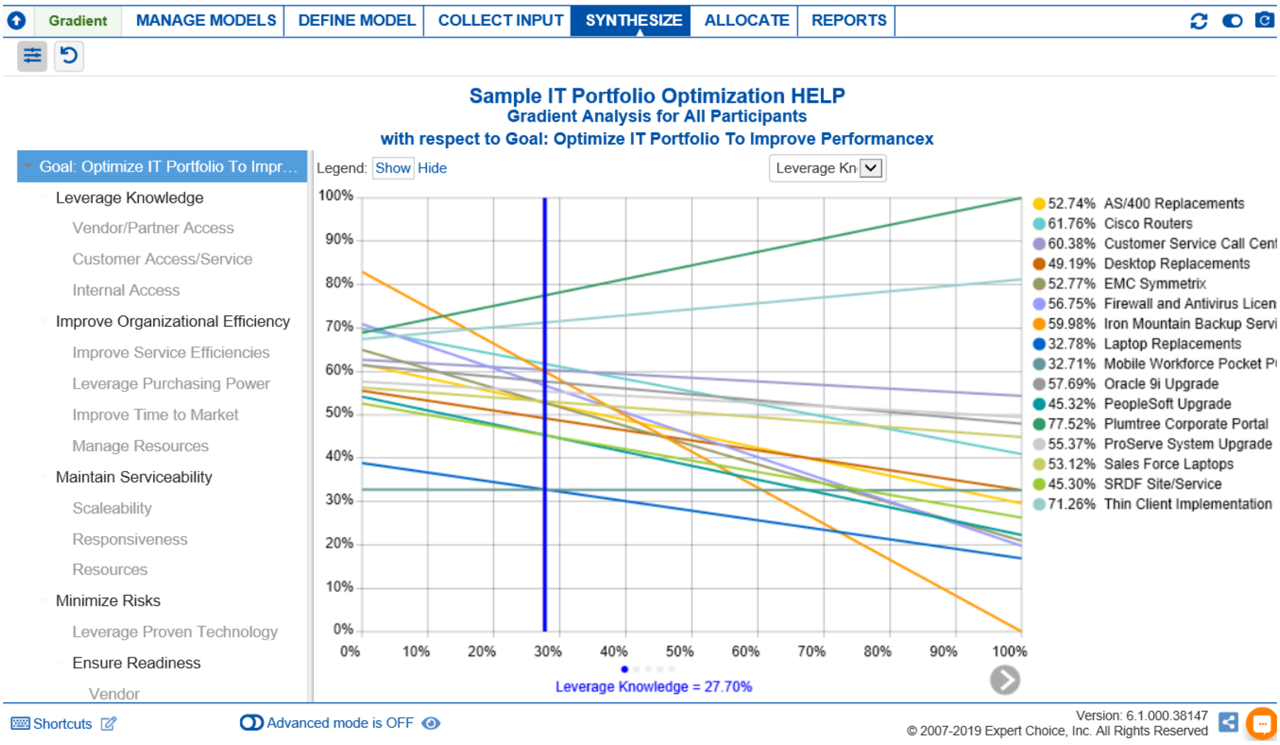
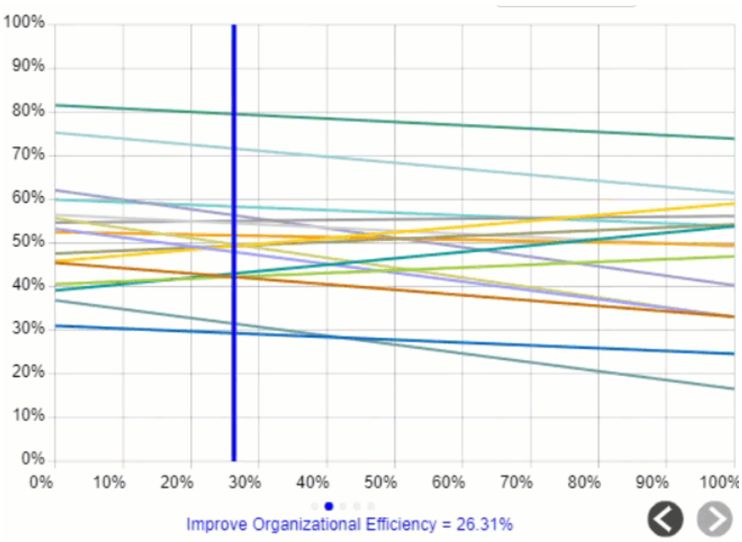
Gradient Analysis

A gradient analysis shows the rate of change of the priorities of alternatives with respect to the change in priority of one of the objectives.



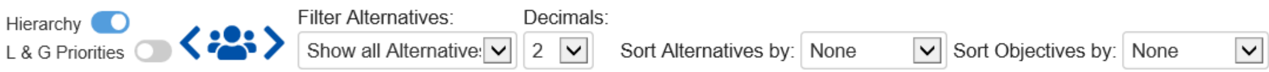
Each gradient sensitivity is composed of:

- An objective on the x-axis -- which can be selected from  buttons, such as:

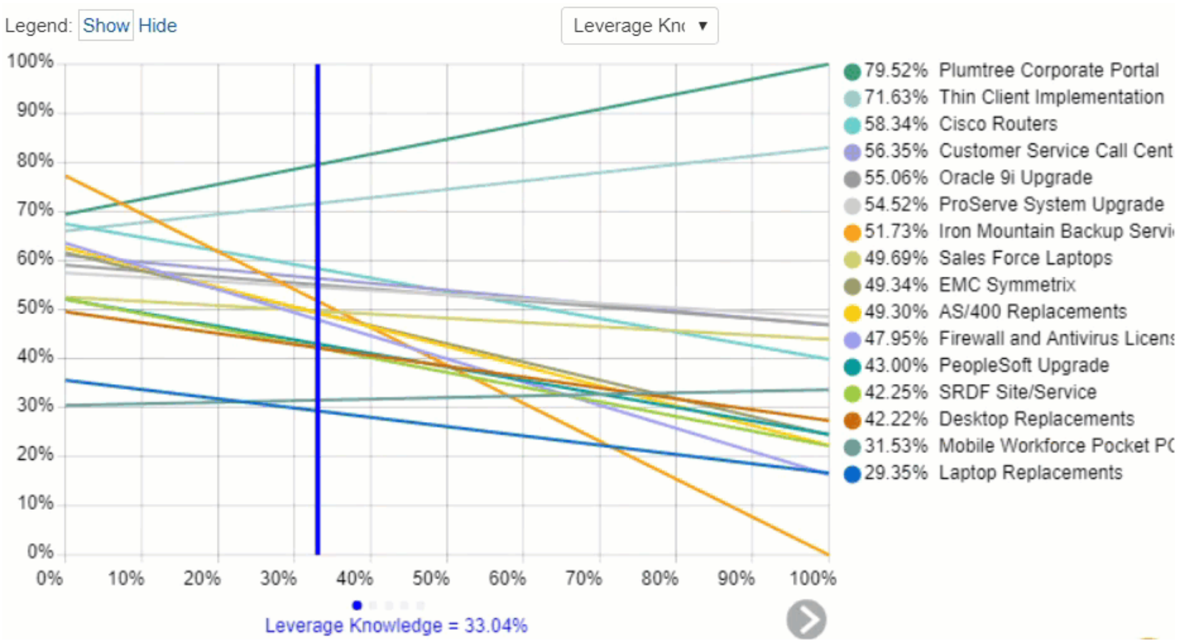


- A curve for each of the alternatives.
- A vertical bar representing the current priority of the objective being considered.

Click  to show/hide the toolbar options:

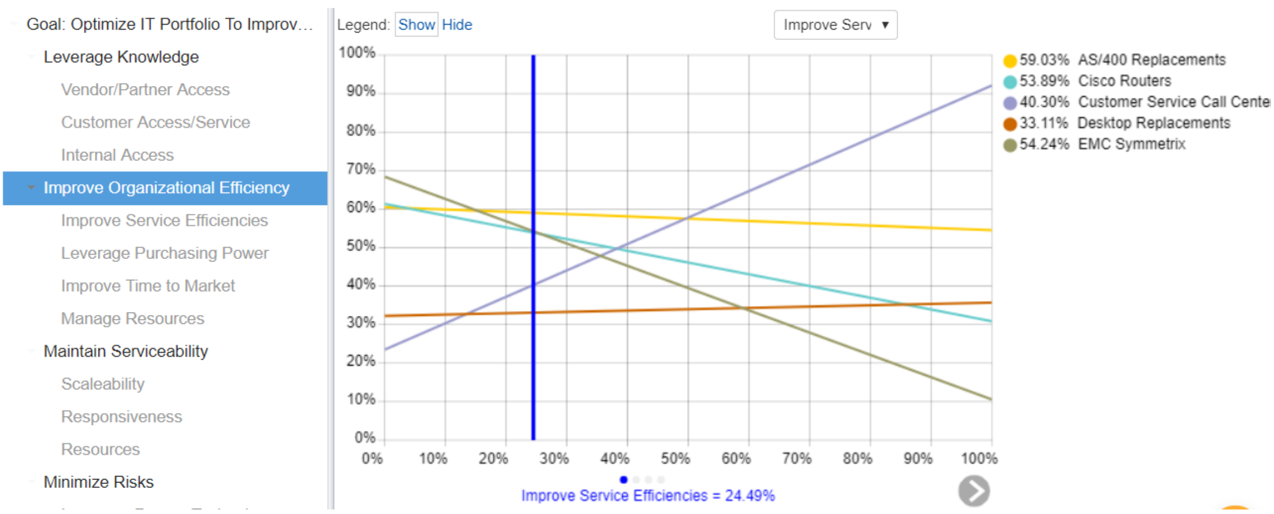


You can temporarily alter the relationship between the alternatives and their objectives by dragging the blue vertical bar left or right.



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

Select Participant and Group

By default, the result shown is for the "All Participants" group. You can select to display results for an individual participant or another 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.

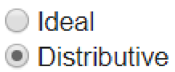
You can use the prev and next buttons to go through each participant or group.

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:

Ideal and Distributive Synthesis

Results can be computed as an **Ideal** mode (default) or **Distributive** 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 goal's 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.

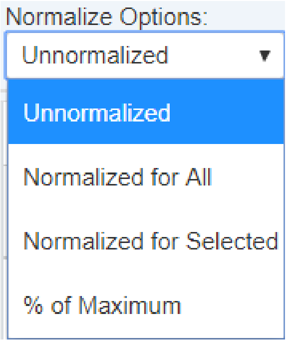
Aggregating Individual Priorities (AIP)

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.

AIP

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** (alternative priorities sum to 1)
- **% 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.

☑ CIS

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.

☑ User Priorities