

Applying ROI Analysis to the Full Investment Management Process

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Army-Contract MOIE



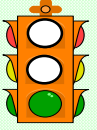

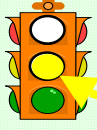

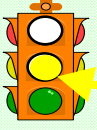

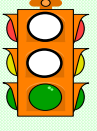
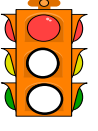
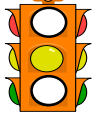
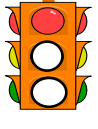
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Problem

- This MOIE extends MITRE's FY01 MOIE to assess the *“Value of ROI Analysis to the Government and Other Non-Profit Organizations”*
 - FY01 MOIE research confirmed that effectively applying ROI concepts to the full investment lifecycle is considerably more difficult and complex than initially anticipated
 - The FY01 ROI research focused on:
 - Investment selection: Now, our customers need to apply ROI analysis to other investment management phases
 - Identifying ROI regulations: Now, our customers must identify overlaps between ROI and other regulated investment analyses
 - Calculation of ROI with only aggregated costs and benefits:
Once an investment is selected, our customers need a mechanism for linking technical performance to ROI

Background

Progress in Attaining MITRE's ROI Goals

MITRE Goal and Supporting Primary Research Objective	Spotlight Rating of Progress		Comments
	Investment Selection Phase	Other Mgm't Phases	
Create an ROI calculation, analysis, and framework that ensure full regulatory compliance and effective investment lifecycle management			
Identify ROI regulations			The research team has focused exclusively on investment selection regulations and has not identified overlaps with other required analyses
Create a recommended ROI calculation			ROI calculation must be tailored to the evaluation phase, link technical performance, and integrate decision analysis to quantify the "hard-to-quantify"
Recommend an approach to ROI analysis			Basic elements of an ROI analysis have been identified, but decision analysis has not been sufficiently integrated
Establish a framework for conducting and implementing ROI evaluation			The ROI process guideline for investment selection will be completed, but this guideline must be modified for other management phases
Ensure that MITRE's research findings are widely accepted as the premier source of ROI standards			
Validate the robustness and extensibility of the ROI calculation, analysis and framework through case study			Although government interviews have been conducted and findings were recognized at an international conference, results have not been tested through case study application

FY01 Objectives

Objective

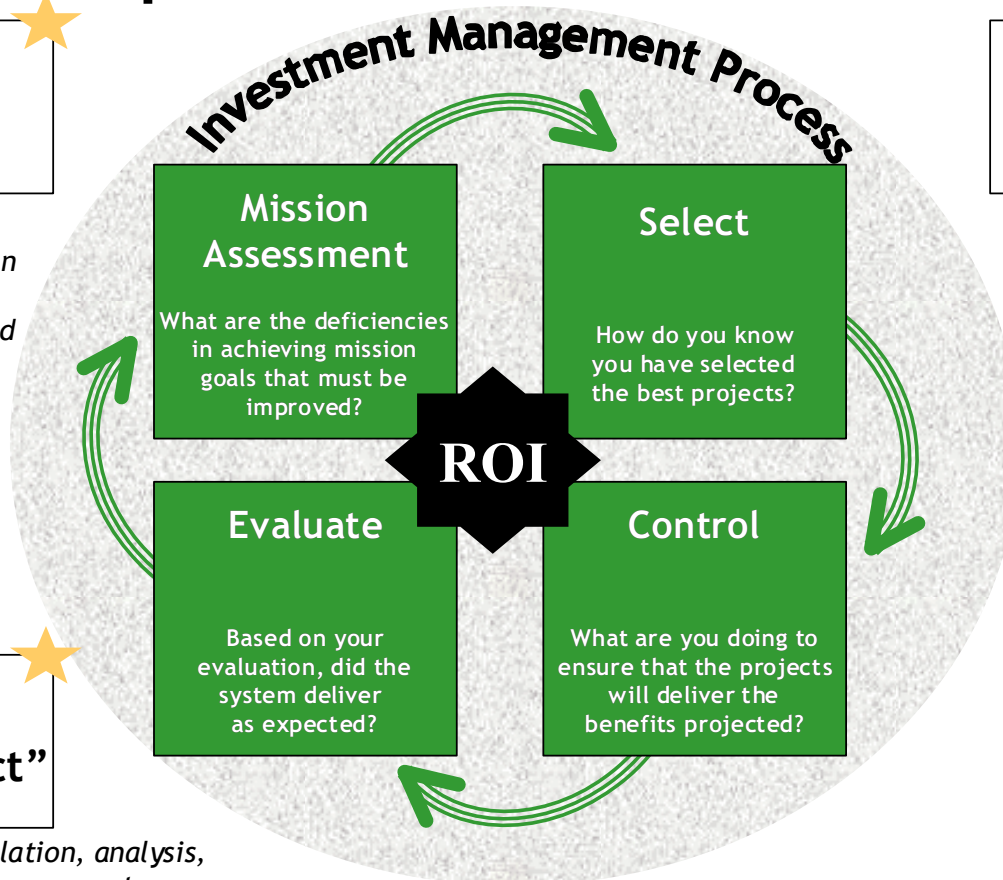
- Develop a decision-logic tree that supports application of ROI analysis throughout the entire investment management process

Eliminate Redundancy

More thoroughly differentiate between recommended ROI analysis standards and requirements for other analyses

Expand ROI Beyond "Select"

Broaden an ROI calculation, analysis, and performance measurement process to most effectively manage projects over the entire investment lifecycle



Quantify the "Difficult-to-Quantify"

Establish an approach for quantifying less easily quantifiable costs and benefits within the ROI calculation standard

Validate Research Findings

Test the robustness and extensibility of the ROI calculation, analysis, and process guideline

★ Key proposed research objectives

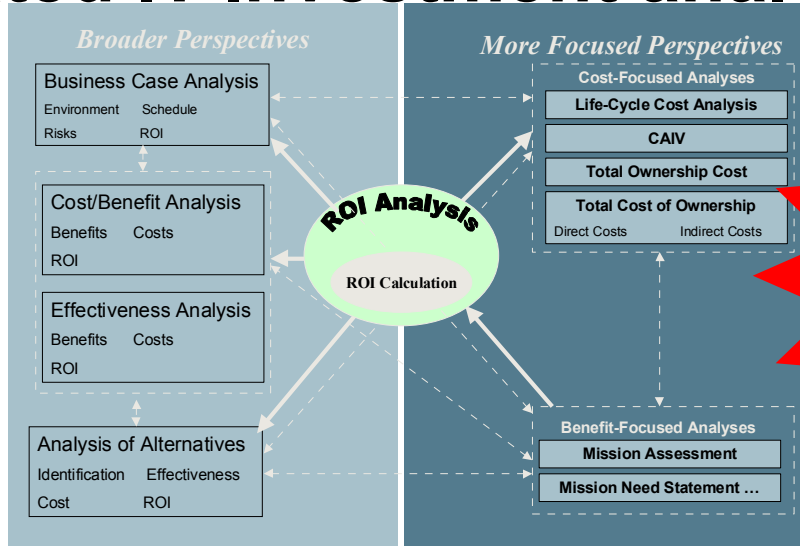
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Activities

- Completed a thorough investigation of government regulations related to other forms of analysis that are required for investment selection
- Conducted a government case study to validate ROI analysis techniques developed during the FY01 MOIE
 - Air Force Materiel Command (AFMC) Logistics (LGN) selected for case study evaluation
 - The case study involved developing an Economic Analysis (EA) for making IT investment decisions related to Manufacturing Resource Planning (MRP)
 - Key case study findings include:
 - A comprehensive understanding of regulatory overlaps between EA and ROI
 - An important research discovery was that EA regulations are truly the overarching government guidelines for IT investment analysis
 - Determination of the most effective methods for integrating ROI techniques within an EA
 - Validation that the ROI calculation methods recommended via the FY01 MOIE are scalable to other DOD IT investment decisions

Highlight

- Considerable redundancy exists between regulated IT Investment analyses



Our sponsors tell us that this overlap creates considerable confusion and wasted resource expenditure

- There is an increased focus on performance measurement throughout the investment lifecycle

“THE top item on President Bush’s management agenda is linking program performance and agencies’ budgets. In the fiscal 2002 budget, he outlined his intention to choose a set of programs across government to test agencies’ abilities to set goals, measure performance, and use that information to improve results.”

- Sean O’Keefe, OMB Deputy Director, to the House Government Reform Committee’s Gov’t Efficiency, Financial Management and Intergovernmental Relations Subcommittee. ¹

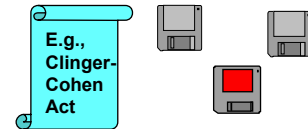
Highlight/Demonstration

- The foundation for a toolkit to measure/monitor key investment decision metrics is being developed and will be integrated within the decision-logic tree

Performance Tool-kit Building Methodology

Review applicable Federal regulations and guidelines (e.g., Clinger-Cohen Act)

- Examine existing laws/regulations
- Understand applicability of laws
- Review and collect relevant data



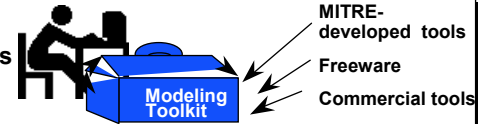
Examine Agency/program mission/functional statements and determine needs/requirements

- Identify Agency mission data and resources
- Determine program needs/requirements
- Identify cost constraints/ROI criteria



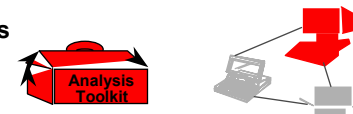
Build Performance Tool-kit based on requirements and develop "candidate" models

- Build performance Tool-kit
- Develop "candidate" models
- Determine



Conduct assessment of Tool-kit and provide analysis/validation of models

- Conduct tailored "what-if" scenarios
- Analyze and validate models
- Demonstrate potential problems

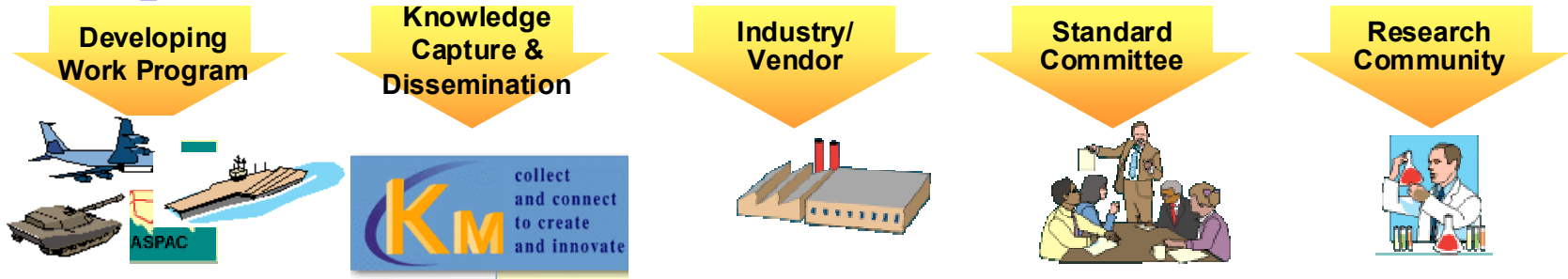


Provide analysis & recommendations

- Characterize Agency performance and cost posture
- Provide analysis and demonstrate results
- Make recommendations



Impacts



- **Developing work program and future MITRE sponsors**
 - CIO support and performance measurement are very high priority for Bush Administration and government agencies
 - ROI concerns cut across the entire sponsor community
- **Relevant knowledge capture and dissemination**
 - Will significantly increase MITRE's knowledge of latest IT strategic, financial, and investment theory and best practices
- **Influencing the vendor community and industry**
 - Will better support selection of most appropriate tools
 - Will offer vendors sufficient understanding of government investment control and evaluation to enhance existing tools
- **Impact on standards**
 - Will ensure MITRE research findings are widely accepted within government as a point source of ROI calculation and analysis standards

Future Plans

- Finalize development of a decision-logic tree to support application of ROI analysis over the entire investment management process

