

# Custom Constraints

## Add, Edit, Delete Custom Constraints

You can add, edit, or delete custom constraints from Allocate > Portfolio Management **CUSTOM CONSTRAINTS** page.

Scenario: Default Scenario | Import Custom Constraint(s) | Reload selected constraints | Delete selected | Delete All Custom Constraints

### Custom Constraints for Scenario "Default Scenario"

| <input type="checkbox"/> | Name         | <input type="checkbox"/> Ignore (Soft Constraint) | Action |
|--------------------------|--------------|---|--------|
| <input type="checkbox"/> | Network      | <input type="checkbox"/>                          |        |
| <input type="checkbox"/> | Project Mgrs | <input type="checkbox"/>                          |        |
| <input type="text"/>     |              | <input type="checkbox"/>                          |        |

To add new Custom Constraints, simply type the Custom Constraint Name in the text box provided and then click the **+** button.

To edit the Custom Constraint name, click the icon.

To delete a Custom Constraint, click the icon.

You can also delete one or multiple custom constraints by checking the checkboxes to the left of the custom constraints you want to delete and then clicking the button.

You can clear all the Custom Constraints by clicking the .

Custom constraints added are displayed as columns in the **Portfolio View Grid**. Below are the Network and Project Managers custom constraints.

**Resource Allocation for scenario "Default Scenario"**

Budget Limit: 12,000 |  Expected Benefit: 5.9468 |  Funded Cost: 6,615 |  Base Case Maximum: 10.1974 |  Effectiveness: 58.32

Musts |  Must Notes |  Custom Constraints 2 |  Dependencies |  Groups

Funding Pools |  Risks |  Time Periods |  Min |  Max

Base Case includes:  Groups

Solved in 125 ms.

| 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             |

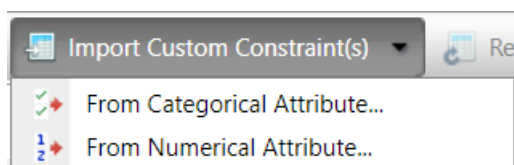
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## Import Custom Constraints

You can import custom constraints from:

- Categorical Alternative Attributes - establish strategic buckets for use in "Balance and Coverage" analysis and to for use as a constraint
- Numerical Alternative Attributes - useful as constraints and for analysis

Navigate to Allocate > Custom Constraints, then click the Import Custom Constraints button:



### From Categorical Alternative Attributes (Strategic Buckets)

You can view and manage alternative attributes from the [Alternatives](#) or Strategic Buckets pages.

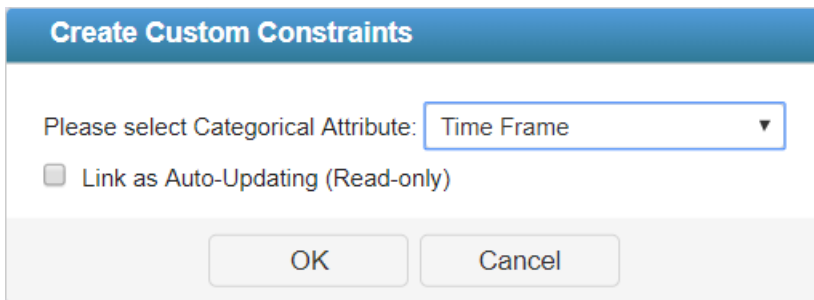
For example, from the Strategic Buckets page below we see an attribute named "Time frame" with Short, Medium, and Long term category items:

**Strategic Buckets for Model "Sample IT Portfolio Optimization"**  
 ("Default Scenario")

Search:

| No ▲ | Alternative                     | Funded | Total | Costs | Time Frame |
|------|---------------------------------|--------|-------|-------|------------|
| 1    | AS/400 Replacements             | Yes    | 0.527 | 990   | Long ▼     |
| 2    | Cisco Routers                   | Yes    | 0.618 | 500   | Medium ▼   |
| 3    | Customer Service Call Center    | Yes    | 0.604 | 980   | Long ▼     |
| 4    | Desktop Replacements            |        | 0.492 | 800   | Medium ▼   |
| 5    | EMC Symmetrix                   |        | 0.528 | 4,220 | Medium ▼   |
| 6    | Firewall and Antivirus Licenses | Yes    | 0.568 | 120   | Short ▼    |
| 7    | Iron Mountain Backup Service    | Yes    | 0.600 | 430   | Medium ▼   |
| 8    | Laptop Replacements             |        | 0.328 | 1,340 | Medium ▼   |
| 9    | Mobile Workforce Pocket PCs     |        | 0.327 | 230   | Medium ▼   |
| 10   | Oracle 9i Upgrade               |        | 0.577 | 1,890 | Short ▼    |
| 11   | PeopleSoft Upgrade              |        | 0.453 | 1,670 | Short ▼    |
| 12   | Plumtree Corporate Portal       | Yes    | 0.775 | 1,345 | Medium ▼   |
| 13   | ProServe System Upgrade         |        | 0.554 | 2,300 | Short ▼    |
| 14   | Sales Force Laptops             | Yes    | 0.531 | 150   | Medium ▼   |
| 15   | SRDF Site/Service               |        | 0.453 | 3,440 | Long ▼     |
| 16   | Thin Client Implementation      | Yes    | 0.713 | 2,100 | Long ▼     |

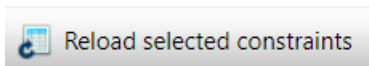
To import the Time Frame attribute as a custom constraint, select Import Custom Constraints > From Categorical Attribute...



You can link any custom constraint that came from an Alternative Attribute to its source attribute as "Auto-Updating" (Read-Only).

When this option is checked, any updates to the attribute will automatically update the constraint. The constraints in the Allocate Main grid will be disabled for editing (Read-only).

When "Auto-Updating" is unchecked, when you want to update or reload the constraints, use the

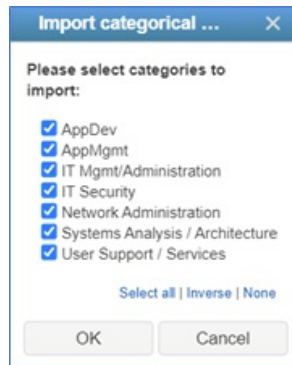


button. This button is also available in the [Allocate Main Grid](#).

| <input type="checkbox"/> | Name                 | <input type="checkbox"/> Ignore (Soft Constraint) | Action |
|--------------------------|----------------------|---|--------|
| <input type="checkbox"/> | Network              | <input type="checkbox"/>                          |        |
| <input type="checkbox"/> | Project Mngrs        | <input type="checkbox"/>                          |        |
| <input type="checkbox"/> | Long                 | <input type="checkbox"/>                          |        |
| <input type="checkbox"/> | Medium               | <input type="checkbox"/>                          |        |
| <input type="checkbox"/> | Short                | <input type="checkbox"/>                          |        |
| <input type="checkbox"/> | <input type="text"/> | <input type="checkbox"/>                          |        |

Custom constraints that are linked to an alternative attribute have a blue chain icon when auto-updating is checked, and a gray chain icon when auto-updating is unchecked. You can click the icon to toggle on and off.

When creating custom constraints created from a categorical alternative attribute, all attribute categories are selected by default. You can create a separate custom constraint for each categorical alternative or, by deselecting some categories, a sub-set of the attribute categories. In the image below, all the categories of the Sponsor attribute are selected and a separate constraint will be created for each category.

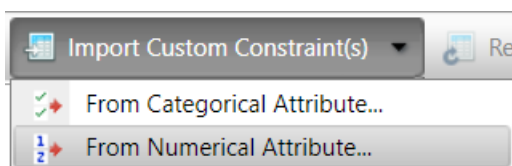


In the image below, the Long, Medium, and Short constraints belong to the Alternative Attribute named "Timeframe." When a project has a particular alternative attribute, a "1" will be placed in the appropriate column. The primary purposes of this is to get a count and to allow for balance and coverage constraints (the totals and constraint rows are not shown in the image below). For example, you can constrain the portfolio to fund a minimum of 3 projects for each of Long, Medium, or Short timeframe.

| ID | Alternative Name             | Funded | Benefit | E.Benefit | Risk   | P.Failure | Cost  | Groups | Partial                  | Min % | Must                     | Must Not                 | Network | Project Mngrs | Long | Medium | Short |
|----|------------------------------|--------|---------|-----------|--------|-----------|-------|--------|--------------------------|-------|--------------------------|--------------------------|---------|---------------|------|--------|-------|
| 1  | AS/400 Replacements          | YES    | 0.6804  | 0.6212    | 0.0592 | 0.0870    | 990   |        | <input type="checkbox"/> |       | <input type="checkbox"/> | <input type="checkbox"/> | 5       | 1             | 1    |        |       |
| 2  | Cisco Routers                | YES    | 0.7967  | 0.7768    | 0.0199 | 0.0250    | 500   | #1     | <input type="checkbox"/> |       | <input type="checkbox"/> | <input type="checkbox"/> | 2       | 0.5           |      |        | 1     |
| 3  | Customer Service Call Center | YES    | 0.7789  | 0.7368    | 0.0421 | 0.0540    | 980   |        | <input type="checkbox"/> |       | <input type="checkbox"/> | <input type="checkbox"/> | 2       | 0             | 1    |        |       |
| 4  | Desktop Replacements         |        | 0.6346  | 0.6289    | 0.0057 | 0.0090    | 800   | #2     | <input type="checkbox"/> |       | <input type="checkbox"/> | <input type="checkbox"/> | 5       | 1             |      |        | 1     |
| 5  | EMC Symmetrix                |        | 0.6808  | 0.6038    | 0.0769 | 0.1130    | 4,220 |        | <input type="checkbox"/> |       | <input type="checkbox"/> | <input type="checkbox"/> | 3       | 1             |      |        | 1     |

## From Numerical Alternative Attributes

Navigate to Allocate > Custom Constraints, then click the Import Custom Constraints button and select From Numerical Attribute:



Then select the desired custom constraint to import.

## Soft Custom Constraints

Soft Constraints have the following properties:

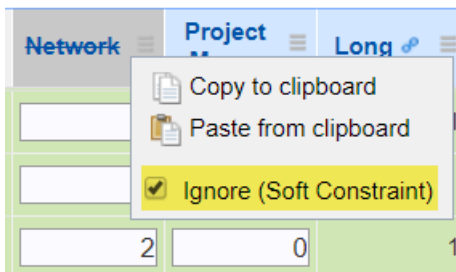
- As a type of Custom Constraint, Soft Constraints are always numeric.
- Soft Custom Constraints are ignored by the Solver in arriving at optimal funding solutions.
- Soft Custom Constraint column headers are displayed with a light grey background and a strike-through font.
- Soft Custom Constraints can be used to calculate surplus or shortage by entering a number in the “Max” row and selecting the “Calculate Soft Constraints” setting.

To designate a Custom Constraint as a Soft Constraint, check the Ignore check box for the Custom Constraint(s) you want to ignore.

### Custom Constraints for Scenario "Default Scenario"

| <input type="checkbox"/> | Name                 | <input checked="" type="checkbox"/> Ignore (Soft Constraint) | Action   |
|--------------------------|----------------------|--|----------|
| <input type="checkbox"/> | Network              | <input checked="" type="checkbox"/>                          |          |
| <input type="checkbox"/> | Project Mngrs        | <input type="checkbox"/>                                     |          |
| <input type="checkbox"/> | Long                 | <input type="checkbox"/>                                     |          |
| <input type="checkbox"/> | Medium               | <input type="checkbox"/>                                     |          |
| <input type="checkbox"/> | Short                | <input type="checkbox"/>                                     |          |
| <input type="checkbox"/> | <input type="text"/> | <input type="checkbox"/>                                     | <b>+</b> |

For example, to ignore the custom constraint "Network" from the [Allocate Main](#), click the of the constraint you want to ignore and then check the Ignore check box. To un-ignore a constraint, uncheck the Ignore checkbox.



The Soft Constraint "Network" will be ignored in the Resource Allocation. Totals, overages, or shortages are available in the footer rows of the grid.

