Likelihood: Performance Analysis

Overview

Likelihood's Performance analysis is used to dynamically change the likelihoods of the threats to determine how these changes affect the likelihoods of the events.

In Riskion, we refer to **threats**, **causes**, **hazards**, and **sources** interchangeably. While they may have slightly different nuances depending on the context in which they are used, they serve the same purpose -- they are all threats/sources of risk (for Risk Events) or sources of opportunity (for Opportunity Events).

In our sample model, we are using the terminology "Source(s)".

Performance Analysis for Overall Likelihood of Events
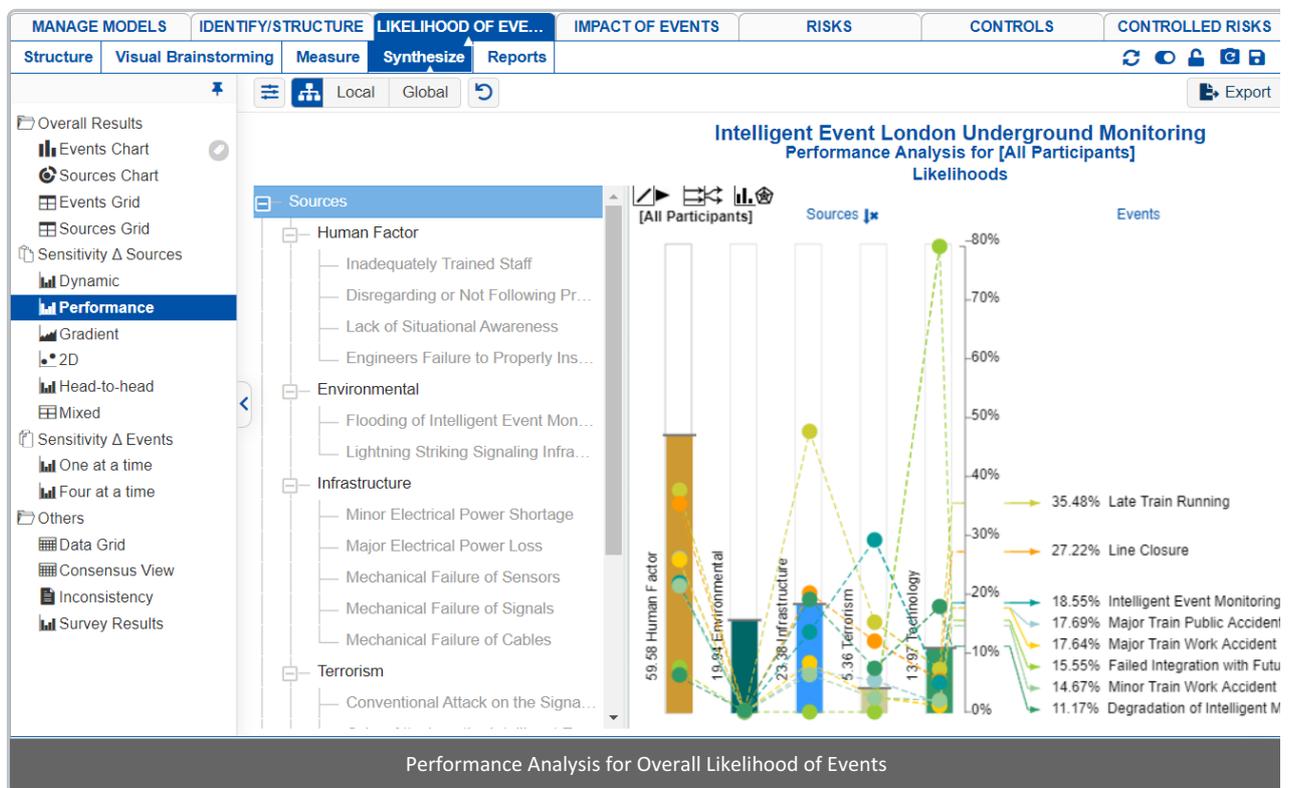
Each performance sensitivity is composed of:

- The relative likelihood of the sources is depicted by the vertical bars and shown numerically on the left side of each bar.
- The relative likelihood due to any of the sources is shown by the intersection of that events line segment with the sources bars. Thus, for example, Late Train Running has the highest likelihood due to Human Factor (yellow-green bubble on the Human Factor bar).
- The intersection of the event line segment with the overall axis on the right shows the relative overall likelihood of the event.

The options above the chart are explained below:

- 🖊 to display the lines connecting the events from one source to another. Note: The connecting lines have no meaning; they are included to help you find where a particular event lies as you move from one source to another.

- ► to hide the connecting lines and use horizontal ticks instead of circles to indicate the likelihood of the event due to the source
- ⇉ to align the event labels at the right to their corresponding overall likelihoods
- ⇆ to expand the event labels
- ıl. to show the sources as bars
- ⬠ to display the performance sensitivity as a radar chart

The Performance graph is also dynamic, so you can temporarily alter the relationship between the events and their sources by dragging the source bars up or down.

> Note: If there is one event that is highest on every source, there is probably something missing from the model, or specific sources were not considered adequately when the judgments were. Iteration should be almost always be performed in such a case since it is extremely rare that any event is highest on every source.
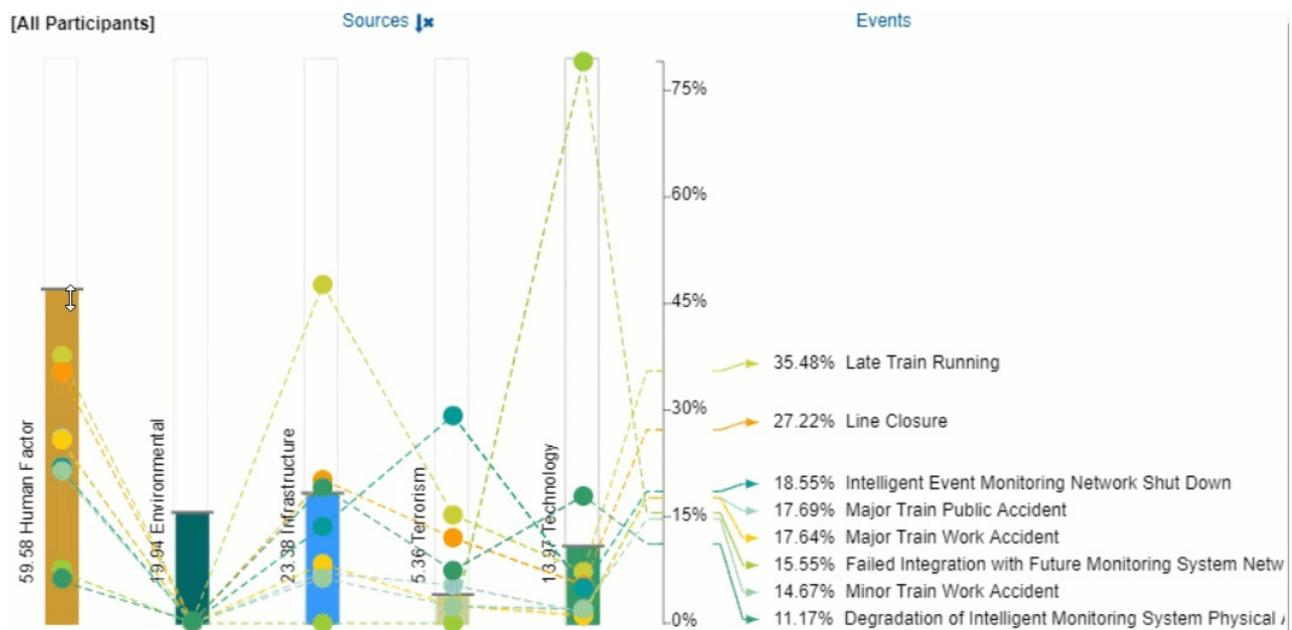
After temporarily changing the likelihoods of one or more of the sources, you can press the ↺ reset icon.

By selecting an element in the hierarchy other than the top node, you can see the results due to this element rather than the overall results due to the "Sources" node.

Performance Analysis for Likelihood of Events due to Human Factor
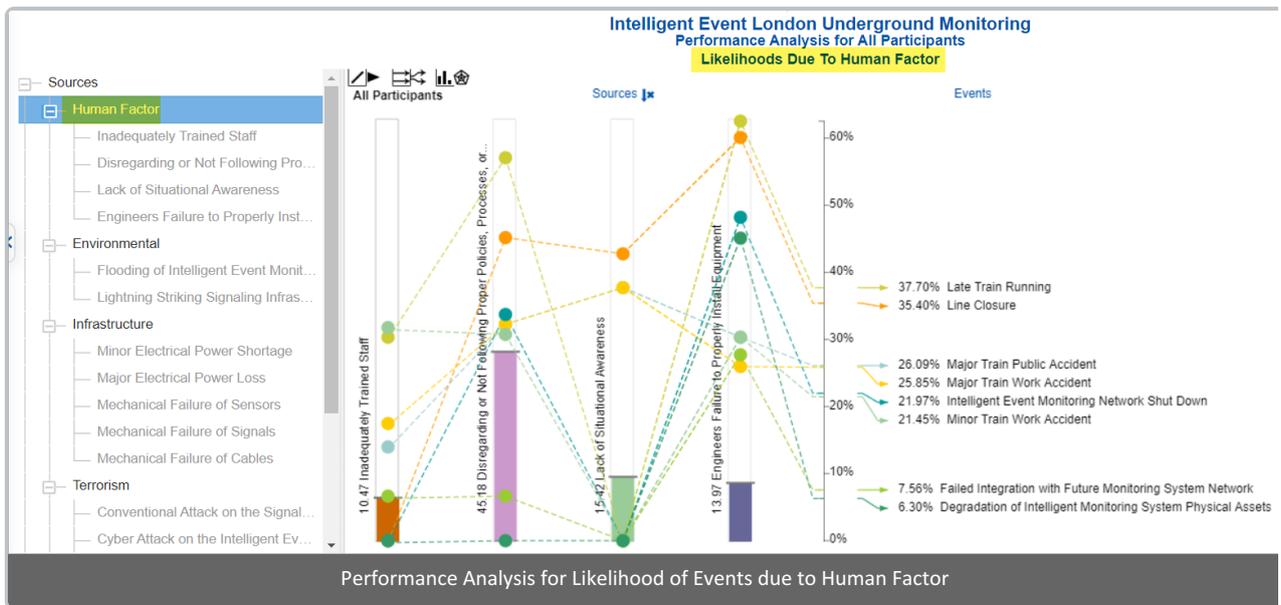
The performance above shows all the event likelihoods due to the selected node Human Factor.

You can show the local and global source's likelihoods on the Sources Hierarchy at the right using the Local-Global buttons:

Sources	All Participants	
	Local	Global
Sources		
Human Factor	59.58%	59.58%
Inadequately T…	10.47%	6.24%
Disregarding o…	45.18%	26.92%
Lack of Situati…	15.42%	9.19%
Engineers Fail…	13.97%	8.32%
Environmental	19.94%	19.94%
Flooding of Int…	2.03%	0.4%
Lightning Striki…	1.08%	0.22%
Infrastructure	23.38%	23.38%
Minor Electrica…	19.22%	4.49%
Major Electrica…	7.91%	1.85%

You can hide the Sources Hierarchy at the left using

Click to show/hide the toolbar options:

Select Participants and Groups

You can select to display results for **one** participant or group using

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

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

Filter Events

By default, all events are displayed.

You can select to display the top or bottom 5, 10, or 25 events based on the "All Participants" group likelihoods.

The Advanced filter, allows you to select a specific number for the top N, and base it on another group or participant.

The select /deselection option, allows you to check/uncheck the events.

The filter by events attributes, filter the events base on the attributes specified on the Events page.

The show risks only / Show opportunities only are applicable for the Mixed model where events can be Risk or Opportunity.

Advanced Mode Options