope of a Transaction Advisor and whether such an approach can bring the right amount of detailed technical assessment to the study since typically Transaction Advisory firms may not have technical strengths.

For complex projects that involve construction of new assets, the approach should be to appoint a separate Technical Advisor to prepare a Detailed Project Report which will allow detailed cost determination for the development of the asset.

A separate advisor should be appointed to undertake the Feasibility Study in parallel to the Technical Advisor so that the DPR can feed into the Feasibility Study.

Ideally, the Transaction Advisor should be separate from the advisor appointed for undertaking the feasibility since such an approach rules out any possibility of a bias in the Feasibility Study.

Thus, for projects that are technically complex and where the cost of the project is likely to exceed Rs. 100 crores, it is advisable to appoint the following:

- Technical Advisor to undertake detailed technical studies and develop a DPR
- Feasibility Study advisor to undertake full feasibility study drawing upon cost estimates developed in the DPR
- Transaction Advisor to update the feasibility report and undertake the procurement process on behalf of the Sponsor Agency/Department

For the purpose of these guidelines, it is assumed (in accordance with the PPP Toolkit developed by the DEA) that the feasibility study and procurement shall remain in the scope of the Transaction Advisor.



## 2.2.2 Appoint a Transaction Advisor

The project development process might require the inputs of a transaction advisor if the Project Sponsor/Department PPP Cell/Project Team feels that capacity within the organisation is not adequate to manage the project development process, especially if the project is complex.

To make it easier and quicker for Sponsor Authorities to find and select advisors, a Panel of pre-qualified transaction advisors has been identified by the Government of India as well as the Government of Karnataka. These advisors have been assessed for their ability to provide services required for PPP development. Use of empanelled advisors is preferable since this saves time for the Sponsor; however, it is not mandatory to use empanelled advisors.

Getting maximum benefit from a transaction advisor requires good management and effective leadership and oversight by the institution – from defining the transaction advisor’s tasks, to choosing the transaction advisor, and throughout their engagement with the institution. Without this, the transaction advisor’s work can be misdirected, misunderstood, and may even amount to fruitless expenditure by the institution.

The Department PPP Cell/Project Team should play the central role in managing the transaction advisor. The transaction advisor should be managed on a day-to-day basis, and will play the key technical roles in the work of the Department PPP Cell/Project Team.

### 2.2.2.1 Scope of work for TA

The scope of work for the TA has been divided into two parts:

#### Part 1 – Feasibility study

The transaction advisor will be required to produce a comprehensive feasibility study for the Institutions project using public sector comparator and PPP reference models. This must enable the Sponsor Authority to determine:

- Full project cycle costs
- Affordability limits
- Risks and their costs
- Optimal value-for-money methods of delivery

#### Part 2 – PPP procurement

If, on the basis of the feasibility study, a PPP solution is decided on, and if the Sponsor or the implementing Institution requires it, the transaction advisor will be required to provide the necessary technical, legal and financial advisory support for the procurement of a private partner.

The subsequent sections provide an overview of the how the full feasibility study should be conducted and what are constructs of a full feasibility study.



### 2.2.3 Project feasibility study<sup>4</sup>

The purpose of the feasibility study is to investigate in detail whether the project is a desirable, viable and achievable investment. The 'full' feasibility study will expand on the preliminary scoping in the Pre-Feasibility Report to enable a more thorough assessment of project costs, benefits and risks, and further refine its development as a PPP. The feasibility study will assess and describe the technical, social, environmental, legal, financial, economic and risk characteristics of the project and produce a project implementation schedule. It will also specify the particular PPP mode for the project.

The general contents of a feasibility study include:

- Market analysis and project scope
  - ◆ This is carried out to assess the need for and appropriate scope of the project, building on the work already done at the strategic planning and pre-feasibility stage
- Social and environmental feasibility
  - ◆ This will typically include undertaking social and environmental impact assessments and designing appropriate mitigation measures
- Technical feasibility
  - ◆ This will include technical parameters based on the market analysis, including specification of required facilities and scenarios of project size, for use in preliminary project design
- Risk studies
  - ◆ This will include analyzing all risks associated with the project, study of which party is best able to bear each risk, and refinement of the PPP mode selected at the pre-feasibility stage
- Preliminary cost assessment
  - ◆ This will include drawing up cost estimates for the projects, to within a sufficient  $\pm\%$  range based on the technical specification and assessed project risks, which will feed into the financial and economic analysis
- Financial analysis and due diligence
  - ◆ This will include incorporating a projected revenue structure (e.g. proposed tariff, required annuity) and assessing any need for financial support from the public sector
- Economic feasibility
  - ◆ This will include assessment of overall net economic benefit of the project, incorporating estimated project benefits and costs including non-market factors such as those from the social and environmental assessment
- Other PPP due diligence activities, including value-for money analysis if data is available
- Procurement plan
  - ◆ This will include identification of all major milestones that need to be achieved including the stages of procurement as well as the expected timelines

#### 2.2.3.1 Market analysis and project scope

The technical design and economic and financial viability of an infrastructure project depend crucially on the services that need to be delivered, the project size, and options for recovering the cost. This is

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<sup>4</sup> This section draws heavily upon the Full Feasibility study and PPP due diligence section of the PPP toolkit prepared under the aegis of the Department of Economic Affairs, Ministry of Finance, Government of India, since the compilation of the PPP toolkit has drawn upon the best practices from across the world. This section is available at the following link <http://toolkit.pppinindia.com/highways/module2-ffaapdd-cotffs.php?links=ffaapdd1a>



especially true of physical infrastructure that has large capital cost requirements, such as ports and network infrastructure like roads and water and sanitation systems.

The market assessment and demand analysis provides an important foundation for determining the scope (definition and scale of outputs) of the project. The results feed into all the other parts of the feasibility analysis and support PPP due diligence.

The demand analysis is an important input to the technical sizing of the project and the assessment of financial viability and economic feasibility. Willingness to pay is a measure of consumer welfare or benefit from the project that is an important input to the assessment of economic feasibility.

Forecasts should present several scenarios that allow for different possible outcomes. This should include a most likely scenario and a range of alternative scenarios, including a worst-case scenario. The scenarios should also take into account social and political factors, such as resistance to user charges.

### 2.2.3.2 Social and environmental feasibility

Infrastructure projects will often have significant social and environmental impacts arising from their construction and operation, which can be both positive and negative. The impacts may include flow-on effects beyond the immediate project area and beyond the people directly associated with the project (secondary impacts).

Social impacts on communities affected by the project include, for example, requirements for resettlement and the associated impact on quality of life and livelihoods, and impacts related to environmental alteration (eg on health and livelihoods)

Environmental impacts on the project location and in associated areas (eg downstream, ground water or ambient air) include effects on environmental resources due to alterations or pollutants

It will often be a mandatory regulatory requirement for assessments of social and environmental impacts to be carried out during infrastructure project development.

Details on social and environmental assessment can be found at **Error! Reference source not found..**

### 2.2.3.3 Technical feasibility

A technical description of the engineering and non-engineering aspects of the project would be developed. This would be based on the service definition and sizing in the project scope. This would include:

- Field surveys of the project site, which may include (depending on the project) mapping, topographical and geotechnical surveys
- Analysis of environmental conditions that impact on the technical design. There may be some overlap between this task and the environmental impact assessment
- A preliminary technical design of facilities required to provide the project outputs. This should consider alternative design options, taking into account uncertainty in the demand projections and other site-related uncertainties

These results would feed into a project implementation programme.

The technical specification should offer a least cost solution to meet the projected demand, standards and other objectives. The preliminary design will also assist the Sponsor in appraising proposals received later at the bidding stage.



#### **2.2.3.4 Risk studies and refined PPP mode**

##### **2.2.3.4.1 Risk analysis**

Many of the PPP project risks should have been identified at the pre-feasibility stage using the Suitability Filter. The feasibility study should expand on this with an assessment of all foreseeable risks associated with the project.

A recognised risk management technique should be applied. There should then be a provisional allocation of those risks (i.e. who should pay if the risk event occurs) between the PPP sponsor and the private partner. Final risk allocation will occur at the tendering or contract finalisation stage.

The environmental and social risks will also be considered in the associated impact assessments.

##### **2.2.3.4.2 Risk allocation**

The risk analysis should include an assessment of which party, public or private, is best able to bear each risk. This risk allocation is important for helping with the design of the particular PPP contractual structure that is best suited to the project.

The party that is best able to bear the risk is the one that is in the best position to reduce the likelihood of the risk occurring and / or minimise the consequences of the risk.

Three risk allocations are possible:

- Retained risk – risks that will be retained by the public Sponsor
- Transferable risk – risks that will be transferred to the private partner
- Shared risk – risks that both parties will bear, as agreed in the contract

For an overview of major common risks associated with PPP modes, please see Annexure 3.

The goal should be to reduce total risk in the project as much as possible. This is not necessarily the same as transferring as much risk as possible to the private partner. There will usually be some risks that the public Sponsor can manage best and these should be retained. For example, the government is often best able to control certain delays associated with land acquisitions and with gaining permissions and approvals.

#### **2.2.3.5 Cost assessment**

A detailed estimate of the capital and operating and maintenance costs (either both or one of these depending on the type of project) needs to be carried out.

The capital (Capex) cost assessment will be based on the components of the preliminary technical design. The Advisor would base the estimate on prevailing market costs, recent costs for similar work and materials, and their own estimates.

Detailed operating and maintenance (Opex) cost estimates would be based on a schedule of activities over the lifetime of the project assets. The type and timing of maintenance will vary depending on the type of project (e.g. A water sector project would have different maintenance requirements to a roads project). Operating costs would include an estimate of labour requirements.

#### **2.2.3.6 Financial viability and PPP due diligence**

In this stage a quantitative analysis of the financial feasibility of the project using the most promising PPP modal option or options is carried out. This stage also allows an assessment of likely VGF or other public-sector financial assistance requirements (e.g. IIFCL or state-level PPP finance vehicles).



This financial analysis is an important part of the “due diligence” that should be carried out on the PPP project. The financial analysis will use information gained from the demand forecasts, technical feasibility, and cost estimates, and will reflect the PPP mode that has been chosen. It should include demand and cost scenarios.

A detailed financial analysis model would usually need to be tailored to the particular characteristics of the project. This would be done by transaction advisors unless the Sponsor has this specialist expertise in-house.

The inputs to the detailed financial analysis would include the following:

- The life-cycle costs of the project and their timing. These include the estimated capital costs and operating and maintenance (O&M) costs identified in the cost assessment and a depreciation schedule for physical assets
- Revenue options and the associated forecast revenue stream. This will include tariffs (where user-charges are possible), and secondary revenue sources from the project.
- Forecast demand including scenario ranges from the feasibility study
- Assumed capital structure (debt - equity mix) of private sector investment vehicle
- Debt and repayment schedule
- The discount rates for the public sector and private investor consistent with the capital structure and allocation of project risks
- Project specifications (investment timing, lifetime etc)
- Sensitivity ranges on assumptions, designed to encourage a careful consideration of probable outcomes and reduce optimism bias.

The outputs of the model would include:

- Expected returns from the project illustrated by the NPV, IRR (see below).
- An assessment of subsidy or viability gap funding requirements where there is a viability gap between the revenue requirement and the revenues that can be raised from users
- Summary financial information including ratio analysis

Together these outputs will provide a quantitative assessment of the financial viability of the PPP.

The scenario analysis may include different risk allocations and even variations in the PPP mode. This means there can be feedback between this analysis and the risk allocation.

#### **2.2.3.6.1 NPV and IRR**

Financial viability will usually be expressed as the project's Net Present Value (NPV) or Internal Rate of Return (IRR). These are two very useful guides to decision making.

Financial viability should be analysed in present value terms, which means the costs and revenues over the life of the project are expressed in terms of today's money. This is essential for making meaningful comparisons of benefits and costs that occur at different times and for comparing different projects.

#### **2.2.3.6.2 Cost of capital**

An especially important input to present value analysis is the ‘discount rate’ (or required rate of return) to use. Separate analyses should be applied using different discount rates:.

- In the first analysis, a realistic assessment of commercial discount rate should be used. This will determine what a commercial investor would require in order to invest.
- The second analysis would use the government's own cost of funds. This may be lower than that applied for private sector investors. However, it is not always the case that the public



sector is able to borrow more cheaply than the private sector. State or local governments in particular may face higher rates depending on their credit rating. The appropriate rate should be reflected in the analysis.

### **2.2.3.7 Economic feasibility**

A feasibility study may also include an economic analysis of the project. The purpose of economic analysis is to determine whether there is an economic case for the investment decision. This assessment goes beyond the items typically included in a financial analysis. Economic feasibility is interested in:

- the economic benefits from the project
- the economic costs of the project
- the balance of these expressed in present value terms (the net economic benefit)

Economic costs and benefits are not always the same as financial cost and benefits. Economic analysis includes project impacts that do not have a market price and positive and negative impacts that are experienced by people who are not the direct users of the services. It is in this way that economic analysis casts a broader net than a financial assessment. Accounting tools such as depreciation and capital charges should not be included in an economic analysis.

The results of the market analysis and scope, technical, social and environmental feasibility, financial cost assessments, and risk analyses are all inputs to the economic feasibility. They should provide a set of scenarios (sensitivity ranges on the values assumed in the analysis) that can be tested as part of the economic feasibility in order to get an idea of potential variation in the outcome.

Specialist advisors would usually be a part of the team engaged to carry out the feasibility.

#### **2.2.3.7.1 Measurement of non-market benefits and costs**

Where some benefits and costs from the project do not have an observable monetary value (e.g. a market price) a full quantitative analysis would require a monetary value to be estimated. The advisor or analyst who is conducting the economic feasibility study would need to propose and justify the valuation. This should be based on a strong and defensible methodology as the valuation of non-monetary benefits and costs can be very subjective.

#### **2.2.3.7.2 Comparison against the next-best alternative investment option**

Part of an economic case for a PPP investment will be an assessment of the next best alternative investment or expenditure to achieve a similar result. This is used as a benchmark for setting a minimum value of the output from the investment. Definition and valuation of the next best alternative must be proposed and justified by the analyst or advisor.

#### **2.2.3.7.3 Decision criteria: NPV and EIRR**

The final output of the economic feasibility assessment will include the Net Present Value (NPV) of the project's economic costs and benefits. This captures the value today of the costs and benefits that occur over the life of the project. It has the benefit of summarising a lifetime of values into a single figure and allowing easy comparison of value between different projects. Comparisons of the NPVs of different projects are assessed using the same discount rate (required rate of return).

An economic internal rate of return (EIRR) is commonly also calculated, which is a similar decision factor to the financial IRR. The EIRR indicates the rate of return at which the present value of the economic costs and benefits of the project are equal. In other words, it is the discount rate for which the net present value is zero.





The EIRR should be compared with the socially required rate of return. Projects that are found to have an EIRR that is higher than the socially required rate of return would be said to be economic investments. These may then proceed for detailed analysis of their viability as PPPs.

The NPV and EIRR give different sorts of information about a project. The NPV provides a decision criterion on whether the project should proceed at all (in general a project with a negative NPV should not be pursued) and also allows direct comparison of actual value between projects. On the other hand, the EIRR is better suited to being a decision criterion only. By allowing a project to be compared against a required rate of return it gives a yes or no answer about whether it is economic. However, the EIRR alone does not give enough information to say whether one project should be pursued ahead of another. This is a value comparison and the NPV should be used.

### 2.2.3.8 Other PPP due diligence activities

Other aspects of PPP due diligence include availability of public and private sector finance, legal feasibility and private sector capacity and interest in carrying out the project. Ideally this should also include value for money analysis.

The value for money analysis exercise is very data intensive and should be carried if past data related to cost of projects is available easily. For a detailed account on conducting a VFM analysis, please refer

## Value for money analysis

### 2.2.3.9 Stakeholder consultations

Stakeholder consultations are often not judiciously exercised as part of a PPP feasibility. The consultation process can provide valuable insights into the project being studied. The consultations process also has the potential of helping the advisors to clearly identify major pitfalls and allows developing appropriate mitigation strategies for such risks well in time.

The stakeholder consultation process should include the project sponsor agency representatives not directly related to project, other key line departments such as Land/Revenue, Electricity, Water Resources, Roads etc. This will be critical to ensure that the necessary infrastructure services will be available when the project is executed and will also help identify if there are any critical bottlenecks that need to be addressed before taking the project forward.

### 2.2.3.10 Procurement plan

#### 2.2.3.10.1 Identify the steps involved in procurement

A procurement plan demonstrates that the institution has the necessary capacity and budget to undertake the procurement of the PPP. A procurement plan must contain at least the following:

- A project timetable for the key milestones and all approvals which will be required to take the project to the next level





- confirmation that sufficient funds in the institution's budget are available to take the project into contract implementation
- a list of any potential challenges to the project and a discussion on how these will be addressed by the project team and transaction advisor
- the best procurement practice and procedures suited to the project type and structure the governance processes to be used by the institution in its management of the procurement, especially regarding decision-making
- the project stakeholders and the extent of their involvement in the PPP
- the project team with assigned functions
- categories of information to be made available to bidders and how such information will be developed
- a list of required approvals from within and outside the institution
- a chart of the procurement process, including all approvals and work items necessary for obtaining these approvals (for procurement documentation as well as, for example, the land acquisitions and environmental studies to be procured by the institution)
- contingency plans for dealing with deviations from the timetable and budgets
- the bid evaluation process and teams
- an appropriate quality assurance process for procurement documentation
- the means of establishing and maintaining an appropriate audit trail for the procurement
- appropriate security and confidentiality systems, including confidentiality agreements, anti-corruption mechanisms, and conflict of interest forms to be signed by all project team members

#### **2.2.3.10.2      Develop a step by step timeline**

The procurement of PPPs goes through distinct stages:

- pre-qualification
- request for proposals
- best and final offer, where appropriate
- negotiations
- financial closure

There is a natural sequence of events in the procurement process. Generally, the time allowed for each step is best practice. However, each procurement will be slightly different and the actual timing may differ from one project to the next. The time required will be affected by the complexity of the project and the level of previous experience with similar procurements.

#### **2.2.4      Clearances, approvals, land acquisition**

The responsibility of securing clearances/approvals related to land/environment/forests/social and rehabilitation plans will be that of the Sponsor Agency/Department. These clearances/approvals should be secured by the time the feasibility study is completed.



Additionally, if land acquisition is involved in a project for which a feasibility study is being prepared, the Sponsor Agency/Department shall ensure that the land acquisition process has been completed before the project is placed for approvals to move to the procurement stage.

## 2.2.5 Approvals / Clearances for projects

### 2.2.5.1 Review by Sub-Committee of the approving authorities

To ensure that the project moves ahead and that the approving authorities (Single Window Agency and State High Level Clearance Committee) are able to take a definitive decision on the project, it is proposed that the Feasibility Study would be first submitted to the Sub-Committee(s) of the approving authorities. For this purpose, it is proposed to formulate the following Sub-Committees:

- **Economic Infrastructure:** Energy, Industrial Infra, Agri Infra, Irrigation etc.
- **Social Infrastructure:** Health, Education, Tourism
- **Transportation Infrastructure:** As per the New Infrastructure Policy
- **Urban Infrastructure:** As per the New Infrastructure Policy (including the Public Markets)

Once the feasibility study has been completed, the same shall be forwarded to the relevant Sub-Committee. The relevant Sub-Committee will convene to deliberate on the feasibility study and will review the analysis and results developed as part of the study.

The Sub-Committee shall provide its comments on the feasibility study which will need to be incorporated in the study. Once the incorporation has been completed, the feasibility study (along with Procurement Plan) will be forwarded to the relevant approving authority as elaborated in the following sections.

Having sought the approval of the sub-committee of the approving authorities, an in-principle approval of the relevant Approval Authority should be secured. The Single Window Agency (SWA) and the State High Level Committee (SHLC) are the two approving authorities that have been formulated. The institutional framework has clearly identified two levels of projects that can be placed before either of the agencies.

### 2.2.5.2 Approval of the Single Window Agency

A Single Window Agency (SWA) has been set up at the State Level under the chairmanship of the Chief Secretary to approve the projects under PPP projects up to Rs. 50 Crores, and to recommend the projects above Rs. 50 Crores to the State High Level Committee under the chairmanship of the Chief Minister constituted under the Section 3 of the Karnataka Industries (Facilitation) Act 2002. In case of all PPP proposals up to Rs. 50 Crores, the concerned department shall, in consultation with the Infrastructure Development Department place them before the SWA for PPP headed by Chief Secretary for approval.

### 2.2.5.3 Approval of the State High Level Clearance Committee

For all projects in excess of Rs. 50 crores, the SWA for PPP will scrutinize the proposals and make its recommendations to the High Level Committee, headed by the Chief Minister, for approval. The Infrastructure Development Department (IDD), as the nodal department for PPP shall assist the concerned departments in the evaluation of all such projects. The Infrastructure Development Department (IDD) shall also assist the SWA for Public Private Partnership (PPP) and High Level Committee (HLC) in evaluating and deciding upon specific proposals.



## 2.3 Procurement

The goal of this Phase is to select the best private sector partner for the PPP and conclude contracting with that partner. This Phase brings the project to the end of the PPP development pipeline. At the completion of this Phase the project will have completed its development as a PPP and will be ready to enter operation.

Responsibility for Procurement will be with the Sponsoring Authority. Support might be provided by dedicated PPP agencies, such as a Department PPP Cell or Project Development Agency, and the Sponsor may wish to engage external advisors.

The existing Project team may be further adapted to become the Procurement and Evaluation (P&E) team to carry out activities of the Procurement Phase. The team will have the following roles during this Phase, using external advisors as needed:

- Provide overall management of the procurement process
- Prepare the RFQ document
- Provide a contact point for communications with interested parties
- Evaluate RFQ submissions
- Develop RFP documents
- Provide a contact point for communications with bidders
- Evaluate bid submissions and select preferred bidder
- Finalise the contract with preferred bidder

### 2.3.1 Review and Update of the PPP Feasibility Report

At the start of the procurement phase it is worth reviewing the project information developed during the Project Preparation Phase. This will be especially useful if there has been a delay since receiving necessary approvals and if new people have joined the Government Agency's (Sponsor) project team. The stronger the link between the project's feasibility study and its procurement, the greater will be the opportunity to create a true value-for-money PPP.

After review and update, it must be made sure that the project information will include an understanding of the project is perhaps the most difficult outcome to define, but it is key to a successful PPP procurement. A minimum requirement is that the scope of the project is defined and linked to a long-term strategy or institutional plan for service delivery. The following aspects will need to be revisited and updated before taking the Procurement process forward:

- Description of services required
- Detailed technical scope
- Economic and financial appraisals of the project
- Environmental and social safeguard information
- Risk allocation and PPP mode
- Project implementation schedule
- Selected procurement strategy and process
- First drafts of the RFQ document and concession agreement

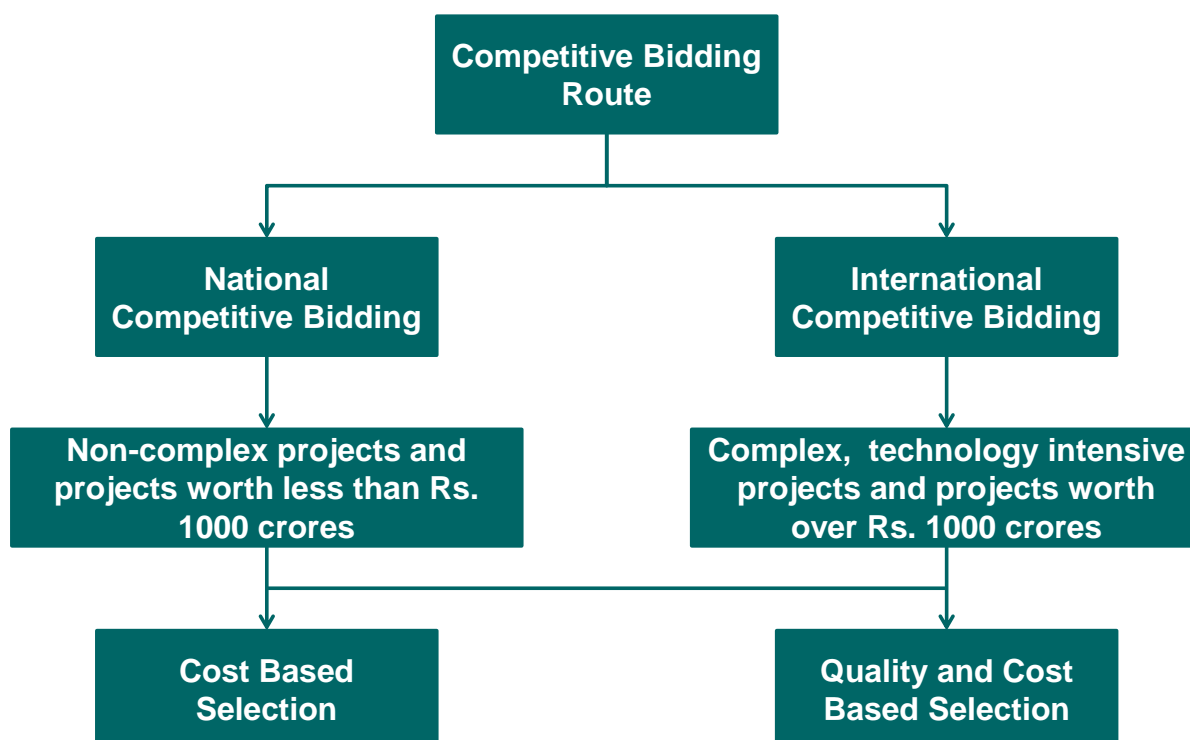
Substantive changes to the project description that was agreed by the Clearance committee, particularly to the scope and risk allocation, should not now be made. If changes are required these would need to be brought to the attention of the Approving Authority and justified.



### 2.3.2 Choosing the best-suited procurement method

Before applying for in-principle clearance for the project the Sponsor should decide which procurement method would be best suited. A number of different methods are available and the application of a particular method will depend on the project characteristics. It is generally accepted best practice to procure PPP projects via an open, competitive bidding process. Competition encourages innovation and efficiency and ideally should be as strong as possible. Several different competitive bidding options are available. Having decided on the bidding strategy it is also necessary to choose a bidding process. This covers the basis for selection and the number of stages in the bid process.

Since the instant guidelines or procedures are aimed at the Competitive Bidding route, the following diagram presents the range of options that are available within the Competitive Bidding route:



#### 2.3.2.1 Competitive Procurement

Competitive procurement strategies are the most efficient strategy for large contracts and for when a large number of prospective bidders is expected. Competitive bidding is usually preferred for PPP projects.

There are several alternative competitive bidding strategies available to suit the circumstances of the particular project. The approaches differ according to the breadth of bidders that they target. They include:

- International competitive bidding
- National competitive bidding
- Limited competitive bidding (bid by invitation based on a pre-qualified panel)

Each of these is briefly described below.



### 2.3.2.1.1 International Competitive Bidding (ICB)

International competitive bidding (ICB) opens the procurement process to the widest potential market of bidders. Firms from around the world are invited to bid with equal opportunity.

Procuring internationally involves greater administrative and advertising cost than more local bidding strategies, such as those at the national level. For this reason, ICB tends to be the best suited procurement strategies when:

- The contract value is large and where the capital investment envisaged is above Rs. 1000 crores and
- The project requires specialised technical inputs which might only be available from leading firms internationally.

Because the benefits of ICB increase with project scale it is common for a threshold contract value to be set as a decision criterion. In this case ICB would typically only be used when the contract value is greater than this threshold.

### 2.3.2.1.2 National Competitive Bidding (NCB)

National bidding is less intensive than ICB. National bidding is suited to procurement of PPPs which, by their nature or scope, are unlikely to be attractive to foreign firms. This would tend to be the case where:

- The contract values are relatively small and where the capital investment is less than Rs. 1000 crores
- The project is scattered geographically or spread over time
- The project is labour intensive

These factors imply the project can be developed locally at prices below the international market, and this would tend to give an advantage to domestic firms. In these cases the advantages of ICB are reduced and they are likely to be outweighed by the extra administrative and financial burden, making procurement at the national level more appropriate. It should be noted that national firms may still choose to include international expertise in their bid if they see fit.

### 2.3.2.1.3 Limited Competitive Bidding (International and Domestic)

Limited International Bidding (LIB) is essentially ICB by direct invitation to a pre-qualified panel of firms without open advertisement. It may be an appropriate strategy for procurement where:

- The contract values are small
- There are only a limited number of developers
- Other exceptional reasons may justify departure from full ICB procedures.

Under LIB, the procurer seeks bids from a select list of known potential developers broad enough to assure competitive prices. Domestic preferences are not applicable in the evaluation of bids under LIB. In all respects, other than advertisements and preferences, ICB procedures would still apply.

### 2.3.2.2 Design of the procurement process

Before the project sponsor can prepare the procurement plan for a competitive bidding process it has to finalise two essential components of the procurement process. These are:

- Basis for bid evaluation – Quality-cum-Cost-Based Selection (QCBS), Quality Based Selection, or Least Cost Method
- Type of procurement process – Single-stage bidding, or multi-stage bidding



### 2.3.2.3 Basis for bid evaluation

The final selection of the preferred bidder is based on the evaluation of the bids. This can be on the basis of:

- Least Cost Method (LCM) – Evaluation based on the cost of the completed asset or cost of service committed by the bidder

The Least Cost Method (LCM) is suitable specifically in situations where the requirement is basic or of a commodity nature or is highly standardised, with limited requisite technical input and nothing to differentiate the quality of competing developers. LCM might be used for basic services like cleaning and maintenance.

### 2.3.2.4 Type of procurement process

There are a range of procurement processes that can be implemented by the project team. The choice is essentially between a single stage process or a multi-stage process.

#### 2.3.2.4.1 Single Stage Process

A single stage process comprises a Request for Proposal (RFP) only. An RFP document is issued to interested bidders inviting them to participate in the bid process. The RFP is the formal bid document issued by the Sponsor and includes the project details and draft concession agreement.

A single-stage process is appropriate for smaller projects when there is a well known and relatively small group of private entities that are likely to bid, and when the project scope and service delivery options can be clearly specified in advance.

#### 2.3.2.4.2 Multi Stage Process

A multi-stage process has distinct Request for Qualification and Request for Proposal stages to short-list bidders and to seek their financial quotes. The Ministry of Finance, Government of India has mandated the adoption of a two-stage bidding process for central sector PPP projects. A multi-stage process can have the following stages:

- Expression of Interest (EOI) stage – to identify a list of interested firms
- Request for Qualification (RFQ) stage – to identify a shortlist of qualified bidders
- Request for Technical Proposals (RTP) – Only in case of exceptionally complex projects where the sponsor determines that the bidders must submit their technical proposals/ plans at the RFQ stage, either along with the initial applications or at an intermediate stage preceding the RFP stage
- Request for Proposals (RFP) stage – to invite comprehensive technical and financial proposals from shortlisted bidders and to select the preferred bidder.

The RFP may be preceded by an Expression of Interest (EOI), a Request for Qualification (RFQ) or sometimes both. The choice of whether to include EOI and / or RFQ depends on how much uncertainty there is about the project definition and about the bidders that are likely to be interested and qualified.

An EOI is used to *identify* firms that are interested in bidding and that are available to bid for a project. It is a 'market sounding' exercise that can be used by Sponsoring Authorities to test the level of interest and availability of potential partners and to identify a preliminary list of firms who will be sent RFQs or RFPs. Typically no evaluation is carried out on an EOI.

The result of the EOI stage is a list of all interested firms.



An RFQ is used to narrow down the list of qualified firms that will be invited to bid. A key difference from an EOI is that the RFQ submissions are evaluated and firms are eliminated on the basis of pre-determined qualifying criteria. The aim is to reduce the number of potential bidders to only those who are technically and financially qualified and those possessing requisite skill sets for implementation of the project.

The result of the RFQ stage is shortlist of bidders. These potential bidders are then invited to submit their proposals for the project at the RFP stage.

An RFP invites technical and financial proposals from interested entities (in case it follows an EOI) or qualified entities (in case it follows an RFQ) or from the market in general (in case of a single stage process).

### 2.3.3 Market sounding – the EOI

An Expression of Interest (EOI) is often included in the procurement process for projects where the number and identity of potential bidders is not well known. The purpose of an EOI is to give the Sponsor an idea of how much interest and availability there is among private firms.

An EOI is a kind of ‘market sounding’ exercise in which the Sponsor tests how many service providers there are in the market at that time. This information can then be used to prepare the RFQ and / or RFP documents.

An EOI is not required for all projects and often the procurement process will skip straight to the RFQ stage. The decision to include the EOI should be based on an assessment of the need for further market sounding against the cost of the EOI process.

Since there is some overlap in the information collected in an EOI and RFQ these two stages are often merged into an EOI-cum-RFQ. This simply combines the contents of the two stages and conducts them together. The objective of an EOI-cum-RFQ is to both test the level of interest among firms and to evaluate firms to reduce the number of applicants to a shortlist.

The Central Government has mandated a 2 stage bidding process for Central Sector PPP projects in India, i.e., Request for Qualification and Request for Proposals stage.

#### 2.3.3.1 Contents of an EOI

An EOI notice is a relatively short and simple document. The notice should include the following information about the project and EOI process:

**Description of key project details, including:**

- Description of the project scope and objectives, with a focus on the services to be provided including indication of performance levels
- Envisaged PPP mode and financing mechanism
- Payment mechanism (eg, user charges, government payment, other source, or a combination)
- Project timeframe and indicative schedule

**Details of the EOI process, including:**

- Developer eligibility and required qualifications, capacity and experience
- Instructions for answering the EOI, including information required and deadline
- Details of information conference or meeting and of other opportunities to ask questions or seek clarifications





- EOI forms (as annexes)

### 2.3.3.2 Preparation of the EOI notice

The EOI notice contains the description of the project and the request for expressions of interest. It should be prepared to contain at least the contents given in the previous section.

The notice does not need to be long and it is better if the required responses also are not very large:

- The level of project detail should be just enough to allow firms to judge whether they have the skills, experience and resources needed for the project.
- The level of effort needed to respond to the EOI should be kept to a minimum in order to minimise the cost to the Sponsor of conducting the process and to private firms of responding.

Interested parties must be given sufficient time to consider the EOI notice, form a team if they decide to express interest as a consortium, respond with any questions or requests for clarification, and to prepare and submit their EOIs.

When setting the timeframe the Sponsor should take account of the size and complexity of the project (large and complex projects are more likely to require consortia to be formed while responses to simpler projects may be made much quicker). If the timeframe is made too short some interested parties may not respond. On the other hand, EOI is the simplest stage in the process and allowing undue time will only delay procurement.

It is typical to allow around one month from first advertisement to the closing date for EOI submissions. A deadline should also be set for seeking clarifications.

#### **Public notification and issuing the EOI**

The EOI notice should be advertised on the website of the Sponsoring Authority as well as the Department PPP Cell or similar organisation. Advertisements should also be placed in major newspapers as appropriate to the size of the procurement (for example, whether it is a local, national or international procurement).

The notice itself can be made available via an appropriate website or in hardcopy from the Sponsor at the expense of the party making the request.

#### **Questions from interested parties**

An arrangement should be in place to allow for questions and feedback from interested parties. At the EOI stage this can be an email address that will be monitored and responded to by the P&E team. A telephone number, for the Project Officer for example, may also be provided.

The Sponsor may find some of the thoughts and opinions expressed by interested parties useful in refining the project documents.

#### **Arrangements for receipt of EOI submissions**

The Sponsor may accept EOI submissions through a website, if the facility is available. Submissions might also be accepted by email to a dedicated and secure mailbox. Electronic submissions have the advantages of being fast and reducing cost to the responding parties. Sufficient security and safeguards should be put in place. If electronic submissions are not permitted the EOI notice must indicate an address and responsible person where hardcopy submissions are to be sent.

#### **Compilation of a list of interested firms**





Once EOI submissions have been received the P&E team will compile a list of all interested firms or consortia of firms. This will include basic contact information including addresses and name of main contact person at each lead firm.

The interested firms on the list will then receive RFQs in the qualifying stage.

A preliminary evaluation of the number of firms active in the market should have been made during the Feasibility study. It should be unlikely that there wouldn't be enough interest shown at the EOI stage.

### 2.3.4 Approval of Bidding Documents

The bidding documents that will be used to select the preferred bidder should be submitted for the approval of the relevant Sub-Committee (discussed in Section 2.2.5.1).

### 2.3.5 Qualifying – RFQ and shortlisting

The Request for Qualification (RFQ) is used in multi-stage bidding to select a shortlist of qualified bidders. The RFQ is often the first formal stage in the procurement process. An RFQ is used to narrow down the list of potential bidders to only those who are technically and financially qualified and those possessing requisite skill sets for implementation of the project. These shortlisted firms are then invited to submit bids for the project at the RFP stage.

By reducing the number of bidders the overall cost of the bid process is lowered. This cost is faced by both the bidders, who have to prepare the bids, and by the Sponsor who has to evaluate them. Reducing the group of qualified bidders can also encourage stronger bids. The selected bidders will be better able to assess their chances of winning amongst a small group. They are then likely to invest greater effort in the bid process. There should be at least rough drafts of most critical project documents in advance of issuing the RFQ.

The RFQ process would typically be as follows:

- Selection of qualifying criteria
- Preparation of the RFQ
- Making the RFQ available to interested parties
- Opportunities for questions and clarifications from interested parties
- Evaluation and shortlisting
- Notification of all responding firms

#### 2.3.5.1 RFQ Document

The RFQ document must enable bidders to present the appropriate information about themselves. It must also clearly set out the RFQ evaluation criteria and processes. Any special requirements of the institution must be clearly stated, and particular RFQ provisions must be developed for each PPP. An RFQ should include the following information about the project and qualification procedure:

**Description of key project details, including:**

- Description of the project scope and objectives, with a focus on the services to be provided including indication of performance levels
- Skills, expertise and experience required to meet these objectives
- Envisaged PPP mode and financing mechanism
- Payment mechanism (eg, user charges, government payment, other source, or a combination)



- Project timeframe and indicative schedule
- A draft of the Concession Agreement can be included, perhaps as an annex.

**Details of the qualification requirements and procurement process, including:**

- Qualifying criteria for the evaluation and selection of shortlisted bidders
- Details of pre-submission conference or meeting and of other opportunities to ask questions or seek clarifications
- Process for submission and evaluation
- Indicative procurement schedule
- Specific legal requirements or restrictions associated with the RFQ or the project
- Other general instructions to applicants
- Application forms (as annexes)

### 2.3.5.2 Qualifying criteria

The qualifying criteria used to evaluate the responses to the RFQ should be:

- Based on the project requirements
- Selected before the RFQ is prepared
- Comparable among firms
- Related to a scoring system
- Clearly stated in the RFQ itself

The criteria will reflect the technical, financial and other requirements of the particular project. They will need to be chosen specifically for the project. The requirements sections of the RFQ can then be written to specify that the responses provide information needed to meet the qualifying criteria.

- Qualifying criteria may include:
  - ◆ Technical qualifications:
    - Experience with similar projects, in terms of service outputs and project size and complexity
    - Experience with PPPs in similar projects and generally
    - Relevant experience locally and internationally
    - Specific technical capabilities of the firm or consortium
    - Experience working together (if firms are forming a consortium)
  - ◆ Financial qualifications:
    - Ability to raise sufficient funding for the project and in the form required
    - Consortium structure, including minimum equity contribution of lead firm and evidence of binding agreement among the members
    - Evidence of no conflict of interest

The RFQ may also request brief comments on the project scope and structure in order to evaluate the firm or consortium's understanding of the requirements.

A scoring system would be developed to allow the firms to be ranked. The Independent Monitor should review the criteria and the scoring system.

Different approaches can be taken to deciding the scoring system. Scores may be set for each qualifying criterion, with the scores chosen to reflect the relative importance of each criterion. In other cases, a minimum cut-off may be attached to some criteria (such as firm size or minimum equity stake) and scores attached to remaining criteria for comparison of firms that meet the cut-off.



Both the criteria and the scoring system should be explicitly stated in the RFQ. This will allow potential bidders to judge whether they are sufficiently qualified for the project and to focus their responses on what the Sponsor wants.

#### **2.3.5.3 Publishing of RFQ**

This typically involves advertising the project in relevant publications, in the Government Gazette, on the institution's website, and by making press statements about the project, calling on interested parties to collect copies of the RFQ from the institution and/or downloading these from its website. It may include an open briefing session for potential bidders to introduce the project and to stimulate private sector interest. Any such public briefings should be careful not to present any information that is not contained in the RFQ document.

Bidders are often asked to pay a purchase price for the RFQ which is non-refundable. The price can be set to cover the cost of producing the RFQ but should not discourage genuinely interested parties from investigating the tender.

#### **2.3.5.4 Receive queries and issues clarifications**

A public conference or meeting may be held to explain the project and allow a forum for questions from interested parties. Separately, one member of the P&E team may be assigned as a contact point for communications from interested parties. This person's email address and phone number can be provided in the RFQ.

Firms or consortia should not communicate with the procurement team after the closure of submission while RFQs are being evaluated.

#### **2.3.5.5 Evaluate RFQ**

Submitted RFQs should be evaluated using the pre-determined qualifying criteria and scoring system. The Project team would form the core of the evaluation committee with external assistance as required. The top-scoring responses would form the shortlist. The length of the shortlist should be decided in advance according to the nature of the project. It should try to find a balance between ensuring good competition among bidders and giving sufficient incentive to invest in the bid.

A shortlist of three to six bidders is common for most competitive bidding processes. However two bidders may be acceptable for very large or complex procurements while more than five may be evaluated for relatively simple contracts. In some cases the shortlist may be increased by an additional bidder if the evaluation committee feels there isn't a clear choice for the final place.

Only the Applicants who have been pre-qualified would be invited to participate in submission of Bids at the RFP Stage. It is good practice to notify all responding parties of whether they were successful in being shortlisted and to thank them for their participation. This provides closure and assists planning for interested parties, shows that the public sector Sponsor recognises and appreciates their efforts, and gives the Sponsor an opportunity to maintain contact with the private sector. Private players who were unsuccessful with the current shortlist are potential bidders next time – it is in the Sponsor's interests to maintain a good relationship with potential future partners.

Successful parties should be contacted and advised of the schedule for receiving the RFP.

### **2.3.6 Request for Proposals (RFP)**

The RFP, which includes the Draft Concession Agreement, is the most important document in the bidding process. It is well worth taking care to develop the document carefully, clearly and thoroughly.



### 2.3.6.1 Identify key consideration in the Bid Process and RFP Document

The RFP and CA specify the main terms of the project and ordinarily these would be non-negotiable at the award stage. It is critically important that these terms are clear and well understood. The CA also lays the foundation for the contract management process throughout the life of the PPP

A quality RFP will provide bidders with clarity on the requirements of the project and encourage them that the public partner is credible and well organised. This will make them more likely to devote resources to the bid. It will also reduce the likelihood of delays to the bidding process as a result of subsequent changes to the RFP.

The outputs specification should be output-focused, not input-focused. The ability to utilize private-sector expertise and innovation is one of the key benefits of the PPP route. Bidders should be allowed the freedom to propose their own delivery solutions within the broad scope of the identified delivery option (ie, asset-based, new or existing, etc).

### 2.3.6.2 Prepare the RFP document

The institution must write the draft RFP, based on its feasibility study. The draft RFP must be the institution's version of a final RFP and must include a draft PPP agreement. It can highlight the areas which bidders are being requested to provide input on. The draft RFP and its attachments, including the draft PPP agreement, must be reviewed, approved and finalized before being issued to the prequalified bidders. The final RFP must communicate project data and the institution's requirements to bidders, and set out how bidders must communicate their proposals to the institution.

The RFP is the comprehensive request for proposals from shortlisted firms or consortia. It is the most important communication to bidders of the Sponsor's requirements. The RFP would typically include several sections detailing the essential aspects of the project and the bid, for example:

General instructions to bidders, including:

- Introduction and overview of the RFP itself, detailing its contents and purpose
- Instructions to bidders, including details of the minimum submission requirements, required format for financial bids, and submission procedures
- Details of pre-bid meetings, site visits and data room
- Requirements for Bid Security or contract performance security

Detailed description of the project scope and required service outputs based on the specifications developed in the feasibility study, including:

- Output-focused specification
- Site-specific details
- Financing requirements
- Environmental and social safeguard requirements

Detailed description of the commercial framework for the project, including:

- Payment mechanisms
- Risk allocation
- Performance standards covering all stages in the life of the PPP
- Penalties for under-performance

Draft Concession Agreement specifying the commercial framework in legal terms, including:

- The intended risk allocation
- Roles, rights, responsibilities and restrictions of all parties



- Key schedules to the Agreement, including
  - ◆ Site description
  - ◆ Specifications and standards
  - ◆ Required tests and inspections, and procedures for testing, independent inspections, and reporting
  - ◆ Schedule of user fees/ tariff rates
  - ◆ Financial arrangements, such as performance security, escrow accounts
  - ◆ Substitution agreement (in case of financial default by the concessionaire)
- Criteria for bid evaluation

### 2.3.6.3 Distribute RFP to bidders

The RFP, including all bidding documents, should be distributed to the shortlisted bidders. The bidders should be given sufficient time to prepare their bids.

The shortlisted bidders may be required to provide a Bid Security to discourage them from dropping out of the bid process. A Bid Security is a sum of money or equivalent that the bidder provides to the Sponsor as security. It would be forfeit if the bidder exited the bidding process. The size of the Security should reflect the cost to the Sponsor of selecting new bidders.

### 2.3.6.4 Pre-Bid Conference

As part of the bid process, it is advisable to hold bidder clarification meetings during their preparation of proposals. These will allow bidders to get clarity on issues in the RFP, and the institution to gauge bidder participation and commitment. These meetings should be scheduled well in advance, should allow for one-on-one meetings with bidders, and there must be a formal process for recording all such meetings and confirming points made during the meetings. Minutes and a signed register for the pre-bid meeting should be maintained and circulated to participants.

Bidders should also be given until a certain date to submit questions and comments in writing. The Sponsor should consider comments and suggestions and where appropriate revise the RFP and incorporate changes into the final version of the Concession Agreement.

Once the final date for questions and clarifications has passed it will be assumed that the RFP and Concession Agreement are understood and bidding will proceed on that basis.

### 2.3.6.5 Evaluation of bids

The criteria for evaluating conforming bids will have been stated in the RFP. The criteria would usually focus on:

- **Technical:** The feasibility and standard of the proposed technical solution, covering the way in which the specified service outputs would be financed, produced, managed and delivered
- **Financial:** The proposed whole-of-life cost or payment in the financial proposal
- **Acceptance by the bidder of the risk allocation** in the Draft Concession Agreement

The financial component will often be the main criteria for assessing RFP responses. In these cases the technical component of the bid is used as a compliance test, to ensure the minimum requirements of the technical specification have been met. The first step to this process is to establish what bids to take forward in the evaluation. The two factors below can be used to eliminate bids from the detailed evaluation process.

#### Check for completeness



Completeness refers to whether the bidder has submitted all required documents (for example, original tax clearance certificates, consortium formation documents and the like). All these formalities must have been set out clearly in the RFP. Each RFP requirement should be listed, with a reference to its place in the RFP and its description. Record of incomplete bids must be maintained.

### **Check for compliance**

Compliance refers to whether the bidder has met the essential minimum requirements set out in the RFP. Use the same format as for bid completeness. Great care must be taken to ensure that the essential minimum requirements are fully met.

## **2.3.6.6 Detailed Bid Evaluation**

### **2.3.6.6.1 Technical evaluation**

The technical evaluation would usually be carried out first as a form of pass/fail test. Only the bids that meet specified minimum technical criteria or beat a cut-off score would continue to the financial evaluation. It is best if the criteria or cut-off score are pre-determined, so as to avoid the appearance of any bias for or against particular bids at the evaluation stage.

The minimum cut-off criteria would specify certain standards that must be met. Bids failing to meet these standards would be rejected. If a minimum score approach is used bids would typically have scores placed on individual technical aspects and these would be combined to arrive at an overall technical score that can be compared against the cut-off. The relative weightings on different aspects of the bid would vary depending on their importance to the particular project.

The evaluation criteria and weightings for scoring technical bids should be determined when the RFP is written. The formula should be stated in the RFP to show the bidders a broad idea of how they will be evaluated and to indicate that the evaluation will be based on a systematic approach.

The technical evaluation should take account of the degree of flexibility built into the proposed technical solution. The extent to which the solution can be made flexible will depend on the particular project. However, since the life of a PPP is typically long and changes can occur over this time period, inbuilt flexibility is a distinct advantage and should be noted at the evaluation stage.

The technical evaluation criteria should also consider the proposed approach to managing the PPP, such as the structure of the proposed operating company.

### **2.3.6.6.2 Financial criteria**

Typically the financial bid criteria would focus on one or a combination of the following, depending on the nature of the project:

- Price to be charged to users of the service
- Price or payment to be charged to the public sponsor or to the users for provision of the service. This may be:
  - On a per-unit basis (eg, tipping charges)
  - As an ongoing lump sum payment (eg, an annuity)
  - As an ongoing fee based on performance (performance fee)
  - Upfront in the form of a grant
- Price or payment to be paid to the public sponsor for the right to provide the service. For example, a negative grant, revenue share (as is common in ports projects), license fee etc.



It is common to take the net present values of the financial offers so that they can be compared like-for-like. Whatever the financial criteria, it should be specified in the RFP and must be common to all bids so that bids can be compared.

#### **2.3.6.6.3 Final evaluation**

The final evaluation may then be based on:

- The financial bid alone using a pre-specified criterion
- A weighted combination of the technical and financial bids using a pre-determined formula – for example for highly complex or first-of-kind projects
- Value for money

The final evaluation will often focus solely on the financial terms of the bids that made it past the technical cut-off. This is best suited to projects where the technical side is fairly standard and the Sponsor's primary concern is price.

In other cases a weighted approach may be used, which has the advantage of explicitly taking account of differences in the quality of the technical bids. This may be preferred if the technical aspects of the project are non-standard. If a weighted formula is to be used the weights on the technical and financial parts and the approach to scoring the financial component should be specified in the RFP.

Ideally the technical and financial aspects of the bids will be used to test the value for money to the public sector. Value for money (VFM) is the critical test of a PPP: it combines a ranked assessment of the bids with a final test of whether the PPP is a better deal for the public sector than traditional public provision.

#### **2.3.6.7 Selection of the preferred bidder**

The preferred bidder will be selected on the basis of the evaluation criteria. A reserve bidder may also be selected as a stand-in in case a problem arises with the preferred bidder.

The preferred bidder (and reserve bidder if one is selected) should be notified. All other responding bidders should be informed that they were not successful on this occasion and thanked for their participation. All bidders have made a valuable contribution to the procurement process and it is desirable that they take away a willingness to participate again next time.

Some unsuccessful bidders may request information about where their bid fell short. The Sponsor should be careful to ensure that information about any bids that may be sensitive is not released until the project has reached technical close. Such information should remain confidential until the contract has been finalised and signed. It is important to bear in mind that the procurement process has not finished until that point has been reached.

### **2.3.7 Approvals before issuing Letter of Award**

Once the preferred bidder has been identified, the Department PPP Cell should approach the Cabinet for seeking approval for issuance of the Letter of Award (LoA).

The LoA can be issued to the preferred bidder only once the Cabinet has provided its approval for the same.





### 2.3.8 Model documents

Several standardized documents relating to procurement are already available with various agencies both at the State level as well as at the Central level.

The Finance Department, GoK has developed model documents for hiring of consultancy services which in the case of PPP projects will relate to transaction advisory services. The model documents are available for various modes of procurement:

- QCBS – time based
- QCBS – Lump sum (small and large values)
- LCS – time based (small and large values)
- Single Source Selection for firms – time based and lump-sum
- Single Source Selection for individuals – time based and lump-sum

As far as is possible, the Department PPP Cell/Project Team should utilize the aforementioned standard documents for procurement of advisory services.

A similar set of RFPs have also been developed by the Infrastructure facility of the Planning Commission of India. The set of standard documents available are:

- RFP for selection of Technical Consultant
- RFP for selection of Legal Adviser
- RFP for selection of Financial Consultant & Transaction Adviser
- RFQ for pre-qualification of bidders
- RFP for selection of Bidder

These are documents that have been successfully utilized during the procurement of various services as well as developers across various projects in the country.

The DEA's PPP Cell has also developed standard RFQ and RFP documents for procurement under PPP projects.

The Department PPP Cell/Project Team should internally decide on which documents would serve their purpose in the best possible manner.

### 2.3.9 Negotiations

The preferred bid should have already satisfied the base terms of the Concession Agreement. However, there may be a limited number of select areas that need to be discussed before the contract can be finalised. The Sponsor should allow for a consultative process with the preferred bidder to finalise these issues.

Negotiations are an integral part of the procurement phase. They are a process, not an event. Successful negotiations culminate in awarding the contract, concluding the procurement phase, and starting implementation. The institution and the private party have different perspectives on the negotiations stage. The private party wants to reduce risk and increase its margins, while the institution wants to reduce its costs and maximise the value of the services provided through the PPP.

It is important that the Institution explains the purpose of the finalisation process and clearly states the non-negotiable items at the start of the consultation. It is useful to remember that the public and private parties are each entering into a long-term partnership with the other. This partnership should be based on trust and mutual respect. The process of building this relationship must now have begun and this attitude should guide all interactions between the parties.





The output of the negotiations must be a PPP agreement with all ancillary agreements containing the Concession agreements and payment mechanism.

According to the Guidelines issued by Government of Karnataka on 3<sup>rd</sup> December, 2002, negotiations with the objective of seeking a reduction in price is strongly discouraged. Negotiations with respect to price shall be allowed only in exceptional circumstances such lack of competition, single, suspected collusion or where the lowest evaluated bid is substantially above the estimated project cost. Even in such circumstances, the first choice shall be rejection of all tenders and re-invitation of fresh tenders.

### 2.3.10 Project Finalization and Financial Closure

Once the preferred bidder has been selected the Concession Agreement can be finalised. The procurement will have reached **technical closure** once the contract is signed. One of the goals of a well-designed RFP is to be sure the bidders are well informed of the requirements, conditions and obligations under the contract. By submitting their bids the bidders have implicitly accepted the defining terms of the contract as set out in the draft Concession Agreement:

The selected private partner will then need to bring the project to **financial closure**, which occurs when all equity and debt financing has been committed. The contract is likely to have conditions related to the timing and achievement of financial close. These are designed to ensure that the private partner moves to financial close in a timely manner without causing undue delay to the project.

If the PPP includes a VGF component then **final VGF approval** may be required at this stage.

## 2.4 Monitoring and reporting for projects

The purpose of monitoring is to ensure that the concessionaire meets the agreed level of performance. Most of the monitoring roles will be carried out by the Sponsor, either by the Contract Management Team or by an Independent Engineer. However, it is important to remember that the private partner will also be monitoring the Sponsor's performance to be sure it also upholds its end of the agreement.

The performance requirements will reflect the agreed risk allocations. Part of the purpose of monitoring performance against these standards is to ensure that risk is actually shouldered by the party who the risk was allocated to. These allocations will be different for different projects. Accordingly, performance requirements, criteria and monitoring roles will also vary.

The illustration below shows some examples of common performance requirements and criteria for measuring performance that call for monitoring and reporting arrangements across different stages of the PPP Project.

### Pre-Operative Stage

Performance requirements	Performance criteria
Achieving financial close	Relevant financial documents are effective and finance is available
Carrying out technical planning and design	Specifications and standards



Performance requirements	Performance criteria
Environmental and social management assessments and planning	Assessments made and plans in place
Obtaining permits / approvals	Required permits are obtained May include Sponsor obligations
Land acquisition	Rights to land acquired – obligation typically on the Sponsor
Project management arrangements	Project management plan, systems and staff in place

### Construction Stage

Performance requirements	Performance criteria
Site-related obligations	Access, site condition, safety, utilities etc May include obligations on the Sponsor, such as granting access
Meeting the design specification, construction quality	Specifications and standards
Meeting construction schedule and timelines	Construction milestones – including dates; Reporting requirements (progress reports, including frequency – eg, monthly)
Implementing environmental and social safeguards	

### Operation Stage

Performance requirements	Performance criteria
Quality of services	Specifications and standards: Number of households or addresses served per day, length of street swept, length of drain cleared per day; frequency of collections, of cleaning; timing of collections (eg, during offpeak periods); Environmental standards at landfill etc
Maintenance	Schedules, including dates; Specifications and standards
Financial reporting	Schedules, including dates; Accounting standards



### Contract Closure and Asset Transfer Stage

Performance requirements	Performance criteria
Asset quality at handover	Specifications and standards
Documentation, records, titles	Completeness, timeliness



## 3. Part 2 B – Annexures

### 3.1 Pre-feasibility report template

The pre-feasibility report standard template has been provided in the Draft PPP Rules, 2012 published by the Department of Economic Affairs, ministry of Finance, Government of India. The same template should be utilized to prepare a pre-feasibility report.

- Technical and operational practicality of the PPP Project concept - preliminary analysis:
  - ◆ The engineering and technical aspects of the PPP Project – this section should analyze the available information relating to the engineering design and technical execution aspects of the project. This analysis should clearly point out to the key points that need to be considered
  - ◆ The manageability of the operational aspects of the PPP Project – this section should analyze how the project, once operational, will be managed and what are the key requirements from management point of view for the same
  - ◆ Preliminary assessment of all likely technical and operational risks – having conducted the above two sets of analysis, it is critical to outline the key risks that are emerging across the two aspects. The risks should be clearly identified and presented as part of this section
- Environmental and social safeguard activities (and related reports)
  - ◆ Socio-economic assessment and analysis – an initial scoping of the socio-economic impact of the project should be carried out. More specifically, analysis should be carried out on whether (a) the project will result in displacement of people, (b) the project will result in loss of livelihoods of a section of society and (c) is the project likely to have an economic impact that will change the quality of life of people (can be both positive or negative)
  - ◆ Environmental assessment scoping – an initial scoping for environmental impacts that the project will have needs to be carried out at this stage and the key impact points should be clearly captured
- Financial and economic viability of the PPP Project concept - preliminary assessment:
  - ◆ The cost recovery/income generation assumptions of the PPP Project – this section should focus upon what are the revenue streams that are possible in a particular project. If the Sponsoring Authority has been, for instance, levying user charges for a particular service, the analysis should be focused on what will be the impact on the cost recovery or income due to the implementation of the project on a PPP basis
  - ◆ Likely interest of private entities in the PPP Project – this is where the market scoping exercise will need to be carried out. The market scoping will perhaps not include floating an EOI or any other relevant instrument, but should analyze whether similar projects are happening on a PPP basis elsewhere. Information should be collected from various agencies on what was the response of the private sector to a particular project
  - ◆ The overall PPP Project cost (capital + operations + maintenance) – the cost estimation at this stage will be based on a thumb-rule estimation method where by the costs are established based on certain principle (typically through benchmarking of similar projects)



- ◆ Possible financial risks – this section should think of the overall financial risks that the project is likely to pose. The impact on the resources of the government needs to be clearly identified and presented as part of this section. Other financial risks could include loss of revenue to the Sponsor Agency/Department and other such relevant risks
- ◆ Identification of likely economic benefits generated by the PPP Project – a brief analysis of the overall economic benefit due to a particular should be carried out and should be presented in this section. The economic benefit can be envisaged in terms of likely employment generation, likely income generation for any relevant agency, opportunity costs that become apparent due to the project
- Possible arrangements for the participation of private entities:
  - ◆ Role of the private entity (direct or indirect investment, Joint Venture Partner, etc) – this section should highlight the options that are available on establishing a relationship with the private entity and the modalities of that relationship should be clearly spelt out. The best possible two or three options for a project should be clearly highlighted
  - ◆ Legal feasibility analysis and contractual framework for the PPP arrangement – this is the stage where the Sponsor Agency/Department should clearly analyze various legal aspects with respect to the project. This should include, but should not be limited to, whether the Sponsor Agency/Department has the authority to enter into a PPP contract, whether the state statutes permit undertaking a certain project, the liabilities that arise out of private sector participation etc.
  - ◆ Outline procedure for ensuring competition in the selection of the private partner(s) – the possible options in terms of methods of bidding should be identified and presented as part of this section. The analysis should clearly indicate on how competition will be utilized for correct price discovery of any project
  - ◆ Legal documentation required to allow participation of the private partner(s)
- Next Steps:
  - ◆ Recommendations on whether the PPP Project should be undertaken - based on the above analysis, there should be a clear indication whether an instant project is worth undertaking or not
  - ◆ Resources required to complete the project preparation process – this section should be aimed at clearly articulating the needs for advancing the project preparation process and the necessary resources (budget, manpower, infrastructure) that will be necessary for the same
  - ◆ Parties responsible for completing next steps – this essentially establishes the road-map for taking the project development process forward and pin points responsibilities that needs to be shouldered by various participants of the process
  - ◆ Time frame required for completing project preparation - a quick analysis of what time will be required by the Sponsor Agency/Department (whether on its own or through appointment of advisors) to complete the project preparation process should be presented in this section



### 3.2 Pre-feasibility report assessment template

The following template should be used for assessment of the pre-feasibility study:

	Pre-feasibility task	Completed: yes/no?
A.	Needs and options analysis	
	<i>Has a needs analysis been carried out?</i>	
	<i>Does the proposed project meet a demonstrated need? Does it meet the objectives of the Sponsoring Authority and wider policy goals? Does the project fit within the strategic plan?</i>	
	<i>Has an options analysis been carried out? Have alternatives to new asset development been considered (ie, use of existing assets and non-asset solutions)?</i>	
B.	Technical and operational practicality	
	<i>Has the project site or options for the site options been identified?</i>	
	<i>Is the project site or at least one of the project site options suitable from technical and operational practicality of the Project Concept?</i>	
	<i>Has the technical scope of the project been defined?</i>	
	<i>Is the preliminary engineering plan practical?</i>	
	<i>Is the operations and maintenance plan practical?</i>	
	<i>Have the major technical and operational risks to the project been identified?</i>	
	<i>Has an impact and management strategy been prepared to deal with the major technical and operational risks to the project?</i>	
	<i>Based on the preliminary analysis, does the Sponsoring Authority consider the Project Concept to be practical?</i>	
C.	Environmental and social safeguard activities	
	<i>Has a scoping social impact assessment been done?</i>	
	<i>Has a scoping environmental assessment been done?</i>	
D.	Financial and economic viability	
	<i>Have all major project cost components (capital, operations, maintenance) of the technical scope of the project been estimated?</i>	



Pre-feasibility task	Completed: yes/no?
<i>Are the assumptions on major project cost components reasonable, can they be justified based on a rationale?</i>	
<i>Has a preliminary market demand analysis been done? (Tariffs, Volume)</i>	
<i>Are the assumptions on tariff/ prices reasonable, can they be justified based on a rationale? Will the users be willing to pay the proposed tariff/ prices?</i>	
<i>Are the assumptions on volume/ quantity of usage reasonable, can they be justified based on a rationale?</i>	
<i>Have similar projects that were done in the past been analysed for project cost, tariff/ prices and volume/ quantity of usage?</i>	
<i>Are the assumptions in the proposed project comparable to similar projects that were done in the past? If not, then can the assumptions be justified on sound economic rationale?</i>	
<i>Has a financial analysis model, such as the Financial Viability model in the PPP toolkit, been used to assess the financial viability of the project?</i>	
<i>Have preliminary financial projections been prepared?</i>	
<i>For a project that is to be developed with private sector participation, has an estimate of required financial support from the public sector been made?</i>	
<i>Have the key financial ratios been computed? (for example, NPV, IRR, etc.)</i>	
<i>Have the major financial and commercial risks to the project been identified?</i>	
<i>Have the impact and management strategy of the financial and commercial risks to the project been prepared?</i>	
<i>Has a sensitivity analysis been undertaken?</i>	
<i>Does the preliminary financial analysis demonstrate that the Sponsoring Authority will recover its investments along with a reasonable return under reasonable scenarios?</i>	
<i>Have the likely economic benefits generated by the project been identified?</i>	
<i>Based on the preliminary analysis, does the Sponsoring Authority consider the Project Concept to be financially and economically viable?</i>	
<i>Has a strong rationale and recommendation been made by the Sponsoring Authority in the preliminary assessment?</i>	



	Pre-feasibility task	Completed: yes/no?
E.	PPP suitability checks	
	<i>Has the Suitability Filter been used to assess the potential of the project as a PPP? What was the result?</i>	
	<i>If any questions in the Suitability Filter were skipped has this been recorded and justified?</i>	
	<i>Have all results from the Suitability Filter that indicated "Difficult as a PPP" been recorded and explained in the Report? Has a preliminary risk assessment and risk management plan been prepared to address these issues?</i>	
	<i>Has a print-out of the Suitability Filter showing answers and results been included in an annex to the Pre-feasibility Report?</i>	
F.	Possible arrangements for private sector participation	
	<i>Has the role of the private sector (direct or indirect investment, indicative PPP mode, etc) been identified?</i>	
	<i>Has a project structure or contractual framework for the PPP arrangement been prepared?</i>	
	<i>Has the procedure for inviting private sector participation been identified?</i>	
	<i>Will the procedure encourage competition in the private sector?</i>	
	<i>Have the major legal documentation required to allow participation of the private partner(s) been identified?</i>	
G.	Next steps	
	<i>Has an estimate of resources (financial, external expertise) to complete the feasibility study and selection of PPP been made?</i>	
	<i>Are budgets available for the above?</i>	
	<i>Have all the parties that will be responsible in the next steps, been identified? Such as within sponsor agency, provincial departments and other parties.</i>	
	<i>Have the roles and responsibilities of involved parties been prepared?</i>	
	<i>Is there an agreement amongst involved parties in undertaking their respective roles and responsibilities?</i>	





	<b>Pre-feasibility task</b>	<b>Completed: yes/no?</b>
	Has the time frame required for completing the feasibility study and selection of PPP been estimated?	
	Is the time frame reasonable and practical?	





### 3.3 Full feasibility report template

The standard contents of the full feasibility report have been provided in the Draft PPP Rules, 2012 notified by the DEA. The same should be utilized and has been outlined below:

- **Part A: Executive Summary** - This summary should provide of the following information:
  - ◆ Current service provision, if applicable and future requirements;
  - ◆ A summary of the full list of options;
  - ◆ A summary of the options selection procedure and the options chosen for detailed examination;
  - ◆ A summary of the comparative findings and justification for the preferred option; and
  - ◆ Highlights of the implementation plan.
- **Part B: Feasibility Assessment**
  - ◆ Project background: This section should provide a background on the project location, type of infrastructure, the Contracting Authority, previous studies undertaken, and previous approvals received etc.
  - ◆ Strategic needs assessment, demand assessment and project scoping: This section will analyze current and future needs. An analysis of the user's needs should be included. The following issues should be addressed:
    - Existing or envisioned service gaps;
    - Key stakeholders and their requirements; and
    - Consultation plan with key stakeholders to ensure that the PPP Project remains relevant.
    - Assessment of demand should also be included in this section. Project scoping Component should determine and define the scope of the PPP Project, outlining the services to be delivered.
  - ◆ Service standard – output and services: This section will translate the needs identified in the previous step into specific outputs. The following issues should be addressed:
    - impact of the proposed PPP Project on the service gaps identified above and overall objectives the PPP Project aims to achieve;
    - outputs expected from the PPP Project, stated, as far as possible, in measurable and quantifiable terms;
    - support service outputs (the outputs that are not the key drivers of the PPP Projects, but have potential to enhance the PPP Project's value for money); and
    - relevance of the PPP Project to the Contracting Authority's long-term strategic goals and overall national development plan.
  - ◆ Market assessment: Once the project outputs have been specified, assessment of the market potential can commence. The purpose of market assessment study is to assist the Contracting Authority in deciding how to design, and deliver the PPP Project. The study may address the following elements:
    - description of the industry;



- current market analysis (current offerings, market players and their capability and appetite);
  - competition (alternative service and product offerings);
  - anticipated future market potential;
  - potential market players and sources of revenues; and
  - demand projections.
- ◆ Technical feasibility: This section details how the PPP Project can be delivered (i.e., outline technical solution). The study should address the following elements:
- field surveys of the project site, which may include (depending on the PPP Project) mapping, topographical and geotechnical surveys;
  - a preliminary technical design of facilities required to provide the project outputs. This should consider alternative design options, taking into account uncertainty in the demand projections and other site-related uncertainties;
  - materials and other input requirements;
  - alternatives (such as those involving usage of existing assets for the PPP Project, rather than creating new ones; or achieving the desired outputs by some means other than the proposed solution) and their assessment in relation to the possibility of achieving the targets of the PPP Project; and
  - capital expenditure cost assessment and operating and maintenance cost assessment based on the components of the preliminary technical design.
- ◆ Financial feasibility: This section provides an estimate of project costs based on recommended technical solution and identifies possible financing solutions. The study should address the following elements:
- project costs (initial and replacement capital expenditure, cost of upgrades, operational expenditure);
  - start-up capital;
  - sources of financing;
  - potential revenues;
  - estimated returns; and
  - consulting costs.
- ◆ Environment impact: This section should examine environmental considerations, including details of any environment impact study conducted. Environment management plan
- ◆ Legal framework: This section examines the suitability of existing legislative environment for the execution and running of the PPP Project. The study should address the following elements:
- appraisal of current legislative environment in relation to requirements of the PPP Project;
  - licences and/or requirements that the Concessionaire will need to obtain and/or comply with;



- assessment of required amendments to the current legislation;
  - legal requirements for the proposed market and organizational structure; and
  - other legal issues that may inhibit / prevent the development of the PPP Project.
- ◆ Stakeholder consultation findings and public interest evaluation: This section should state the findings of the consultation process with the various stakeholders including but not limited to:
- users;
  - developers;
  - community participants;
  - citizens likely to be affected;
  - financiers; and
  - other relevant government authorities.
- ◆ Public sector comparator, value for money and recommendations: This section should state the reference project and detail the computation of the public sector comparator and resultant value for money for the Contracting Authority (“**Value for Money Assessment**”). The Value for Money Assessment involves a qualitative assessment and a quantitative assessment, wherever possible:
- Quantitative Assessment involves estimation of the risk adjusted cost of delivering a project through PPP mode as compare to the risk adjusted cost of delivering the same project through the traditional public procurement mode. The same is determined by:
    - Specifying clear outputs from the project and comparing the costs and benefits of a PPP Project with the costs and benefits of a publicly financed project, and
    - Estimating risk factors which should be applied to the estimates
  - Comparing the risk adjusted net costs/ benefits of both the PPP Project and a publicly financed project on the Contracting Authority, and ascertaining the value for money.
  - Qualitative Assessment: PPP shall be considered as a procurement option if the following value for money drivers are present:
    - Sufficient scale and long-term nature: The project represents a major capital investment with long-term requirements. In determining whether the scale of a project is sufficient, the Contracting Authority should consider the costs to be incurred in procuring the PPP project;
    - Complex risk profile and opportunity for risk transfer: The transfer to the Concessionaire of risks associated with provision of the specified services, asset ownership and asset management during the life cycle of the asset;
    - Measurable outputs: The nature of the services enables output specifications and a performance-based contract;



- Asset utilization: Reducing costs to the Contracting Authority through potential third-party utilization or through more efficient design to meet performance specifications;
- ◆ Competitive process: A competitive market exists and the use of a competitive process encourages the private entity to develop innovative means of service delivery while meeting the Contracting Authority's cost objectives.
- ◆ Conclusion and recommendations on feasibility assessment: This component should detail the key conclusions and recommendations on the Feasibility Assessment.
- **Part C: Structuring**
  - ◆ Risk assessment: This section should identify all material risks associated with the PPP Project, specifying the external and project development risks for the Contracting Authority, the project risks to be allocated to the private entity and those to be retained by the Contracting Authority.
  - ◆ Key commercial principles including payment mechanisms: This section should detail the key commercial principles for the PPP Project. These commercial principles would include, *inter alia*, the payment mechanisms, relief, compensation and force majeure events, default events, termination payments, the Contracting Authority's step-in and cure rights and insurance.
  - ◆ Evaluation criteria for selection of the private entity: This section should detail the evaluation criteria for selection of the Preferred Bidder.
  - ◆ Implementation plan: This section should detail the activities and timelines during the project development period. It should also state the person or entity responsible for each activity.
  - ◆ Project resource requirement: This section should detail the resources required during and after the project development period.
  - ◆ Conclusion and recommendations on structuring: This section should detail the key conclusions and recommendations on the project structuring.
- **Part D: Appendixes**
  - ◆ The Contracting Authority shall include in this section any supporting documents such as a detailed projected financial statement, environment impact assessment study, technical report or review of legal framework.



### 3.4 Typical risks in PPP projects

The major common risks associated with typical PPP modes in shown in the risk matrix below.

	Risk Type	BOT Toll	BOT Annuity	BOT Shadow Toll	Performance Based Maintenance Contracts
<b>A</b>	<b>Pre Operative Task Risks</b>				
A1	Delays in Land Acquisition	Public Sector	Public Sector	Public Sector	Not Relevant
A2	External Linkages	Public Sector	Public Sector	Public Sector	Not Relevant
A3	Financing Risks	Private Sector	Private Sector	Private Sector	Not Relevant
A4	Design and Planning	Private Sector	Private Sector	Private Sector	Not Relevant
A5	Approvals related to plans, design etc. <sup>5</sup>	Private Sector	Private Sector	Private Sector	Not Relevant
<b>B</b>	<b>Construction Phase Risks</b>				
B1	Design Risk	Private Sector	Private Sector	Private Sector	Not Relevant
B2	Construction Risk	Private Sector	Private Sector	Private Sector	Not Relevant
B3	Approvals	Private Sector	Private Sector	Private Sector	Not Relevant
<b>C</b>	<b>Operations Phase Risks</b>				
C1	Technology Risk	Private Sector	Private Sector	Private Sector	Private Sector
C2	Operations & Maintenance Risk	Private Sector	Private Sector	Private Sector	Private Sector

<sup>5</sup> Approvals related to environment etc, to be taken by Government. Approvals related to the project construction or applicable permits to be part of the Private Sector



	Risk Type	BOT Toll	BOT Annuity	BOT Shadow Toll	Performance Based Maintenance Contracts
C3	Volume Risk	Private Sector	Public Sector	Private Sector	Public Sector
C4	Payment Risk	Private Sector	Public Sector	Public Sector	Public Sector
C5	Financial Risk	Private Sector	Private Sector	Private Sector	Private Sector
<b>D</b>	<b>Handover Risk Events</b>				
D1	Handover Risk	Private Sector	Private Sector	Private Sector	Private Sector
D2	Terminal Value Risk	Private Sector	Private Sector	Private Sector	Private Sector
<b>E</b>	<b>Other Risks</b>				
E1	Change in Law	Public Sector	Public Sector	Public Sector	Public Sector
E2	Force Majeure	Shared	Shared	Shared	Shared
E3	Concessionaire Risk	Public Sector	Public Sector	Public Sector	Public Sector
E4	Sponsor Risk	Private Sector	Private Sector	Private Sector	Private Sector
E5	Concessionaire Event of Default	Private Sector	Private Sector	Private Sector	Private Sector
E6	Government's Event of Default	Public Sector	Public Sector	Public Sector	Public Sector



## 3.5 Value for money analysis – guidance notes

This is the pivotal stage of the feasibility study. It enables the institution to determine whether a PPP is the best procurement choice for the project. The three vital questions to be answered here are:

- a. Is it affordable?
- b. Does it appropriately transfer risk from the institution to the private party?
- c. Does it provide value for money?

To determine which procurement choice is best for a project, a comparative assessment has to be made between delivering the same service (to the identical output specifications) as conventional public sector procurement or as a PPP. A risk-adjusted public sector comparator (PSC) model and PPP reference model must therefore be constructed for the chosen solution option. These provide costings of each procurement option in the form of a discounted cash-flow model adjusted for risk. The following are the steps to carry out Project Value Assessment.

### 3.5.1 Construct public sector comparator

A PSC model is a costing of a project with specified outputs with the public sector as the supplier. Costs are based on recent, actual costs of a similar project, or best estimates. The base PSC model represents the full costs to the institution of delivering the required service according to the specified outputs via the preferred solution option using conventional public sector procurement. The base PSC costing includes all capital and operating costs associated with the project. The risk-adjusted PSC model includes a costing for all the risks associated with the project.

The first step is to construct a base PSC model following which potential risks would be identified, analysed and allocated to compute cost implications. The process of constructing a Risk-adjusted PSC model is preceded by construction of a base PSC model as described below.

#### 3.5.1.1 Constructing a base PSC model will include the following steps:

- Step 1: Provide a technical definition of the project
- Step 2: Calculate direct costs
- Step 3: Calculate indirect costs
- Step 4: Calculate any revenue
- Step 5: Explain all assumptions used in the construction of the model
- Step 6: Construct the base PSC model and describe its results

**Step 1: Provide a technical definition of the project:** What norms and standards will be applied in the project? What maintenance cycles are expected? These must be described carefully, bearing in mind that the same principles must apply in the PPP reference model to come, in order to allow for a comprehensive comparison.

**Step 2: Calculate direct costs:** Direct costs are those that can be allocated to a particular service. These costs must be based on the most recent public sector project to deliver similar infrastructure or





services (including any foreseeable efficiencies, for example, regular life-cycle maintenance), or a best estimate where there is no recent comparable public sector project.

*a. Capital costs:* Direct capital costs are specifically associated with the delivery of new services, and may include, for example, the costs of constructing a new facility or acquiring a new asset. The PSC model should account for direct capital costs in the year in which they occur, including, but not limited to, the costs of design, land and development, raw materials, construction, and plant and equipment (including IT infrastructure). Direct capital costs should also account for the project's labour, management and training costs, including financial, legal, procurement, technical and project management services. Only the costs associated with developing and implementing the project should be included in the PSC model. It is also important to include the costs of replacing assets over time.

*b. Maintenance costs:* Direct maintenance costs will include the costs over the full project cycle of maintaining the assets in the condition required to deliver the specified outputs, and may include the costs of raw materials, tools and equipment, and labour associated with maintenance. The level of maintenance assumed must be consistent with the capital costs, the operating cost forecasts and the residual value treatment of any assets.

*c. Operating costs:* Direct operating costs are associated with the daily functioning of the service and will include full costs of staff (including wages and salaries, employee benefits, accruing pension liabilities, contributions to insurance, training and development, annual leave, travel and any expected redundancy costs), raw materials and consumables, direct management and insurance.

**Step 3: Identify indirect costs:** The project's indirect costs are a portion of the institution's overhead costs, and will include the costs of: senior management's time and effort, personnel, accounting, billing, legal services, rent, communications and other institutional resources used by the project. The portion can be determined by using an appropriate method of allocation, including but not limited to:

- number of project employees to total institutional employees for personnel costs
- project costs to total institutional costs for accounting costs
- number of project customers to total institutional customers for billing costs.

**Step 4: Identify any revenue:** The total cost of delivering the service should be offset by any revenues that may be collected. Project revenue may be generated where:

- users pay for the service or a part thereof
- the use of the institution's assets generates revenue
- service capacity exists above the institution's requirement
- the institution allows third parties to use the service.

Any revenue collected must reflect the institution's ability to invoice and collect revenue. In revenue-generating or user-pays projects, this element will be a significant component of both the PSC and PPP reference models, and the institution's specialist advisors should consider market testing.

**Step 5: Explain assumptions:** the model must explain in detail all assumptions the model makes about the inflation rate, the discount rate, depreciation, treatment of assets, available budget(s), and the Inflation.

*a. Inflation:* The model should be developed using nominal values. In other words, all costs should be expressed with the effects of expected future inflation included. This also allows for easy comparison with the institution's budget, which is expressed using nominal values. Inflation projections should be made with reference to the inflation targets set by the Reserve Bank.



*b. The discount rate:* For practical purposes, the discount rate is assumed to be the same as the risk-adjusted cost of capital to government. The institution, with advice from its transaction advisor, should choose a nominal government bond yield rate over a similar term to the length of the project term as the risk free discount rate for the project. It is important to note that the necessity of applying a risk premium to the risk free discount rate should be done on a project-by-project basis and only in cases where it is not possible to accurately reflect the effect of all risks in the cash flow of the project. The discount rate chosen for the project must then be applied consistently in all the feasibility study models.

*c. Depreciation:* Since the PSC model is calculated on cash flow, not on accrual, non-cash items such as depreciation should not be included.

### **Step 6: Construct the base PSC model and describe its results**

The base PSC model must be presented as a discounted cash-flow model. The complexity of the model will depend on the complexity of the project. Simple output specifications can be analysed using a simple cash-flow statement. For projects that entail capital investment and/or generate revenues, the PSC model will need to include a cash-flow timing profile.

#### **3.5.1.2 Constructing the Risk-adjusted PSC model as described below:**

- Step 1: Identify the risks
- Step 2: Identify the impacts of each risk
- Step 3: Estimate the likelihood of the risks occurring
- Step 4: Estimate the cost of each risk
- Step 5: Identify strategies for mitigating the risks
- Step 6: Allocate risk
- Step 7: Construct the risk matrix
- Step 8: Construct the risk-adjusted PSC model

#### **Step 1: Identify the risks:**

The identification of risks is best done in a workshop setting with the institution, its transaction advisor and the relevant PPP cells project advisor. The focus of the first workshop should be purely on identifying the risks. A separate workshop should be held to assess and quantify their impact. This is recommended because clearly identifying risks and sub-risks can be clouded by discussions about their potential financial impact. Separate workshops will also allow the advisors to prepare adequately for assessing and quantifying the financial impact of the identified risks. Explore each risk category in detail during the workshops, and produce a detailed, project-specific list. This list will be developed into a risk matrix for the project. It is important to identify and evaluate all material risks. Even if a risk is unquantifiable, it should be included in the list.

#### **Step 2: Identify the impacts of each risk**

The impacts of a risk may be influenced by:



a. *Effect*: If a risk occurs, its effect on the project may result, for example, in an increase in costs, a reduction in revenues, or in a delay, which in turn may also have cost implications. The severity of the effect of the risk also plays a role in the financial impact.

b. *Timing*: Different risks may affect the project at different times in the life of the project. For example, construction risk will generally affect the project in the early stages. The effect of inflation must also be borne in mind.

c. *Type*: Some risks are difficult to quantify accurately.

d. *Severity of the consequence*: It is essential to specify all the direct impacts for each category of risk. For example, construction risk is a broad risk category, but there could be four direct impacts, or sub-risks:

- cost of raw material is higher than assumed in the PSC model
- cost of labour is higher than assumed in the PSC model
- delay in construction results in increased construction costs
- delay in construction results in increased costs as an interim solution needs to be found while construction is not complete.

Each impact is thus a sub-risk, with its own cost and timing implications.

### **Step 3: Estimate the likelihood of the risks occurring**

Ensure that assumptions are reasonable and fully documented, as they may be open to being challenged in the procurement process or be subject to an audit. There are some risks whose probability is low, but the risk cannot be dismissed as negligible because the impact will be high (for example, the collapse of a bridge). In this case a small change in the assumed probability can have a major effect on the expected value of the risks. If there is doubt about making meaningful estimates of probability, it is best practice to itemise the risk using a subjective estimate of probability rather than to ignore it. Institutions should also be prepared to revisit initial estimates, if they learn something new that affects the initial estimate. Together with estimating the probability of a risk occurring, it is also necessary to estimate whether the probability is likely to change over the term of the project.

### **Step 4: Estimate the cost of each risk**

- a. Estimate the cost of each sub-risk individually by multiplying the cost and the likelihood.
- b. Assess the timing of each sub-risk.
- c. Cost the sub-risk for each period of the project term.
- d. Construct a nominal cash flow for each risk to arrive at its net present value.

### **Step 5: Identify strategies for mitigating the risks**

A risk can be mitigated either by changing the circumstance under which the risk can occur or by providing insurance for it. Indicate what the risk mitigation strategy for dealing with each particular risk will be, and the attendant cost of such mitigation.

### **Step 6: Allocate risk**

Once risks have been identified and costed, analyse which risks should be carried by the private party, which the institution should retain, and which will be shared, if this project were to be procured through a PPP. This will be reflected in the PPP reference model. A risk should be carried by the party best able to manage that risk. The principle for allocating risk should be value for money. Where retaining a risk presents value for money for the institution, it should be retained.

### **Step 7: Construct the risk matrix**



A comprehensive risk matrix is a fundamental component of PPP procurement as it is used to identify and track risk allocation throughout the drafting of the PPP agreement, the bidding process, PPP agreement negotiation and financial closure. The risk matrix consolidates all identified project risks, their impacts, and their associated costs. Include all risks (retained by the institution and transferred to the private party) in the calculation of the PSC. List those which are to be retained or transferred as these will need to be costed for the PPP reference project and will also be used and elaborated on during the procurement phase.

#### **Step 8: Construct the risk-adjusted PSC model**

Once costs have been established for all identified risks, the base PSC must be risk-adjusted.

This is done using the following simple formula:

**Risk-Adjusted PSC = Base PSC + Risk**

#### **3.5.1.3 Construct a PPP reference project**

The PPP reference project/model is a hypothetical private party bid to deliver the specified outputs. The PPP reference model is the costing of the output specifications from a private party's perspective. Comparing the risk-adjusted PSC model with the risk-adjusted PPP reference model enables the institution to assess whether service delivery by government or by a private party yields the best value for money for the institution.

The PPP reference model must be developed using the identical output specifications as those used in the PSC model, but technically and financially it is very different. Constructing a PPP reference project involves the following steps:

- Step 1: Confirm the type of PPP
- Step 2: Describe the proposed PPP project structure and sources of funding
- Step 3: Develop the core components of the payment mechanism
- Step 4: Set and cost BEE targets
- Step 5: Calculate and consolidate all costs
- Step 6: Construct the PPP reference model and explain all assumptions and indicators

#### **Step 1: Confirm the type of PPP**

There are two basic types of PPP: one involving the performance of an institutional function by a private party, and one involving the use of state property by a private party for its own commercial purposes. A project may be a hybrid of these types. Each type (or hybrid) may also have various characteristics, influenced largely by the expected sources of funding and the anticipated payment mechanism.

#### **Step 2: Describe the proposed PPP project structure and sources of funding**

The proposed structure for the project needs to show the relationship between the institution, the special purpose vehicle (SPV) (if required), shareholders, lenders, suppliers, subcontractors and other players. The proposed sources of funding (the combination of debt and equity, and (if appropriate) government contribution) must be identified and shown in a



proposed funding structure. Appropriate equity returns, and the costs and key terms of debt financing, including debt service cover ratios (if applicable) must be shown. All assumptions must be clearly stated, as these will directly affect the cost of capital for the project.

In such a project finance structure, the following must be addressed:

- legal and financial structure and participants
- ratios such as: annual debt service cover ratio, project life cover ratio, loan life cover ratio,
- debt service reserve and maintenance reserve accounts, and the cash-flow arrangement.

### **Step 3: Develop the core components of the payment mechanism**

Although the full payment mechanism is developed during the preparation of the request for proposals (RFP), the feasibility study must develop the core components.

### **Step 4: Calculate and consolidate all costs**

The categories of costs covered in the PPP reference model must be the same as those in the PSC model – namely, direct capital, maintenance and operating costs, and indirect costs – and over a comparable period. The key difference is that the PPP reference model is expected to take into account the innovative design, construction and operational efficiencies that may realistically be expected of the private sector.

A notable inclusion in the PPP reference model is the cost of capital, which should be made up of the proposed debt and equity structuring of the project. The cost of capital must be justified by historical data and an analysis of project risk as perceived by potential funders.

### **Step 5: Construct the PPP reference model and explain all assumptions and indicators**

The PPP reference model must be presented as a discounted cash-flow model, as with the PSC model. As far as possible the PPP reference model must rely on the same assumptions as the PSC model, including the inflation and discount rates, which are particularly important for allowing for a proper comparison between the two procurement choices. The treatment of tax, VAT, depreciation, residual value and any other assumptions must be explained in detail.

A detailed narrative commentary on the model is required. It must explain the construction of the model and its key indicators, including the net present cost. Key indicators may be the debt/equity ratio, debt service cover ratio, liquidity, key sensitivities to inflation, project term, and tax.

### **Step 6: Construct the risk-adjusted PPP reference model**

It is necessary to do an independent risk assessment for the PPP reference model, using the costs that the private sector would usually apply to cater for the risk categories already identified for the project. This must be done by the institution's transaction advisor and backed up with a market testing exercise if necessary.

While the risk categories are the same, they are dealt with differently in the two models. In the PSC model, risks are valued by assessing their cost, their likelihood of occurring and the costs of mitigation. The values are added to the base PSC model to create the risk-adjusted PSC model. In the PPP reference model, the PSC model's risk valuation process should not be necessary. Instead, because of the private sector's better capacity to manage risk, risk is incorporated into the costing of the project and should be reflected as:

- specific line items in the model dealing with direct risk-related costs
- subcontractor costs
- increased required return on equity
- increased cost of debt.



In addition, the PPP reference model must reflect, as specific add-on costs, the risks retained by the institution. The risks which were allocated to the institution (the retained risks) in the risk matrix for the PSC model, must also be included in the PPP reference model. Although the PPP reference model reflects an estimated private sector response to delivering the output specifications, there will still be some costs which the institution will be liable for in a PPP, such as the costs of managing the PPP agreement. These costs must also be calculated and clearly identified in the PPP reference model.

The PPP reference model cost is thus an 'all-in' cost to the institution for undertaking the project through a PPP. The PPP reference model must clearly show what the proposed unitary payment will be to government for undertaking the project through a PPP.

### **B. Undertake sensitivity analysis**

A sensitivity analysis determines the resilience of the base PSC model and the base PPP reference model to changes in the assumptions which the model has been based on. The institution and its transaction advisor should test the sensitivity of key variables to test their impact on affordability, value for money and risk, such as:

- project term
- inflation rate
- discount rate
- construction costs
- total operating costs
- service demand
- residual value
- financing terms

If both discount rates support or reject the value for money of the project (when the NPV of the PPP reference model is compared with the NPV of the PSC model), the result is clear. However, if only one of the discount rates meets the value-for-money criterion, the project should be further examined, taking into consideration the sensitivity of the independent variables and how they may affect the results.

### **C. Determine affordability**

The budget for the project has been identified at various stages prior to this. At this stage, it must be scrutinised in detail and confirmed in order to demonstrate project affordability.

Two vital activities to be carried out here is to determine the institutional budget available for the project and compare the risk-adjusted PPP reference model with the available institutional budget

### **D. Compute initial value for money**

#### **Step 1: Check the models**

- Do the models (both PSC and PPP reference) reflect the requirements of the output specifications?
- Have all capital costs, operating and maintenance costs required to deliver the service according to the output specifications been included?
- Have all material and quantifiable risks been identified and accurately valued?
- Have all risks been summarised in the risk matrix, including their consequences, financial impacts and proposed mitigation strategies? Have all risks been appropriately assigned to the party best able to manage them?
- Has a sensitivity analysis been conducted on the key assumptions?



- Are all assumptions used reasonable and appropriate?

**Step 2: Establish the initial indication of value for money**

The value-for-money test is only conducted in the procurement phase as one of the requirements when private party bids are submitted. Institutions are required to give an initial indication of what value for money the project is likely to provide if it were procured through conventional public sector procurement or a PPP, by comparing the two models. The models will also provide the critical benchmark for evaluating PPP bids during the procurement phase. Value for money is considered at this stage by comparing the risk-adjusted PSC model to the risk-adjusted PPP reference model on a net present value (NPV) basis.



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