Portfolio View

Portfolio View Overview

The Portfolio View page contains all the alternatives, their benefits (priorities), e.benefits (expected benefits), risks (by default, the risk and e.benefits columns are hidden when there are no risks defined), and costs. The Partial column is used to specify that an alternative can be partially funded instead of funding it in its entirety, while the Min% column for partially funded alternatives specifies the minimum percentage that can be funded. The Must and Must Not columns are used to specify that an alternative must or must not be funded.

The **Funded** column will display YES for alternatives that the optimization determines should be funded in their entirety or a percentage, if the alternative can be partially funded. The total cost to fund the alternatives identified in the optimal solution is shown in the Funded Cost box.

The **Benefit** for the optimized solution (the sum of the benefits for the alternatives to be funded) is shown in the Benefits box. When there are risks specified and are in use, Expected Benefits is displayed instead of benefits.

The **Base Case Maximum** is the maximum benefit achievable if the Budget Limit is at least large enough to fund all of the alternatives.

The **Ignore** options can be used to request that any of the constraints (or risk specifications) be ignored in the optimization. This is convenient if it is desired to temporarily disable one or more constraint types and see what effect it has on the solution. Note: If you check a constraint type in both the Set Base Case and in the Ignore options – something that doesn't really make sense to do – then it is possible to achieve a Benefits Percentage greater than 100%.

In some cases, there may not be any feasible solution – that is, it may not be possible to satisfy all of the constraints

specified. Expert Choice will, of course, report that there is no feasible solution when this condition arises. However, when this happens, there is no unique set of constraints that lead to this condition. For example, you may have specified that at least one alternative in each of five groups is funded, but the budget isn't large enough to fund these alternatives. If the available budget constraint were relaxed by making more funding available, then a feasible solution might be found. Alternatively, if the amount required to fund one or more of the alternatives were decreased, or if the number of groups that had to have at least one alternative funded was decreased, a feasible solution might be found. The number of combinations of constraints that result in infeasibility can be quite large when we consider must constraints, must-not constraints, custom constraints such as full-time equivalents, floor space, funding pool constraints, and so on.

Portfolio Solve and Auto-Solve

Solve

Solve – solves the optimization when executed.

If Auto-solve is checked then a solution is sought whenever a variable or constraint is changed.

Portfolio Scenario

Scenarios provide the ability to save different Resource Aligner constraint sets (e.g., budget limit, musts, must-nots, custom constraints, dependencies, funding pools, and groups). You can then compare these scenarios in a Pareto Curve (see Efficient Frontier) or in several other views available on the Scenario Comparison page.

The Default Scenario is provided by default. You can switch to the different scenarios using the Scenario dropdown below.

Click to manage portfolio scenarios *(1 indicates the number of available scenarios).*

To add a new scenario, enter the scenario name, description, and select from the Combined Group drop-down, and then click . The scenario description is optional. The Combine Group drop-down is the predefined group that the priorities of the scenario will be based on.

You will be asked if you want to copy the active scenario to the new scenario. This is handy if you only want to change a few variables. The new scenario will be displayed for you to alter.

You can also switch to different scenarios by clicking on the scenario name. The active scenario is displayed in black bold font.

You can copy the active scenario to another scenario by clicking .

Click to delete a scenario.

You can reorder the scenarios by clicking and dragging the three dots:

Risks (Probability of Success and Failure)

Project risk is one of the three types of risk that can impact the performance of projects. It is determined by the P.Failure*Benefits.

The risks should be ratio scale estimates of the relative risk of the alternatives or projects. If you need to *derive* such estimates, you can create and evaluate an "associated risk model" using the Risks drop-down menu:
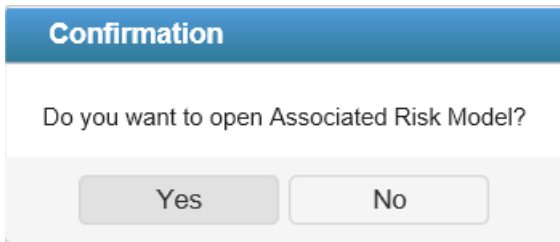

Click **Create and Associate a Risk Model...** to create and associate a risk model. A prompt will be displayed where you can specify the risk model name and the default options set:
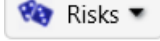

You will then be asked to open the created Risk Model:

Clicking Yes will open the associated model where you can estimate the relative risks of the alternatives or projects.

Initially, the Risks menu has black font color, as shown above; it will turn to blue when there is an associated risk model.

You can also associate a risk model that already exists in your workgroup by clicking **Associate Risk Model...** . A dialog box will display all the projects available in your workgroup.

Simply select the model and then click Select.

Click Open Associated Risk Model to open the associated model.

You can import the combined results from the Associated Risk Model as **Probability of Success** or **Probability of Failure.**

Risk = P. Failure* Benefits

Risk = (1 - P. Success)* Benefits

If you have more than one scenario, you will have an option to import into all scenarios or only into the active scenario.

Click **Detach Associated Risk Model** to detach the model.

Click **Delete All Risks** to delete all the existing risks.

Custom Constraints in Portfolio View

Custom Constraints added from Allocate > Project Management > CUSTOM CONTRAINTS are displayed as columns on the Portfolio View page.

Below we see the Network and Project Managers custom constraints:

Resource Allocation for scenario "Default Scenario"

ID ▲	Alternative Name	Funded	Benefit	E.Benefit	Risk	P.Failure	Cost	Groups	Partial	Min %	Must	Must Not	Network	Project Mngrs
1	ⓘ AS/400 Replacements	YES	0.6804	0.6212	0.0592	0.0870	990		☐		☐	☐	5	1
2	ⓘ Cisco Routers	YES	0.7967	0.7768	0.0199	0.0250	500	#1	☐		☐	☐	2	0.5
3	ⓘ Customer Service Call Center	YES	0.7789	0.7368	0.0421	0.0540	980		☐		☐	☐	2	0
4	ⓘ Desktop Replacements		0.6346	0.6289	0.0057	0.0090	800	#2	☐		☐	☐	5	1
5	ⓘ EMC Symmetrix		0.6808	0.6038	0.0769	0.1130	4,220		☐		☐	☐	3	1
6	ⓘ Firewall and Antivirus Licenses	YES	0.7322	0.7322	0.0000	0.0000	120	#1	☐		☐	☐	1	0
7	ⓘ Iron Mountain Backup Service	YES	0.7738	0.7723	0.0015	0.0020	430		☐		☐	☐	0.5	0
8	ⓘ Laptop Replacements		0.4229	0.4089	0.0140	0.0330	1,340	#2	☐		☐	☐	1	0
9	ⓘ Mobile Workforce Pocket PCs		0.4220	0.2979	0.1241	0.2940	230	#2	☐		☐	☐	0.5	0

Hovering on the total number of custom constraints will display the custom constraints details:

You can jump to the "Custom Constraints" page by clicking the right head arrow:

You can input custom constraints for the Alternatives by typing into the cells provided.

You can copy and/or paste custom constraints values to or from excel, notepad, etc.
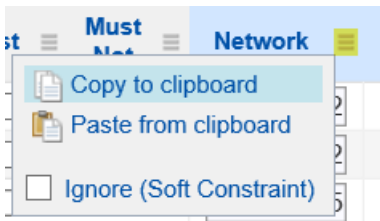
Soft Constraints is a special type of Custom Constraint. Soft constraints are displayed with a grey background and strikethrough font attribute, and constraint values are *gray* and *italicized.*

You can ignore constraints by checking the Ignore (Soft Constraint) check box above or from the Custom Constraints page.