

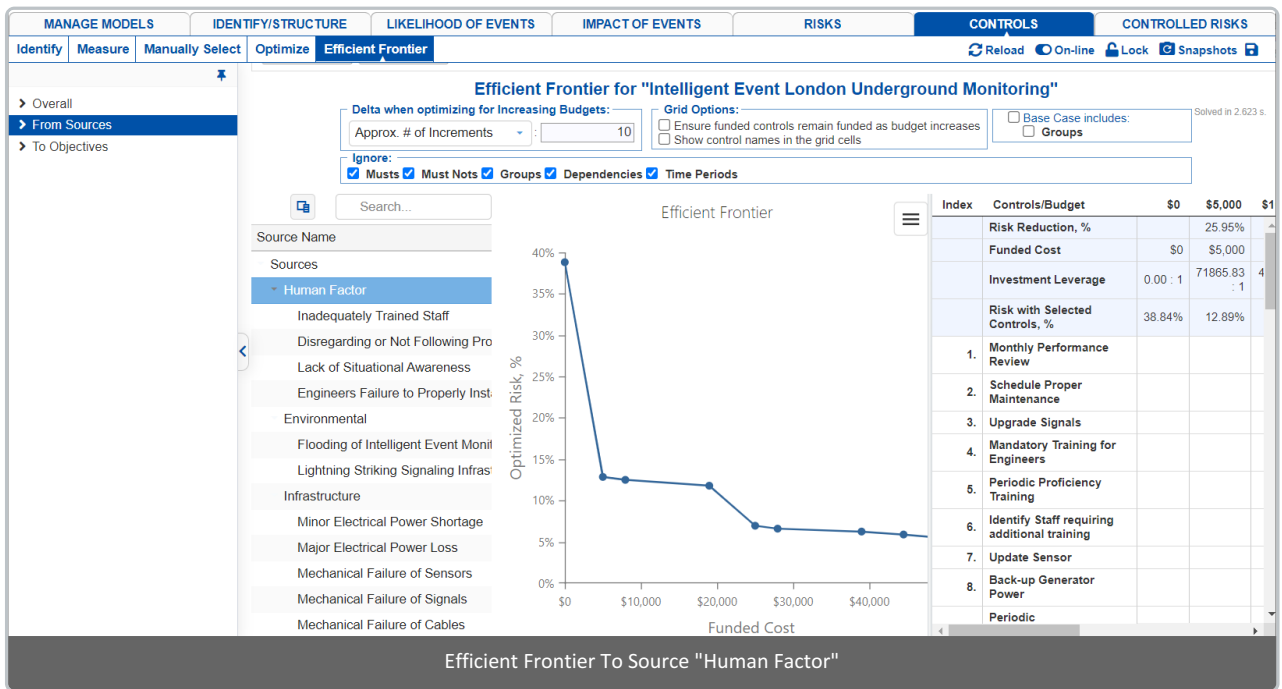
# Efficient Frontier From Threats

The Efficient Frontier results make it easy to compare several scenarios and see the effects of lower or higher budgets.

This page displays the **Efficient Frontier 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)".

Click  to display results:



This page is just similar to [Overall Efficient Frontier](#), except that we can select a specific source to calculate the results.

From the above the Efficient Frontier solved is due to the source " **Human Factor**". You can select another source from the Sources Hierarchy at the left.

Source Name
Sources
Human Factor
Inadequately Trained Staff
Disregarding or Not Following Pro
Lack of Situational Awareness
Engineers Failure to Properly Inst
Environmental
Flooding of Intelligent Event Monit
Lightning Striking Signaling Infrast
Infrastructure
Minor Electrical Power Shortage
Major Electrical Power Loss
Mechanical Failure of Sensors
Mechanical Failure of Signals
Mechanical Failure of Cables

Once solved, the Efficient Frontier page displays a curve(s) at the left and a grid at the right.

You can ignore constraints:

**Ignore:**  **Musts**  **Must Nots**  **Groups**  **Dependencies**  **Time Periods**

Constraints that are defined have a **bold** font.

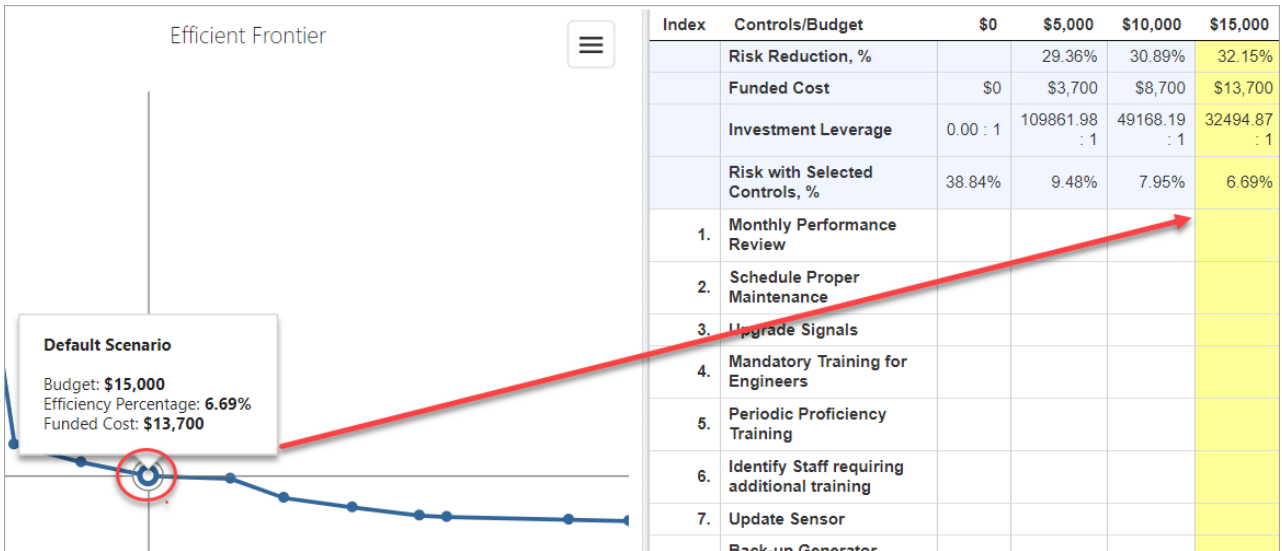
You can select the delta when optimizing:

**Delta when optimizing for Increasing Budgets:**

Approx. # of Increments

- Min Benefit Increase, %
- Specified Amount
- Approx. # of Increments**
- All Solutions,  $\Delta$

Hovering on a plot in the Chart will show a tooltip with its details and will highlight the corresponding column in the Grid.



You can see the controls that are funded on the grid. There will be FUNDED on the cell intersecting the control (row) given the budget (column).

Index	Controls/Budget	\$0	\$5,000	\$10,000	\$15,000	\$20,000	\$25,000	\$30,000
	Risk Reduction, %		29.36%	30.89%	32.15%	32.39%	34.02%	34.87%
	Funded Cost	\$0	\$3,700	\$8,700	\$13,700	\$19,700	\$23,700	\$28,700
	Investment Leverage	0.00 : 1	109861.98 : 1	49168.19 : 1	32494.87 : 1	22765.37 : 1	19878.66 : 1	16821.57 : 1
	Risk with Selected Controls, %	38.84%	9.48%	7.95%	6.69%	6.45%	4.81%	3.97%
1.	Monthly Performance Review							
2.	Schedule Proper Maintenance							
3.	Upgrade Signals							
4.	Mandatory Training for Engineers							
5.	Periodic Proficiency Training							
6.	Identify Staff requiring additional training							
7.	Update Sensor							
8.	Back-up Generator Power							
	Periodic							

Alternatively, you can turn on the show control names option to list the funded controls in the cell.

**Grid Options:**

- Ensure funded controls remain funded as budget increases
- Show control names in the grid cells

- Base Case includes:
- Groups

**Time Periods**

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<b>Funded controls</b>		23. Reprimand Operator 27. Replace Operator 36. Monthly safety meeting to review saf... 38. Maintain proper insurance policy 43. Follow safety	22. Monitoring Gate System Approach 23. Reprimand Operator 27. Replace Operator 36. Monthly safety meeting to review saf... 38. Maintain	22. Monitoring Gate System Approach 23. Reprimand Operator 24. Frequent Monitoring and Replacement ... 27. Replace Operator 36. Monthly safety meeting to review saf... 38. Maintain	12. Employ Higher Security 22. Monitoring Gate System Approach 23. Reprimand Operator 24. Frequent Monitoring and Replacement ... 27. Replace Operator 36. Monthly safety	23. Reprimand Operator 27. Replace Operator 36. Monthly safety meeting to review saf... 38. Maintain proper insurance policy 40. Use emergency	22. Monitoring Gate System Approach 23. Reprimand Operator 27. Replace Operator 36. Monthly safety meeting to review saf... 38. Maintain