Efficient Frontier To Objectives

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 To specific Objectives.



This page is just similar to Overall Efficient Frontier, except that we can select a specific objective to calculate the results.

From the above the Efficient Frontier solved is with respect to the objective "**Public Relations**". You can select another objective from the Objectives Hierarchy at the left.

| Objective Name |
|--|
| Objectives |
| Public Relations |
| Loss of Company Reputation |
| Customer/Business Dissatisfactio |
| Financial |
| Loss of Customers |
| Financial Loss |
| Financial Liability Due to Accident |
| Reliability, Availability, Maintainability |
| Loss of Maintenance Efficiency |
| Disruption/Damage to Service Lin |
| Repair to Service Line Infrastructu |
| Performance |
| Temporary Line Closure |
| Loss of Reliability and Network Ef |

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:

| ncrea | asing Bu | udgets: — |
|-------|----------|---------------|
| - |): | 10 |
| | | |
| | | |
| | | |
| | | |
| | - | increasing Bu |

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 | | | | | | | \searrow |
| 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 | | | | | | | |
| A. | | | | | | | | • |

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:

| ~ | Time | Periods | 5 |
|---|------|---------|---|
|---|------|---------|---|

| Controls/Budget | \$0 | \$5,000 | \$10,000 | \$15,000 | \$20,000 | \$25,000 | \$30,000 | |
|--------------------------------------|----------|---|---|--|--|---|---|--|
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| Risk with Selected Controls, % | 38.84% | 9.48% | 7.95% | 6.69% | 6.45% | 4.81% | 3.97% | |
| Funded controls | | 23. Reprimand 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 27. Replace Operator 36. Monthly safety meeting to review saf 38. Maintain | 22. Monitoring Gate System Approach 23. Reprimand 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 24. Frequent Monitoring and Replacement 27. Replace Operator 36. Monthly safety | 23. Reprimand 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 27. Replace Operator 36. Monthly safety meeting to review saf 38. Maintain | |