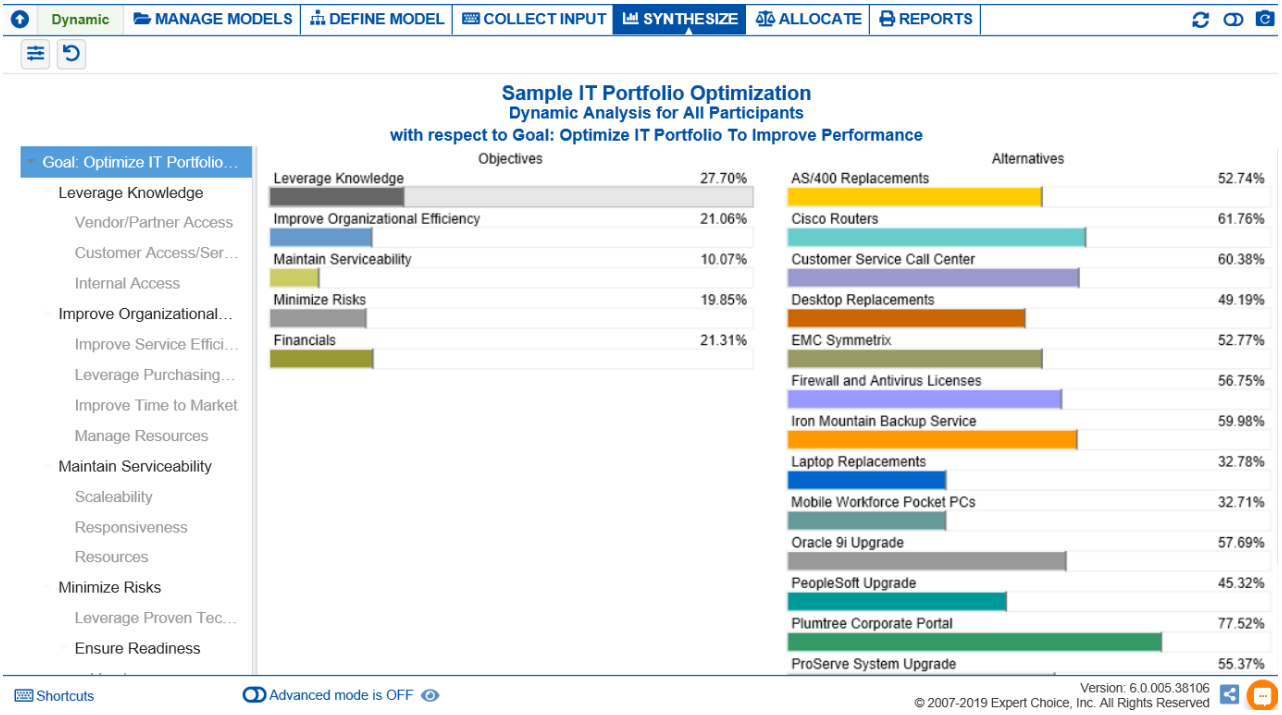
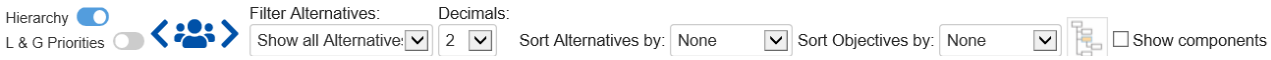
Dynamic Analysis

Overview

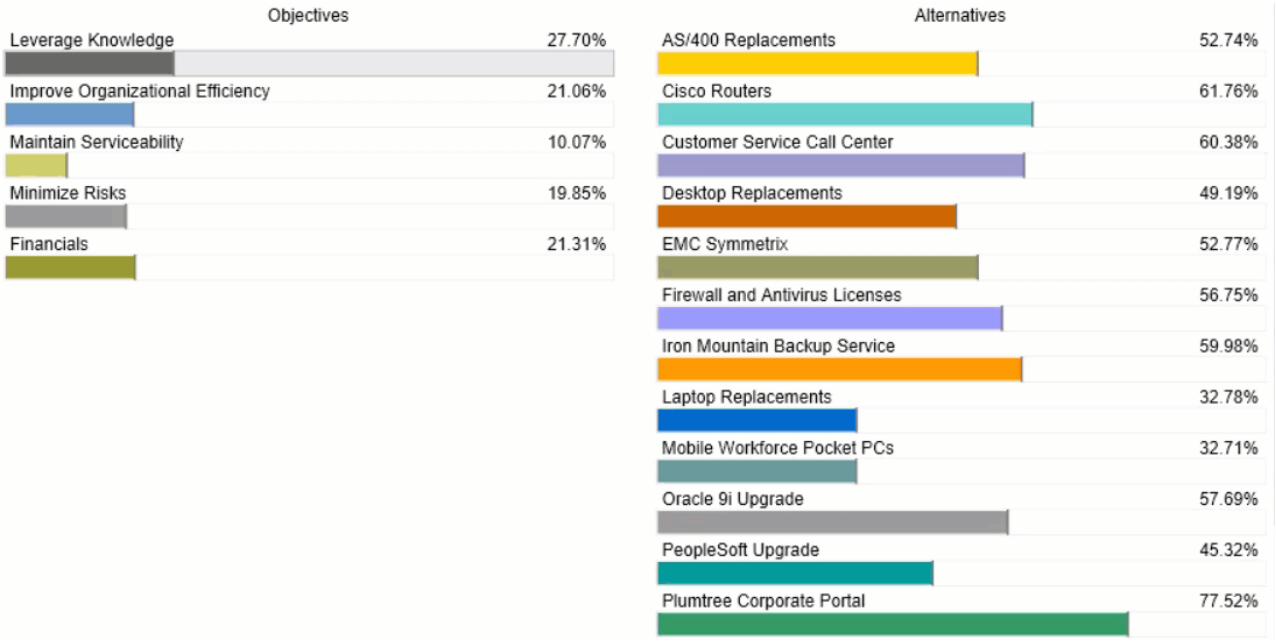
Dynamic Sensitivity analysis is used to dynamically change the priorities of the objectives to determine how these changes affect the priorities of the alternative choices.



Click  to show/hide the toolbar options:



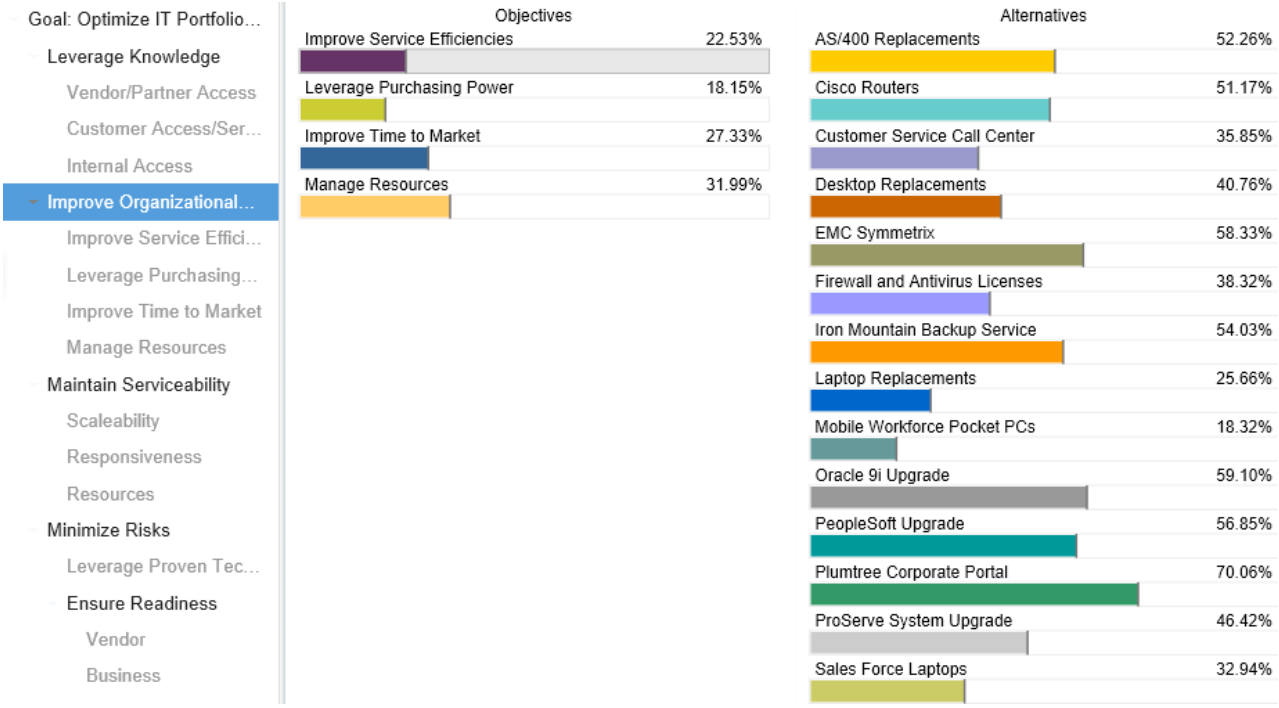
By dragging the objective's priorities back and forth in the left column, the priorities of the alternatives will change in the right column.



The black | markers on the objective and alternative bars indicate the original objectives and alternatives priorities.

After temporarily changing the priority of one or more of the objectives, you can press the reset icon.

By selecting an element in the hierarchy other than the Goal, you can see the results with respect to (WRT) this element rather than the overall results with respect to the goal:



The dynamic analysis above shows all the alternatives priorities with respect to the selected node Improve Organizational Efficiency.

Toggle  to show/hide the objectives hierarchy/tree at the left.

Toggle 

to show/hide the Local and Global objectives priorities on the objectives hierarchy/tree.

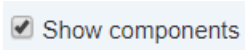
Select Participant and Group

You can select to display results for an individual participant or another group using  .

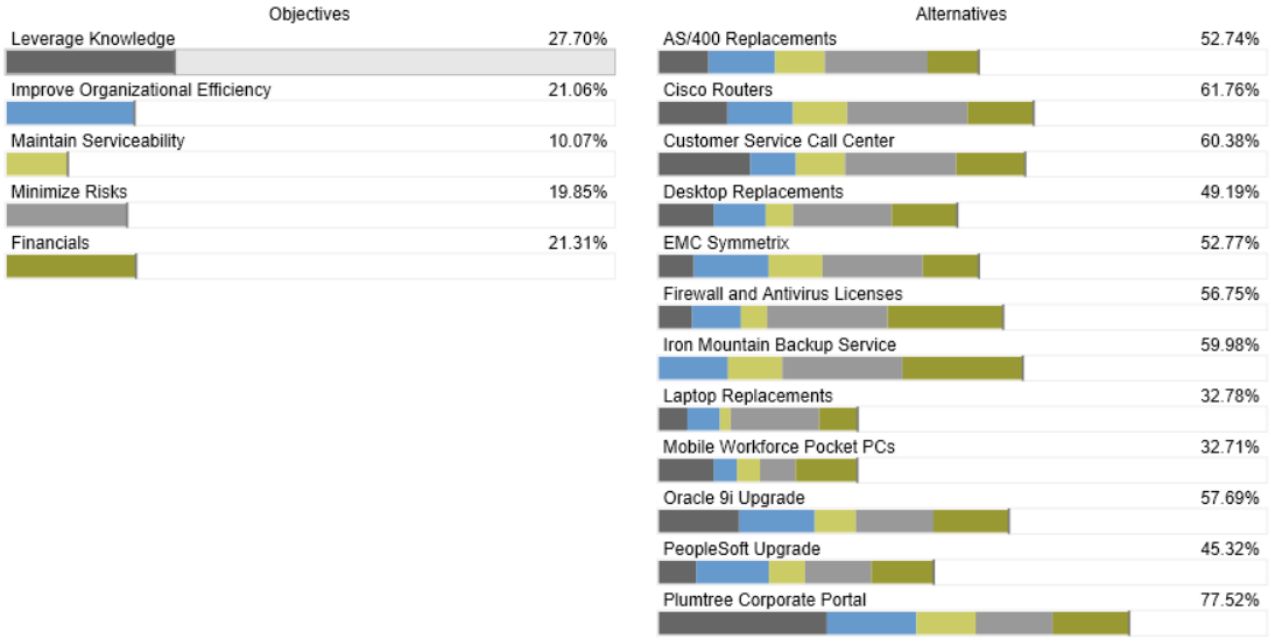
Clicking the  button will open a window where you can select a participant or a group.

You can use the prev  and next  buttons to cycle through each participant or group.

Alternative Components



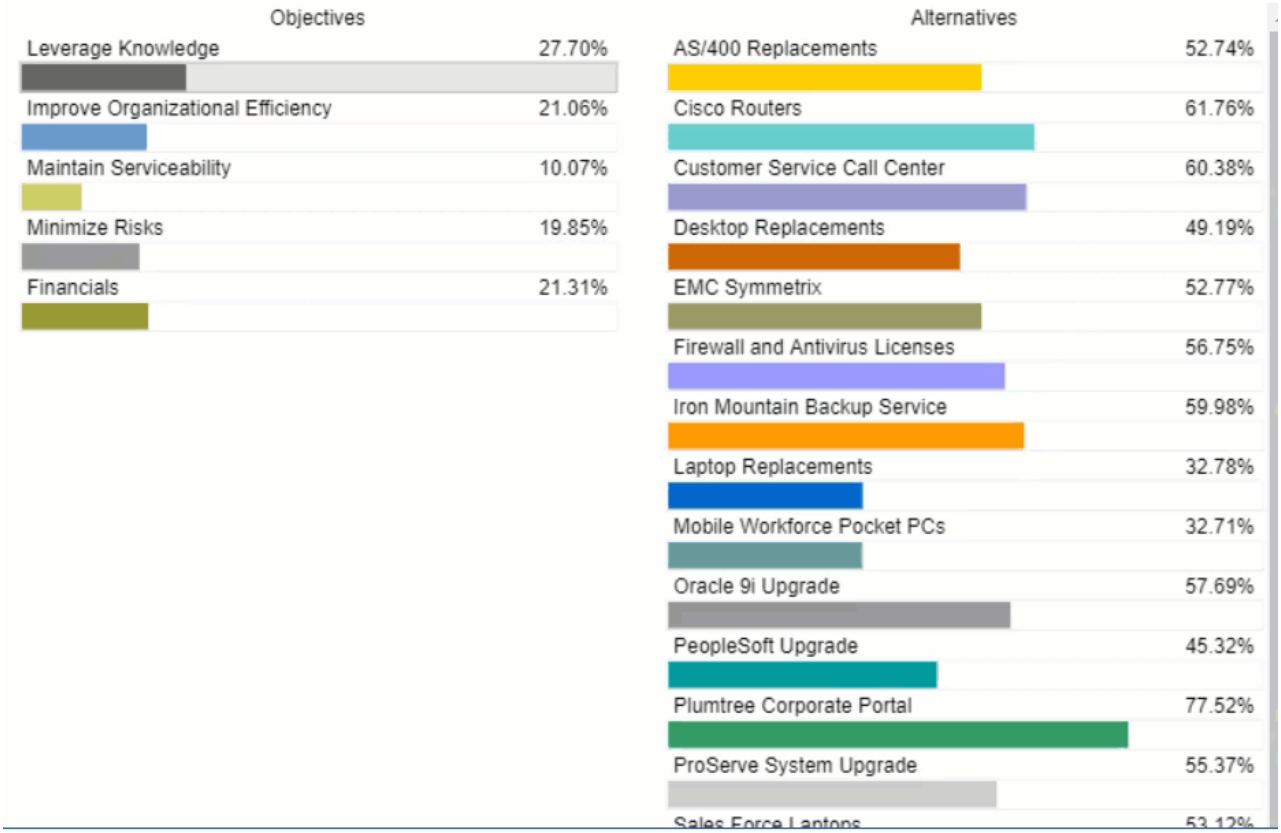
displays the breakdown of each of the objective's contributions or share to the priority of each of the alternatives.



The breakdown colors of the alternative bars at the right corresponds to each of the objectives at the left.

Change Alternatives Color

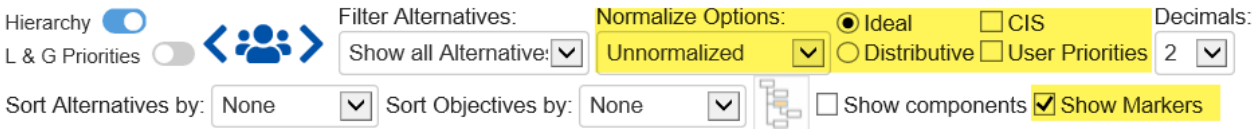
Clicking on the alternative bar will open a color picker where you can select and change the color assignment.



You can also change colors from the Alternatives and Objectives Grid.

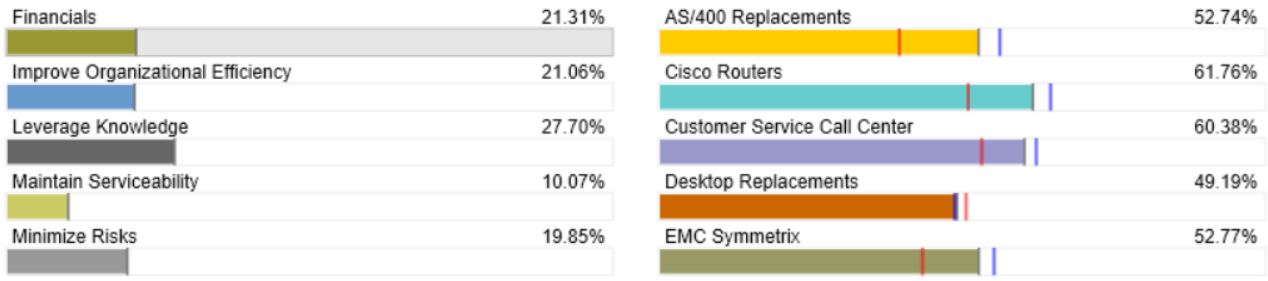
DIDN'T SEE THE OPTION YOU ARE LOOKING FOR? Try enabling the **Advanced Mode** switch at the bottom of the page; this will show the **advanced options on this page**.

When the Advanced mode is ON, you will see the advanced options on this page:



Using Markers

The ☐ Show Markers option displays red and blue markers on the alternatives bars which indicate the alternative priority when the selected objective is dragged to the maximum (100%) or minimum (0%) respectively.



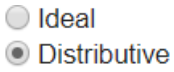
The selected objective in the example above is "Financials" as indicated by its light gray background.

When the "Financials" bar is dragged to the maximum (100%), the alternative bars at the right will be filled up to where the red marker is. When it is dragged to the minimum (0%), the alternative bars at the right will be filled up to where the blue marker is.

Depending on the alternative, red might be on the right and blue on the left, or vice-versa.

Ideal and Distributive Synthesis

Results can be computed as an **Ideal** mode (default) or D**istributive** mode synthesis.



Originally, AHP had only one synthesis mode – later called the "distributive" synthesis mode. A distributive synthesis distributes priorities from the goal down through the alternatives and is analogous to dividing priorities in a pie chart, which is intuitive for decision-makers to comprehend. The sum of the global priorities for each alternative with respect to each covering objective represents the overall priority of that alternative. The priorities have ratio scale properties (as well as, of course, interval and ordinal properties), which means that they can be used in making a choice or in allocating resources. This synthesis operation can be thought of as distributing the goals priority of 1.0 to the alternatives under consideration and is today called the distributive synthesis mode. Originally, this was the only synthesis mode of AHP. Critics of AHP pointed out situations where a different synthesis mode is more appropriate.

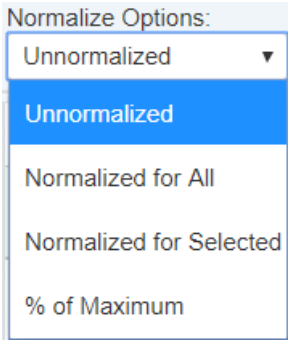
Aggregating Individual Priorities (AIP)

Clicking the **AIP** check-box will show results based on aggregating individual priorities, known as AIP, instead of aggregating individual judgments (AIJ). When AIP is checked, overall alternative priorities are computed for each participant and then an average of these priorities is computed.

NOTE: Due to the nature of AIP, objectives charts, objectives grid, and all sensitivity analysis pages are disabled when AIP is selected.

Normalization Options

In Advanced mode, you can select to display results based on various normalization options:



- **Unnormalized:** The priority is the sum of the products of each covering objective's global priority times the priority of the alternative with respect to each covering objective. If an alternative has a priority of 1 for every covering objective, it will have an unnormalized priority of 1 and is referred to as an ideal alternative. Note: "Unnormalized" is not available and not applicable when using Distributive mode.
- **Normalized for All:** Sum to 1 for all the alternatives.
- **Percentage of Maximum:** The alternative with the highest priority is 1 and all others are a percentage of this.
- **Normalized for Selected:** Sum to 1 for the selected alternatives.

Combined Input Option (CIS)

If the Combined Input Option (CIS) is ON, then results for individuals are computed by combining the priorities derived from judgments/ratings for which they had roles, with the combined results for any parts of the model where they did not have a role.

Apply User Priorities

If priorities (weights) have been specified for participants, you can use the "User Priorities" check box which enables you to apply or ignore these priorities in calculating the results.