# **P3-VALUE 2.0**

# QUICK START GUIDE

# January 2016









#### **Use of Quick Start Guide**

The purpose of the Quick Start Guide is to provide the user with a brief overview of the P3-VALUE 2.0 tool. The Quick Start Guide describes a series of basic step-by-step instructions used to navigate the inputs and outputs of the tool. For more detailed instructions and the methodology behind the tool, please see the Guide to P3-VALUE 2.0.

## **Opening P3-VALUE 2.0**

- **1.** Open P3-VALUE 2.0 excel file.
- 2. When opening the file, Excel may prompt the user to approve the use of macros. To do so, click "Enable editing" and/or "Enable content" on the yellow bar across the top of the screen.
- **3**. After the model opens, the following user form will appear.

Navigator Selection	×
Welcome to P3-VALUE 2.0! This tool has been designed to help you perform Value-for-Money (VfM) and Project Delivery Benefit-Cost Analysis (PDBCA) for highway projects. The model also contains risk assessment and financial analysis modules. For guidance on how to use this tool, please refer to the User & Concept Guide accompanying P3-VALUE 2.0. If you wish to use P3-VALUE 2.0 in a training setting, please click on the Training Navigator button below. The Training Navigator contains four different modules that allow you to access only those inputs and outputs that are relevant to the selected training module.	
If you would like to explore the full P3-VALUE 2.0 model, please click on the Model Navigator button.           Model Navigator   Training Navigator	

4. Select the "Model Navigator" to access the full model. The "Training Navigator" contains four training modules that provide limited access to only the most relevant inputs and outputs for a particular training session.

#### **Using the Model Navigator**

If "Model Navigator" is selected, the following user form will appear. The Model Navigator enables the user to navigate the P3-VALUE 2.0 tool. If the user wishes to switch to the Training Navigator, one may do so by clicking the "Go to Training Navigator" button on the top right. The user can exit the Navigator at any point by clicking on the exit "X" at the top right corner of the Navigator. To access the Navigator again, simply click on the "Navigator" button on the toolbar (see below).



	Model Navigator	
View Type High Level: Shows inpu C High Level: Shows inpu C Detailed Level: Shows a	t, landing and output sheets Ill sheets	Go to Training Navigator
Shared Elements	Value-for-Money Revenues	Project Delivery BCA
Core Calculations	PSC	Benefits
Risks	P3	PDBCA Outputs
	VfM Outputs	
Risks	P3 VfM Outputs	PDBCA Output

The Model Navigator has two different view options: a high level and a detailed level view. Users can choose between the high level view and detailed level view using the radio buttons at the top left of the Navigator.

In the high level view, the user has access only to the inputs, landing sheets (see below) and outputs. Detailed calculation sheets are hidden to provide the user with overall understanding of the model flow and

logic. By clicking on any of the buttons in the high level view, the Model Navigator will either list the relevant input sheets (for the "Inputs" button), output sheets (for the "Risks", "VfM Outputs" and "PDBCA Outputs" buttons) or take the user to the relevant landing sheet (for all other buttons). For the listed input and output sheets, the user can click on them to directly access these input and output sheets.

In the detailed level view, all sheets are visible and accessible to the user. By clicking on any of the buttons in the detailed level view, the Model Navigator will list all relevant worksheets. The screenshot to the right shows what the user will see if he or she clicks on the P3 button (in the Value-for-Money section).





The user can click on any of the listed worksheets to navigate to a particular worksheet. While the high level view enables the user to navigate the model through landing sheets, the detailed level view enables the user to navigate to each individual sheet in the model.

## **Using the Landing Sheets**

The landing sheets provide an overview of each module's components (elements used as inputs to the calculations in the module, calculations carried out within the module, and a list of outputs and modules that are affected by this module's calculations) in a flow chart format. As an example, the screenshot below shows the landing sheet for the Revenues module.



The landing sheet can also be used to navigate the model. To access the landing sheet, click on any button in the high level view. By double clicking on any of the sheet names listed on the landing sheet, the user will be taken to the selected sheet. This functionality works both in the high level and detailed level view (in the high level view, the selected sheet will in fact be unhidden to be visible to the user).

#### **Using the Toolbar**

The model also contains a toolbar that is visible in all worksheets (except on the Home worksheet). The toolbar contains the following three buttons.



The user can use the toolbar to navigate or optimize the model:

- Click the **Home** button to view the model flow diagram.
- Click the **Navigator** button to load the Model Navigator and navigate to a worksheet.
- Click the **Model Optimizer** button to calculate the required subsidy/availability payment while simultaneously optimizing the project's financing.

#### **Enter Inputs**

 Navigate to the following worksheets (input worksheet tabs are highlighted in yellow) to enter inputs. All yellow cells within these sheets can be altered whereas non-highlighted cells should not be modified.



- **InpTiming&Cost**: This sheet contains project timing, cost, and escalation inputs. In addition, it contains non-changeable (constant) inputs, which are used throughout the model and should not be changed.
- **InpTraffic&Toll**: This sheet contains traffic and tolling inputs as well as roadway characteristics.
- **InpSeries**: This sheet contains time series inputs for pre-construction, construction, traffic rampup, and subsidy/milestone payments for Conventional Delivery and P3 scenarios.
- **InpFin**: This sheet contains discount rate, tax and financial inputs including subsidies, interest rates, target debt service coverage ratios (DSCRs), equity returns, reserve requirements, etc.
- **InpRisk**: This sheet contains pure risk, base variability, lifecycle performance risk, and revenue uncertainty adjustment inputs.
- **InpBCA**: This sheet contains all additional inputs required for benefit-cost analysis (BCA) calculations.
- **2.** Use the drop down box in cell F6 of the InpFin sheet to toggle between different combinations of P3 and Conventional Delivery scenarios:
  - o PSC: Tolled, P3: Toll concession
  - o PSC: Tolled, P3: Availability Payment
  - o PSC: Not tolled, P3 Availability Payment

You can enter scenario-specific inputs into columns I, J, and K of the InpFin sheet. The selected scenario column will be highlighted in yellow while the other input columns are greyed out.

#### **Optimize P3-VALUE 2.0**

Once inputs have been entered and reviewed, click the **Model Optimizer** button, which calculates the required subsidy/availability payment required to make the project financially feasible while simultaneously optimizing the project's financing.

#### **Review Detailed Calculations**

Use the Model Navigator to navigate to the various modules and worksheets to review the detailed calculations used for VfM and PDBCA. To be able to access the calculation sheets, the user should switch to the detailed level view. The user may want to review some or all of the following calculation modules:

- Shared Elements (Both VfM & PDBCA): Core Calculations, which include timing and escalation, traffic, construction and O&M cost, base variability, pure risk and lifecycle performance risk calculations
- o VfM: Revenues, PSC & P3 financial calculations
- o PDBCA: Travel costs and benefit calculations

## **Review Outputs: Risk, VfM and PDBCA**

Click on the various output sheets under each of the output modules – Risks, VfM Outputs and PDBCA Outputs in the Model Navigator to review the results of the risk analysis, VfM analysis, and Project Delivery BCA.