

**The World Bank** 

Government of India Ministry of Finance Department of Economic Affairs

## Developing Toolkits for Improving Public Private Partnership Decision Making Processes

### **User Guide**









Australian Government



Government of India Ministry of Finance Department of Economic Affairs

Developing Toolkits for Improving Public Private Partnership Decision Making Processes

### **User Guide**

December 2010









Australian Government

© Department of Economic Affairs All rights reserved

Published by: PPP Cell, Department of Economic Affairs Ministry of Finance, Government of India New Delhi-110 001, India www.pppinindia.com

#### Disclaimer

This Toolkit has been prepared as a part of a PPP capacity building programme that is being developed by the Department of Economic Affairs, Ministry of Finance, Government of India (DEA) with funding support from the World Bank, AusAID South Asia Region Infrastructure for Growth Initiative and the Public Private Infrastructure Advisory Facility (PPIAF). A consulting consortium, consisting of ECA and CRIS, commissioned by the World Bank, has prepared this Toolkit based on extensive external consultations.

ECA and CRIS have taken due care and caution in preparing the contents of this Toolkit. The accuracy, adequacy or completeness of any information contained in this Toolkit is not guaranteed and DEA, World Bank, AusAID or PPIAF is not responsible for any errors or omissions, or for the results obtained from the use of such information. While this Toolkit has been prepared to provide useful guidance, it should not be considered as a substitute for the due diligence and project development process, expected in respect of a PPP project. Its contents should not be construed to be the opinion of the DEA, World Bank, AusAID or PPIAF. DEA is not liable for any direct, indirect, incidental or consequential damages of any kind whatsoever to the subscribers / users / transmitters / distributors of this Toolkit.

The Toolkit shall not be reproduced in any form, other than those intended by DEA, without prior written permission from DEA.

### Preface

With the rapid growth in the PPP programme, policy-makers are increasingly focused on a new set of issues relevant to a programme of this size and maturity. Key amongst these are: assessing performance of PPPs in India to inform future approaches and programmes; the regulation and management of PPPs under operation; and ensuring that the fiscal risks associated with PPPs are properly understood, reported and managed. Government of India (GOI) is also well aware that the expansion of the PPP programme will most urgently require strengthening capacities at all level - Center, States and local level governments - to properly develop and oversee the programme.

To further its support for scaling up PPPs, Department of Economic Affairs requested the World Bank for assistance in developing tools, methodologies and processes to assist the governments/ agencies to strengthen decision-making at all key stages of the PPP project cycle. These will serve a very urgent and critical purpose of capacity building and guidance for government at various levels.

The objective of this assignment is to develop a web-based on-line "PPP Toolkit" to facilitate identification, assessment, development, procurement and monitoring of PPP projects. The Toolkit is structured to cover the full life cycle of PPP projects. While the general structure has incorporated international best practices the Toolkit has built on specific approaches for project procurement, approval etc. currently in place in India to ensure that it forms a relevant resource for practitioners in India. The on-line nature of the Toolkit means it will be possible to update the resource quickly over time as the approaches in place develop and change. The toolkit is proposed to be made available to practitioners through DEA PPP Cell's website (www.pppinindia.com) as well as in the form of CDs and manuals.

The primary audience for the Toolkit are officials at the National, State and city/local governments, State-owned enterprises and other agencies responsible for developing and monitoring PPPs. The Toolkit will be useful in expanding the lessons learned in the transport and power sectors to other infrastructure sectors considering the use of PPPs. More specifically, the Toolkit will benefit the lagging States and regions that currently have huge infrastructure deficits and low capacity to conceptualise and develop PPP projects. The Toolkit will also be of use to the private sector and financial institutions involved in infrastructure PPPs, consultants advising the private sector and governments, as well as civil society.

#### Credits

The Toolkit was developed for Department of Economic Affairs Infrastructure, Ministry of Finance, Government of India.

The Toolkit was developed under a non-lending technical assistance co-financed by AusAID through the South Asia Region Infrastructure for Growth Initiative, Public-Private Infrastructure Advisory Facility (PPIAF) and the World Bank.

#### Core team members for the DEA

Mr. Govind Mohan, Joint Secretary, DEA Ms. Aparna Bhatia, Director PPP Cell, DEA Mr. Atul Garg, PPP Expert Mr. Saji TD, MIS Expert Mr. Prashant Bharadwaj, MIS Expert

#### **Toolkit development credits**



A consortium of consultants, led by Economic Consulting Associates (ECA), was engaged by the World Bank to develop and produce the Toolkit.

The Toolkit concept, structure and content were conceived, developed and prepared by **Economic Consulting Associates (ECA)** of London, UK.

**ECA** also conceived and developed the Toolkit's PPP analysis, decision making and learning tools:

PPP Family Indicator, PPP Suitability Filter, PPP Mode Validation Tool, Financial Viability Indicator Models, VFM Indicator Tool, Readiness Filters and Process Maps.



Indian contextualisation and project assistance was provided by **CRISIL Risk** and Infrastructure Solutions Limited (CRIS), a subsidiary of CRISIL Limited, a Standard & Poor's company.

Case studies of PPP experience in India were researched and prepared by CRIS.



Web design, web development and programming was by **Cross Section** Interactive (CSI), India.

#### Core development team members

#### **Economic Consulting Associates (ECA)**

Ray Tomkins, ECA Director, Team Leader Shane Avers, PPP Financial Expert William Derbyshire, PPP Capacity Building Advisor Robert Arbon, Modelling Expert Sophie Tremolet, PPP Expert Advisor (contributed initial insights)

#### **CRISIL Risk and Infrastructure Solutions Limited (CRIS)**

Pratyush Prashant, CRIS Director – Consulting, PPP Expert and Deputy Team Leader Amit Vora, Financial Expert

#### **Cross Section Interactive (CSI)**

Rajat Berry, CSI Director and Web Development Team Leader Amrish Tyagi, Senior Software Engineer Sumit Makan, Senior Web Developer

## Contents

I	PPP Toolkit User Guide		
2	What is	PPP in infrastructure?	2
3	Content	s of the Toolkit	5
4	How to use the Toolkit		
	4. I	Entering the Toolkit	6
	4.2	Navigation	6
	4.3	Suggested ways of using the Toolkit	8
5	The Toolkit tools		
	5.I	PPP Family Indicator	9
	5.2	Mode Validation Tool	10
	5.3	PPP Suitability Filter	П
	5.4	Financial Viability Indicator Model	12
	5.5	VFM Indicator Tool	13
	5.6	Readiness Filters	16
	5.7	Other resources	15
Tab	les and	Figures	
Tab	les		
Tabl	e l	Tools in the PPP Toolkit	5
Table 2		Case studies included in the Toolkit	15
Fig	ures		
Figu	re I	The PPP process	5
Figure 2		Screen shot of PPP Toolkit Home Page	6
Figu	re 3	Screen shot of Process Maps Page	7
Figu	re 4	PPP Toolkit site map	7
Figu	re 5	Screen shot of the PPP Family Indicator Tool	10
Figu	re 6	Screen shot of the Mode Validation Tool	П
Figu	re 7	Screen shot of the Suitability Filter	12
Figu	re 8	Screen shot of the Financial Viability Indicator Model	13
Figure 9		Screen shot of VFM Indicator	14
Figure 10		Screen shot of a Readiness Filter	15

#### KN(@)WLEDGE

# PPP Toolkit User Guide

The PPP Toolkit is a web-based resource that has been designed to help improve decision-making for infrastructure PPPs in India and to improve the quality of the infrastructure PPPs that are implemented in India.

The Toolkit covers five infrastructure sectors:

- Highways
- Water and sanitation (W&S)
- Ports
- Municipal Solid waste management (SWM)
- Urban transport (Bus Rapid Transport Systems BRTS)

The Toolkit is for use by PPP practitioners across India in both the public and private sectors. It has been designed with a focus on helping decision-making by project officers at the Central, State and Municipal levels. However, other users, including PPP practitioners in the private sectors, are also likely to find the material useful. It should be used as a learning tool and as a resource for best practice in PPPs.

This Guide provides a quick introduction to the online Public-Private Partnerships (PPP) Toolkit. It begins with a short introduction to PPP in infrastructure. It then gives an overview of what is in the Toolkit, explains how to use the Toolkit and briefly introduces the Toolkit tools.

# What is PPP in infrastructure?

Physical infrastructure, such as roads, water and sanitation networks, and transportation systems, involve large investments that can put a strain on the public purse. This strain is especially great for countries, such as India, whose economies are undergoing rapid development and urbanisation and have a great need for expanded infrastructure.

Public-private partnerships (PPPs) are increasingly being used by governments and public sector authorities throughout the world as a way of increasing access to infrastructure services for their citizens and economies at a reduced cost.

The objectives of a PPP in infrastructure are to:

- increase the availability of infrastructure services
- to do so with greater efficiency (lower cost for the level of services provided) than could be achieved using the traditional public sector approach

PPPs make this possible because:

- > PPPs allow access to the substantial financial resources of the private sector
- PPPs enable the public sector to benefit from private sector technical expertise, experience and efficiency
- PPPs enable the public sector to transfer project-related risks to the private sector

A PPP brings the public and private sectors together as partners in a contractual agreement, for a pre-defined period (eg. 30 years) matched to the life of the infrastructure assets used to provide the services. The private partners (investors, contractors and operators) provide specified infrastructure services and, in return, the public sector either pays for those services or grants the private partner the right to generate revenue from the project. For example, the private partner may be allowed to charge user fees or receive revenue from other aspects of the project.

The best PPPs will have the public and private partners working together to build and sustain a long-term relationship that is of benefit to all.

#### **Definition of PPPs in India**

The Department of Economic Affairs (DEA) defines PPPs as:

PPP means an arrangement between a government or statutory entity or government owned entity on one side and a private sector entity on the other, for the provision of public assets and/ or related services for public benefit, through investments being made by and/or management undertaken by the private sector entity for a specified time period, where there is a substantial risk sharing with the private sector and the private sector receives performance linked payments that conform (or are benchmarked) to specified, pre-determined and measurable performance standards.

The level of private sector participation in infrastructure can cover a spectrum from short-term service contracts at one end all the way through to full privatisation (disinvestment) at the other.

Service contracts and disinvestments are generally not considered as PPPs in India.An infrastructure PPP in India is therefore more than just a short-term contract for services with the private sector but does not go so far as to include complete private sector ownership and control.

#### **Characteristics of PPPs**

A PPP typically has the following characteristics:

- the private sector is responsible for carrying out or operating the project and takes on a substantial portion of the associated project risks
- during the operational life of the project the public sector's role is to monitor the performance of the private partner and enforce the terms of the contract
- the private sector's costs may be recovered in whole or in part from charges related to the use of the services provided by the project, and may be recovered through payments from the public sector
- > public sector payments are based on performance standards set out in the contract
- often the private sector will contribute the majority of the project's capital costs, although this is not always the case

It will often be necessary to build or add to existing assets in order to meet the infrastructure needs of the economy and users. However, an important part of the infrastructure PPP concept is that:

- PPP is focused on outputs, and
- > The outputs of the PPP are infrastructure services, not infrastructure assets.

The reason for the focus on outputs and services rather than assets is to encourage efficient use of public resources and improved infrastructure quality.

#### Risk - a key focus of PPP design

Allocating risk to achieve added efficiency is what makes PPP a potentially powerful way of reducing project-related costs and achieving improved value for money for the public sector. The *level* of risk can be changed by allocating responsibility for individual risks to those who are best able to manage them.

The parties involved in a project can affect the amount of risk by:

- the level of influence they have over events, and
- the level of **information** they have about the present and the future.

The public and private sectors are different in the types of influence and information that they have. This means they can control risks in different ways from each other and they are better at controlling some risks and not as good at controlling others.

On their own both the public and private sectors are weaker in their ability to control certain risks. One of the goals of a well-designed PPP is to pick out the strengths and combine them together. The result should be that a partnership of public and private parties is stronger and more efficient than either party by itself.

#### When should PPP be used?

The use of PPP for infrastructure projects should only be considered when:

► The public sector environment is suited to supporting PPPs – a PPP is a complex arrangement that requires support from the Public sector during development and

VI EDGE

operation. The likelihood of PPP success will be increased when the public sector supporting environment is strong.

- The project is suitable to being carried out as a PPP certain characteristics make a project well suited to being a PPP, while others imply that the PPP approach will be difficult or inappropriate.
- The potential barriers to successful project implementation have been identified and can be overcome – many of the common obstacles to successful PPP implementation can be identified in advance. If these are insurmountable then the project should not proceed as a PPP. If they can be overcome, as will often be the case, then this needs to be factored into the PPP development and thoroughly planned for.
- Given that these conditions are satisfied, the project must be commercially viable for the private sector and offer value for money (VFM) for the public sector —the choice of PPP should allow the project to be undertaken at lower cost on a lifetime basis, while delivering the same or better quality services than could be achieved through implementation by the public sector or private sector on their own. It must also be commercially viable in order to be attractive to private investors.

These important conditions should be checked early for every project. This will improve the quality and likely success of projects entering the PPP development pipeline.

Where these tests are not met, it may be better to carry out the project through the traditional public sector route. In this case private sector involvement might be introduced in management or operations, but primary responsibility for financing and control of the project would remain with the appropriate public sector authority.

In general, in a well-designed and supported PPP the advantages will outweigh the challenges. The purpose of the Toolkit is to help Sponsoring Authorities achieve this.

#### **The PPP Process**

Identifying, developing and implementing a project as a PPP involves a series of steps and should be undertaken following a clear process. The PPP Toolkit organises the PPP process into a sequence of four phases:

- Phase 1: PPP identification A set of potential projects is identified through a strategic planning process, which includes a needs analysis for the infrastructure services and an options analysis for providing the services (including whether assets are required). Potential PPPs are then evaluated for their suitability for development as PPPs and a prefeasibility report is prepared. An Internal Clearance is required before proceeding to the next Phase.
- Phase 2: Full feasibility study, PPP preparation, and clearance A potential PPP that was considered suitable in the Phase I analysis is studied in detail and an application is made for In-principle Clearance to continue to the procurement Phase.
- Phase 3: PPP procurement the procurement process takes place, an application is made for Final Approval, the preferred bidder is selected and the project is taken to technical close.
- Phase 4: Contract management and monitoring the Sponsoring Authority manages the PPP throughout its life, including monitoring the private partner's performance against the requirements of the Concession Agreement. Phase 4 begins at the pre-operative stage, and spans the construction stage (where relevant), the operations stage, and contract closure and asset transfer.

The Toolkit is designed to assist the Sponsoring Authority as it goes through this process.

#### KN(@)WLEDGE

## **Contents of the Toolkit**

The Toolkit is made up of three modules:

- PPP Background module this provides explanatory and reference material about PPPs. It will be of most interest to people who are fairly new to PPPs and to those who want a refresher on some of the main PPP concepts, such as risk and the common types of PPPs.
- 2. **PPP Process module** this describes the process of developing a PPP through four Phases, from identification of potential PPP projects, to preparation and clearance, to procurement, and on to management of the PPP contract during the operational life of the PPP



 Tools and resources module – contains a set of decision-making tools to help PPP practitioners at important stages of the PPP Process. This module also contains downloads and links to other PPP resources, and a set of 15 case studies of PPP project experience in India.

Tools in the PPP Toolkit			
PPP Family Indicator Tool	PPP Suitability Filter	Value-for-money Indicator Tool	
PPP Mode Validation Tool	Financial Viability Indicator Model	Readiness Filter	

## How to use the Toolkit

#### 4.1 Entering the Toolkit

The Toolkit is available online at www.toolkit.pppinindia.com

On the homepage **choose a sector** using the Sector Selector drop-down menu. Specific parts of the Toolkit will then be customised to that particular sector. For example, if you are working in the water sector, choose Water and Sanitation from the menu. The tools and other Toolkit material will then be customised to this sector. The Sector Selector also appears at the top right of each page and can be changed at any time.

#### Figure 2 Screen shot of PPP Toolkit Homepage



After choosing a sector click **Go** to enter the Toolkit. The first page after entering the Toolkit is the start page. Here you can choose which part of the Toolkit you want to start using.

To use the tools you must Login. The first time you will need to register and choose a username and password. Registration is quick and easy. On the Tools login page click *Register Here* and follow the instructions. Once you have registered, you can view your profile and change your password by clicking on the links at the top of the page.

Click **Signout** to end the current session and leave the Toolkit. The next time you go to the Tools page you will be asked to Login again.

#### 4.2 Navigation

Use the **menu on the left** of each page to navigate around the Toolkit. The **Sitemap**, available from the bottom of the menu on the left, also provides a convenient way of seeing all content in the Toolkit and navigating around.

The navigation banner at the top of the page tells you which sector you are viewing and which part of the Toolkit you are in.

You can change sector at any time by using the Sector Selector at the top of the page.

In the PPP Process module, you can also navigate by clicking on the **Process Maps**. These show the PPP process in a flow-diagram, making it easy to see where you are in relation to other parts of the process.

KN (@) WLEDGE

Figure 3

To quickly access the tools including your saved versions click on **Go To My Tools**.

#### Screen shot of Process Maps page

10000				Sector Selector	
Sector: State Highwa	ay   Module 2: Work th	rough the PPP process			
Nodule 1: PPP Background	Introduction			<u>Go to</u>	My Tools
Module 2: Work through the PPP process	Process Maps	the PPP Process, including the linkages with the to	ols and the readines	s checks are shown in t	the
Introduction	Process Maps for each Pha	ase. The Process Maps are interactive and accessit			
Analysis and decision making tools     Process Maps	the user can go directly to the <b>Top-level process ma</b>	hat part of the toolkit or to a tool. <b>ap for Module 2</b>			
Process Maps	Major	Major activities in the PPP process PPP			
Phase 1	major activities in the PPP process PPPPL			Decision Tools	
Phase 2	Click on a phase to see	Click on step or tool to g	to it in the toolkit		
Phase 3	a more detailed process map for that phase				
Phase 4					
Nodule 3: Tools and Resources	Phase 1: Project Identification	Strategic planning for a set of projects	Financial Viability	Suitability	
Sitemap		Pre-feasibility checks and analysis	Indicator	Filter	
		Readiness check 1	ppp Family Indicator	Mode Validation Tool	
		PPP Suitability Decision	Readines	s /	
			C. CONS.		
	Phase 2: Full	(			

The sitemap for the Toolkit is at Figure 4.

<b>PPP</b> Toolkit site map			Figure 4
Module I: PPP Background	Module 2: PPP Process Guide	Module 3: Tools and Resources	
Overview of PPP in Infrastructure	Phase I: PPP identification <ul> <li>Strategic planning</li> </ul>	Tools PPP Suitability Filter	
Overview of PPP in India	<ul> <li>Strategic planning activities</li> <li>PPP process management</li> <li>Pre-feasibility analysis</li> <li>PPP suitability checks</li> </ul>	<ul> <li>PPP Family Indicator Tool</li> <li>PPP Mode Validation Tool</li> <li>Financial Viability Indicator Model</li> <li>VFM Indicator Tool</li> </ul>	
Risk - a critical focus of PPP design	<ul> <li>Pre-feasibility report</li> <li>Readiness Check I</li> <li></li></ul>	Process guides and checks	
Overview of main PPP modes	Phase 2: Full feasibility, PPP preparation and project clearance Planning for PPP management	<ul> <li>Process Map</li> <li>PPP readiness filter</li> </ul>	
PPP supporting environment	<ul> <li>Full feasibility analysis and PPP due diligence</li> <li>Choosing best-suited procurement</li> </ul>	Document guides TOR contents for needs and options assessment, full feasibility study	
Overview of the PPP process	method First drafts of key project documents	<ul> <li>Checklists for environmental and social assessments, pre-feasibility checklist</li> </ul>	
	<ul> <li>Readiness Check 2 and application for in-principle clearance</li> </ul>	Document examples	
	<ul> <li>Phase 3: PPP Procurement</li> <li>Preparing for procurement</li> <li>Market sounding - EOI</li> <li>Qualifying - RFQ and shortlisting</li> <li>Final drafts of key bidding documents</li> <li>Readiness Check 3 &amp; Final approval</li> <li>Bidding - RFP and bid evaluation</li> <li>Contract finalisation &amp; award</li> </ul>	<ul> <li>Links and resources</li> <li>Links to websites and other online PPP resources</li> <li>Set of 15 PPP in India case studies</li> <li>PPP glossary</li> <li>PPP modal definitions</li> </ul>	
	Phase 4: PPP contract management		
	Phase 4: PPP contract management and monitoring         • Goals, principles and stages of contract management         • Preparation for contract management         • Readiness Check 4         • Monitoring performance		

Monitoring performance Managing asset transfer Other contract management issues

Further guidance on specific topics Case study lessons

#### 4.3 Suggested ways of using the Toolkit

Follow the process to develop a PPP - A PPP practitioner who is developing a project as a PPP can follow the Process module in a step-by-step way. This will help ensure that all the important preparations and actions that are needed for a PPP are carried out, which will in turn help strengthen the PPP and help to avoid problems later on in the PPP's development and in its operational life.

The Process module presents a clear process for the identification, development and implementation of a PPP. This indicates best practice, and shows where clearances and approvals are needed.

The Process module also ties in with the tools, which support the key activities that are required during the Process. When you reach a stage in the process that is supported by a tool you can go and use the tool and then return to the Process module and continue.

During the development of a PPP the practitioner is likely to use other resources also, including External Advisors. The practitioner can return to the Toolkit as they progress to the next step in the process.

Use it as a reference resource -A user might dip in and out of the Toolkit to use the specific parts that they are interested in at any particular time. The Toolkit contains useful background material about PPPs in general and about PPPs in India, as well as links to other resources and an instructional set of case studies of previous experience with PPPs in India.

**Use the tools to help with particular parts of PPP preparation** – PPP practitioners might use particular tools, such as the Financial Viability Indicator models, the Suitability Filter, or the Readiness Filter, to test or check a project that they are developing.

# The Toolkit tools

The Toolkit contains the following 6 tools to help decision-making for PPPs:

- PPP Family Indicator gives a starting indication of which PPP mode 'family' the particular project might be suited to
- PPP Mode Validation Tool uses a risk allocation analysis to help decide further whether the selected PPP mode is best for the project
- ► The PPP Suitability Filter tests how well suited the project is to being a PPP and checks for barriers that might make it difficult to do the project as a PPP
- Financial Viability Indicator Model allows an analysis of the key questions of financial viability of the project and to test these using 'what-if?' scenarios
- Value-for-money Indicator Tool provides an indication of the expected range of valuefor-money for the public sector from the PPP
- Readiness Filters checks that all the important steps have been followed and that the important preparations have been made, so that the project is ready to move on to the next step in development as a PPP.

The tools are available from the Tools & Resources Module, or by clicking on Go To My Tools. You need to login before you can use the tools.

Each of the tools is briefly introduced below.

#### 5.1 PPP Family Indicator

The PPP family indicator tool uses a decision tree to help the practitioner see quickly the main PPP mode options available in the selected sector and for the particular project type. This provides the earliest indication of the mode that might be best for the project.

PPP modes can be loosely grouped into several 'families' which share certain important characteristics. The simplest family groups are Opex PPPs and Capex PPPs.

The Family Indicator asks some questions about the type of project that you have in mind. It then uses the answers to make a preliminary suggestion of which PPP family would best fit the project.

It may be helpful to use the Family Indictor before using the Suitability Filter.

#### Figure 5 Screen shot of the PPP Family Indicator Tool

#### **PPP Family Indicator**

The PPP 'family' indicator is structured as a decision tree. The user should work through the questions from the top down to identify the appropriate indicative 'family' of PPP options.

Go to My Tools



#### 5.2 Mode Validation Tool

The Mode Validation Tool uses a risk allocation approach to further test the preliminary choice of the best PPP 'family' for the project.

The aim at this stage is to prompt the practitioner to go to the next level of detail in thinking about the particular project risks and how these might best be allocated between the public and private sectors in a PPP. This risk allocation is key to choosing the PPP mode.

The Mode Validation Tool allows you to specify your own preferred risk allocation, and then to compare this against the typical risk allocations under the main families of PPPs. Where there are differences between the preferred allocation and the typical allocations, you should ask yourself why this is and consider whether a different allocation would be more appropriate. In this way, you should get a better sense of the best suited PPP mode.

The actual mode for the project will be further refined during the full feasibility and procurement stages and finally specified in detail in the Concession Agreement. The exact details of the specific PPP mode will be determined by the Project Team or by External Advisors.

Screen shot of the Mode Validation Tool

referred PPP mode for compa	arison (Step 1)			
BoT Toll			•	
			Yellow i	ndicates allocation does not match
			c	Green indicates matching allocation
Risk Type	Sensitivity	Relevance during the concession	Preferred Allocation (Step 2)	Allocation under BoT Toll
PRE OPERATIVE TASK RISKS				
1 Delays in land acquisition	P High	0-5 years	Public Sector 🛟	Public Sector
2 External linkages	🛐 Low	0-5 years	Public Sector \$	Public Sector
3 Financing risks	😝 Medium	0-5 years	Private Sector 😫	Private Sector
4 Planning	Medium	0-5 years	Private Sector 😫	Private Sector
5 Approvals	🛐 High	0-5 years	Public Sector \$	Public Sector
CONSTRUCTION PHASE RISKS				
1 Design Risk	Medium	0-5 years	Private Sector 🛟	Private Sector
2 Construction Risk	Medium	0-5 years	Public Sector \$	Private Sector
3 Approvals	🚺 Low	0-5 years	Private Sector \$	Private Sector
OPERATIONS PHASE RISKS				
1 Technology Risk	Dow	Throughout	Private Sector \$	Private Sector
2 Operations & Maintenance Risk	Medium	Throughout	Public Sector 😫	Private Sector

#### **5.3 PPP Suitability Filter**

The Suitability Filter is effectively a preliminary *qualitative* value-for-money (VFM) test. It tests for qualitative factors that have an impact on the ease or difficulty of doing the project as a PPP. The Filter's purpose is to weed out dead-end PPP projects early, so resources aren't wasted and can instead be used on the most promising projects.

The results of the Filter can also be used to highlight where there are weaknesses in the project or in the supporting environment that would make the project less suited to being a PPP. By highlighting any such weaknesses, the Filter can help the Project Officer identify areas that need to be improved, or to decide that the project is not well suited to being a PPP. In this way, the Suitability Filter can help to strengthen the quality of PPPs entering the development pipeline.

The Suitability Filter is made up of a series of questions about the important factors that impact on the suitability of the project for being a PPP. The answers to each question are scored, and the final result from all questions is presented on a scale of ease or difficulty of developing the project further as a PPP. The Suitability Filter results would be summarised in the Pre-Feasibility Report.

Figure 6

#### Figure 7 Screen shot of the Suitability Filter



#### 5.4 Financial Viability Indicator Model

A simplified Financial Viability Indicator Model is provided to help the practitioner make their own financial assessment of the PPP project. The model is a spreadsheet that runs in Microsoft Excel (2003 or later). The Model has been customised for each of the five sectors.

The Financial Viability Indicator can be used to make a preliminary assessment of the likely financial viability of the project for the private sector. The model looks at financial returns from the PPP compared to the after-tax return on equity a commercial developer would expect. The idea is to get an indication of whether the proposed PPP would be likely to attract private partners and to show what the financial implications would be for the public sector.

You can enter a range of financial options into the model, including:

- an assessment of the level of user charges, annuity or other payment needed to make the project attractive to the private sector
- an initial test of whether and how much government support is likely to be needed (for example, through VGF funding)
- 'what-if?' tests of different financial designs and alternative project outcomes

The complexity of the Financial Viability Indicator Model has been deliberately reduced to make it applicable across sectors and flexible enough to analyse many different projects, while still retaining all of the key financial inputs and variables that affect a project. In this way it is a valuable tool to highlight the key project details to practitioners in a way that is most accessible.

Important: Excel's Macros must be enabled in order to use the Model.

#### Screen shot of the Financial Viability Indicator Model

6 PPP viability analysis CapEx project with greenfield assets and No user-charges (Revenue from annuity paid by government). Expressed i Warning: some data may not have been entered fully. Please check the flags at bottom of this sheet and then check the data inputs. Cover User Guide Set-up Demand CapEx OpEx Revenue Viability Analysis Cash Flow Income Statment Balance Sheet Results Export Total Cashflow Project Ratio Rs Cr DSCR/LLCP Net Profit 150 40% 10.00 100 35% 8.00 30% 50 25% 6.00 20% -50 4.00 15% 100 10% 2.00 150 596 0.0 200 Cash available Test the viability of the project (Sensitivity and scenario analysis) Real Rs Cr. Shareholder cashflows (nominal 100 80 60 20 -20 -20 -40 -60 -50 100 Rs Cr. rs (Cost of Equity = 12.0%) 25.2 Rs Cr ade up of 77.8 Rs Cr Equity invested (present value) Dividends received (present value) 103.0 Rs Cr 20105 20125 iable Rate of return 20145 20165 20185 20205 20225 2024 uity IRR of the project 16.0

#### 5.5 VFM Indicator Tool

This project is viable from a private investor perspective

The results from the Financial Viability Indicator Model are an input to the VFM Indicator Tool.

A quantitative value-for-money (VFM) test compares the estimated cost of procuring the project in the public sector with the estimated cost of procuring it as a PPP.

Typical VFM tests use just one monetary value for the risk that would be transferred to the private sector in the PPP. The test is very dependant on the level of uncertainty in the estimate of transferred risk.

The VFM Indicator highlights the uncertainty by using a range of values for the estimate of transferred risk. This range is based on probability distributions. This means the VFM Indicator can incorporate the uncertainty into the result and give a better indication of how likely the PPP is to deliver VFM or not.

The result of the VFM Indicator is a range of expected VFM results that may occur from the project:

- If the range is all positive then this indicates that the project can be expected to provide VFM.
- If it is all negative, then VFM may be unlikely.
- If the range covers both negative and positive VFM outcomes then the focus should shift to a careful qualitative assessment to check where the risks to VFM are and to mitigate these risks where possible.

Note, it is good practice to carry out a qualitative assessment of likely VFM in any case, for example by using the Suitability Filter.

#### Figure 8



#### 2 Range of simulated VFM outcomes

Average expected VFM was positive and strong in the most recent simulation.

The estimated chance of a positive VFM outcome was 94%

A qualitative VFM assessment of the proposed PPP should still be carried out as best practice.



#### **5.6 Readiness Filters**

The Readiness Filters are used during the four Readiness Checks that are included in the PPP development process outlined in Process module. The Readiness Checks happen at key milestones in project development. Their purpose is to help make sure that the PPP project is ready for the next stage and to highlight areas where the quality of preparation can be improved. By doing the Checks the overall quality of the PPP can be improved.

The Readiness Filters are structured in the form of checklists containing a series of questions relating to the PPP project design. Each Readiness Filter also contains an overall assessment of the project proposal and a recommendation as to whether it should proceed to the next stage of the process.

The Project Officer or the person in charge of developing the PPP for the public sector sponsor should fill out the Readiness Filter. This should then be reviewed by an internal team of two or three more senior reviewers. The job of the reviewers is to check that the quality of preparation is high enough to allow the PPP to proceed further. Any weaknesses that are identified should be addressed.

#### Screen shot of a Readiness Filter

#### Figure 10

Checklist 1: Project design, need and justification			
See the section on <u>How to use the Readiness Filters</u> for an explanation of how to answer the questions in	n this checklist.		
Q1: Is there a clear and demonstrated need for the project?			
Is the project documentation complete?	Readiness ass	essment	
Complete O Partially Complete O Not Provided O	Select	•	
Explanatory notes (to be completed by Expert Group)			
Examples of supporting evidence			
<ul> <li>Results of preliminary needs assessment, including description of the changes in demand, supply, obligations of the project</li> </ul>	or other needs that j	ustify	
Explanation of how the project will meet these needs			
Q2: Is the project consistent with the objectives and scope of the Sponsoring Au	thority?		
Is the project documentation complete?	Readiness ass	iness assessment	
Complete O Partially Complete O Not Provided O	Select	•	
Explanatory notes (to be completed by Expert Group)			
Examples of supporting evidence Explanation of how the project fits with and furthers the objectives of the Sponsoring Authority			

#### **5.7 Other resources**

Tools and Resources Module also includes a set of other resources to help PPP practitioners. These include:

- links to other online PPP related resources
- downloads of examples of tables of contents for important documents
- A set of 15 case studies of PPP experience in India

Case studies included in the Toolkit	Table
Alandur Sewerage Project	
Karnataka Urban Water Supply Improvement Project	
Latur Water Supply Project	
Salt Lake Water Supply and Sewerage Network	
Timarpur Okhla Municipal Solid Waste Management Project	
Vadodara Halol Toll Road	
Tuni Anakapalli Annuity Road Project	
Delhi Gurgaon Expressway	
Nhava Sheva International Container Terminal	

#### Kakinada Deep Water Port

Gangavaram Port

Mumbai Metro

Hyderabad Metro

Bhiwandi Electricity Distribution Franchise

Amritsar Intercity Bus Terminal Project

Notes:

Developing Toolkits for Improving PPP Decision-Making Processes User Guide

Notes:

www.pppinindia.com

CAPACITY BUILDING CURRICULUM

CASE STUDIES

EDUCATION

HEALTH

LEGAL ISSUES

ROADS

STRATEGIC COMMUNICATION

## TOOLKITS

URBAN TRANSPORT

WATER





INFRASTRUCTURE Building for Growth