Local Results

The likelihoods/impacts for elements in each cluster of the threats/objectives hierarchy, and as the likelihoods/impacts derived for the events with respect to each covering threat/objective, are referred to as '**local**' likelihoods/impacts.

The options available on the Local Results page is depending on if the inconsistency ratio is hidden or shown .

Local Results when Inconsistency Ration is hidden

If the Project Manager has specified that the inconsistency ratio for your judgments not be shown, you will see the likelihoods/impacts/priorities for the elements you have just made judgments on a screen that looks like:

| | You have completed prioritizing the priority of the Objectives 🜔 🛋 🗙 | | | | | |
|----------------------------|--|---|--|--|--|--|
| Importance of "Objectives" | | | | | | |
| No 🛦 | Name | Impact of due to "Objectives" | | | | |
| 1 | Public Relations | 9.28% | | | | |
| 2 | Financial | 7.13% | | | | |
| 3 | Reliability, Availability, Maintainability | 29.02% | | | | |
| 4 | Performance | 20.00% | | | | |
| 5 | Human Factors | 11.61% | | | | |
| 6 | Safety | 22.95% | | | | |
| | Click here if you would like | e to redo a judgment for one pair of elements | | | | |

Above are the local results for the objectives priorities.

You can click on any heading to sort by that column.

If you think the priorities are not reasonable (i.e. are not intuitive), then click the

Click here if you would like to redo a judgment for one pair of elements button.

You can then (1) select a pair of elements for you to think one may have too high a priority and the other too low a priority.

| | You have completed price | ritizing the priority of the Objectives 🜔 4× | |
|------|--|--|--|
| | Importan | ce of "Objectives" | |
| No 🔺 | Name | Impact of … due to "Objectives" | |
| 1 | Public Relations | 9.28% | |
| 2 | Financial | 7.13% | |
| 3 | Reliability, Availability, Maintainability | 29.02% | |
| 4 | Performance | 20.00% | |
| 5 | Human Factors | 11.61% | |
| 6 | Safety | 22.95% | |
| | Select a pair of elements (by clicking the che One has too high a priority, and the oth | | |

(2) After selecting the pair and clicking 'Re-evaluate', you will be taken to the screen where you can enter or revise the judgment comparing these two elements.

After doing so and clicking 'next', you will be taken back to the screen showing the revised cluster priorities.

Local Results when Inconsistency Ration is shown

If the Project Manager has specified that the

inconsistency ratio of your judgments is shown the priorities of the elements, as well as the inconsistency ratio, will be displayed on a screen such as the following:

| | | You have completed prioritizing the priority of the Objectives 🜔 ፋ | | | |
|------|-------------|--|---|--------|--|
| | | Importan | ce of "Objectives" | | |
| No 🔺 | | Name | Impact of due to "Objectives" | | |
| 1 | Public Re | elations | 9.28% | | |
| 2 | Financial | | 7.13% | | |
| 3 | Reliability | v, Availability, Maintainability | 29.02% | | |
| 4 | Performa | nce | 20.00% | | |
| 5 | Human F | actors | 11.61% | | |
| 6 | Safety | | 22.95% | | |
| | | Inc | consistency ratio: 0.08 | | |
| | | Click here if these prioriti | es or the inconsistency are not satisfa | ictory | |

As a very rough rule of thumb, the inconsistency ratio should be .10 or less. However, there are reasons for accepting results even if the inconsistency ratio is as high as .2 or .3. (See Inconsistencies, or *Decision by Objectives* on Professor Forman's Website or at Amazon) It is more important that the priorities be reasonable to you than to have a low inconsistency ratio. You should NOT change judgments just because of inconsistencies. You *should* re-examine judgments because of high inconsistency and change only those judgments that you feel were incorrectly recorded or for which you

have a change of opinion -- regardless of inconsistency.

If you feel that either the priorities are not satisfactory or would like to review the judgments to address a high inconsistency ratio, click the above button. Doing so will produce the following screen:

| vour judgments |
|--------------------------------|
| nsistency is too high |
| ot reasonable then: |
| gment for one pair of elements |
| Cancel |
| |

Clicking the "Click here to review your judgments" will take you through the first page of the evaluation for the given cluster.

Clicking the 'Click here if you think the inconsistency is too high ' button will result in a screen showing the judgment matrix (discussed below).

Clicking the "**Click if you would like to redo a judgment for one pair of elements** " will take you through the sequence explained at the top of this page.

Judgment Matrix

The judgment matrix will be displayed when you click the second button

Click here if you think the inconsistency is too high

The judgments shown in the cells of the matrix indicate how much more important or preferable the row element corresponding to a judgment cell is than the column element corresponding to the judgment cell.

Red judgments mean that judgments for which an element in the column is more important or preferable than an element in a row.

Blank cells in the upper diagonal of the matrix represent judgments that were not elicited or entered.

The radio button **O** Review all judgments in cluster makes the intersecting cells clickable. Clicking on any one of the cells will redirect you to the step displaying the pairwise comparison for the row and column elements corresponding to that cell.

By default, the elements (objectives or alternatives) are sorted by original order in the model as shown above.

You can sort the elements by priority (descending) by clicking

↓ Sort by priority

You can easily notice that elements are sorted by priority by looking at the priority bars below the elements

You can hover on the element cell to see its priority as shown above.

You can sort back the elements based on their original order by clicking

E Sort by original order

Make changes on the judgment matrix

If you wish to make or investigate possible changes to judgments in the matrix itself, click on the Make changes on this screen button and enter or change the judgment.

The judgments are shown numerically in this matrix regardless of whether they were made in the verbal or numerical/graphical modes.

You can type in judgments and then press enter to save.

To invert judgments (change from black to red or red to black, press either the - or i keys. Inverting is saving automatically.

You can then click again the sort by priority to see how the sorting changed after altering the judgments.

Conditions for consistent judgments when the matrix is sorted by priority.

If the judgments were perfectly consistent, they would be increasing (or more precisely non-decreasing) as you look at them:

- a) from left to right in each row, and
- b) from bottom-up in each column

Rank and Best Fit

You can display the inconsistency rank and the best fit by checking Rank and Rest Fit respectively.

This will show small numbers on each cell with judgments.

The inconsistency rank is the small number with blue color, while the best fit is red.

The **inconsistency rank** is the order of inconsistency of that judgment with the other judgments. So, for example, the cell with a judgment of 5 (strong in the verbal mode) and a 1 in the upper right corner of the cell is the most inconsistent judgment and the judgment of 2 with a 2 in the upper right of the cell is the second most inconsistent judgment.

The **best-fit** judgment is not necessarily the best, rather it is the judgment that fits best with all of the other judgments that were made. It is not advisable to change judgments to the 'best fit' values, but rather use the 'best fit' values to give you an idea of which judgments you might want to reconsider to reduce the inconsistency.