

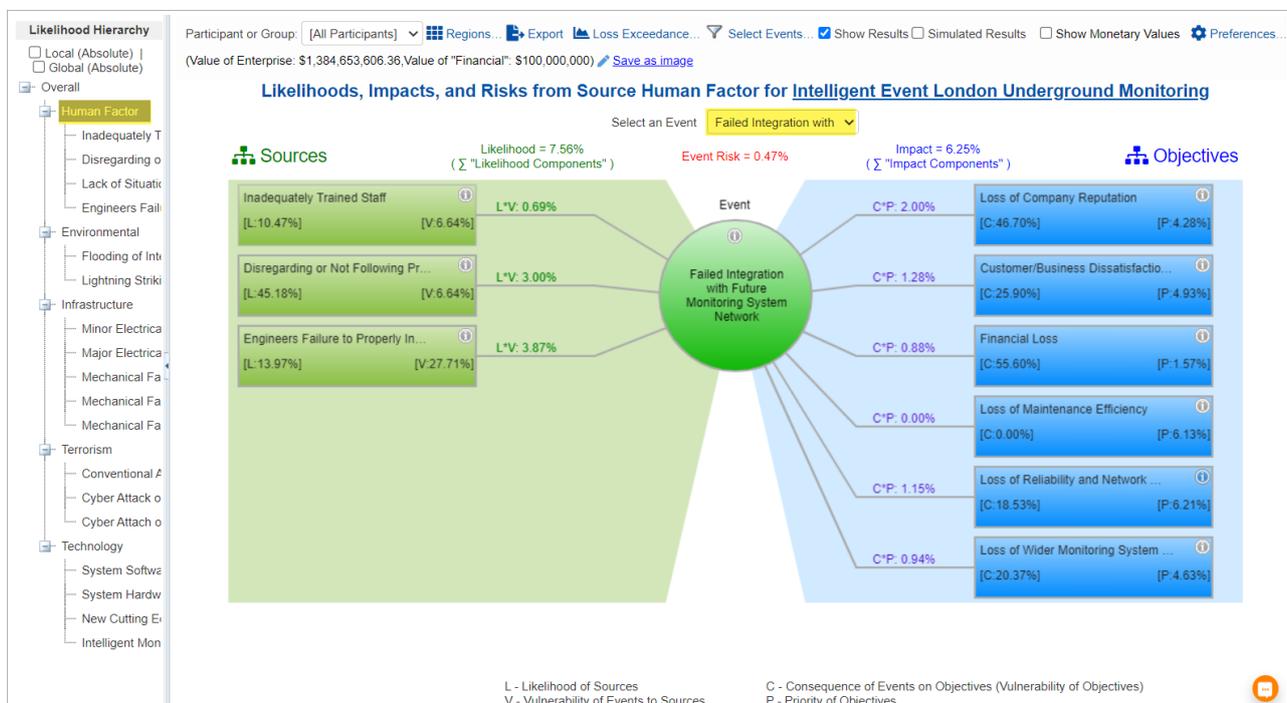
Bow-Tie Diagram From Threats

Overview

This page displays the **Bow-tie diagram from specific Threats**.

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)".

The bow-tie diagram for the analysis of the Event "**Failed Integration with Failure Monitoring System Network**" from source "**Public Relations**" is displayed below.



The selected **Event** is displayed at the center of the diagram (circle). Its background color varies based on the event's %risk.

The **Sources** of the selected event are displayed on the left side of the diagram (green boxes).

The **Objectives** of the selected Event are at the right (blue boxes).

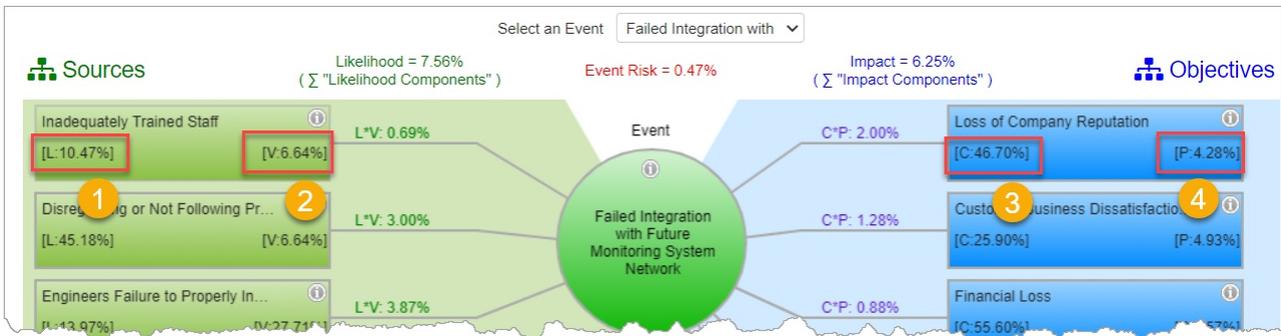
The specific Source ("**Human Factor**") from which the event is being analyzed is selected from the **Likelihood Hierarchy** at the left.

You can also define and analyze controls in a **bow-tie diagram with controls**.

You can view and analyze the following information:

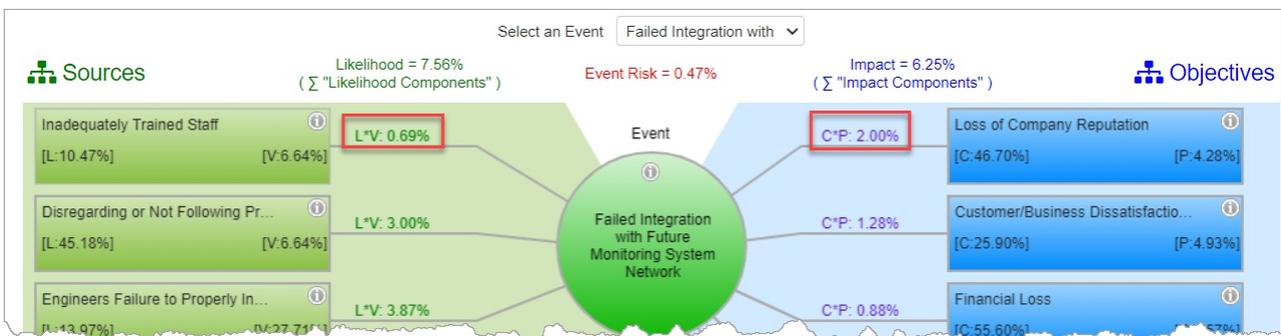
- L - Likelihood of Sources
- V - Vulnerabilities of events to sources
- C - Consequences of Events on Objectives
- P - Priority of Events on Objectives

Focusing on the first source and objective on the diagram:



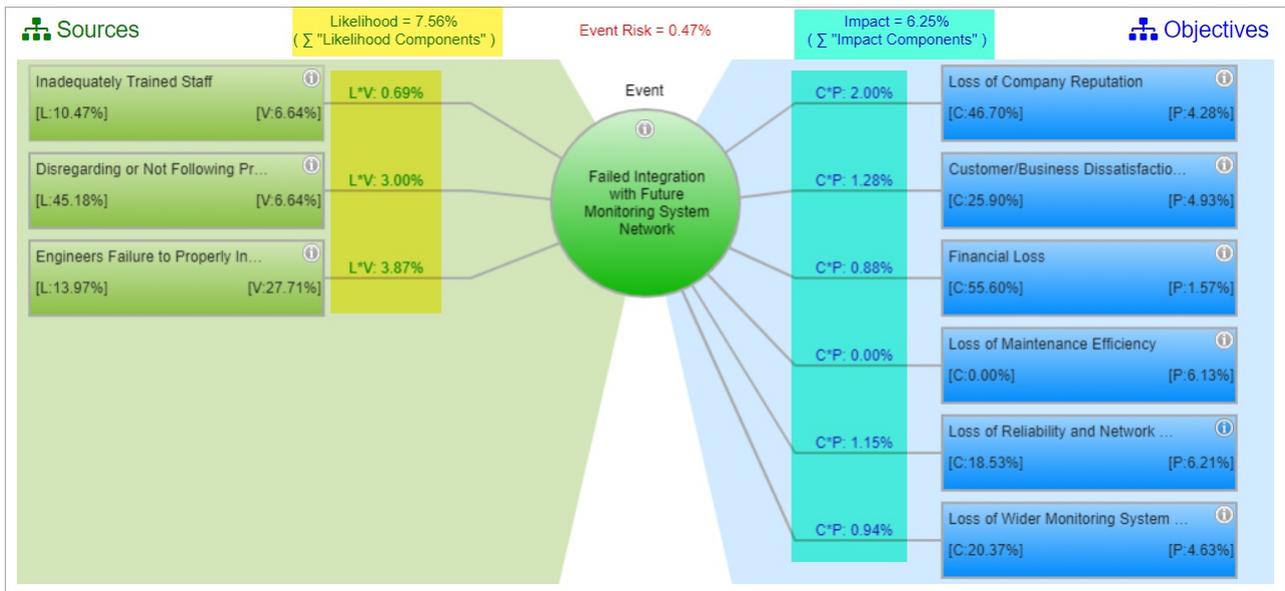
1. The Likelihood (L) of the Source "Inadequate Trained Staff" given the source "Human Factor" is **10.47%**
2. The Vulnerability (V) of the Event "Failed Integration with Future Monitoring System Network" from source "Inadequately Trained Staff" is **6.64%**
3. The Consequence (C) of the Event "Failed Integration with Future Monitoring System Network" on the Objective "Loss of Company Reputation" is **46.70%**
4. The Priority (P) of Objective "Loss of Company Reputation" is **4.28%** (overall or global impact)

The Likelihood of the event to a given source (L*V), and the Impact of the event (C*P) on a given objective are shown on the connecting lines to the source/objective boxes:



- The Likelihood of the Event "Failed Integration with Future Monitoring System Network" to the source "Inadequately Trained Staff" given "Human Factor" is **0.69%**
- The Impact of the Event "Failed Integration with Future Monitoring System Network" on the Objective "Loss of Company Reputation" is **2.0%**

The summation of (\sum "L*V") event's likelihoods from each event is the Likelihood of the Event, and the summation (\sum "C*P") event's impact on each objective is the Impact of the Event -- given the selected source.

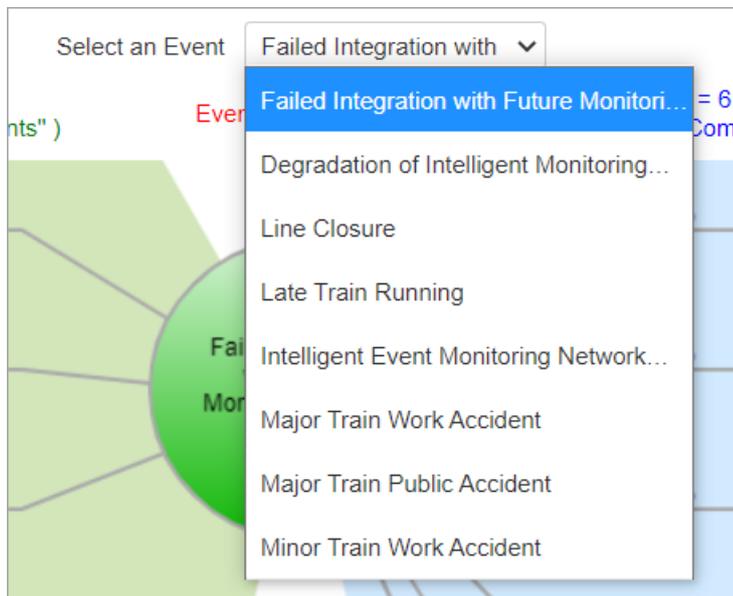


The event "Failed Integration with Future Monitoring System Network" has Likelihood and Impact due to source "Human Factor" **7.56%** and **6.25%** respectively.

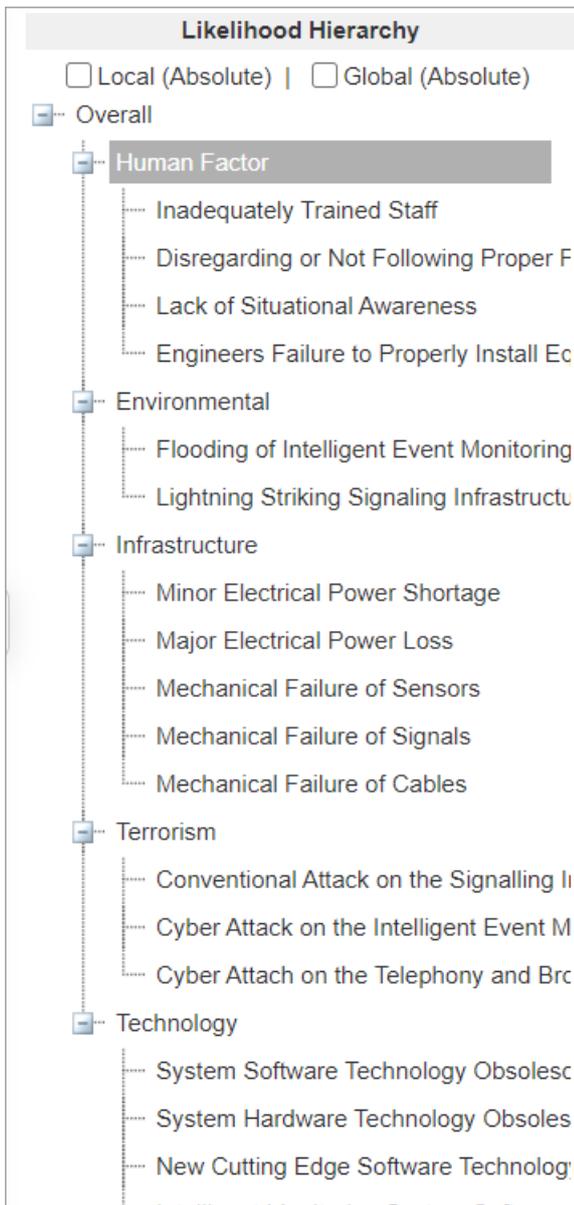
The Event's risk is then computed by Likelihood * Impact:

$$4.51\% * 6.25\% = \mathbf{0.28\%} \text{ (as shown at the top of the Event)}$$

You can select another Event to analyze from the Events list pulldown at the top:



and you can select another source by clicking a node from the Likelihood Hierarchy at the left:



Select Participant or Group

The bow-tie for the "All Participants" group is displayed by default. By selecting from the "Participants and Groups" dropdown, you can display the bow-tie analysis for another participants or group:

Participant or Group: [All Participants] 

Show Monetary Value: [All Participants]

 Sources

Inadequately Trained [L:6.24%]	Denis Risman
	Brian Quigley
Disregarding or Not [L:26.92%]	Chief Risk Officer
	Chief Engineering Officer
Engineers Failure to [L:8.32%]	IT Supervisor
	Chief Executive Officer
System Software Te [L:5.97%]	Devin Nagy
	Michael Mankowski
System Hardware Te	John Doe

Define Event Color (Region)

Default colors are already provided for the events on the diagram based on the event's %risk.

You can change this by clicking 

Participant or Group: [All Participants] **Regions...** Export Loss Exceedance... Select Events

Values (Value of Enterprise: \$1,384,653,606.66, Value of "Financial": \$100,000,000) [Save as image](#)

Regions Editor

Settings:

If Risk > Rh #FF5656

If Risk <= Rh and >= RI #FFFF56

If Risk < RI #09B500

Percentage Monetary Value

Rh (%) =

RI (%) =

Here you can specify the limits: Rh (risk high) and RI (risk low) both for percentage or monetary.

Given the limits, you can specify the 3 regions/colors:

- High Risk
- Mid (in-between) Risk
- Low Risk

Export Bow-tie to Excel or Image Format

Click [Export](#) to export the bowtie into a .xlsx file.

Click [Save as image](#) link to download the diagram as an image file (.jpeg)

Show Monetary Values

Simulated vs Computed Event Likelihoods, Impacts, and Risks (Flaw of Averages)

Preferences