



2025 HANDBOOK ON PPP STRUCTURING TOOLKIT

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DEPARTMENT OF
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Abbreviations and Acronyms

Abbreviations	Explanation
BRTS	Bus Rapid Transit Systems
DCA	Draft Concession Agreement
DEA	Department of Economic Affairs
EoI	Expression of Interest
GoI	Government of India
HAM	Hybrid Annuity Mode
IFS	Infrastructure Finance Secretariat
INR	Indian Rupees
InvIT	Infrastructure Investment Trust
MLD	Million liters per day
Mn	Million
MoRTH	Ministry of Road Transport and Highways
NH	National Highways
NHAI	National Highway Authority of India
NIP	National Infrastructure Pipeline
NMP	National Monetisation Plan
O&M	Operation and Maintenance
PHED	Public Health and Engineering Department

Abbreviations	Explanation
PPP	Public Private Partnership
PSA	Project Sponsoring Authority
PS&W	Ministry of Ports, Shipping and Waterways
RfP	Request for Proposal
RfQ	Request for Qualification
SH	State Highways
SWM	Municipal Solid waste management
TA	Transaction Advisor
TOT	Toll Operate Transfer
USD	United States Dollar
UT	Union Territory
W&S	Water and sanitation

Introduction

Public-private partnerships (PPPs) are increasingly growing as a preferred mode of project delivery by governments throughout the world for providing access to infrastructure services to their citizens. Government of India is also promoting PPPs and has strong and continued commitment towards stepping up spending on infrastructure and keeping the investments planned under National Infrastructure Pipeline on track, which was reinforced in the landmark Union Budget 2021-22. With the dual aim of countering the negative impact on the economy caused by the COVID-19 pandemic as well as striving to achieve the target of India becoming a USD 5 trillion economy, the Government is giving a fresh boost to the private sector, for them to play a greater role in India's infrastructure development.

PPPs have been able to deliver some of the most successful infrastructure projects in various sectors. However, PPPs may not be suitable for all types of projects and many sectors have encountered problems with implementing PPP projects effectively. Thus, it is essential to identify that which project can be implemented on PPP mode particularly at an early stage so as to have the right approach from the beginning.

The Government is committed in creating a robust pipeline of qualitative infrastructure projects which can attract private sector interest and investments. In supporting this endeavor, the Infrastructure Finance Secretariat (IFS) in Department of Economic Affairs (DEA) has developed “**PPP Structuring Toolkit**” to support the Project Sponsoring Authorities (PSA) to develop their projects with professional approach.

The PPP structuring Toolkit is a web-based resource that has been designed to help improve decision-making for Project Sponsoring Authorities to improve the quality of the structuring of PPPs. The Toolkit currently covers **eight** infrastructure sectors:

- Road & Highway
- Port
- Municipal Solid waste management (SWM)
- Water and sanitation (W&S)
- Urban transport (Bus Rapid Transit Systems - BRTS)
- Healthcare
- Education and

- Tourism (International Convention Centre)

Figure 1: Sectors of the Toolkit



The Toolkit has been designed to strengthen decision-making at all key stages of the PPP project cycle and also improve the quality of the PPPs that are being developed by project officers at the Central, State and Municipal levels. It should be used as a learning tool and as a resource for best practice approach in developing PPP projects.

This Handbook provides an introduction to the online Public-Private Partnership (PPP) Structuring Toolkit. It gives an overview of the contents in the Toolkit, explains how to use the Toolkit and briefly introduces the tools of the Toolkit.

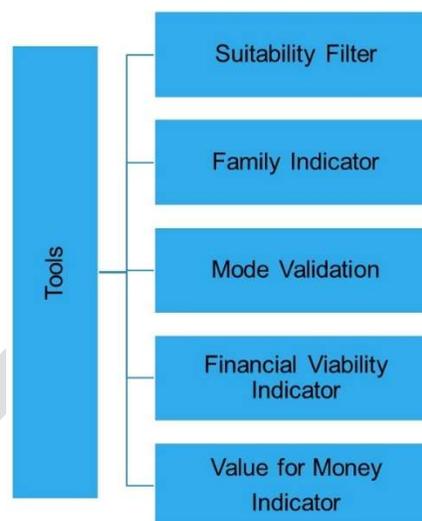
The tools assist the professionals in answering the following questions:

1. Whether the project is attractive to be implemented on PPP basis?
2. If, yes which family of PPP does the project belong?
3. Which is best mode to implement the project in the selected family?
4. Whether the project is financially viable?

The tools of PPP Structuring Toolkit are explained under this handbook. The toolkit contains five web and excel based tools developed to support project structuring. These tools are as below:

- **Suitability filter:** This is the key tool to test whether the project is suitable to be developed on PPP basis. It tests for qualitative factors that have an impact on the ease or challenges of developing a project on PPP basis. It provides **Go/ No-Go** decision for the project to be implemented on PPP. This tool also acts a preliminary **qualitative value for money tool**.
- **Family indicator:** Family indicator tools help to identify the appropriate PPP family that the project may be best fit. The tool uses a decision tree in identifying the PPP family.
- **Mode validation:** The mode validation is based on the risk profile of the project.
- **Financial viability indicator:** Financial viability indicator examines the viability of the project with returns on various PPP modes.
- **Value for money indicator:** VFM tool helps to examine whether the project provides for value for money if structured as a PPP project.

Figure 2: Tools for Project development



The tools and its usability in the project lifecycle are defined below:

Figure 3: Summary of Tools and their usability

Tool	What's it for?	For use in which phase of the PPP Process?		
		Pre-feasibility	Feasibility	Procurement
PPP Suitability Filter	Should you do the project on PPP? A Go/No Go decision	✓		
PPP Family Indicator	Which type of PPP Family?	✓		
PPP Mode validation	Risk-based mode check	✓	✓	
Financial Viability Model	Viable for private partners?	✓	✓	✓
VFM Indicator	Likely VFM public sponsor?	✓	✓	✓

Each of the above tools are discussed in the subsequent chapters. The Toolkit is available on www.pppinindia.gov.in.

Chapter 1: Navigating PPP Structuring Toolkit

The Toolkit is available on the <https://www.pppinindia.gov.in/> under the section Knowledge Products with sub category Online Toolkits as shown in the figure below:

Figure 4: Access toolkit on the PPP India portal



Once you access the PPP Structuring Toolkit, the user may register himself to the portal, this will help the user in saving their work for future use and also prevent repetition from redoing the work.

Figure 5: Register on the PPP Structuring Toolkit

A screenshot of the 'Sign Up' form on the PPP Structuring Toolkit portal. The form is titled 'Sign Up' and includes a sub-header 'If you are new to this toolkit section. Start Here'. The 'Your Details' section contains several input fields: Name, Email, Phone Number, and Designation. There are also dropdown menus for Authority and Ministry. A Password field is present with a list of criteria: one lowercase letter, one uppercase letter, one number, one special character (e.g., @, #, \$, %, ^, &, *), and a minimum of 8 characters. At the bottom, there is a checkbox for 'I'm not a robot' and a CAPTCHA image. A blue 'Sign Up' button is located at the bottom right of the form. Below the button, there is a link for 'Already have an account? Sign In'.

While registering on the PPP Structuring Toolkit you will have to create a username and password for yourself. The Password chosen should meet the following criteria.

- Should be minimum 8 letters
- One UPPERCASE letter
- One lower case letter
- One number
- One Special Character (@, #, \$, %, ^, &, *)

Figure 6: Example of Username and Password

User name: Lotus123	Password: Qifelis@wesome
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Once the user will login, they will see the “Dashboard” section. In this section the user will be able to see the progress of all his saved tools.

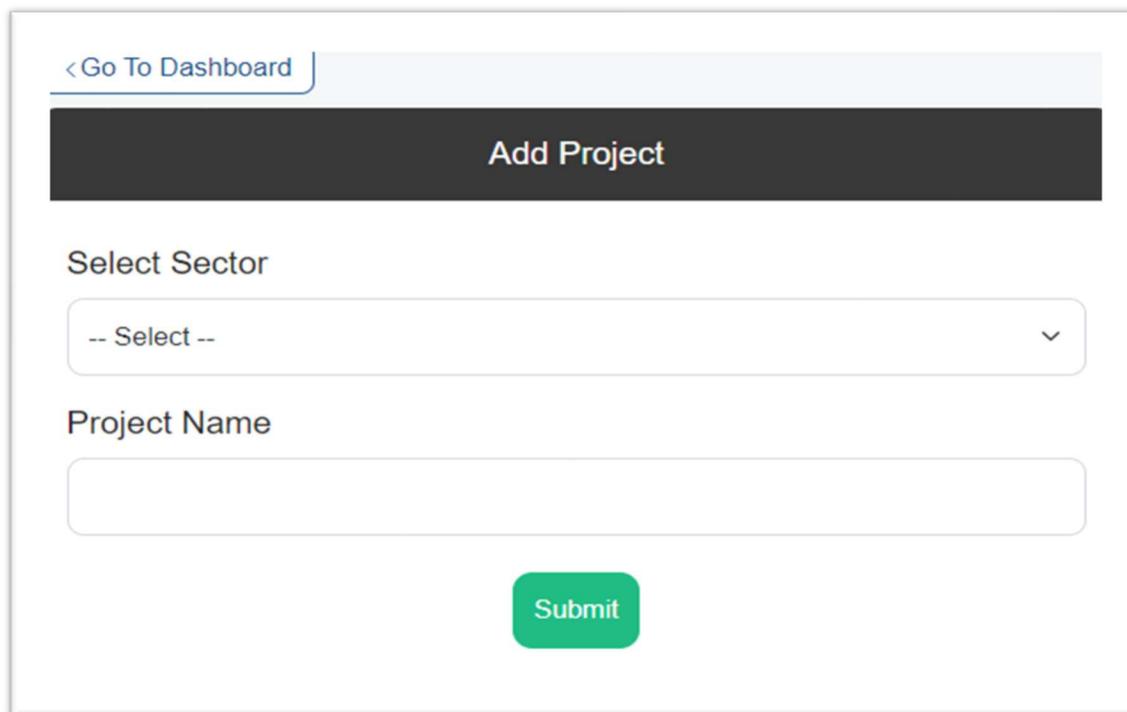
Figure 7: Overview of the Dashboard

Sector	Project Name	Suitability Filter Tool	Family Indicator Tool	Mode Validation Tool
Water and Sanitation	Tirupur Water and Sanitation Project	Completed 	Completed 	Completed 
Road and Highway	BSRDCL_Bakhtyarpur	Completed 	Completed 	Completed 

Financial Viability Indicator Tool	VFM Indicator Tool	Status	Started At	Download	Action
(Click here to upload your updated version and dashboard)	(Click here to upload your updated version and dashboard)	60% 	02 Aug 2023		
(Click here to upload your updated version and dashboard)	(Click here to upload your updated version and dashboard)	60% 	26 Jul 2023		

The user can add, delete and upload new projects as shown in the figure below.

Figure 8: Creating New Project in the Toolkit



< Go To Dashboard

Add Project

Select Sector

-- Select --

Project Name

Submit

To add a new project the user should click the “**Add Project**” icon on the top right of the Dashboard. It will open a new screen to add the sector and name the project as shown in the adjacent figure.

Chapter 2: Users of the PPP Structuring Toolkit

The Toolkit is built keeping in mind the increasing number of professionals entering the PPP arena in the Project Sponsoring Authorities. This is a **ONE STOP** practical shop to understand the PPP sector and practice.

The users can create dummy/real projects in the Toolkit to understand their project they are aiming to design and develop with their Transaction Advisors.

A user might use the Toolkit for specific parts that they are interested in at any particular time. The work is stored in a cloud environment, accessible from anywhere, through logging in.

The user can update his Photo, Department, Communication details in the profile section of the toolkit.

The user can also delete their toolkit account if they so desire.

The toolkit provides several advantages to its use. Some of the key advantages are:

- Provide direction to the user and helps in effective structuring of PPP project
- Educate the user to various PPP options available without much support from external agencies
- Provides easy to understand analytical tools
- Provides clear view of all the modals of a PPP variant
- Provides easy accessibility to the Toolkit.
- It is time saving and cost-effective process
- Improve quality of project structuring
- Streamline the review submission process

The user can reach out the IFS connect in case they face any difficulty while working with the toolkit. The contact details are provided for the in the Contact Us

Contact UsChapter 3: Suitability Filter Tool

The tool consists of a set of questions on thirteen identified parameters to determine the likelihood of the project to be developed on PPP basis. The filter proposes to check the readiness of the project at an early stage. The filter provides for **Go/ No-Go** decision for the project. The tool provides option to the user to define the weightage for each section. The user needs to ensure that the **weightage is always 100** for all the questions answered. The tool also gives options to user the **skip** the question, in such case the question will not be used to calculate the final outcome.

Figure 9: Screenshot of the Suitability Filter (1/2)

The screenshot displays the 'Suitability Filter' tool interface. At the top right, a red circle highlights the text 'Total Weightage of Questions : 100'. Below this is a horizontal progress bar with six segments: 'No Go' (red), 'Very Difficult' (pink), 'Difficult' (orange), 'Possible' (yellow), 'Attractive' (green), and 'Very Attractive' (dark green). The 'Attractive' segment is currently selected. The main content area is divided into sections. The first section is 'Legal Limitations and Policy Support'. It contains question 1: '1. Are there laws or other legal restrictions that limit PPPs?'. The options are: 'PPP's specifically enabled in primary legislation' (selected), 'No known legal restrictions', 'There are legal restrictions on some aspects of a PPP', and 'PPP's disallowed by existing laws'. A 'Skip' button is circled in red. To the right of the question is a 'Very Attractive' button. The second section is 'Government support for the project'. It contains question 3: '3. Is there Government Support for the project / sector?'. The options are: 'Sector is part of the Flagship scheme of Central and State Govt' (selected), 'Sector is part of the Flagship scheme of Central Govt', 'Support exist at State / local authority level only', and 'No Support'. A 'Skip' button is present. To the right of the question is a 'Very Attractive' button. Below this is question 4: '4. Is there support for the PPP in the affected communities?'. The options are: 'Local community is informed, engaged and supportive of PPP Project' (selected), 'Local community not informed or engaged, but previously supportive of PPP project', 'Local community not informed or engaged over the PPP project', and 'Local community actively opposing the PPP project'. A 'Skip' button is present. To the right of the question is a 'Very Attractive' button.

Figure 10: Screenshot of the Suitability Filter (2/2)

Public sector PPP capacity and experience

5. Is there a PPP Unit/Dept in the State? ⓘ

- PPP unit exists with decision-making powers
- PPP unit exists with advisory powers
- PPP unit has not been established

Skip Very Attractive

6. Does the Sponsoring Agency have the capabilities to develop and procure PPPs? ⓘ

- Full set of capabilities
- Some capabilities
- No or very little capability

Skip Possible

7. Does the Sponsoring Agency have the capabilities to manage and monitor a PPP contract? ⓘ

- Full set of capabilities
- Some capabilities
- No or very little capability

Skip Possible

8. Does the Sponsoring Agency have previous experience with PPPs? ⓘ

- Extensive experience (5+ projects), including similar PPPs
- Limited experience (1-3 projects), including similar PPPs
- Some experience with other sector PPPs, or no previous PPP experience

Skip Very Attractive

9. Would the physical infrastructure pass through multiple jurisdictions? ⓘ

- Project fully contained within one jurisdiction
- Project in two jurisdictions
- Project in multiple jurisdictions with previous experience of shared PPPs
- Project in multiple jurisdictions with limited or no previous PPP experience

Skip Very Attractive

Public sector funding assistance for PPPs

10. Is funding assistance available for project development? ⓘ

- Budget has been set aside (sanctioned project)
- PDA funds are available (following application)
- Uncertainty as to availability
- No PD budget is available

Skip Attractive

11. Is the project likely to be eligible for Viability Gap Funding? ⓘ

- Project is likely to be eligible for Viability Gap Funding
- Project is unlikely to be eligible for Viability Gap Funding

Skip Very Attractive

12. Is the project likely to be eligible for funding from other grant schemes? ⓘ

- Project is likely to be eligible for funding from other government schemes
- Project is unlikely to be eligible for funding from other government schemes

Skip Very Attractive

13. Is the project eligible for funding / guarantees from multi-lateral agencies? ⓘ

- Project is likely to be eligible for funding from multi-lateral agencies
- Project is unlikely to be eligible for funding from multi-lateral agencies

Skip Very Attractive

The filter provides answers thirteen parameters to evaluate the preparedness of the project to be developed under the PPP mode. These parameters are listed below:

Figure 11: PPP Suitability filter parameters

Parameters	Questions	Explanation
Legal	<ul style="list-style-type: none"> • Are there laws or other legal restrictions that limit PPPs? • Does a policy for private participation in the sector exist? 	Legal parameters help the user to understand if the law permits the implementation of PPPs or not?
Administrative	<ul style="list-style-type: none"> • Is there Govt/Administrative Support for the sector/ project? Is there support of PPP in the affected communities? 	Administrative parameter helps the user to understand if the public environment is supportive for the implementation of PPP projects.
Public sector PPP capacity and experience	<ul style="list-style-type: none"> • Is there a PPP Unit/Dept in the State? • Does the Project Sponsoring Agency have the capabilities to procure PPPs? • Does the Sponsoring Agency have the capabilities to manage and monitor a PPP contract? • Does the Sponsoring Agency have previous experience with PPPs? • Would the physical infrastructure pass through multiple jurisdictions? 	This parameter analyses PSAs capacity to execute and implement PPP project.
Public sector funding assistance for PPPs	<ul style="list-style-type: none"> • Is funding assistance available for project development? • Is the project likely to be eligible for Viability Gap Funding? 	This parameter helps in understanding different funding options that may be available for the development of the project to the PSA.

Parameters	Questions	Explanation
	<ul style="list-style-type: none"> • Is the project likely to be eligible for funding from other grant schemes? • Is the project eligible for funding / guarantees from multi-lateral agencies? 	
Private Sector	<ul style="list-style-type: none"> • Are multiple firms active in the PPP market? • Have other similar PPP projects reached Financial Close? 	These parameters assess private sector participation and interest in the PPP projects in the chosen sector.
Land availability and acquisition	<ul style="list-style-type: none"> • Will the PPP require land acquisition? • If land acquisition is required, will the public sector do this? 	These parameters assess land requirement and potential issues related to acquisition of land for the project and their impact on the project timelines.
Environmental and Social Impact	<ul style="list-style-type: none"> • Will the PPP have significant environmental impacts? • Will the PPP have significant social impacts? 	These parameters assess the impact of the project on Environment and social factors related to it.
Labour	<ul style="list-style-type: none"> • Will a significant transfer of employees take place under the PPP? • Have there been successful transfers under previous PPPs? • Is the project likely to result in job losses? 	These parameters helps the PSA in evaluating potential unrest by the employees and to prepare for its resolution.
Tariffs	<ul style="list-style-type: none"> • What is the main revenue source for the project? • If tolled, how much demand risk is there? • How are user charges set? • What is the track record of Project Sponsoring Authority in paying subsidies / annuity payments? 	This parameter evaluates the PSA ability to set the user charges and ability to pay the contractor on timely basis.

Parameters	Questions	Explanation
Project Size	<ul style="list-style-type: none"> • What is the project value? 	<p>This parameter assesses the size of the project so that it is worthy enough to be implemented on PPP basis. PPP projects generally have higher transactions costs than conventional procurements. Hence, projects need to be large enough for the expected efficiency savings from a PPP to exceed these higher transactions costs.</p>
Bundling	<ul style="list-style-type: none"> • Do life-cycle costs exceed construction costs? 	<p>A PPP is likely to be suitable where the operating performance (quality and/or cost) of a project is dependent on its design and construction and it is difficult to separately appraise them. Where the two are largely independent, then separate construction and operating contracts can be used.</p> <p>Where operating costs and life cycle costs are not significantly part of the total cost, separate construction and operation contracts should be given.</p> <p>This parameter helps in understanding the relationship between the life cycle cost to construction cost.</p>
Outputs	<ul style="list-style-type: none"> • Are outputs definable, measurable and verifiable? 	<p>If it is not possible to clearly specify outputs then there is a high risk of disputes arising during the course of the PPP. There should also be an agreed understanding on the desired outputs before proceeding to PPP procurement.</p>
Timing	<ul style="list-style-type: none"> • Are there time constraints? • Can PPP project be tendered at a short notice? 	<p>A PPP procurement will generally take more time than a conventional procurement-although this will be offset by the faster speed of delivery once the contract is awarded. If there are significant time constraints on the contracting process, a PPP may not be appropriate. This parameter emphasizes on the time available to procure the PPP.</p>

The parameters collectively help in answering five key questions, such as:

1. How supportive is the public sector to undertake the project?
2. Whether the private sector has interest in the sector?
3. How is the ease of doing business in the sector?
4. How well suited are the project characteristics to a PPP?
5. How do other factors impact on the viability of PPP projects?

The result of the Filter is a **Go or No-Go decision** for the underlying project. The result may be used to improve the identified areas of weaknesses in the project which makes it less attractive to be developed on PPP mode.

Figure 12: Output of Suitability filter tool



Question: When should we use the Suitability Filter tool?

Answer: The Suitability Filter tool should be used during Project Identification Phase of the PPP development process. The tool assists the officer with Go/No Go decision for the project to be developed on PPP basis.

Chapter 4: Family Indicator Tool

Once we get a go ahead to develop the project on PPP basis, the next immediate question is to understand who will pay for this project? PPP projects determine their family tree based on who will pay for the service. Would it be paid by the citizens, who are in need and willing to pay for the service i.e., **User Pay** or would it be paid by the Project Sponsoring Authority who wants to develop the project to improve the lifestyle of its citizens, i.e., **Authority Pay**. The Family Indicator tool uses decision tree to help in arriving at the best family option to deliver the project. The figure below shows the tool on the web portal.

Figure 13:PPP Family Indicator Tool - an overview

The screenshot displays the 'Family Indicator Tool' interface. It features a header with the tool's name and a sub-header 'Critical PPP Design Questions'. Below this, four questions are presented in a vertical sequence, each with a corresponding dropdown menu. The questions and their selected options are:

- 1. Would the project be a capex-based (capital expenditure) or an opex-based (operating expenditure with no capex) PPP??
Selected: Capex-based project (includes opex also)
- 2. Would assets under the proposed PPP be 'greenfield' (newly-built) or 'brownfield' (additions to existing infrastructure)?
Selected: Brownfield assets
- 3. Which party would own the assets under the PPP?
Selected: Assets would be publicly owned
- 4. Finance responsibility: For any water and sanitation sector PPP involving capex the main finance source will be the private sector
Selected: Private sector finance required

Below the questions, a section titled 'Results: Indicative PPP family' provides three key outputs:

- Indicative roles for private sectors:** Design, finance, construction, operation and maintenance
- Suggest PPP "family":** User Pay
- Typical revenue structures:** User Charges

At the bottom of the interface, there are two buttons: 'Save' and 'Save and Finish'.

Question: When to use the Family Indicator tool?

Answer: The Family Indicator tool should be used during Project Identification Phase of the PPP development process to determine the possible PPP family for the project.

DRAFT

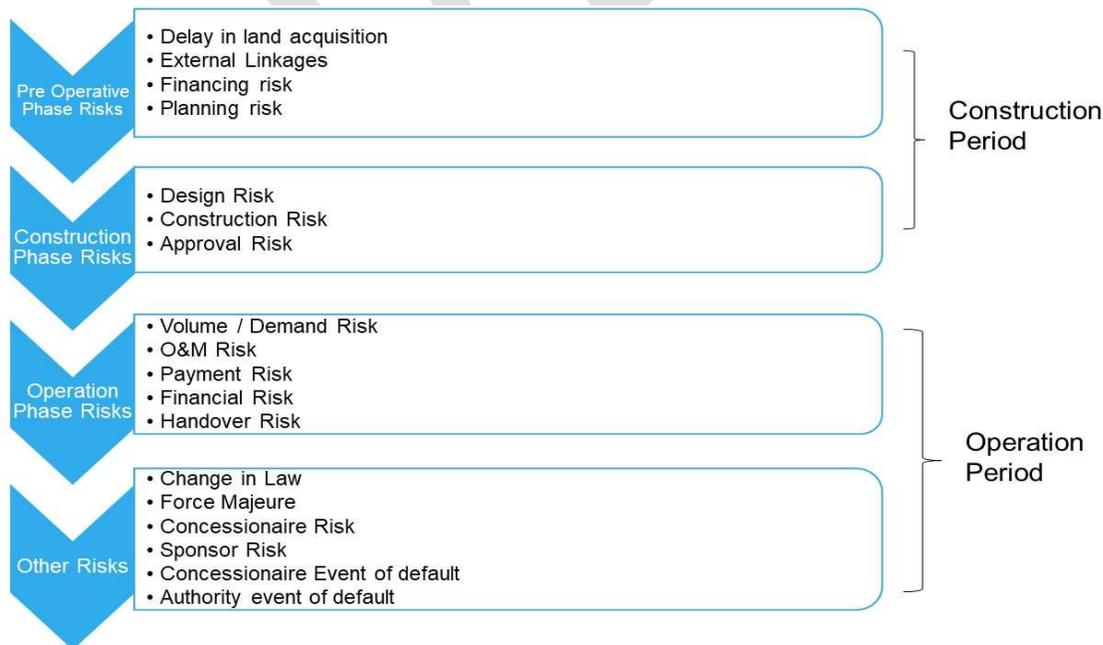
Chapter 5: Mode Validation Tool

The Mode Validation tool analyses risk allocation approach to test the primary choice of best PPP ‘family’ for the project received from the Family Indicator tool. The aim of the tool is to make the user think about the risk that the project will incur at different stages of its lifecycle. The tool provides for three categories of risk sharing i.e., risk to be shared by Private Sector, Risk to be shared by Public Sector or the risk shared by both, “Shared” risks. The users are also provided with the flexibility to allocate risks based on the best understanding of them to choose best party to mitigate the desired risk.

The tool compares the chosen risk for the project to the preferred risk allocation based on the PPP family selected and its mode for implementation.

It is suggested that the users should reallocate the risks in case there are differences between the preferred allocation and the typical allocations. In this way, users should get a better sense of the best suited PPP mode. The tool defines major risk in a PPP life cycle as shown in the figure below:

Figure 14: Risk in PPP Lifecycle



Each of the risk is defined in the table below:

Risks	Description
Pre-Operative Phase Risks	
Delay in land acquisition	Refers to the risk that the project site will be unavailable or unable to be used within the required time, or in the manner or the cost anticipated or the site will generate unanticipated liabilities due to existing encumbrances and native claims being made on the site.
External linkages	Refers to the risk that adequate and timely connectivity to the project site is not available, which may impact the commencement of construction and the overall pace of development of the project. Eg. Road's connectivity to the project site.
Financing risks	Refers to the risk that sufficient finance will not be available for the project at a reasonable cost (e.g., because of changes in market conditions or credit availability) resulting in delays in the financial closure of a project.
Planning risks	Refers to the risk that the pre-development studies (technical, legal, financial, and others) conducted are inadequate or not robust enough resulting in possible deviations from the planned or expected outcomes in the PPP project development.
Approval risk	Refers to the risk that necessary permits, authorisations, and approvals required before the start of construction are not obtained in a timely fashion, resulting in delays to construction and the project as a whole.
Construction Phase Risk	
Design risk	Refers to the risk that the proposed design will not meet the performance and service requirements in the output specification. It can result in additional costs for modification and redesign.
Construction risk	Refers to the risk that the construction of the assets required for the project will not be completed on time, within budget, or to specification. It may lead to additional raw materials and labour costs, an increase in the cost of maintaining existing infrastructure or providing a temporary alternative solution due to a delay in the provision of the service.
Approval risk	Refers to the risk that delays in approvals to be obtained during the construction phase will result in a delay in the construction of the assets as per the construction schedule. Such delays in obtaining approvals may lead to cost overruns.
Operation Phase risk	
Technology risk	Refers to the risk that the technology used will be unexpectedly superseded during the term of the project and will not be able to satisfy the requirements in the output specifications. It would result in increased costs of replacement technology.

Risks	Description
O&M risk	Refers to the risks associated with the need for increased maintenance of the assets over the term of the project to meet performance requirements.
Volume / Demand risk	Refers to the risk that demand for service will vary from that initially projected, such that the total revenue derived from the project over the project term will vary from initial expectations. There is no risk in annuity contracts for the private sector.
Payment risk	Refers to the risk that tolls are not collected in full or are not set at a level that allows recovery of costs. This is a risk for the public sector under shadow tolls and for the private sector under user tolls. There is no risk in annuity contracts.
Financial risk	Refers to the risk that the private sector overstresses a project by inappropriate financial structuring. It can result in additional funding costs for increased margins or unexpected refinancing costs.
Handover risk	Refers to the risk that the concessionaire will default in the handover of the asset at the end of the project term or will deviate from the minimum quality/value of the asset that needs to be handed back to the public entity.
Other risks	
Change in law	Refers to the risk that the current legal/regulatory regime will change, having a material adverse impact on the project.
Force Majeure	Refers to the risk that events beyond the control of either entity may occur, resulting in a material adverse impact on either party's ability to perform its obligations under the PPP contract. E.g.: pandemics, strikes, act of war.
Sponsor risk	Refers to the risk that the Equity sponsor will prove to be an unsuitable partner for the project, for example, lack of financing support to the SPV, poor project management or a failure to fully recognise the agreed terms of the Concession Agreement.
Concessionaire event of default	Refers to the risk that the private entity will not fulfil its contractual obligations and that the Project Sponsoring Authority will be unable to either enforce those obligations against the sponsors or recover some form of compensation or remedy from the sponsors for any loss sustained by it as a result of the breach or the private partner will prove to be inappropriate or unsuitable for delivery of the project.
Authority event of default	Refers to the risk that the Project Sponsoring Authority will not fulfil its contractual obligations and that the Concessionaire will be unable to either enforce those obligations against the Authority or recover some form of compensation or remedy from the Authority for any loss sustained by it as a result of the breach.

The figure below depicts how the tool works on the portal.

Figure 15:PPP Mode Validation Tool – snapshot

Preferred PPP mode for comparison (Step1)

User Pay

#	Risk Type	Sensitive	Relevance during the concession	Preferred Allocation (Step2)	Typical allocation under User Pay
A. Pre Operative Phase Risks					
A.1	Delays in land acquisition	High	0-2 years	Public Sector	Public Sector
A.2	External Linkages	High	0-2 years	Public Sector	Public Sector
A.3	Financing Risks	Medium	0-2 years	Private Sector	Private Sector
A.4	Planning	Medium	0-2 years	Private Sector	Private Sector
A.5	Approvals(Other than Construction)	Medium	0-2 years	Public Sector	Public Sector

Question: When to use the Mode Validation tool?

Answer: The Mode Validation tool should be first used during Project identification Phase of the PPP development process and while conducting prefeasibility study.

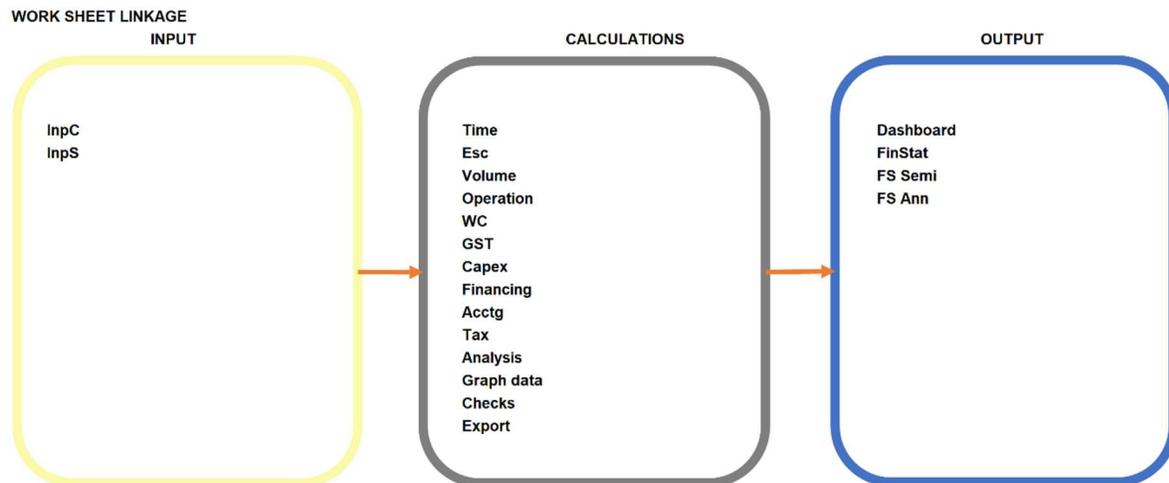
Chapter 6: Financial Viability Indicator Tool

A user-friendly financial model in Microsoft Excel with VBA (.xlsm) (Visual Basic for application) file is provided. The model works on Microsoft excel (2003 or later) versions. The model provides for financial assessment of the desired project in different implementation modes.

The financial model is customized for all the sectors of the Toolkit. It provides users with the ability to see the returns from the PPP project to be implemented in different modes. The tools provide quantitative assessment of the project, to get an indication of whether the proposed PPP would be likely to attract private partners and to show the financial implications would be for the public sector.

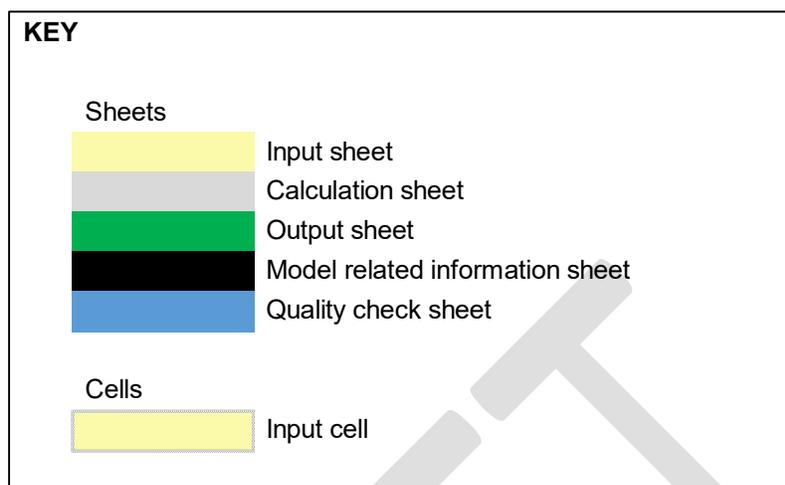
It clearly defines inputs on a stand-alone (InpC sheet) and time series (InpS sheet) basis along with key outputs (Dashboard sheet). The tool has been built in line with financial modelling best practices. There is a clear distinction for input sheets, calculation sheets and output sheets as shown in the figure below.

Figure 16: Financial model worksheet linkages



The excel file also provides for color coding used in the model and description of each sheet in the “Index” sheet. Color coding used in the model is described as below:

Figure 17: Financial model tool Key



The model assumes financial year to start from April 1 and end on March 31 of the following year. The excel file has a “**Model book**” sheet which guides the user on how to use the model and update it.

The model also provides for “**Edit Log**” sheet. This sheet is basically used to document changes made to the scenarios related to the inputs and also document the owner/initiator of the change suggested. It also helps document the queries user may have to be discussed with the PSA/TA.

The financial model provides for the key financial statements provided on quarterly, semi-annual and annual basis. These statements are:

- Profit & Loss Statement
- Cashflow Statement
- Balance Sheet
- Sources and Uses Statement

Users can run and store outputs for 5 scenarios in excel file. It is important for the users to have macros enabled to use the model. The scenarios tested may be as below but not limited to:

- Determine user charge to be paid to make the project financially viable and attractive
- Determine Government support in the form of Viability Gap Funding will be needed to make the project viable
- To test the level of traffic needed to make the project attractive to private sector
- Tests for various construction and maintenance profiles for the project

Below is the screenshot of the dashboard of Financial Viability tool.

Figure 18: Financial viability tool dashboard – Port sector (1/4)

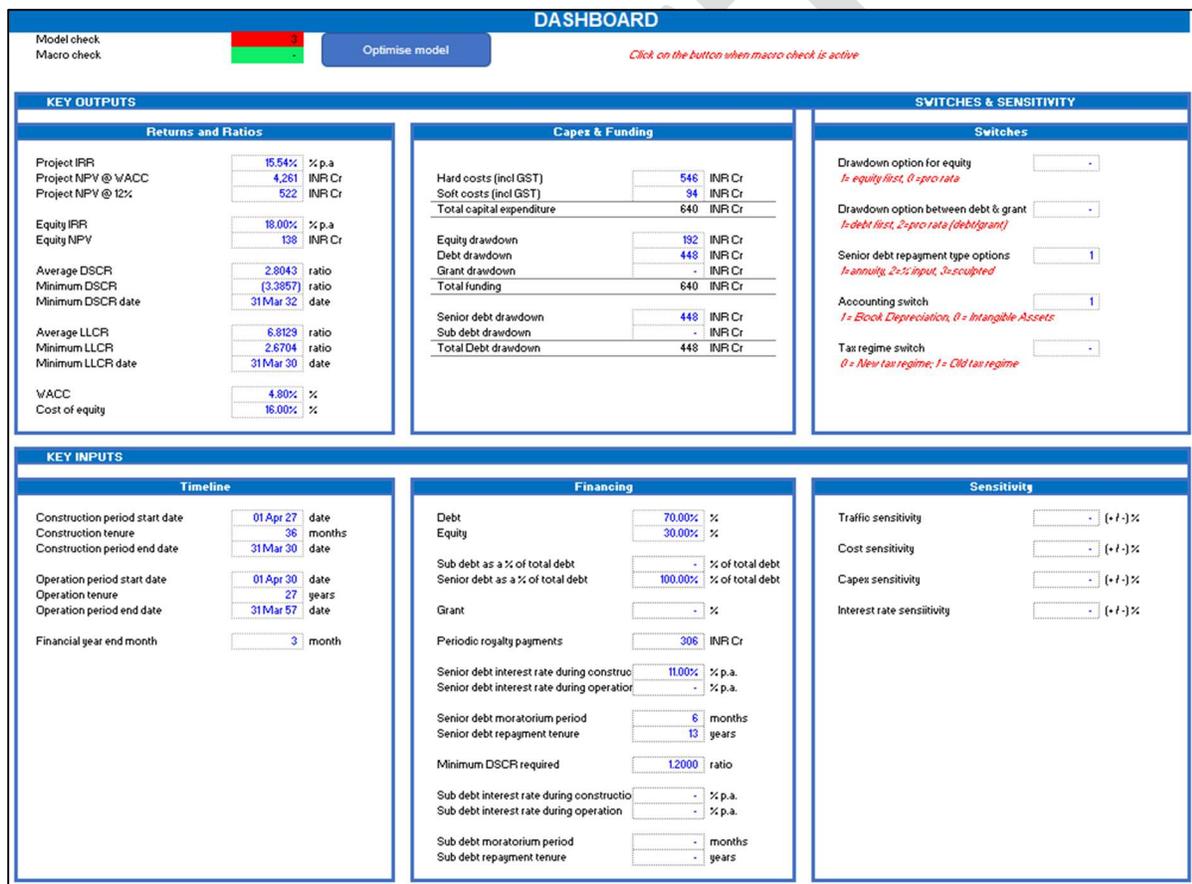


Figure 19: Financial viability tool dashboard – Port sector (2/4)

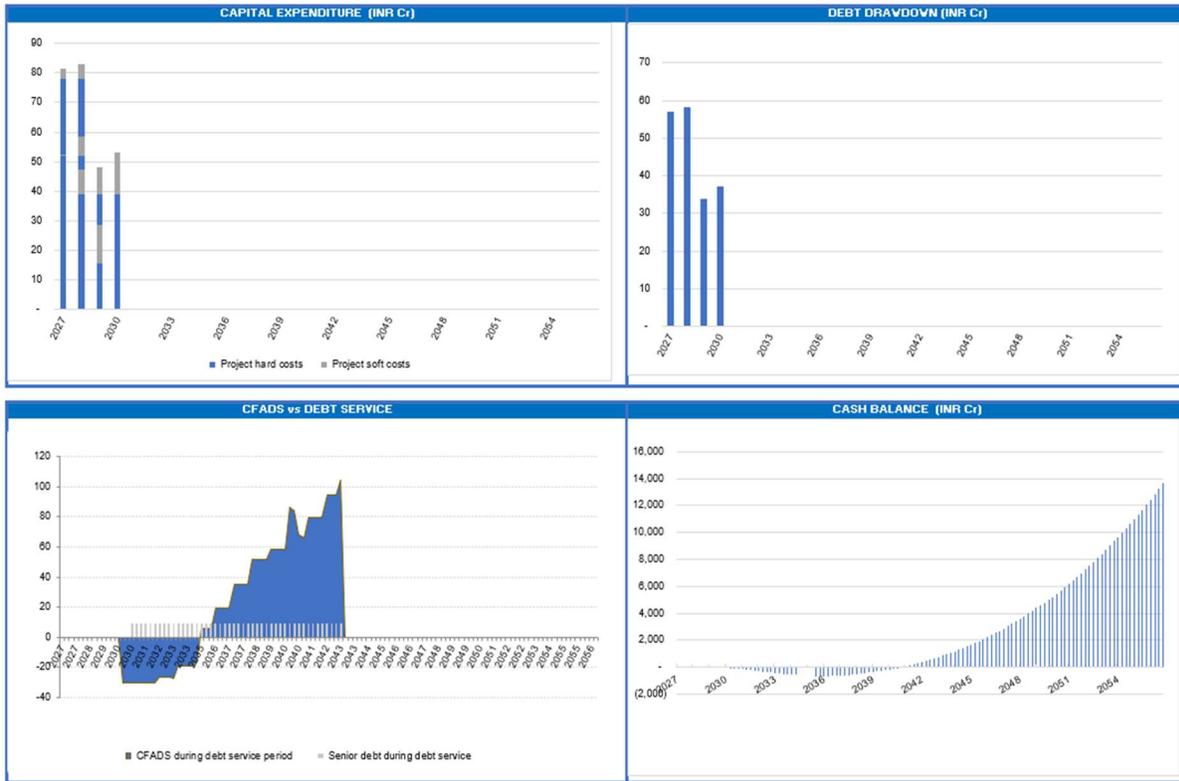


Figure 20: Financial viability tool dashboard – Port sector (3/4)

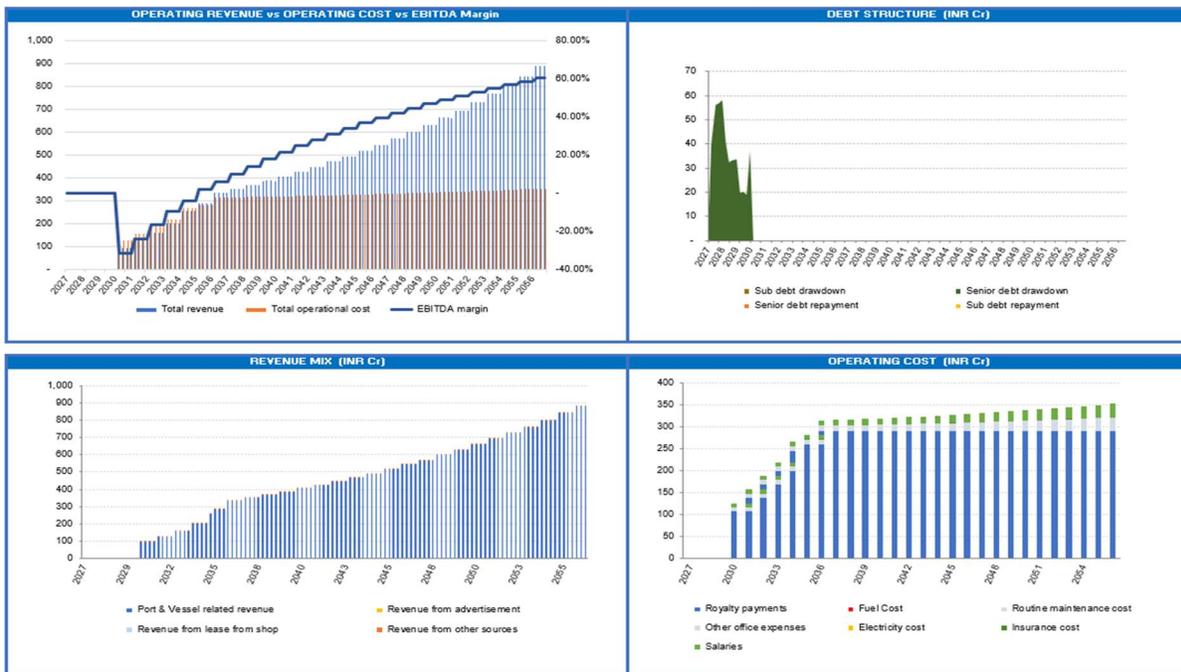
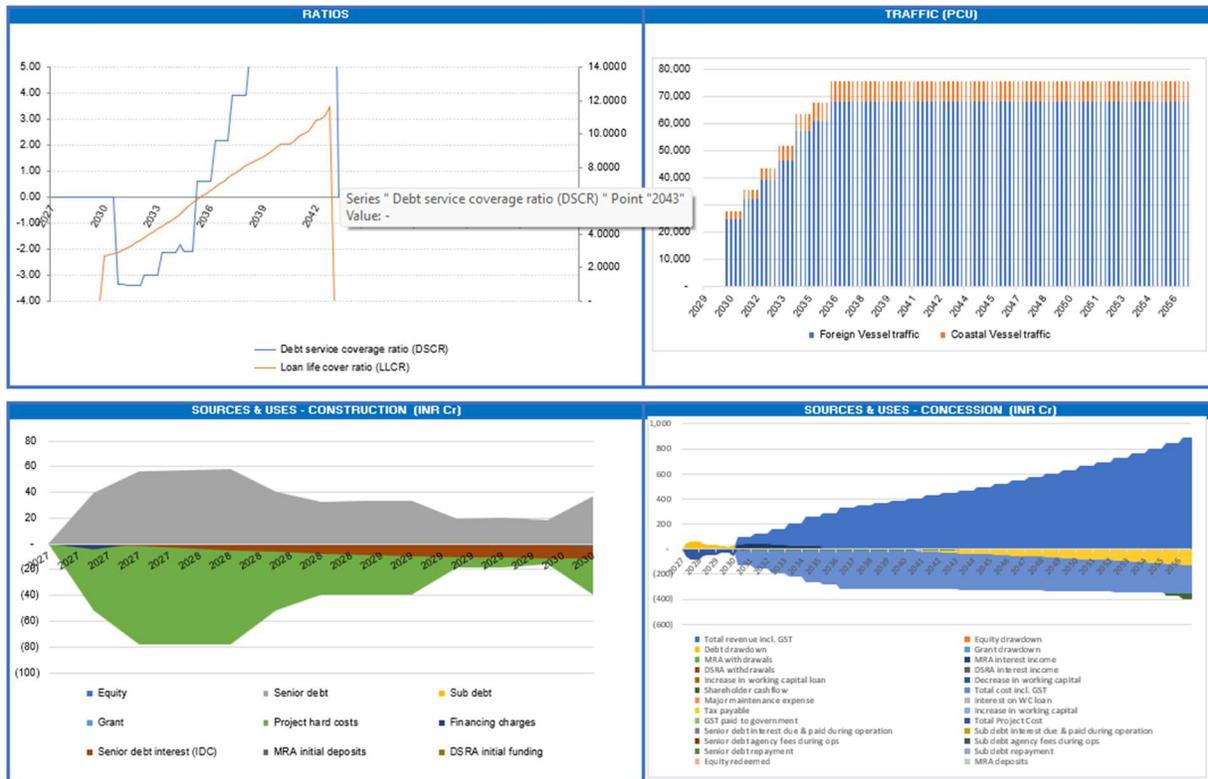


Figure 21: Financial viability tool dashboard – Port sector (4/4)



Each of the sector is explained below:

Road and Highway

The model provides to test viability for Greenfield 2 lane, 4 lane or 6 lane road respectively. It also helps explore the option for each project to be tested on toll charges, annuity, hybrid annuity, operation and maintenance and Toll operate and Transfer basis.

Figure 22: Components of Financial Viability Indicator – Road & Highway

Category	BOT – Toll	BOT – Annuity	BOT – HAM	OMT	TOT
Traffic	Included	n/a	n/a	n/a	Included
Bidding Criteria	Highest Upfront premium Highest Revenue Share Lowest VGF	Lowest Annuity Lowest VGF	Lowest Annuity	Lowest annual maintenance	Highest upfront Premium
Revenue	Toll Revenue	Annuity	Annuity	Annual maintenance	Toll Revenue
Operating Cost	Toll Plaza cost Toll Collection Expense O&M Cost Other Office Expenditure Electricity and Patrolling IE/IA expenses Insurance Routine Maintenance	Toll Plaza cost O&M Cost Other Office Expenditure Electricity and Patrolling IE/IA expenses Insurance Routine Maintenance	Toll Plaza cost O&M Cost Other Office Expenditure Electricity and Patrolling IE/IA expenses Insurance Routine Maintenance	Toll Plaza cost O&M Cost Other Office Expenditure Electricity and Patrolling IE/IA expenses Insurance Routine Maintenance	Toll Plaza cost O&M Cost Other Office Expenditure Electricity and Patrolling IE/IA expenses Insurance Routine Maintenance
Financing					
Sources of Funds	Equity	Equity	Equity	Equity	Equity
	Senior Debt	Senior Debt	Senior Debt	Senior Debt	Senior Debt
	Sub Debt	Sub Debt	Sub Debt	Sub Debt	Sub Debt
	VGF Grant	VGF Grant	Grant – 40% construction	n/a without Capital Expenditure	VGF Grant
Taxes	GST / Corp Tax	GST / Corp Tax	GST / Corp Tax	GST / Corp Tax	GST / Corp Tax
Major Maintenance	Included	Included	Included	n/a	included

Port

The model provides for new port development, adding a new berth and modernization on ports. The outcome of the model is to test for Potential Royalty payments the public sector may generate from the project.

Figure 23: Components of Financial Viability Indicator – Port

Category	BOT	BOT – Lease (BOLT)	OMT
Traffic	Included	n/a	n/a
Bidding Criteria	Highest Royalty Payments Lowest VGF	Highest Lease Rent Lowest VGF	Lowest annual maintenance
Revenue	Water side revenues – GRT, Pilotage, Vessel Handling charges Berth side revenues – Berthing, handling & Wharfage Charges, Land side revenues		Annual maintenance
Phasing	Phased development		No Phasing
Capital Expenditure (10 Categories to be provided for)	Civil Construction Cost Equipment Cost Insurance Contingency Pre operative Costs	Civil Construction Cost Equipment Cost Insurance Contingency Pre operative Costs	Provides for No Capex but major maintenance
Operating Cost	Port Operations License Fees Royalty Payments O&M Cost Other O&M Cost IE/IA expenses Insurance Routine Maintenance	Lease rent Port Operations License Fees O&M Cost Other O&M Cost IE/IA expenses Insurance Routine Maintenance	Port Operations License Fees Royalty Payments O&M Cost Other O&M Cost IE/IA expenses Insurance Routine Maintenance
Financing			
Sources of Funds	Equity	Equity	Equity
	Senior Debt Sub Debt	Senior Debt Sub Debt	Senior Debt Sub Debt
	VGF Grant	VGF Grant	n/a without major expenditure
Taxes	GST / Corporation Tax	GST / Corporation Tax	GST / Corporation Tax
Major Maintenance	Included	Included	n/a

Solid Waste management

The model provides for development of integrated solid waste management plant, collection and disposal, Integrated Treatment and Disposal. It also helps explore the option for each project to be tested on user charges, annuity / tipping fees, hybrid annuity and operation and maintenance basis.

Figure 24: Components of Financial Viability Indicator - SWM

Category	BOT – User Pay	BOT – Annuity (tipping fees)	BOT – HAM	OMT
Volume	Included	Included	Included	Included
Bidding Criteria	Highest Upfront premium Highest Royalty Lowest VGF	Lowest Annuity Lowest VGF	Lowest Annuity	Lowest annual maintenance
Revenue	User charge Sale of extracted metals Sale of energy/ electricity	Tipping / Gate fees Sale of extracted metals Sale of energy/ electricity	Tipping / Gate fees Sale of extracted metals Sale of energy/ electricity	Tipping / Gate fees Sale of extracted metals Sale of energy/ electricity
Operating Cost	C&T Cost Waste Processing cost Landfill cost Fuel Cost Vehicle Maintenance Other Office Expenditure Electricity IE/IA expenses Insurance Routine Maintenance	C&T Cost Waste Processing cost Landfill cost Vehicle Maintenance Other Office Expenditure Electricity IE/IA expenses Insurance Routine Maintenance	C&T Cost Waste Processing cost Landfill cost Vehicle Maintenance Electricity IE/IA expenses Insurance Routine Maintenance	C&T Cost Waste Processing cost Landfill cost Vehicle Maintenance Electricity IE/IA expenses Insurance Routine Maintenance
Financing				
Sources of Funds	Equity	Equity	Equity	Equity
	Senior Debt Sub Debt	Senior Debt Sub Debt	Senior Debt Sub Debt	Senior Debt Sub Debt
	VGF Grant	VGF Grant	Grant – 40% construction	n/a without Capital Expenditure
Taxes	GST / Corporation Tax	GST / Corporation Tax	GST / Corporation Tax	GST / Corporation Tax
Major Maintenance	Included	Included	Included	n/a

Water and Sanitation

The model provides for Bulk Water supply, Water treatment and supply and Integrated Water supply to a region in this tool. It also helps explore the option for each project to be tested on the basis of user charges, Annuity / Tipping Fees, Hybrid annuity and Operation and maintenance,

Figure 25: Components of Financial Viability Indicator – W&S

Category	BOT – User Pay	BOT – Annuity	BOT – HAM	OMT
Volume	Included	Included	Included	Included
Bidding Criteria	Highest Upfront premium Lowest tariff Lowest VGF	Lowest Annuity Lowest VGF	Lowest Annuity	Lowest annual maintenance
Revenue	User charge Sale of treated water Non-Water revenues			
Operating Cost	Chemicals Connection cost Purchase of raw water Power consumption Salaries and expenses Other admin expenses IE/IA expenses Insurance Routine Maintenance	Chemicals Connection cost Purchase of raw water Power consumption Salaries and expenses Other admin expenses IE/IA expenses Insurance Routine Maintenance	Chemicals Connection cost Purchase of raw water Power consumption Salaries and expenses Other admin expenses IE/IA expenses Insurance Routine Maintenance	Chemicals Connection cost Purchase of raw water Power consumption Salaries and expenses Other admin expenses IE/IA expenses Insurance Routine Maintenance
Financing				
Sources of Funds	Equity	Equity	Equity	Equity
	Senior Debt Sub Debt	Senior Debt Sub Debt	Senior Debt Sub Debt	Senior Debt Sub Debt
	VGF Grant	VGF Grant	VGF Grant	n/a without Capital Expenditure
Taxes	GST / Corporation Tax			
Major Maintenance	Included	Included	Included	n/a

Urban Transport (Bus Rapid Transit System)

The model provides for development of greenfield Integrated BRTS in a region in this tool. It also helps explore the option for each project to be tested on user charges, annuity and Operation and maintenance basis. The areas of the tool may be used to determine level of traffic needed to make the project viable, grant needed to make the project lucrative for the private sector.

Figure 26: Components of Financial Viability Indicator – BRTS

Category	BOT	BOT – Annuity	OMT
Traffic	Included	n/a	n/a
Bidding Criteria	Highest Premium Payments/ revenue share Lowest VGF	Lowest management fee Lowest VGF	Lowest management fee / Highest premium payment or revenue share
Revenue	Bus fare, Advertising revenue, Lease rentals, Infrastructure usage charge		Annual maintenance
Phasing	Phased development with Major maintenance		No Phasing
Capital Expenditure (10 Categories to be provided for)	Civil Construction Cost Rolling Stock Cost Signaling, Bus Terminal, Depot Car Shed, workshop, Parking Project development cost Insurance Contingency Pre operative costs	Civil Construction Cost Rolling Stock Cost Signaling, Bus Terminal, Depot Car Shed, workshop, Parking Project development cost Insurance Contingency Pre operative costs	Provides for No Capex but major maintenance
Operating Cost	Bus Operations Upfront Premium O&M Cost Salary & wages Energy Cost Other O&M Cost IE/IA expenses Insurance Routine Maintenance	Bus Operations Maintenance Fee O&M Cost Salary & wages Energy Cost Other O&M Cost IE/IA expenses Insurance Routine Maintenance	Bus Operations O&M Cost Salary & wages Energy Cost Other O&M Cost IE/IA expenses Insurance Routine Maintenance
Financing			
Sources of Funds	Equity	Equity	Equity
	Senior Debt Sub Debt	Senior Debt Sub Debt	Senior Debt Sub Debt
	Grant	Grant	VGF n/a without major expenditure
Taxes	GST / Corporation Tax	GST / Corporation Tax	GST / Corporation Tax
Major Maintenance	Included	Included	n/a

Tourism (International Convention Centre)

The model provides for development of International convention Centre along with Exhibition Hall, Mall, Hotels, Accommodation. The user can choose their criteria. The outcome of the model is to test for Potential Lease rentals/ revenue share public sector may generate from the project.

Figure 27: Components of Financial Viability Indicator – Tourism (ICC)

Category	BOT User Pay	BOT Authority Pay	BOT – Authority Pay (HAM)	Management
Volume	Included	Included	Included	Included
Bidding Criteria	Highest Upfront premium Highest Revenue Share Lowest VGF	Lowest Annuity Lowest VGF	Lowest Annuity	Lowest annual maintenance
Revenue	Rental Income from Convention center Food and Beverage Mixed use development income	Lowest Annuity	Lowest Annuity	Rental Income from Convention center Food and Beverage Mixed use development income
Operating Cost	Revenue Share Operating Expenses Food and Beverage Vehicle Maintenance Other Office Expenditure Electricity IE/IA expenses Insurance Routine Maintenance	Operating Expenses Food and Beverage Vehicle Maintenance Other Office Expenditure Electricity IE/IA expenses Insurance Routine Maintenance	Operating Expenses Food and Beverage Vehicle Maintenance Other Office Expenditure Electricity IE/IA expenses Insurance Routine Maintenance	Maintenance Fees Operating Expenses Food and Beverage Vehicle Maintenance Other Office Expenditure Electricity IE/IA expenses Insurance Routine Maintenance
Financing				
Sources of Funds	Equity	Equity	Equity	Equity
	Senior Debt Sub Debt	Senior Debt Sub Debt	Senior Debt Sub Debt	Senior Debt Sub Debt
	VGF Grant	VGF Grant	Grant – 40% construction	n/a without Capital Expenditure

Category	BOT User Pay	BOT Authority Pay	BOT – Authority Pay (HAM)	Management
Taxes	GST / Corporation Tax	GST / Corporation Tax	GST / Corporation Tax	GST / Corporation Tax
Major Maintenance	Included	Included	Included	n/a

Education (Schools)

The model provides to test viability for Greenfield School development. It also helps explore the option for each project to be tested on user charges, annuity, hybrid annuity, operation and maintenance respectively.

Figure 28: Components of Financial Viability Indicator – School

Category	BOT User Pay	BOT Authority Pay	BOT – Authority Pay (HAM)	Management
Volume	Included	Included	Included	Included
Bidding Criteria	Highest Upfront premium Highest Revenue Share Lowest VGF	Lowest Annuity Lowest VGF	Lowest Annuity	Lowest annual maintenance
Revenue	Rental Income from Convention center Food and Beverage Mixed use development income	Lowest Annuity	Lowest Annuity	Rental Income from Convention center Food and Beverage Mixed use development income
Operating Cost	Revenue Share Operating Expenses Food and Beverage Vehicle Maintenance Other Office Expenditure Electricity IE/IA expenses Insurance Routine Maintenance	Operating Expenses Food and Beverage Vehicle Maintenance Other Office Expenditure Electricity IE/IA expenses Insurance Routine Maintenance	Operating Expenses Food and Beverage Vehicle Maintenance Other Office Expenditure Electricity IE/IA expenses Insurance Routine Maintenance	Maintenance Fees Operating Expenses Food and Beverage Vehicle Maintenance Other Office Expenditure Electricity IE/IA expenses Insurance Routine Maintenance
Financing				

Sources of Funds	Equity	Equity	Equity	Equity
	Senior Debt Sub Debt	Senior Debt Sub Debt	Senior Debt Sub Debt	Senior Debt Sub Debt
	VGF Grant	VGF Grant	Grant – 40% construction	n/a without Capital Expenditure
Taxes	GST / Corporation Tax	GST / Corporation Tax	GST / Corporation Tax	GST / Corporation Tax
Major Maintenance	Included	Included	Included	n/a

Question: When to use the Financial Viability Indicator tool?

Answer: The Financial Viability Indicator tool should be used during Project Identification Phase, PPP Feasibility and PPP Procurement Phase. The tool should also be used during operation phase to measure the deviation from agreed financial close case.

Chapter 7: Value for Money Indicator Tool

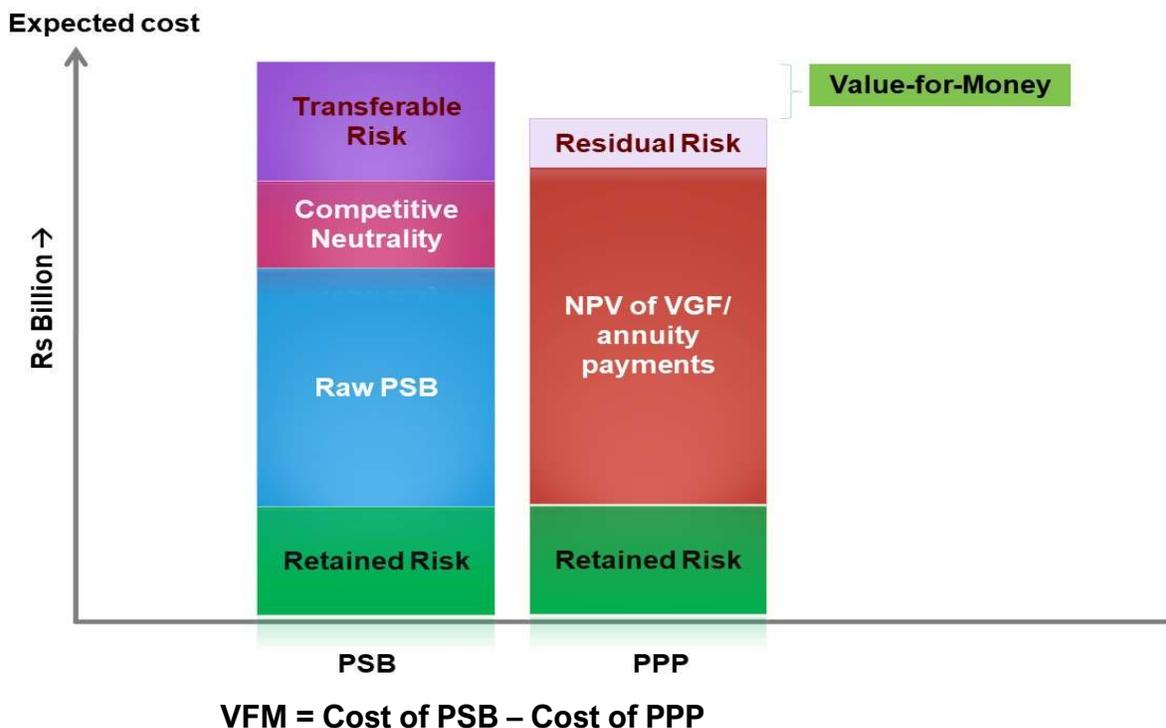
Value for Money (VfM) means the public sector is financially better off if the project is implemented as a PPP rather than if it is done as a traditional public sector project. If a project is not expected to provide VfM for the public sector then the project should not be implemented as a PPP.

The VfM Indicator tool 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.

The tool is a downloadable excel file and uses the outputs from the Financial Viability Indicator tool to determine Value for money.

It is good practice to carry out a qualitative assessment of likely VfM in any case by using the Suitability Filter.

Figure 29: Value for money



A VfM test compares the estimated cost of procuring the project in the public sector (the traditional route) with the estimated cost of procuring it as a PPP. The public sector procurement option is called the public sector benchmark (PSB).

Figure 30: Illustrative calculation for Value for money

Present value inputs are calculated using cashflows provided by the Financial Viability Indicator tool, discounted at the user-input discount rate.
All calculations should be made in nominal terms.

Cash costs and receipts - from Financial Viability Indicator tool		<i>PSB</i>	<i>PPP</i>
PV of payments for a public sector project	<i>R cr.</i>	220.6	
PV of payments under PPP	<i>R cr.</i>		15.2
Total costs for public finances	<i>R cr.</i>	220.6	15.2
Gross VAT received	<i>R cr.</i>	0.0	0.0
Corporate tax (including MAT) received	<i>R cr.</i>		19.3
Third party income (eg, tolls, charges, advertising) received	<i>R cr.</i>	276.4	
Total receipts for public finances	<i>R cr.</i>	276.4	19.3
Net cash cost to Public Finances (= costs - receipts)	<i>R cr.</i>	-55.8	-4.1
Risk adjustment		<i>PSB</i>	<i>PPP</i>
Expected value of risk that would be transferred under PPP	<i>R cr.</i>	116.4	
Expected cost of added risks from a PPP for the public sector	<i>R cr.</i>		0.8
Adjusted net cost to Public Finances	<i>R cr.</i>	60.6	-4.9
Expected VFM	<i>R cr.</i>		65.5

Question: When to use the Value for Money Indicator tool?

Answer: The Value for Money Indicator tool should be used during Project Identification Phase and Feasibility Phase.

Frequently asked questions (FAQs)



1. How do I access the PPP Structuring toolkit?

The PPP structuring toolkit can be accessed from www.pppinindia.gov.in

2. Who can create username and log in to the PPP Structuring toolkit?

The toolkit is primarily designed for the officials of Project Sponsoring Authorities, but anyone can create their username and login. To assist in creating username kindly refer to [Chapter 1: Navigating PPP Structuring Toolkit](#)

3. Which sectors are currently covered in the current toolkit?

The toolkit currently covers five sectors namely,

- Roads and Highway
- Port
- Solid Waste Management
- Water and Sanitation
- Urban transport (BRTS)

4. Can we get new sectors to added in the toolkit?

Yes, IFS is open to add new sectors to the toolkit based on the request received from the users. The request may be sent through any communication medium mentioned in

[Contact Us](#)

5. How many tools are there in this toolkit?

There are five Tools developed for the users in the toolkit. These tools are as below:

- PPP Suitability Filter
- PPP Family Indicator
- PPP Mode Indicator
- Financial Viability Indicator
- Value for Money Indicator

6. Who will benefit from the toolkit?

The toolkit is designed as ONE STOP shop for all the officials of Project Sponsoring Authority. It provides valuable insights to young professionals starting their careers in PPP and also for seasoned and experienced PPP professionals.

7. Can I save my work in the toolkit?

Yes, Toolkit provides options to save your work.

8. Can I download the tools that I have filled and updated?

Yes, user can download the tools in **pdf** format if needed. However, the user has to mandatory download Financial Viability Indicator and Value for money Indicator tool to update them.

9. In excel file download macros are disabled. How should I enable them?

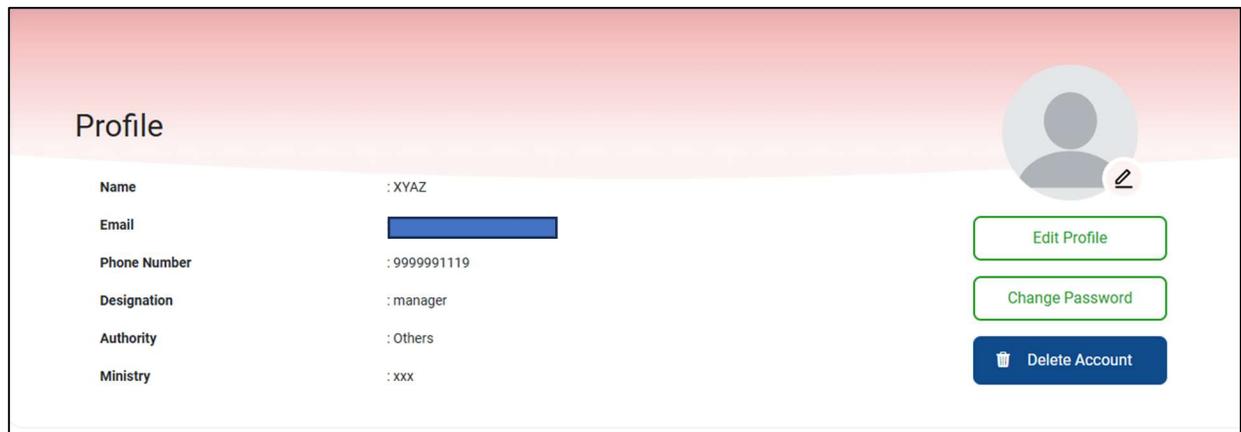
To enable macros in a downloaded Excel file, you'll need to adjust a few settings depending on how Excel is handling the file.

- a) When you open the file, Excel may show a yellow Security Warning bar at the top:
Click Enable Content to allow macros for that session.
- b) Download the file, check file properties, in the security tab, click "unblock"

10. Can I delete my account from the Toolkit?

Yes, Toolkit provides the flexibility to delete your account. However, all your saved work will be deleted if you exercise the option. You can delete your account from the profile section on the top right-hand side of the toolkit.

Figure 31: Profile account on the toolkit



Contact Us

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Disclaimer

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