

Building a Security Business Case PCSF Meeting Chicago

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The Security Business Case

- The Methodology of Economic Value Creation
- The Security Business Case
- Adapting the Security Business Case
- Proposed Action Plan

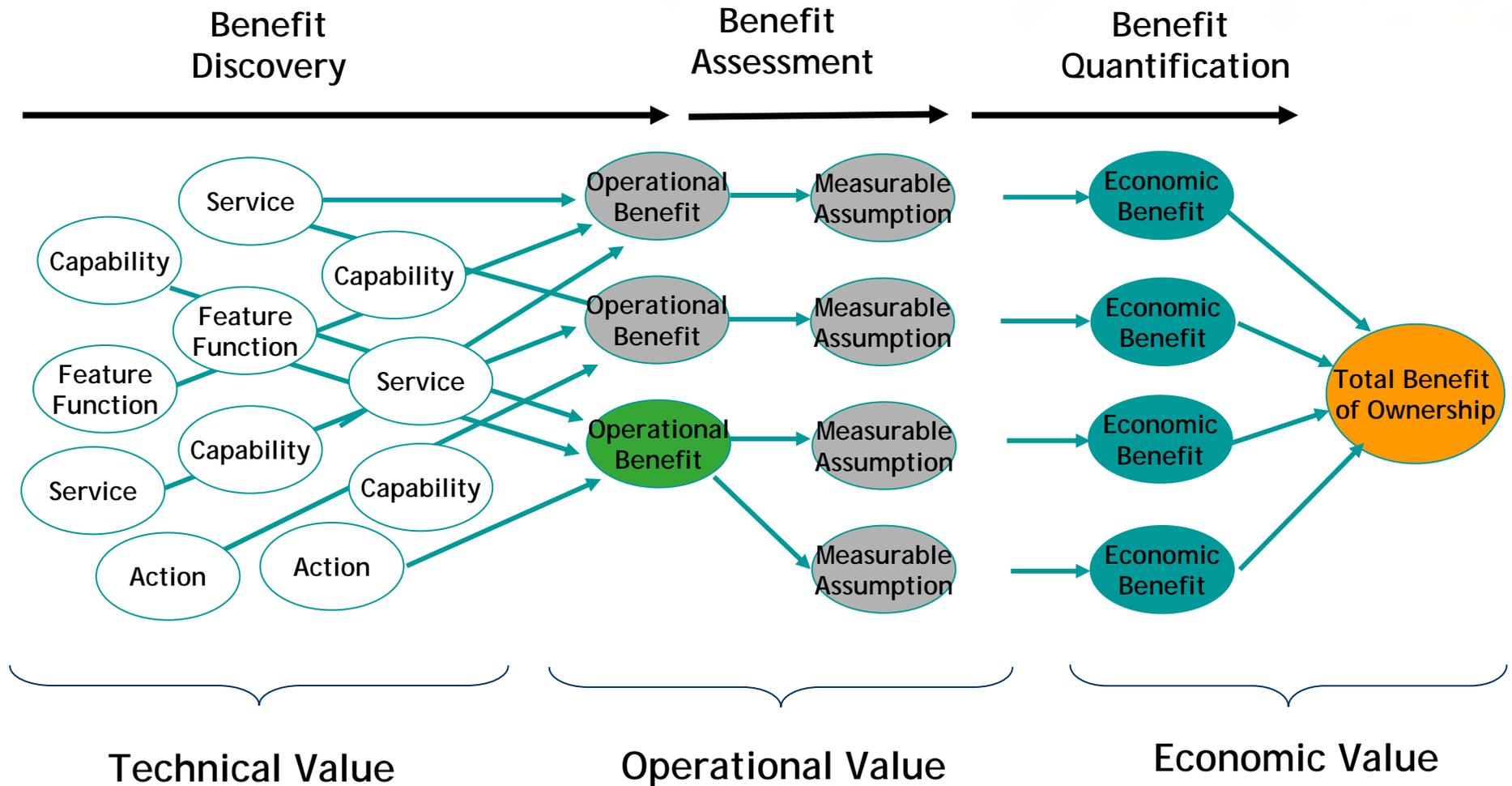
Three Types of Value

Three types of value build a solid business case

	Knowledge Required	Most Concerned
Economic Value	Economic Objectives	General Mgmt, Finance
Operational Value	Business Processes	Process & Ops Mgmt
Technical Value	Products, Services, Actions	Technicians, Engineers

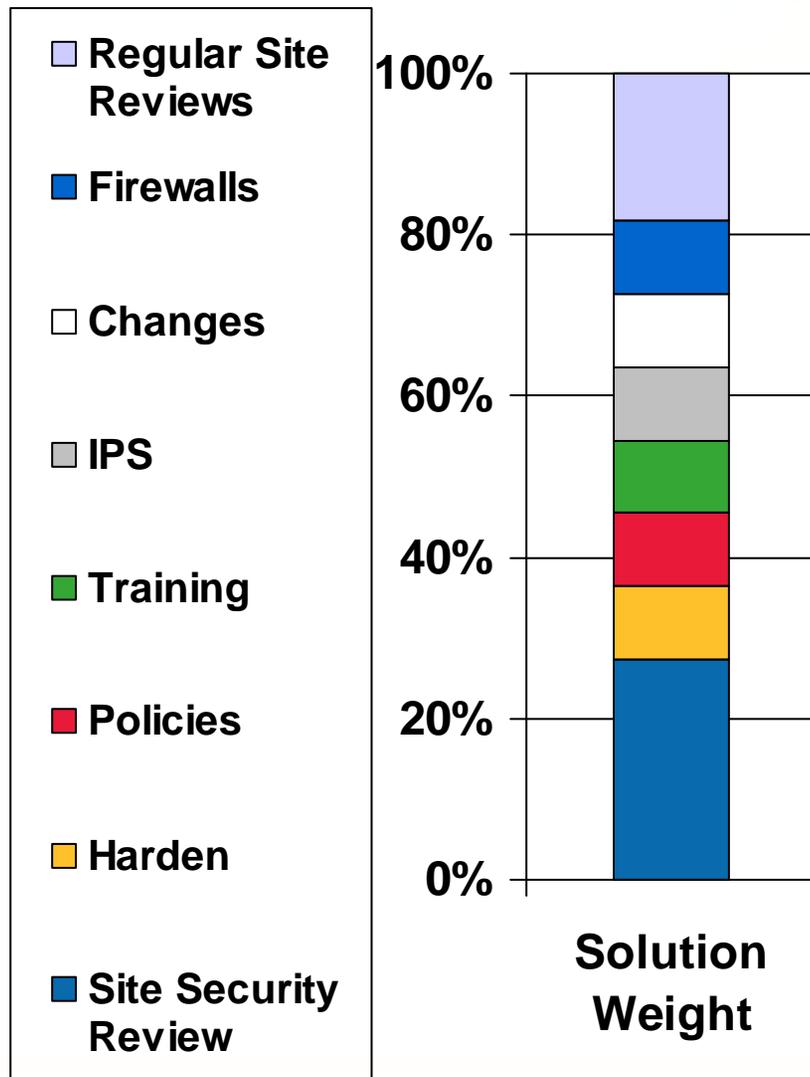
The Methodology of Economic Value Creation

Feature-Benefit Mapping



The Methodology of Economic Value Creation

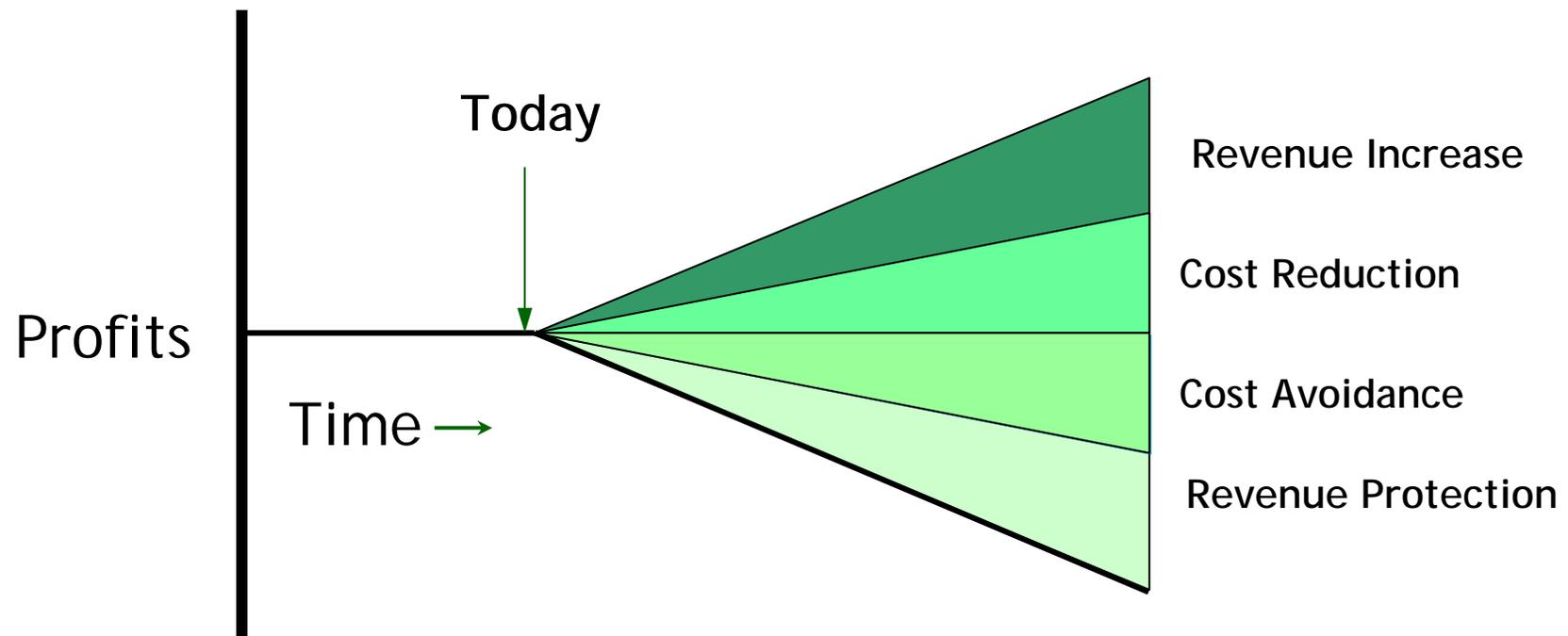
Feature Benefit Map for Security



- **Solutions Impact each Benefit**
 - Avoid Remediation Costs
 - Avoid Compliance Costs
 - Avoid Non-compliance costs
 - Enable Secure Remote support
 - Protect Production from Intrusions
 - Streamline the security workload
 - Avoid risk of catastrophic failures
 - Enable Process Improvements – Increase Production
 - Enable Process Improvements – Reduce Costs
 - Enable web support for customers
 - Reduce customer support costs

Profit Impact on the Enterprise

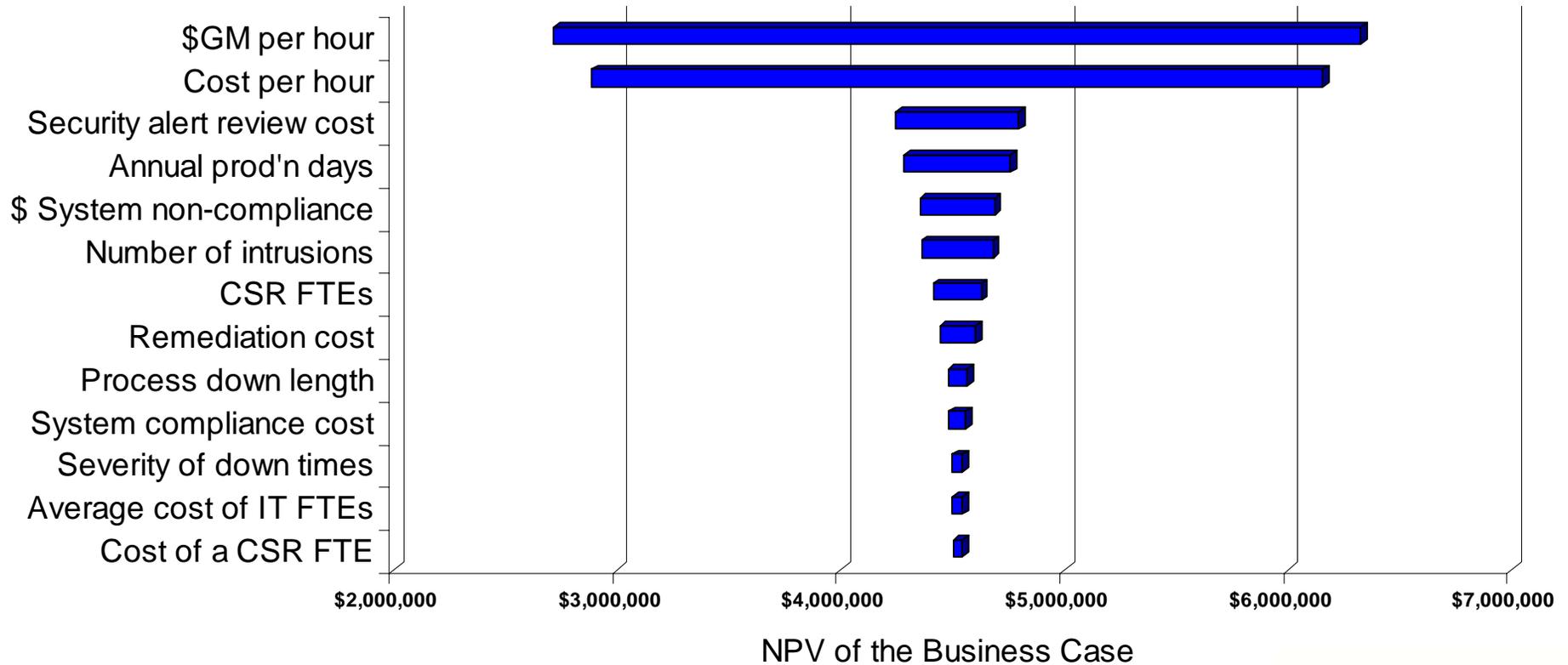
- Maintaining profits...as important as Increasing profits
- Assuming that the current baseline will be maintained is a mistake



What if profits will decrease in the future?

Assessing Risk and Key Performance Indicators (KPIs)

- “Tornado Diagram” shows sensitivity to each assumption
 - Tells us to focus our attention on 7-10 assumptions
 - Begins discovery of the 3 to 5 KPIs we will use to track future performance



Knowledge Sources for the Business Case

- **Glomark Corporation**
 - Research and Experience on Economic Value Creation of generic IT security solutions
- **Invensys Foxboro**
 - Joint Business Case Analysis with Glomark
 - Leading Experience
- **BCIT Industrial Security Incident Database (ISID)**
 - Eric Byres
- **ARC Manufacturing Security Status & Strategies**
 - Bob Mick
- **CSI/FBI 2005 Report**
- **US CERT ongoing data collection**

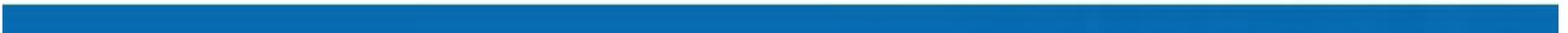
Who is Glomark?

- Headquartered in Columbus, Ohio with consultants in 9 countries.
- 12 years of experience starting with process control, then expanding to IT and other industries.
 - Executives have over 50 years of industrial process control experience.
- Served over 300 clients.
- Over 11,000 people trained on Glomark Economic Value Creation™ programs.
- Track record of success with technology buyers and sellers.

The Security Business Case



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Developing your Business Case

- Invensys Foxboro and Glomark used Glomark's Genius tools to build a generic Business Case
- Invensys Foxboro and Glomark security consultants can use the Genius tool to build your business case with:
 - Your assumptions describing your operations
 - Your selection of solutions and benefits
 - The reports you want to see in Word or PowerPoint
- The current version could easily be adapted to the requirements of the Process Control Security Forum or its members

Adapting the Generic Business Case to your Operation is Easy

- Which Solutions are you interested in exploring?
 - Impacts Benefits & Costs
- Which Benefits make sense for your operation?
- Answer a few questions about your operation:
 - What are the current annual costs of control system non-compliance?
 - What is the number of hours spent monitoring security alerts and messages by system administrators?
 - What is the gross margin per hour produced by the processes on the site?
 - What is the length of a process interruption caused by a control system malfunction?
 - What is the average cost to remedy a control system intrusion?
 - How many automation system intrusions are expected in the coming year?

Excel spreadsheet with questions to start an analysis

Required Assumptions	Units	Best Case	Most Likely	Worst Case
Compliance				
What are the current annual costs of process and control system non-compliance?	\$	750000	500000	0
Customer Support				
What is the number of FTEs currently engaged in providing customer support?	FTEs	10	3	0
IT System Administration				
What is the number of hours spent monitoring security alerts and messages and on other system administration of security on a monthly basis?	hours/mo	640	320	200
Production				
What is the average gross margin per hour produced by the processes on the site?	\$	50000	20000	15000
What is the average length of a process interruption caused by a control system malfunction?	hours	8	5	1
What are the average variable process costs for raw materials, energy, and supplies per hour of production?	\$	60000	25000	18000
How many days per year is the plant operated?	days	365	350	340
Security				
What is the average cost to remedy a control system intrusion?	\$	50000	35000	20000
What is the expected number of automation system intrusions in the coming year?	Intrusions	4	2	1

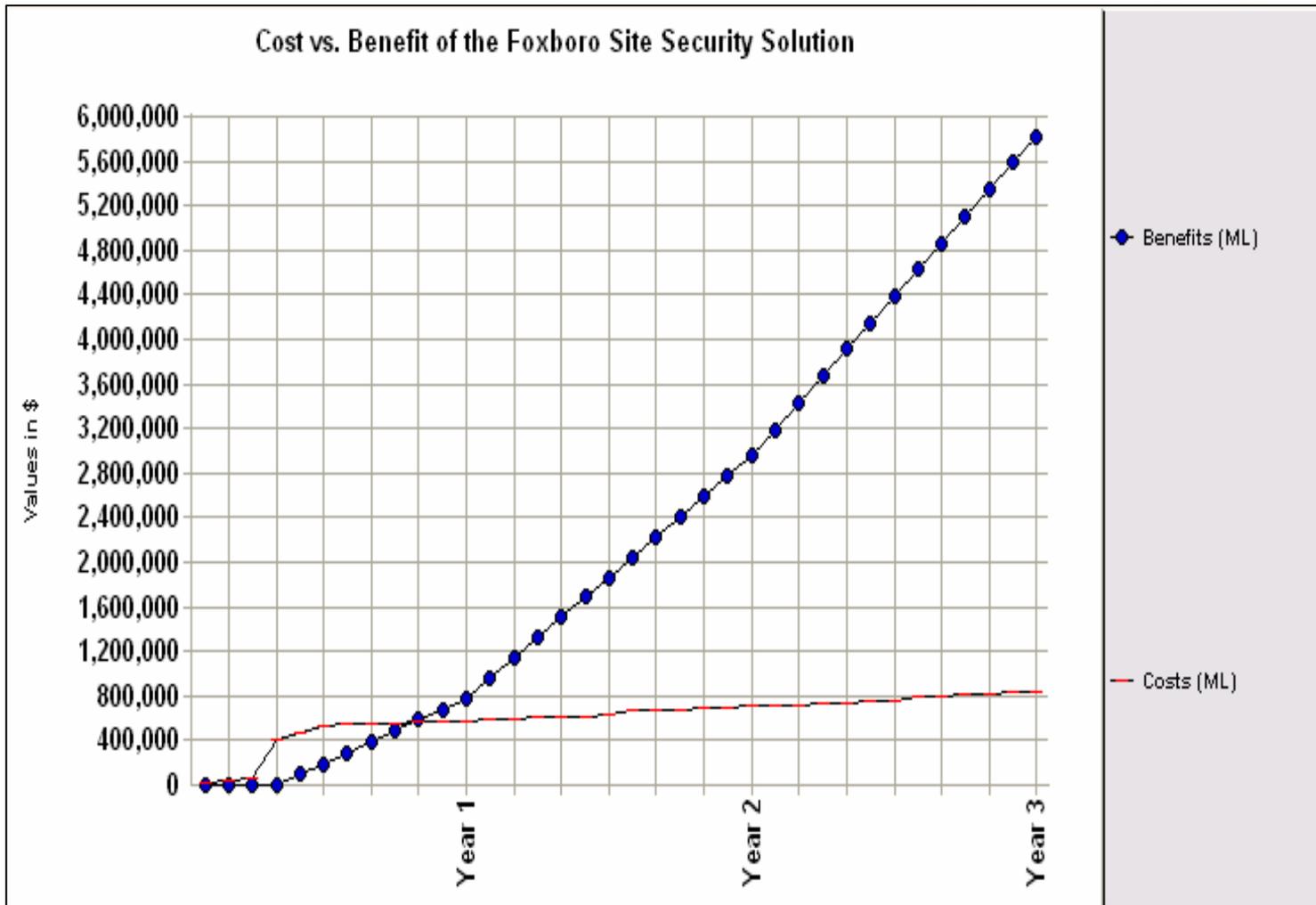
Security Business Case Financial Measures

\$	Best Case	Most Likely Case	Worst Case
Simple ROI	4455%	368%	6%
Payback	5 Months	12 Months	None
NPV (Net Present Value)	\$11,508,694	\$2,414,989	\$(335,984)
* Risk of Not Making Investment	\$(4,675,410)	\$(1,160,697)	\$(120,239)
* TBO (Total Benefit of Ownership)	\$23,000,385	\$5,823,011	\$2,673,209
* TCO (Total Cost of Ownership)	\$(320,750)	\$(837,500)	\$(2,476,000)
* Cumulative Cash Flow	\$14,288,170	\$3,079,822	\$(159,682)

- Excellent returns on Security investments are possible
- Benefits and costs can vary widely so:
 - finding out where we are today, and
 - designing a specific, tailored solution
- Both mean a high value of a site security review!

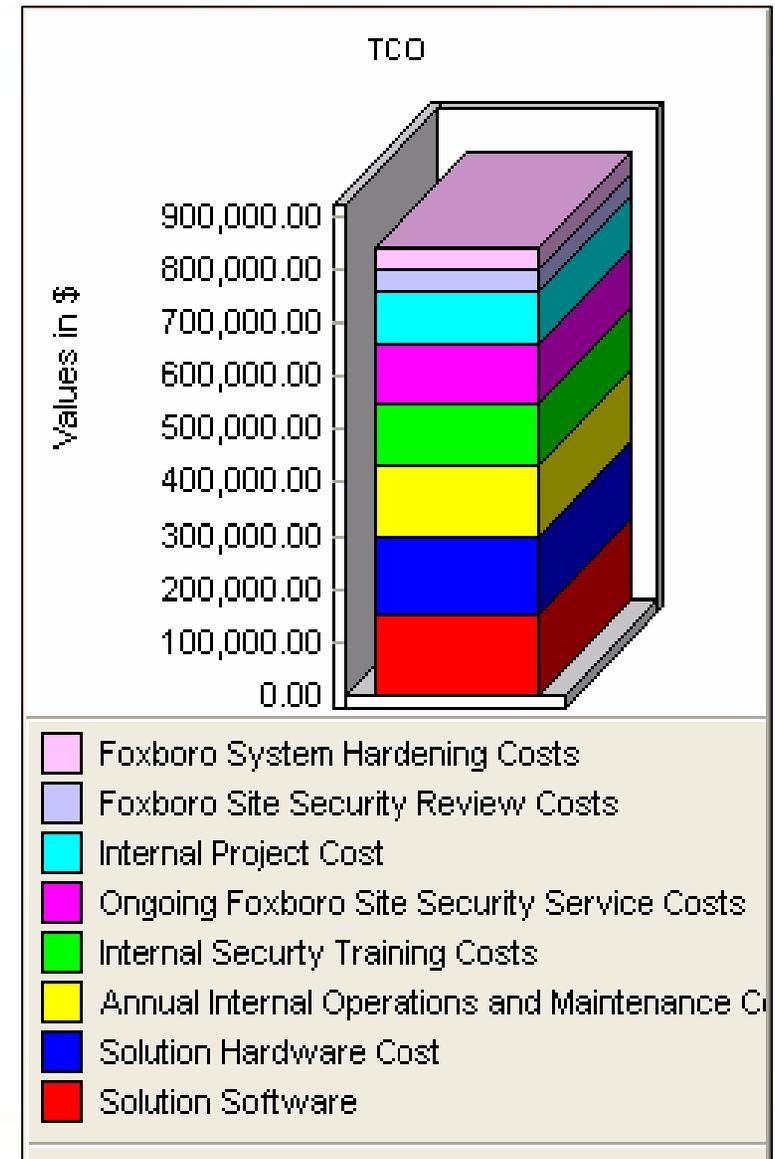
Economic Summary

Benefit Cost Graph

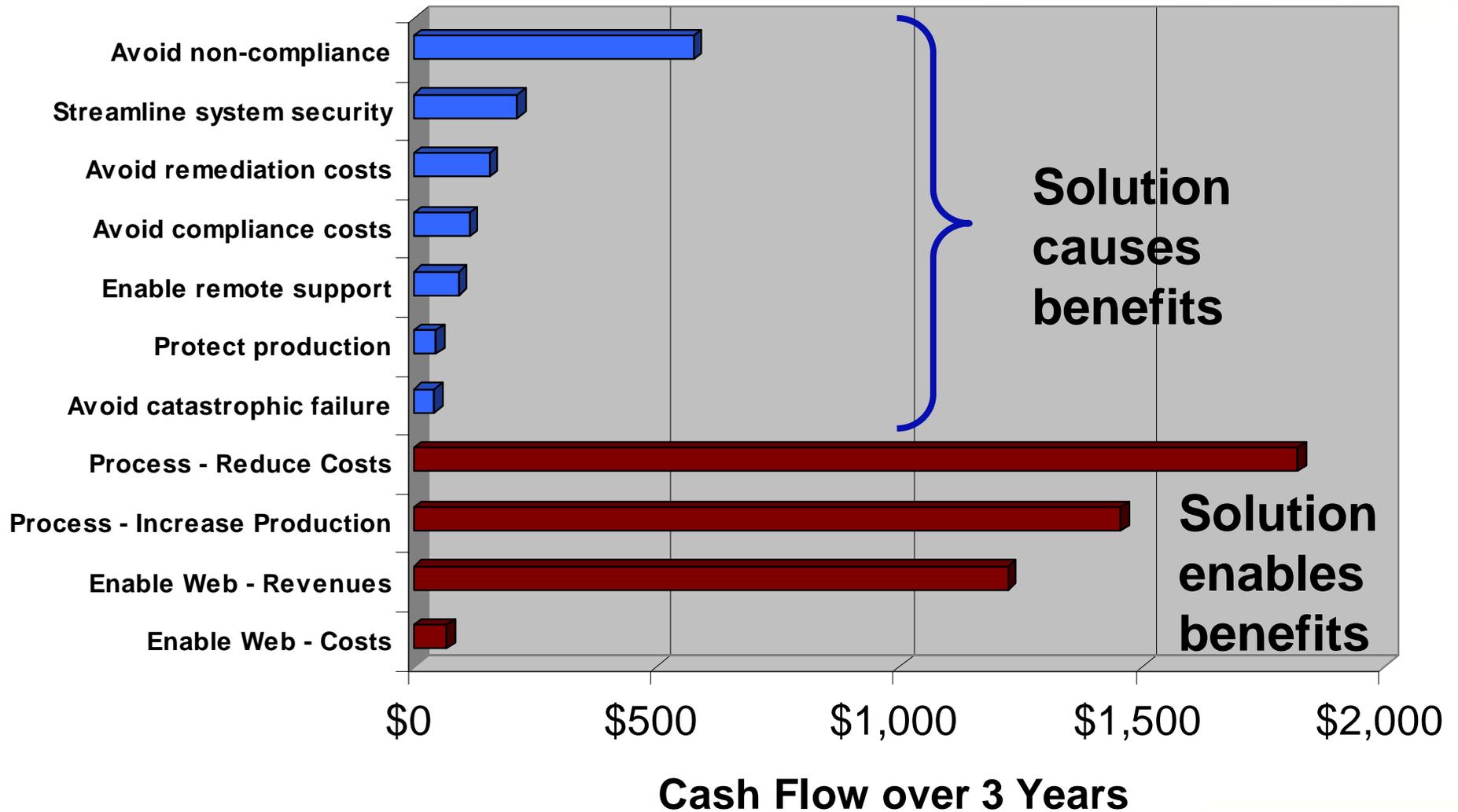


Total Cost of Ownership

- “Look at all possible Cost”
- No Security Effort Started
- Most Likely Investment costs of a complete solution – Worst Case
 - Total Cost over 3 years
- Costs include
 - Direct acquisition costs
 - Training
 - Internal costs
 - To implement, operate, service, and maintain the Site Security solution.



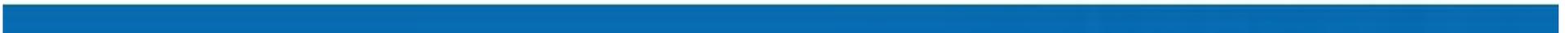
Security Enables Communication for Strategic Improvement



Adapting the Security Business Case for the Process Control Security Forum



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Possible Actions to Adapt the Business Case

- Volunteers to validate
- Develop generic solution nomenclature
- Members submit new benefits and costs for the model
- Sub-committee for detailed review of complete business case
- Incorporate results of the review
- Test the resulting generic business case with members
- Maintain the generic business case with member experience & new research results

Thank You



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