Custom Constraints

ADD, EDIT, DELETE CUSTOM CONSTRAINTS

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

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 ✖ **Delete selected** button.

You can clear all the Custom Constraints by clicking the 🧹 **Delete All Custom Constraints** .

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

IMPORT CUSTOM CONSTRAINTS

You can **import custom constraints** from:

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

Navigate to **Allocate > CUSTOM CONSTRAINTS**, then click the **Import Custom Constraint(s)** button:
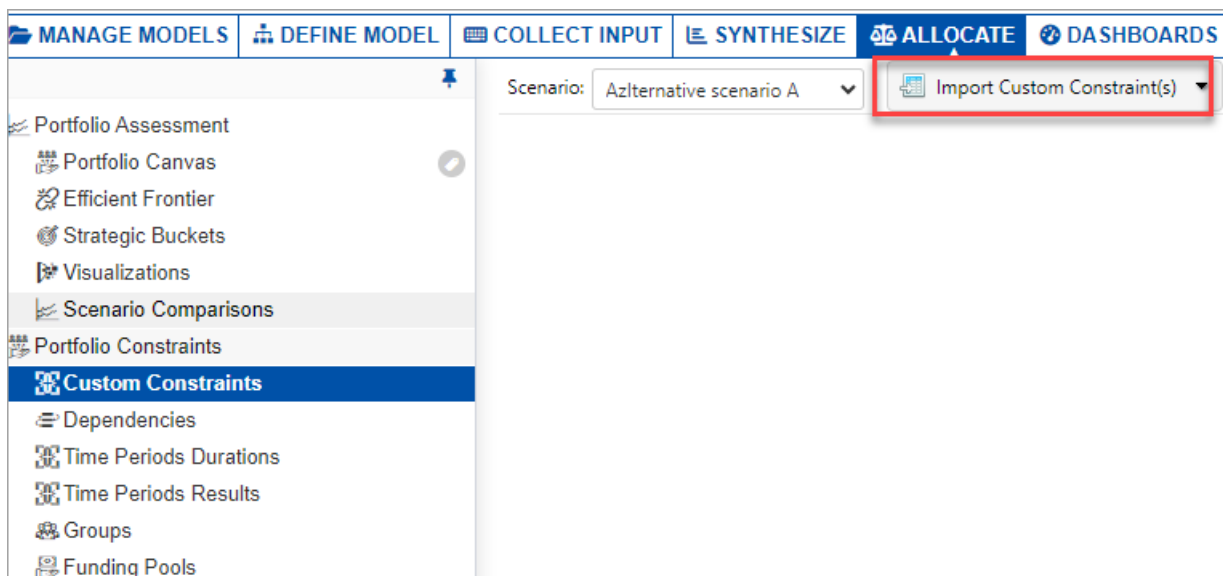
From Categorical Alternative Attributes (Strategic Buckets)

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, navigate to **Allocate > CUSTOM CONSTRAINTS** page and then click the **Import Custom Constraint(s)** button:
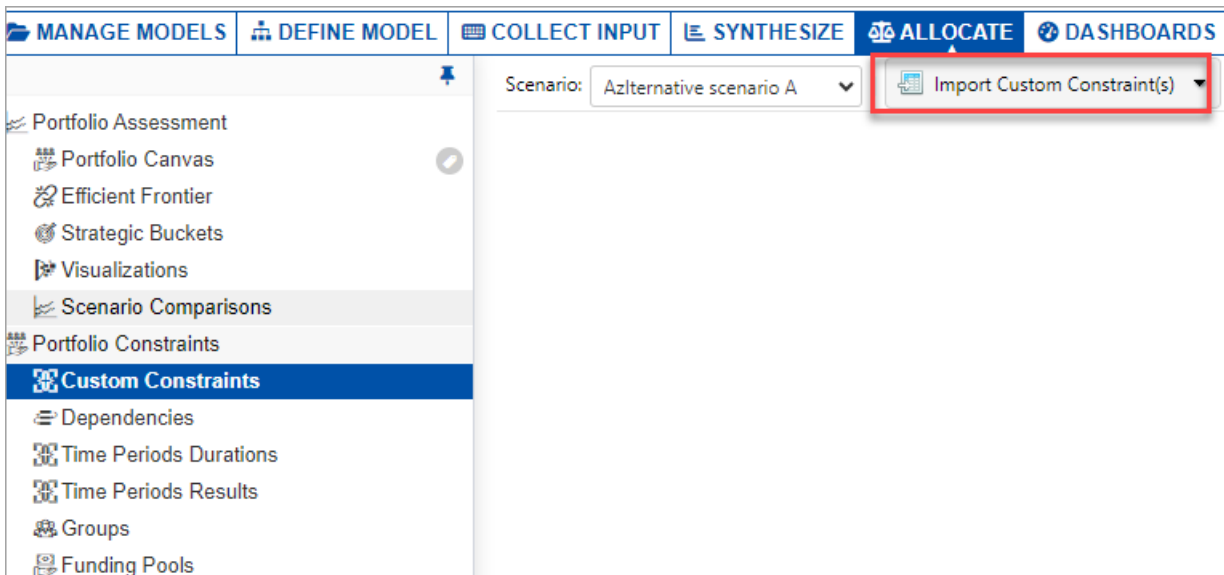
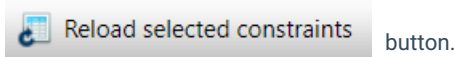Select "**From Categorical Attribute...**":
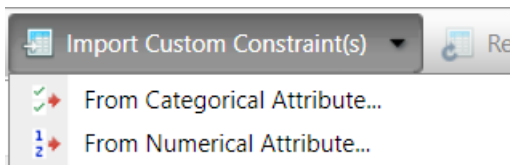
A dialog will open where you can select the categorical attribute:
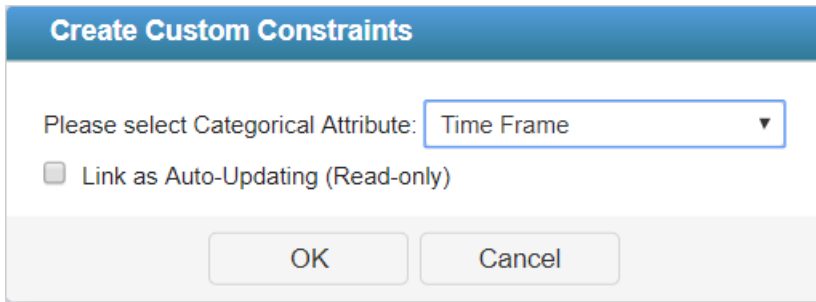
You can link any custom constraint that came from an Alternative Attribute to its source attribute as **Auto-Updating" (Read-Only)**.

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, and you want to manually update or reload the constraints, use the

 button.

or from the Portfolio Canvas page, click the hamburger icon for the custom constraint column and then click **Synchronize values from linked attribute**.
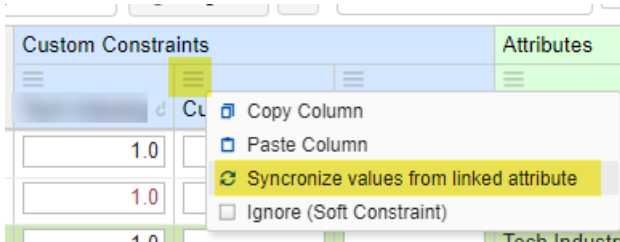
Custom constraints linked to an alternative attribute have a blue chain icon 🔗 when auto-updating , and a gray chain icon 🔗 when auto-updating. You can click the icon to toggle on and off.

When creating custom constraints from a categorical alternative attribute, all the 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.
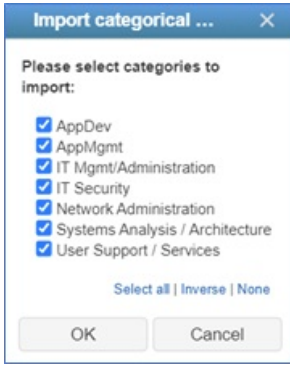
In the image below, the Long, Medium, and Short constraints belong to the Alternative Attribute named "Timeframe." When a project has a particular alternative attribute, a "1" will be placed in the appropriate column. The primary purposes of this is to get a count and to allow for balance and coverage 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		☐		☐	☐	5	1	1		
2	Cisco Routers	YES	0.7967	0.7768	0.0199	0.0250	500	#1	☐		☐	☐	2	0.5		1	
3	Customer Service Call Center	YES	0.7789	0.7368	0.0421	0.0540	980		☐		☐	☐	2	0	1		
4	Desktop Replacements		0.6346	0.6289	0.0057	0.0090	800	#2	☐		☐	☐	5	1			1
5	EMC Symmetrix		0.6808	0.6038	0.0769	0.1130	4,220		☐		☐	☐	3	1			1

From Numerical Alternative Attributes

Importing from Numerical Alternative Attributes is the same process as importing from Categorical Alternative Attributes.

Navigate to Allocate > Custom Constraints page, then click the Import Custom Constraints button and select From Numerical Attribute:
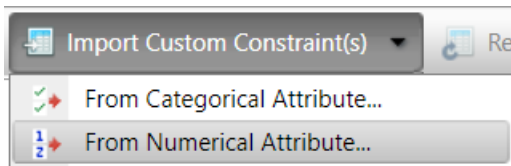
Then select the desired custom constraint to import.

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
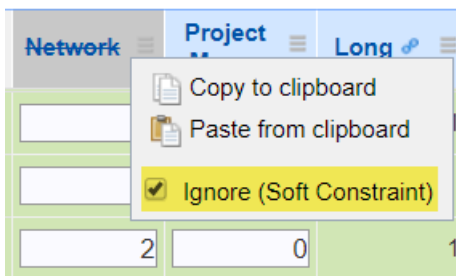
"Calculate Soft Constraints" setting.

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"

		Name		Ignore (Soft Constraint)	Action
⋮	☐	Network		☑	✏ ⊘
⋮	☐	Project Mngrs		☐	✏ ⊘
⋮	☐	Long	🔗	☐	✏ ⊘
⋮	☐	Medium	🔗	☐	✏ ⊘
⋮	☐	Short	🔗	☐	✏ ⊘
				☐	+

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.

Network ☰	Project ☰	Long 🔗 ☰
	📄 Copy to clipboard	
	📋 Paste from clipboard	
	☑ Ignore (Soft Constraint)	
2	0	1

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