



# Project Portfolio Tool User Guide

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# Introduction

This User Guide for the Queensland Treasury Corporation Project Portfolio Tool has been developed in conjunction with the Project Decision Framework ('PDF'). This guide has been designed to assist users in the day-to-day use of the tool, including guidance on how to input data and effectively use the reports. It is not an extensive guide as to the methodology or calculations used in the tool, however, commentary around these points is provided where necessary to assist with the use of the tool.

The PDF is an overarching system through which decision making for new projects can be disciplined, robust and in the best interests of the community. It has a deliberate and specific focus on the time invested at the start of a project in order to maximise cost efficiencies, optimise resource allocation and achieve positive community outcomes while minimising risks and uncertainties. The PDF provides a scaffold of information, tools and templates from which a local government can build, or improve upon its existing decision making processes.

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# 1 Introducing the Project Portfolio Tool

## 1.1 Overview

The Project Portfolio Tool (‘the Tool’) has been developed as part of Queensland Treasury Corporation’s Project Decision Framework (‘PDF’) to assist local governments to make better project decisions.

The Tool is designed for use by local governments (‘the User’) to act as the central depository of key information for up to 50 proposed projects. It summarises information and presents key information in a format that allows ease of comparison for decision makers.

Inputs are clearly identified and are divided between six worksheets, two for general inputs and one for each project stage in the PDF. Outputs include a project summary dashboard and an options comparison dashboard.

- The project summary report summarises key information for a single project option.
- The options comparison report provides decision makers with a side by side comparison of the key information for different project options.

To reduce the chance of accidental changes to critical elements and calculations, the Tool has been locked with the exception of input cells. The calculations remain visible and accessible for examination.

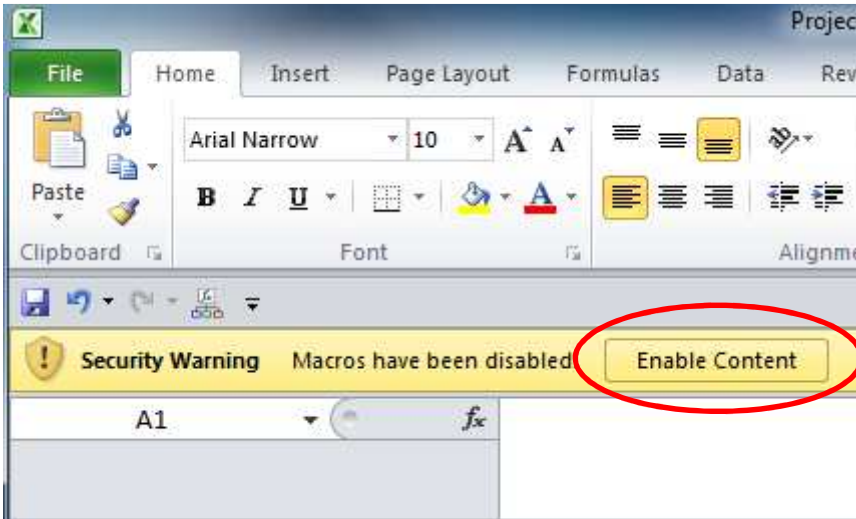
## 1.2 Microsoft Excel Settings

The Tool uses a number of Microsoft Excel (‘Excel’) settings which may not be set by default on the User’s system. These settings may also reset to a different default setting without user intervention and will need to be returned to the required setting.

### 1.2.1 Enable macros

For the Tool to operate effectively, macros are required to be enabled. By default, macros in Excel are either not permitted or a warning message (a message box or yellow message bar at the top of the screen) will ask whether the user wishes to enable macros. Excel can be configured to always accept macros to prevent the User having to enable macros each time the Tool is opened, however, your System Administrator may not allow this.

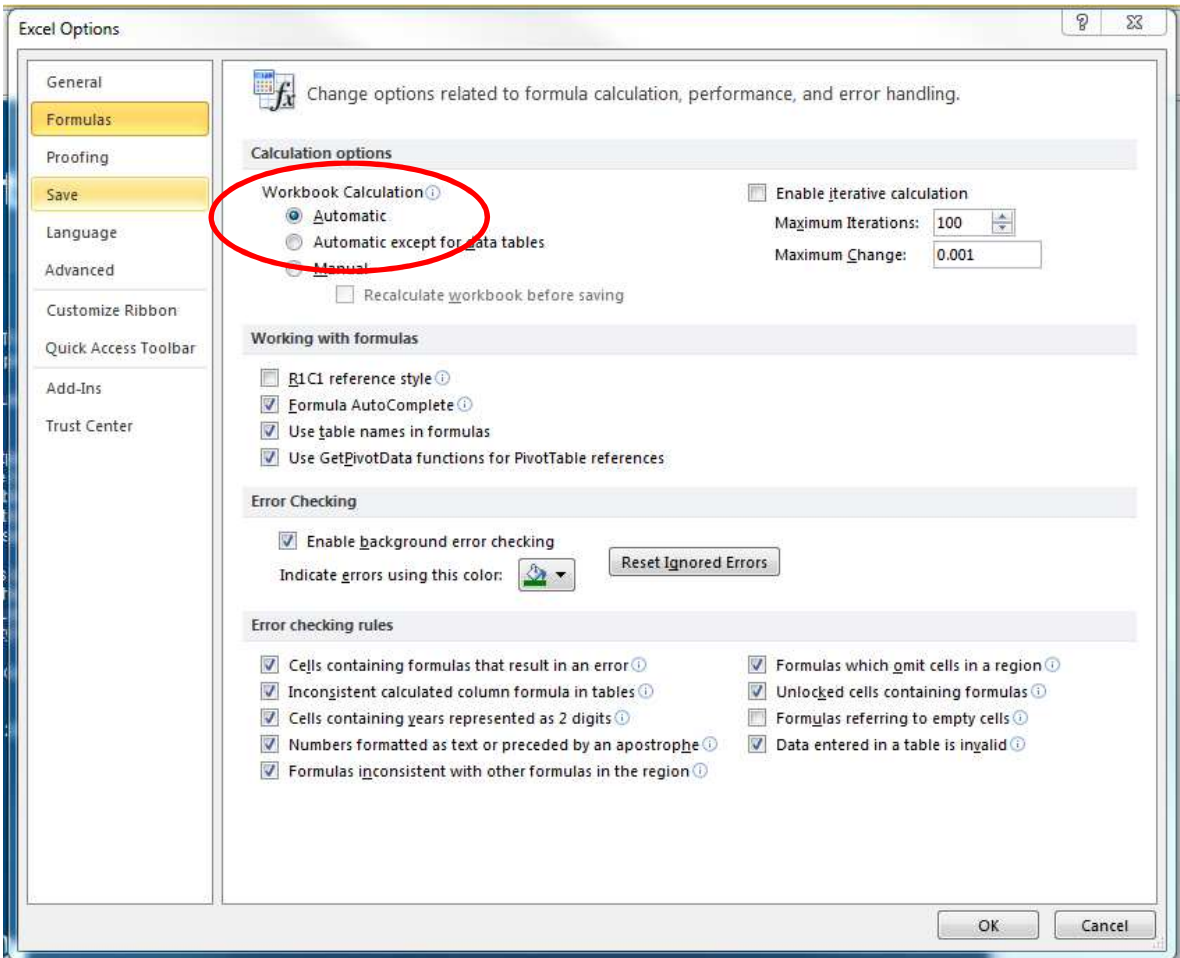
FIGURE 1 – MACRO SECURITY WARNING



### 1.2.2 Automatic calculations

The Tool requires Excel’s calculation mode to be set to ‘Automatic’. This is achieved by navigating to File>Options>Formulas>Workbook Calculations. The Tool will not function correctly if this is not enabled.

FIGURE 2 – LOCATION OF THE AUTOMATIC CALCULATION OPTION



### 1.3 Navigation

The Tool includes easy navigation links between the project stages (input worksheets) and to the dashboard reports (output worksheets). The Index is the primary method of navigation. It has links to each section of the Tool, grouped into input and output worksheets.

The Index can be navigated to by clicking on the index button in the standardised header at the top of each worksheet.

FIGURE 3 – INDEX BUTTON



### 1.4 Conditional formatting

The Tool uses conditional formatting to assist the User with entering valid data.

Input cells have a yellow background for ease of identification. All inputs in the tool are formatted in this way.

Cells with a white background have pre-determined inputs or will auto-calculate based on user inputs as the User moves through the Tool.

Conditional formatting is used throughout the Tool for input fields which require earlier project stages to be approved before input cells become active. Input cells are shaded out as the proposed project has not been approved at a prior stage.

FIGURE 4 – INPUT AND PRE-DETERMINED CELLS AND CONDITONAL FORMATTING

Input cell	
Pre-determined input cell	QTC Project Portfolio Tool
Conditionally formatted cell	

## 2 Populating the Tool

### 2.1 General Project Inputs (sheet 'GenIn')

The General Project Inputs worksheet captures inputs for risk definitions, ratings and categories as well as the units that will be used in the Tool (eg, thousands). The General Project Inputs worksheet also has input cells for the User to define the project origin, asset types, department and agency types, cost estimates and funding sources.

Default inputs have been included in this section based on the standard PDF methodology, however, they can be redefined or customised by the User to fit a local government's existing definitions. The User may return to the General Project Inputs worksheet to include additional inputs as they are required at each stage of the PDF.

Please note where an input has been assigned a ranking, the scale must be maintained if alternative categories are used instead of the defaults (ie, 1 remains as the least likely or severe and 5 the most likely or severe).

FIGURE 5 – RISK SCALING

Risk Likelihood Definitions	Likelihood rating code
Rare	1
Unlikely	2
Possible	3
Likely	4
Almost certain	5

### 2.2 Project Inputs (sheet 'ProjIn')

The Project Inputs worksheet allows for the creation of up to 50 different projects. For each project, it identifies the primary contact, sponsor, concept origin, the business unit or agency the project will fall into (if successful), asset type and a brief description of the proposed project.

The Project Inputs worksheet also tracks the stage of the project lifecycle for each proposed project. The project stage inputs and approval details for any given stage cannot be entered until the previous stage approval has been completed. For example, pre-feasibility approval details cannot be entered if concept selection approval has not been completed.

The Tool allows the User to expedite a project through one or more approval stages. If it is necessary to expedite a project through to an approval stage, the prior stage can be skipped by selecting 'Yes' from the drop down box in the expedited column. This will activate the next stage worksheet and approval section for completion.

FIGURE 6 – EXPEDITING A PROJECT APPROVAL STAGE PART A

Pre-Feasibility Approval				
Date approved	Signatory	Expedited?	Actioned by	Date
		No		
		Yes		
		No		

FIGURE 7 – EXPEDITING A PROJECT APPROVAL STAGE PART B

Pre-Feasibility Approval					Feasibility Approval				
Date approved	Signatory	Expedited?	Actioned by	Date	Date approved	Signatory	Expedited?	Actioned by	Date
		Yes	Ice Gallagher	8-Apr-15			No		
		No					No		
		No					No		
		No					No		
		No					No		

The feasibility approval section can now be completed.

### 2.3 Concept Selection Stage Inputs (sheet 'ConSelln')

The Concept Selection worksheet provides the user with a central place to input information for the concept selection stage of a proposed project. The inputs may come from the PDF Concept Approval Template or other Council documentation. It is assumed that they will be high level estimates given the preliminary stage of the proposed project.

#### Step One

The PDF methodology recognises there can be multiple options for developing the same project. Up to eight different options can be created for each proposed project by using the 'Add Option' button located in the standardised header and following the prompts. At least one project option is required for each proposed project in each stage. At each project stage, proposed project options are to be input by the user.

FIGURE 8 – ADD OPTION BUTTON



Each option created will appear under the relevant project name with the ability to give each option a unique and meaningful name in addition to the Option Number provided by the Tool.

FIGURE 9 – PROPOSED PROJECT OPTIONS



Project Name	System ID	Council ID	Option Name	Option #
Council Water Security	1001	-	Option One	1
Council Water Security	1001	-	Option Two	2
Council Water Security	1001	-	Option Three	3

### Step Two

The User selects the most appropriate initial project risk rating from the drop down box and nominates a realistic contingency value.

FIGURE 10 – RISK ASSESSMENT INPUTS

Risk Assessment		
Project Risk Rating	Contingency Value	Contingency Percent
High		-%
Low		-%
Moderate		-%
High		-%
Extreme		

### Step Three

In the Cost Estimates section, the User inputs the capital expenditure, annual operations & maintenance costs, expected economic useful life of the assets and the project delivery dates. In addition, the User can enter any general comments applicable to each project option.

FIGURE 11 – COST ESTIMATE INPUTS

Cost Estimate (\$'000)				Project Funding	
Total CAPEX	Ongoing O&M Per Annum	Average Asset Useful Life	Total Project Allowance	Total Funding Required	
50,000.0	150.0	80.0	55,000.0	55,000.0	
15,000.0	10.0	40.0	16,000.0	16,000.0	
20,000.0	20.0	50.0	21,000.0	21,000.0	

FIGURE 12 – PROJECT DELIVERY AND GENERAL COMMENT INPUTS

Project Delivery			General Comments
Start Date	End / Commissioning Date	Total Days	Comments
1-Jul-15	30-Jun-17	731.0	Comments about option one
1-Jul-15	30-Jun-16	366.0	Comments about option two
1-Jul-15	31-Dec-15	184.0	Comments about option three

## Step Four

Once the concept selection stage has been approved by the project decision making group, the User inputs the approval details in the Project Input worksheet.

FIGURE 13 – CONCEPT SELECTION STAGE APPROVAL

Concept Selection Approval				
Date approved	Signatory	Expedited?	Actioned by	Date
1-Apr-15	J Citizen	No	Elle Pembroke	9-Apr-15

## 2.4 Pre-Feasibility Stage Inputs (sheet 'PreFeasIn')

Once formal concept approval has been provided and the details entered into the Project Input worksheet, the Pre-Feasibility Stage worksheet will become active and will allow the User to complete the inputs.

The Pre-Feasibility Stage worksheet follows on from the Concept Selection worksheet by collating key information considered at the Pre-Feasibility Stage of a proposed project. The inputs may come from the PDF options analysis template, or QTC's Project Risk Assessment tool, Whole of Life costing tool<sup>1</sup> or Lease vs Buy tool<sup>2</sup>. The inputs may also come from council risk registers, costing tools or other council documentation.

### Step One

For each proposed project option the User can input relevant treated TECOP risk assessments, a contingency value and a basis of contingency estimate. The 'project risk rating' is automatically determined to be equivalent to the highest TECOP risk.

FIGURE 14 – TREATED RISK ASSESSMENT INPUTS

Treated Risk Assessment						Contingency		
Technical Risk Rating	Economic Risk Rating	Commercial Risk Rating	Organisational Risk Rating	Political Risk Rating	Project Risk Rating	Contingency Value	Basis of Contingency Estimate	Contingency Percent
Low	High	High	Moderate	Moderate	High	200.0	Percentage of project cost	4.0%
					No Rating			-%
					No Rating			-%

<sup>1</sup> Available through QTC Connect

<sup>2</sup> Available from your QTC Account Manager

## Step Two

The User inputs the ‘Total risk count by risk score’ for each option. The total risk count is a summary of all risks identified for the project option.

FIGURE 15 – TOTAL RISK COUNT BY RISK SCORE INPUTS

Total Risk Count by Risk Score			
Extreme Risk Count	High Risk Count	Moderate Risk Count	Low Risk Count
-	6	23	31

## Step Three

The User enters the top five risks for each option in the five risk sections in order of importance. The TECOP type and risk score are selected from the available drop down boxes and a brief description is identified for each risk.

FIGURE 16 – TOP 5 RISK INPUTS

Risk 1		
R1 TECOP Type	R1 Risk Score	R1 Description
Economic	h	Description of risk 1 goes here...
Technical		
Economic		
Commercial		
Organisational		
Political		

## Step Four

The User inputs the capital expenditure, annual operations & maintenance costs, expected economic useful life of the assets, the discounted Whole of Life Cost (‘WOLC’) and project funding details in line with the column headings.

FIGURE 17 – COST ESTIMATE AND VALUE ESTIMATE INPUTS

Cost Estimate (\$'000)				Value (\$'000)	
Total CAPEX	Ongoing O&M Per Annum	Average Asset Useful Life	Total Project Allowance	Disc. WOLC	
5,000.0	500.0	40.0	5,000.2	2,000.0	
			-		

FIGURE 18 – PROJECT FUNDING INPUTS

Project Funding					
Internal Funding			External Funding		
Internal Funding %	Min. Internal Funding Required	Total Internal Funding	External Funding %	Total External Funding	Total Funding Required
80%	4,160.0	4,160.0	20%	1,040.0	5,200.0
	-	-	100%	-	-
	-	-	100%	-	-

Cells with a white background will automatically be calculated based on the input for internal funding per cent.

**Step Five**

The User inputs the WOLC per rateable property and the project delivery dates. The User can also enter any general comments they may have for each option.

FIGURE 19 – RATES IMPACT, PROJECT DELIVER AND GENERAL COMMENTS INPUT

Rates	Project Delivery			General Comments
Disc. WOLC per rateable property	Start Date	End / Commissioning	Total Days	Comments
	1-Jul-15	30-Jun-17	731.0	Comments about option
			na	

Note: the WOLC per rateable property should be calculated as the WOLC of the project divided by Council’s expected number of rateable properties at the commissioning date.

**Step Six**

Once the proposed project has received pre-feasibility stage approval from the decision making group, the User inputs the approval details in the Project Input worksheet.

**2.5 Feasibility Stage Inputs (sheet ‘FeasIn’)**

The Feasibility worksheet follows on from the Pre-Feasibility worksheet by collating the key information considered at the Feasibility stage of a proposed project. The inputs may come from the PDF business case template, options analysis template, QTC’s Project Risk Assessment tool, QTC’s Guide to Funding Options or Council risk registers, costing tools or other documentation.

### Step One

The User should review all the options, the risk assessments, the total risk count and the top five risks for each project and make any required amendments.

### Step Two

The User inputs the capital expenditure for up to five years, the basis of the capital expenditure estimate, the date of the capital expenditure estimate, the annual operating & maintenance costs, the economic useful life of the assets, the WOLC, the NPV and the payback period in years.

FIGURE 20 – CAPEX, OPEX AND VALUE COST ESTIMATES

CAPEX Cost Estimate (\$'000)							Project Funding		OPEX Cost Estimate (\$'000)		Value (\$'000)		
Yr 1 CAPEX	Yr 2 CAPEX	Yr 3 CAPEX	Yr 4 CAPEX	Yr 5 CAPEX	Total CAPEX	Basis of CAPEX	Date of CAPEX Estimate	Total Project Allowance	Ongoing O&M Per Annum	Average Asset Useful Life	Disc. WOLC	Net Present Value	Payback Period
2.0	3.0	-	-	-	5.00	Tendered Price	1-Feb-15	5.2	0.5	40.0	(2.0)	5.0	8.0
2.0	2.0	-	-	-	4.00	Tendered Price	1-Feb-15	4.3	1.0	15.0	(1.8)	5.0	8.0

### Step Three

The User inputs the internal funding percentage to calculate the minimum internal funding requirement. There is also an internal funding override in dollars should the User wish to enter an internal funding amount different to the auto-calculated minimum internal funding required. If the override is left blank, the calculated minimum internal funding required will be used.

FIGURE 21 – INTERNAL FUNDING INPUTS

Internal Funding			
Internal Funding Percent	Min. Internal Funding Required	Internal Funding Override	Total Internal Funding
80%	48,800.0	50,000.0	50,000.0
	-		-
	-		-

Auto-calculated minimum internal funding required from the 80% internal funding per cent input entered.

Internal funding requirement input that has overridden the minimum internal funding requirement of 80%.

### Step Four

The User inputs detailed external funding in line with the column headings. This includes the primary and secondary funding sources as well as any other external funding and debt funding from QTC.

FIGURE 22 – EXTERNAL FUNDING INPUTS

Project Funding								
Primary External Funding Source		External Funding			QTC Funding Amount	Min. External Funding Required	Total External Funding	Total Funding Required
Primary External Funding Source	Primary External Funding Amount	Secondary External	Secondary External Funding Amount	Other External Funding Amount	QTC Funding Amount	Min. External Funding Required	Total External Funding	Total Funding Required
TIDS	4,200.0		0.0	-	8,000.0	12,200.0	12,200.0	62,200.0
				-		-	-	-
						-	-	-

### Step Five

The User inputs the ongoing resourcing requirements in terms of full-time equivalent staff ('FTEs'). The ongoing resourcing requirements segment identifies the ongoing internal and external FTEs required for the successful operation of the project once the delivery stage is complete.

FIGURE 23 – ONGOING RESOURCING INPUTS

Ongoing Resourcing		
Ongoing Internal FTEs	Ongoing External FTEs	Total Ongoing FTEs
5.0	0.5	5.5
1.0	0.5	1.5
2.0	1.0	3.0

### Step Six

The User inputs the WOLC per rateable property, ongoing resourcing requirements and project delivery details. The User can also enter any general comments for the project options.

### Step Seven

Once the Feasibility Stage has been approved by the project decision making group, the approval details in the Project Input worksheet can be completed.

## 2.6 Planning Stage Inputs (sheet 'PlanIn')

The Planning Stage worksheet is the final input worksheet in the Tool and provides a summary of the key planning details for the successful project option. The inputs may be drawn from the tools and templates used throughout the PDF and identified in the earlier stages of this document.

At the planning stage, all previously identified inputs should be reviewed for the successful project option and any relevant amendments entered. Note that QTC considers it unlikely that

inputs for each project option, for example the risk assessment, will have remained static across the four stage worksheets as further research, investigation, and analysis will have been undertaken for each of the project options.

### Step One

The User inputs any project interdependencies. A project option would be dependent on another project if it is unable to begin until the first project is completed. Up to three dependent projects can be identified in the Planning Stage worksheet using the drop down menus in the input cells.

FIGURE 24 – PROJECT INTERDEPENDENCY INPUTS

<b>Dependent Project</b>	
<b>Name 1</b>	<b>Dependency Description 1</b>

### Step Two

When the Planning Stage of a proposed project is approved by the project decision making group, input the approval details in the Project Inputs worksheet. As the planning stage is the final stage in the Project Decision Framework, this is the final input worksheet of the Tool.

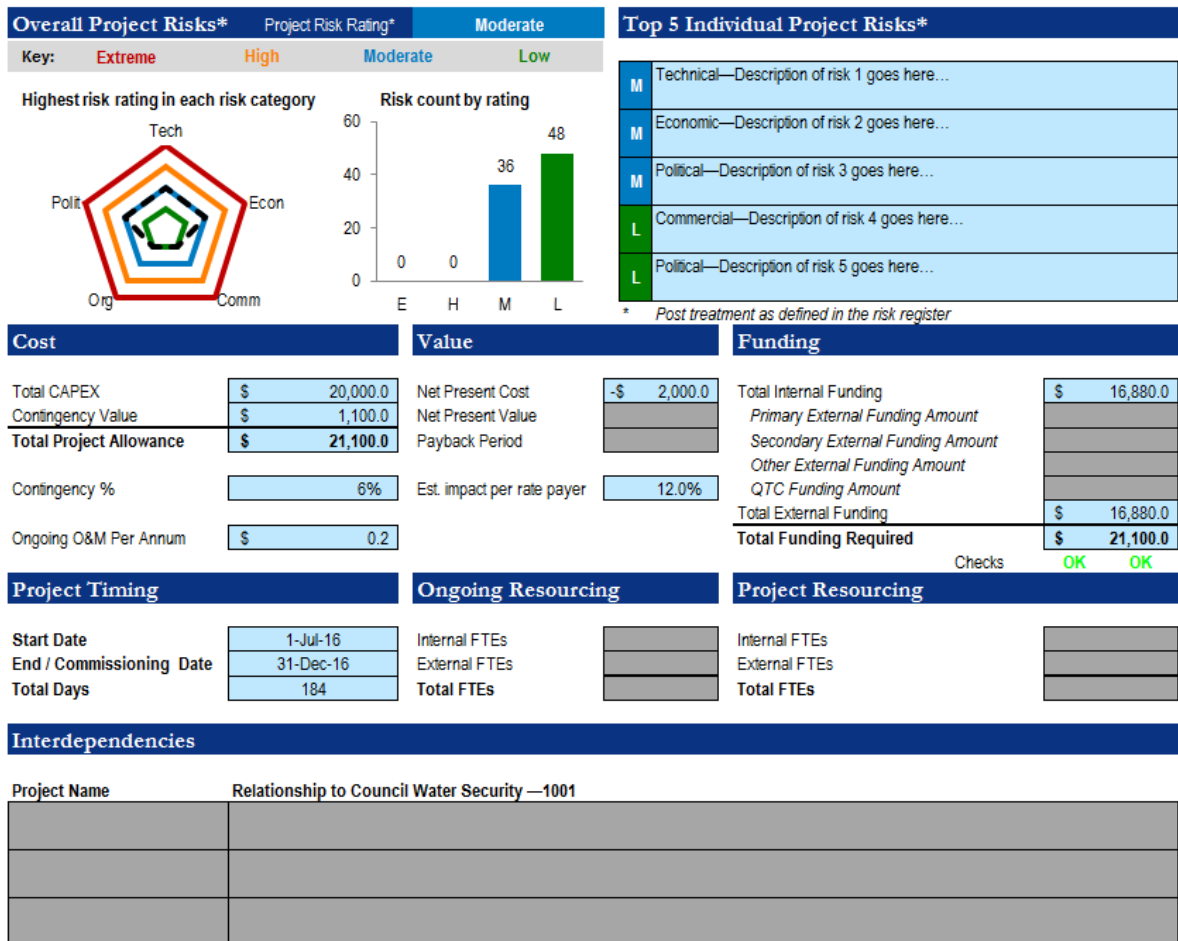
# 3 Outputs

## 3.1 Project Dashboard ('ProjDash')

The Project Dashboard Report provides a consolidated summary view of each stage of a proposed project option. The outputs are presented in data tables and charts that will change dynamically depending on which stage of the PDF is selected. This allows for easy analysis and quick reference by decision makers.

The project, option and stage can be selected from the drop down boxes in the 'general information' section at the top of the page. The project stage selection is limited to the approved stages plus the stage immediately following the highest approved stage.

FIGURE 25 – PROJECT SUMMARY REPORT OUTPUTS



A Project Summary Report can be printed using the print button located in the standardised header at the top of the worksheet.




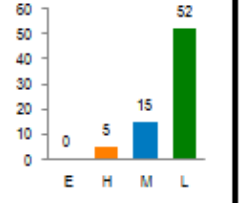
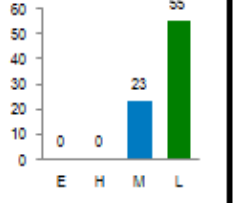
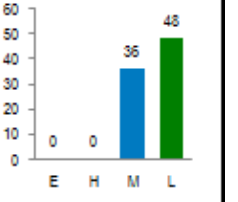


### 3.2 Options Comparison Report ('OptDash')

The Options Comparison Report is designed to easily compare multiple project options at a particular project stage.

The proposed project and project stage can be selected from the drop down boxes in the 'general information' section at the top of the page. The outputs are presented in table format and consist of data and charts detailing the key information for each option of a proposed project.

FIGURE 26 – OPTIONS COMPARISON REPORT OUTPUTS

Option Details	Option One	Option Two	Option Three
Option Name	Option One	Option Two	Option Three
Comments	Comments about option one	Comments about option two	Comments about option three
<b>Risk (post treatment)</b>			
Project risk rating	<b>High</b>	<b>Moderate</b>	<b>Moderate</b>
Maximum risk rating in each risk category			
Risk count by rating			
<b>Cost</b>			
Total CAPEX	\$ 50,000.0	\$ 15,000.0	\$ 20,000.0
Contingency Value	\$ 5,000.0	\$ 800.0	\$ 1,100.0
<b>Total Project Allowance</b>	<b>\$ 55,000.0</b>	<b>\$ 15,800.0</b>	<b>\$ 21,100.0</b>
Contingency Percent	10%	5%	6%
Ongoing O&M Per Annum	\$ 0.5	\$ 1.0	\$ 0.2
<b>Value</b>			
Net Present Cost	-\$ 10,000.0	-\$ 5,000.0	-\$ 2,000.0
Net Present Value			
Payback Period			
Est. impact per rate payer	200%	6%	12%
<b>Funding</b>			
Total Internal Funding	\$ 44,000.0	\$ 12,640.0	\$ 16,880.0
Primary External Funding Amount			
Secondary External Funding Amount			
Other External Funding Amount			
QTC Funding Amount			
Total External Funding	\$ 11,000.0	\$ 3,160.0	\$ 4,220.0
<b>Total Funding Required</b>	<b>\$ 55,000.0</b>	<b>\$ 15,800.0</b>	<b>\$ 21,100.0</b>
<b>Timing</b>			
Start Date	1-Jul-16	1-Jul-16	1-Jul-16
End / Commissioning Date	31-Dec-17	30-Oct-16	31-Dec-16
Total Days	549	122	184

An Options Comparison Report can be printed using the print button located in the standardised header at the top of the worksheet.

# Appendix A: Key Terms

## **CAPEX**

Capital expenditure is the total cost of developing, planning and delivering a project.

## **OPEX**

Operating expenditure includes the ongoing costs of operating and maintaining the new asset/project deliverable.

## **TECOP**

A method of categorising identified risk factors into one of five broad risk categories, Technical, Economic, Commercial, Organisational and Political. A table of example risk categorisation using the TECOP method is available at **Appendix B**.

## Appendix B: TECOP Example Risk Categorisation

Category	Underlying Risk	Low Risk	Extreme Risk
Technical	Project location	Standard	New frontier
	Climate	Temperate	Remote desert
	Location	Level/open	Mountainous
	Scope definition	Well defined	Poorly defined
	Existing infrastructure	Reliable	Non-existent
	Project complexity	Simple	Complex
	Technology	Conventional	New/ unproven
	Safety	Safe	Dangerous
Economic	Schedule	Realistic	Unrealistic
	Inflation	Favourable	Unfavourable
	Currency	Single major	Multiple
Commercial	Operations	Group	Joint Venture/ inexperience
	Contract strategy	Optimum	Undefined
	Contractor competition	Multiple bidders	Single source
	Contractual interfaces	No contractors	Multiple contractors
	Risk ownership	Clear and appropriate	Unclear and inappropriate
	Local content requirement	None	High
Organisational	Cross business	Single business unit	Multiple business units
	Number of locations	Single	Multi
	Project team competence	Good	Poor
Political	Government involvement	Passive	Active
	Joint Venture involvement	Passive	Active
	Environmental issues	None	Major
	Community issues	None	Many
	Industrial relations	Good	Poor
	Reputational issues	Standard	High profile

## Disclaimer

Queensland Treasury Corporation (QTC) has prepared the QTC Project Portfolio Tool (Tool) for use solely by Queensland local governments (the User) to assist in the tracking and reporting of projects across the Project Decision Framework (PDF) pre-execution stages. The Tool should not be used for any other purpose.

As use of the Tool is intended for Queensland local government only, it should not be provided to or disclosed to, nor relied upon by, any other party without QTC's express written consent.

The accuracy of the Tool and its outputs is significantly determined by the accuracy, currency, completeness and applicability of the information entered by the User. It is also determined by the User's understanding of the Tool's underlying methodology and its appropriateness to the User's business. QTC is not in a position to review and verify the suitability of the Tool or its inputs to specific situations being examined by the User and, therefore, QTC accepts no responsibility for the incorrect application of the Tool by the User or the entry of incorrect information into the Tool. The outputs of the Tool should be used as a guide only. Specific advice should be obtained before acting on the basis of any output of the Tool.

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