

Primavera Risk Analysis - Templated Quick Risk

Templated Quick Risk

This document is an extract from the Primavera Risk Analysis help file version 8.7 SP5.

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1	Templated Quick Risk	

Overview

Templated Quick Risk allows duration distributions to be assigned to tasks based on a template.

Criteria are set up with percentages that are then used to calculate the minimum, most likely and maximum durations of the tasks that match the criteria.

The template is stored in the plan so it can be reviewed or re-applied to tasks at any time. Templates can also be saved and re-used on different plans.

Templated Quick Risk Tutorials (Section 2)

Running Templated Quick Risk

- *Risk | Templated Quick Risk*

Example

Criteria can be set up for LOW, MED, HIGH. Then in the example below...

Tasks assigned LOW are assigned a distribution using 95%, 100% and 110%

Tasks assigned MED are assigned a distribution using 90%, 100% and 130%

Tasks assigned HIGH are assigned a distribution using 80%, 100% and 150%

Field	Value	Tasks	Distributi...	Min	Likely	Max	Correlati...	Descriptio...
Text 1	= Low	0	Triangle	95%	100%	110%	none	Low unce...
Text 2	= Medium	0	Triangle	90%	100%	130%	none	Medium u...
Text 3	= High	0	Triangle	80%	100%	150%	none	High unce...

Buttons: Clear All, Load..., Save..., Help, Apply Template, Save and Exit


☐ Use as default for new projects

Figure: Templated quick risk dialog. Set up to apply distribution based on values stored in task user fields: "Text 1", "Text 2", "Text 3".

1.1 Options

Field and Value - Used to define the criteria. Can be based on summary tasks, task user fields or imported Primavera Activity Codes.

Tasks - The number of tasks that match the criteria set up.

 If a task matches more than one criteria then only the first criteria is used to assign the duration distribution. However the Tasks field displays all the tasks that match the criteria irrespective of whether they have matched previous criteria.

Distribution - The distribution shape that will be applied.

Min, Likely, Max - The percentages that will be used to calculate the minimum, most likely and maximum durations for each task that matches the criteria. The percentages always refer to a percentage of remaining duration.

Correlation - Each task that matches the criteria will be assigned a distribution and all the distributions will be correlated by the percentage entered here. This allows a criteria to be defined that impacts multiple tasks and for that impact to be correlated, i.e. if one task takes a long time so do the others.

All tasks in a group will be correlated. For example tasks A, B and C will be correlated as three pairs; A to B, A to C and B to C.

Description - Enter a description for the specified criteria. This description will be copied to the Duration distribution notes field for each task modified by the template.

Clear All - Clear the grid.

Load, Save - Load and Save quick risk templates so they can be used on other plans. This is particularly useful if your projects are coded in the same way allowing the saved template to be applied to any project.

Apply Template - Applies the templated quick risk to the plan.

Save and Exit - Saves any changes to the template but does not apply it.

Applying Correlation Only


If *Min*, *Likely* and *Max* values are all set to 0% then no distributions will be added and only the Correlation percentage will be applied to the matching tasks. If there are matching tasks with no duration distribution then no correlation is added.

Central Limit Theorem

Problems with the central limit theorem can be avoided using correlation. Correlation can be defined so that task matching the same criteria have their duration distributions correlated.

Primavera Activity Codes

If Activity Codes have been imported from Primavera P6 they will be available in the drop down list under the Field column as a task user field. Duration distributions can be assigned based on existing activity code assignments in Primavera P6 (see **Templated Quick Risk Tutorials (Section 2)** for an example).

 When opening a Primavera P6 project directly from the Primavera P6 project database you must specifically select activity codes and task user fields that will be imported. If you do not then the activity codes will not be available. When using the Primavera XER import activity codes are always read in.

2 Templated Quick Risk Tutorials

Tutorial 1 - Quick risk based on Task User Fields

The criteria for the templated quick risk can be based on values assigned to tasks.

- Open an existing Primavera Risk Analysis plan, e.g. "RiskTutorial 1.pln" (accessible via *Help | Open Samples...* or usually located: C:\Program Files\Oracle\Primavera Risk Analysis\Samples).

Next we will set up a task user field:

- *Plan | Task User Fields.*
- Add 'Uncertainty' as a new *Field Name*.
- Change *Type* to *Code*.

- Enter the codes and descriptions shown below:

Field Name	Type
P50 Start	Start Date
P50 Finish	Finish Date
P80 Start	Start Date
P80 Finish	Finish Date
P50 Cost	Cost
P80 Cost	Cost
Uncertainty	Code

Code	Description
Low	Low uncertainty
Medium	Medium uncertainty
High	High uncertainty

Figure: Setting up a task user field with codes.

- Click OK.

Now we need to add a column and assign the new user field to the tasks:

- *Format | Columns.* Find and add the User Field column 'Uncertainty'.
- In the column assign a variety of Low, Medium and High values to the tasks in the plan.

Next we need to set up the templated quick risk to assign the duration uncertainty based on the task 'Uncertainty'.

- *Risk | Templated Quick Risk.* Set up the grid as shown below:

The values in the *Tasks* column will be different. This column indicates how many tasks match each of the criteria, for example in the screenshot below 40 tasks have been assigned an "Low" value.

Field	Value	Tasks	Distributi...	Min	Likely	Max	Correlati...	Descr
Uncertainty	= Low	40	Triangle	95%	100%	110%	none	
Uncertainty	= Medium	32	Triangle	90%	100%	130%	none	
Uncertainty	= High	64	Triangle	80%	100%	150%	none	

Description:

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Figure: Templated quick risk setup to apply duration uncertainty based on a task user field.

- Click *Apply Template* and the 3 points estimates are assigned to the activities based on the assigned user's fields values.
- Click *Save and Exit* to close dialog.

Tutorial 2 - Quick Risk based on imported Primavera Activity Codes

In this tutorial the activities in the Primavera P6 project have been assigned activity codes that relate to the level of uncertainty on their durations.

When the Primavera P6 project is opened in Primavera Risk Analysis these activity code assignments are imported and can then be used in the templated quick risk to assign uncertainty on the task durations.



Primavera Activity Codes are automatically added when importing a Primavera XER file. However they need to be selected when importing a Primavera P6 project directly from the project database.

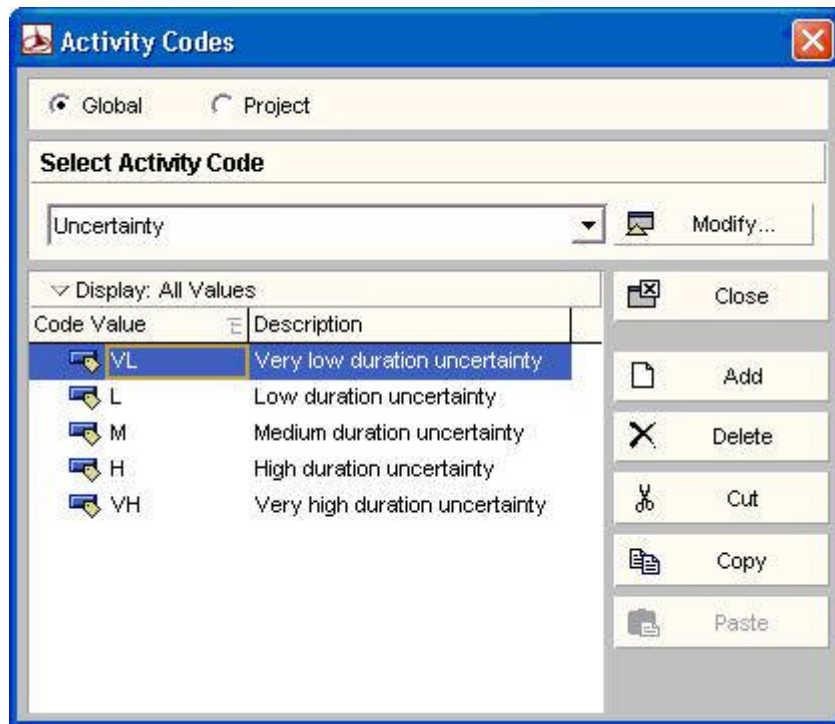


Figure: Activity codes set up in Primavera.

- *Help | Open Samples...*
- Find the file "Construction.xer" that is usually installed in the *Samples* folder (usually located: C:\Program Files\Oracle\Primavera Risk Analysis\Samples) and click *Open*.
- Click *OK* in the *Primavera XER Import Options* dialog:

Primavera XER Import Options

Project Selection

Please select the required project: Construction ▼

Import all projects in the selected file: ☐

Combined Project Name:

Planning unit

☒ Day One day equals hours

☐ Hour

☐ Quarter Hour

WBS

☐ Organize by the project WBS structure

Workspace template

Currently selected - Primavera.wkspc Select Workspace...

OK Cancel

Figure: Importing the Primavera P6 project.

- Click **OK** in the *Primavera XER Import Mappings* dialog.
- ☒ If importing directly from the Primavera P6 database you must select the Activity Codes from the *Activity Code* tab.
- Click **Save**.
- The imported Activity Codes can be viewed using *Plan | Task User Fields*.
- ☒ The Primavera Activity Code is equivalent to a Primavera Risk Analysis Task User Field that has *Type* set to *Code*.
- *Risk | Templated Quick Risk*. Set up the grid as shown below:
- ☒ The values in the Tasks column indicate how many tasks match each of the criteria, for example in the screenshot below 1 task has been assigned a "VL" value.

Field	Value	Tasks	Distribution	Min	Likely	Max	Correlation	Description
Uncertainty	= VL	1	Triangle	75%	100%	125%	none	
Uncertainty	= L	7	Triangle	75%	100%	125%	none	
Uncertainty	= M	6	Triangle	75%	100%	125%	none	
Uncertainty	= H	2	Triangle	75%	100%	125%	none	
Uncertainty	= VH	1	Triangle	75%	100%	125%	none	

Description:

☐ Use as default for new projects

Figure: Templated Quick Risk set up for imported Primavera activity codes.

- Click *Apply Template* and the 3 points estimates are assigned to the activities based on the assigned activity codes.
- Click *Save and Exit* to close dialog.

Tutorial 3 - Quick Risk based on durations

Activities with shorter durations tend to have more uncertainty in terms of their percentage than tasks with longer durations. For example a 1 day task could easily double to 2 days, but a 100 day task is less likely to double to 200 days.

- Open an existing Primavera Risk Analysis plan.
- *Risk | Templated Quick Risk | Load...*
- Select "DurationsTemplate" and click *OK*.

Field	Value	Tasks	Distributi...	Min	Likely	Max	Correlati...	Descr
Advanced Filter	= Filter 1	19	Triangle	50%	100%	200%	none	Durat
Advanced Filter	= Filter 2	19	Triangle	70%	100%	150%	none	Durat
Advanced Filter	= Filter 3	19	Triangle	80%	100%	130%	none	Durat
Advanced Filter	= Filter 4	0	Triangle	90%	100%	120%	none	Durat

Description:

☐ Use as default for new projects

Figure: Templated Quick Risk set up for durations.

- The Advanced Filters have been set up to filter on the durations of the tasks. The shorter the task the greater the percentage uncertainty that will be assigned.
- Click *Apply Template* and the 3 points estimates are assigned to the activities based on their remaining durations.
- Click *Save and Exit* to close dialog.

3 PDF Documentation and Printing Help

PDF Documentation

Some of the on-line help (e.g. tutorials) can be found in the *Documentation* folder that is created when the Primavera Risk Analysis software is installed. The documentation is saved in the Adobe PDF format.

The default installation folder for the documentation is:

C:\Program Files\Oracle\Primavera Risk Analysis\Documentation

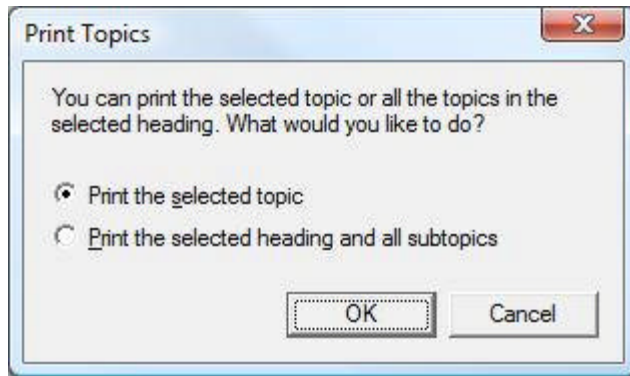
Printing an individual help topic

- After printing a help topic, Windows can sometimes freeze the help file. If this occurs, right-click on the Primavera Risk Analysis help application icon in Windows Start menu Taskbar (usually located at the bottom of the screen) and choose *Restore*.

1. Select the required topic.
2. Click on the *Print* button.



3. Choose *Print the selected topic*.



Printing a chapter of the help

After printing a chapter of the help, Windows can sometimes freeze the help file. If this occurs right-click on the Primavera Risk Analysis help application icon in Windows Start menu Taskbar (usually located at the bottom of the screen) and choose *Restore*.

1. Select the required chapter.
2. Click on the *Print* button
3. Choose *Print the selected heading and all the subtopics*.

The example below has the Risk Tutorial - Part 1 selected. Clicking on the *Print* button and selecting *Print the selected heading and all the subtopics* will print out the whole of the 'Risk Tutorial - Part 1'.

