Optimizing IT Investments

Improve Your Organization's Ability to Implement Its Best Ideas

Root Causes of Project Investment Selection and Delivery Failures

- Lack of business / IT strategy alignment
- Immature project portfolio management techniques
- Sporadic use of application portfolio management disciplines
- Not understanding the desired project outcomes
- Business / IT failure to work in partnership in defining business requirements
- Lack of project management disciplines
- Insufficient project management capabilities for complex initiatives
- Ineffective system development life cycle methodology utilization
- Ineffective / non-existent architecture function
- Underestimated impact of organizational change
- Focus on piece-meal tool solutions

Exhibit A — Source: CSC, Proprietary Research, 2007

Organizations still struggle with identifying and delivering the "right" projects in a consistent, repeatable manner. In fact, a recent survey of financial executives indicates these top challenges in *identifying* the right IT investments[1]:

- Aligning business and IT strategies (40 percent)
- Identifying the appropriate level of technology spending (40 percent)
- Prioritizing technology investments (40 percent)
- Evaluating or measuring the return of technology investments (18 percent)

Executives also experience similar *delivery* challenges. Key issues experienced in project delivery within IT organizations *after* the investment decisions have been finalized include:

- Approximately one out of three projects are considered less than successful by senior management
- About half of the ERP projects continue to experience schedule and cost overruns
- 43 percent of senior management believe that they are obtaining a low, negative, or unknown return from IT

The purpose of this paper is to: 1) share the "root causes" of project investment selection and delivery challenges and, 2) provide a roadmap for implementing change and measuring improvement against these challenges. The paper is organized into the following sections:

- Root Causes of Project Investment Selection and Delivery Challenges
- The CSC M^5 Maturity Model
- Building an Effective Project Selection and IT Delivery Framework

Root Causes of Project Investment Selection and Delivery Challenges

Lack of Business / IT Strategy Alignment

By creating business and IT strategies independently of each other, or attempting to integrate these strategies solely at the enterprise level, companies run the risk of implementing IT projects that do not address the specific business needs identified in the business strategy. Decomposing high-level business strategies into specific business capabilities allows IT executives to understand how effectively the current applications / infrastructure support the desired future state of the business. IT executives can use this information as input into their IT strategy, and ultimately as a source for identifying potential projects.

[1] Source: *2006 Annual Report Technology Issues for the Financial Executives* eighth joint publication conducted by FEI and CSC.

Key Success Factors

Strategy

- Holistic approach to addressing portfolio, program, and project management
- Alignment of initiatives to the business objectives
- Business results measurement of completed initiatives

Process

- Effective demand management processes
- Disciplined project planning and estimation processes
- Rigorous project tracking, issue, change, and risk management
- Industry proven system development methodologies

Organization

- Skilled and experienced program / project management resources
- Structured program governance and decision making
- Clear roles and responsibilities
- Effective communication and integration

Tools

- Integrated PM toolkit that supports processes
- Enterprise-level visibility into project status, issues, and risks

Exhibit B — Source: CSC, Proprietary Research, 2007

Immature Project Portfolio Management Techniques

It is not uncommon for organizations to suffer from working on the "wrong" projects — projects not providing high business value with an acceptable risk. This condition is typically the result of poor or absent business case justification and governance models that clearly document and objectively evaluate the costs, benefits, and risks from both a business and IT perspective.

Sporadic Use of Application Portfolio Management Disciplines

When initially implemented, applications are in strong alignment with current technology standards and the business processes they are designed to support. However, business strategies change in response to market demands and technology standards evolve over time. Many organizations do not perform ongoing application portfolio assessments to measure the alignment of individual applications to changing business strategies and technical architecture standards. This, in turn, results in missed project opportunities for renewing, enhancing, reengineering or retiring / replacing misaligned applications.

Not Understanding the Desired Project Outcomes

Due to competitive business pressures, projects are often launched without a clear understanding of the desired outcomes, and project teams are staffed before the project charters are written and project plans are created. In an effort to generate activity, project managers waste time identifying non-critical assignments to keep the staff busy rather than focusing on clarifying the project goals and objectives. Inevitably, much of this work is discarded or re-worked after the project manager finalizes the desired objectives / outcomes.

Business / IT Failure to Work in Partnership to Define the Business Requirements

"We're waiting on requirements" is a phrase heard all too often in IT organizations. Often, the business does not have the patience to participate in requirements definition, and IT is not comfortable or proficient at gathering requirements. The lack of user input, incomplete requirement definition, and requirement change has a domino effect on the project. Corresponding system design will also be incomplete; ultimately resulting in change orders, budget overruns, and schedule delays.

Lack of Project Management Disciplines

All too often, individuals who hold the title of "project manager" do not understand the mechanics of building a project plan or the value in tracking the plan once it is base-lined. Such project managers see project planning and tracking as wasteful overhead — getting in the way of doing the direct labor work. While project managers may be able to take a casual approach on small projects, this lack of discipline inevitably causes chaos. As the scope and complexity of projects increase, an undisciplined approach allows early problems to go undetected, and results in significant cost and performance issues.

Insufficient Project Management Capabilities for Complex Initiatives

In the 1990s, projects tended to be limited to a single department or division. With the advent of ERP systems, projects often require enterprise-level participation. Unfortunately, many project managers are not experienced at planning initiatives of this magnitude, dealing with executive-level project sponsors, or coordinating across multiple business / IT areas to procure the required resources for the project. Even the most successful department / division-level project managers often fail at the enterprise level.

Ineffective System Development Life Cycle Methodology (SDLC) Utilization

Project teams often struggle with applying the organization's System Development Life Cycle (SDLC) to new projects. Inexperienced project managers tend to view the methodology as a "cook book," including all activities and deliverables regardless of the situation — resulting in wasted work effort and unnecessary delays. Business users often insist on firm cost / schedule estimates very early in the life cycle. This causes project teams to perform unauthorized work as they are operating under the assumption they have one chance to provide an estimate.

Ineffective / Non-Existent Architecture Function

Project teams tend to think and act "vertically" within their assigned work streams. On larger projects, "horizontal" or cross-team coordination of business processes, applications, data, and technical infrastructure is needed. Many organizations struggle to build an effective architecture function that balances successful project team interaction with a focus on building the desired future state.

Underestimated Impact of Organizational Change

Most organizations have attempted to improve their delivery capabilities but they fail to address the cultural changes required for such improvements. For example, one of the cornerstones to improvement is the establishment of rigorous task-level tracking procedures. It is common for those who are not accustomed to reporting progress at the task level to feel micromanaged. Clear communication for process changes (in this case, project tracking provides historical information to improve the estimates of similar projects in the future) is vital for the acceptance of these changes.

Focus on Piece-Meal Tool Solutions

Many IT executives believe their IT delivery issues could be improved with the latest wave of Enterprise Portfolio / Project Management tools (a so-called "silver bullet" salvation). These tools can increase team collaboration and provide management with an early warning system to detect troublesome projects. However, they are *only* effective when combined with best practice processes and clear governance models.

The CSC M^5 Maturity Model

Improving the ability to turn the best ideas into business value is a joint business and IT responsibility and requires an integrated, evolutionary approach. CSC's M^5 Maturity Model illustrates the growth an organization must achieve in each of the key business and IT areas to optimize IT investments. That is, selecting the projects that provide the best business value and bringing them to fruition. The maturity model is loosely based on the Software Engineering Institute's (SEI) Capability Maturity Model (CMM). An overview of the CSC M^5 Maturity Model is provided below in diagrams 1a and 1b:

Diagram 1a – CSC's M^5 Maturity Model

	Level 1	Level 2	Level 3	Level 4	Level 5
Area	**Self-Directed**	**Supportive**	**Standardized**	**Integrated**	**Fully Adopted**
Strategic Alignment	Projects are launched with no / little regard to business objectives.	Projects are launched based on non-prioritized business objectives.	Projects are driven by prioritized business area objectives.	Projects are driven by prioritized enterprise objectives.	Completed projects are measured and evaluation criteria are continuously updated.
Project Portfolio Management	Objective decision criteria are not used in selecting / prioritizing projects. New budgets are based solely on prior year budgets.	Project decisions are primarily based on potential financial return. Business and IT project risks are not normally considered. There is no mechanism to capture and analyze actual business benefits.	Budgets are distributed across all spending categories based on business demand. Decisions to initiate projects are based on business benefits, business risk, and IT risk.	The uncertainties of cost and benefit estimates are considered and includes the mechanisms to capture and analyze actual benefits realized.	Budgeting, project initiation decisions and actual business benefits realized are all integrated and portfolio adjustments are being made based upon actual performance.

Diagram 1b – CSC's M[5] Maturity Model (continued)

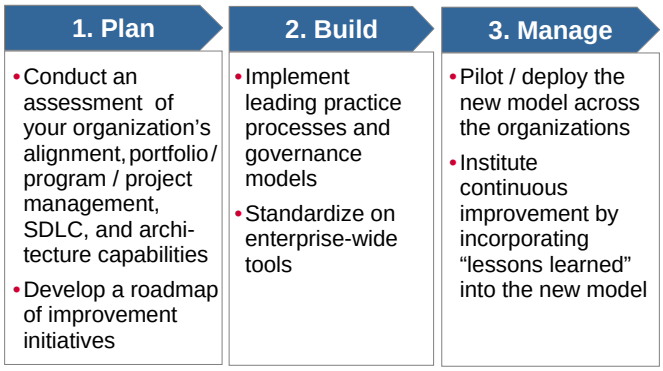
Summary					
	Level 1	**Level 2**	**Level 3**	**Level 4**	**Level 5**
Area	**Self-Directed**	**Supportive**	**Standardized**	**Integrated**	**Fully Adopted**
Application Portfolio Management	The "health" of applications supporting major business processes is not considered before additional investments are made.	Standards exist within some business areas to evaluate the technical health, business process alignment, total cost of application maintenance and support, and the impact of project activity on the portfolio.	Application Portfolio Management standards are established and consistently applied across the organization.	An application portfolio strategy has been developed (Renew, Re-engineer, Enhance or Retire) for all major business processes.	Run / maintain and new / investment decisions are made based on the application portfolio strategy.
Demand Management	There is no documented process for initiating, approving, or executing service requests.	Documented processes for initiating, approving, or executing service requests exist in some business areas.	Standard processes for initiating, approving, and executing service requests exist across the organization.	Resources can be re-allocated across business areas based on supply / demand fluctuations.	Senior management is provided with effective visibility into SLA performance, enabling continuous improvement.
Project Management (PM)	The organization tends to over commit, to abandon processes in a time of crisis, and is unable to repeat successes. Projects frequently exceed cost / schedule commitments.	Standard processes are defined for project requirements, planning, tracking, status reporting, and issue management. However the standards have not been fully adopted.	PM standards are consistently followed across the enterprise. Organization formally recognizes different levels of project management roles.	Project teams integrate project management, SDLC, and architecture disciplines in project planning and executing.	Lessons learned and historical metrics are incorporated into the planning of new projects.
System Development Life Cycle (SDLC)	Project approaches, deliverables and milestones are ad hoc and based on PM experiences.	Standard project approaches with deliverables and milestones are provided for the frequently used development paths.	Standard approaches are applied on the majority of projects.	Project planning and estimating tools are available to support the SDLC.	The standard approaches and supporting tools have been fully adopted by the enterprise.
Architecture	Each project team is responsible for architecture standards.	Some enterprise standards have been provided, however the standards have not been fully adopted by the projects.	Enterprise architecture standards have been provided across the enterprise and are fully adopted by new projects.	Both legacy environments and new projects have fully adopted the enterprise architecture standards.	Enterprise architecture standards are available and lessons learned incorporated.
Complex Program Management	There is no alignment between the individual projects within a program.	An overall program roadmap has been developed and dependencies between projects identified.	Projects within a program are aligned, cross-project issues and risk are managed, and a consolidated program status report is developed.	Programs have been integrated into the enterprise with dependencies and risk identified and managed.	Program planning, estimating, status reporting and issue management has been integrated across the enterprise.
Program Management Office (PMO)	No department or enterprise PMO exists. Project teams utilize their own standards.	The PMO provides project teams with project management process templates, sample governance models, and tools which are partially adopted across the organization.	Standard project management processes, governance models, and tools are consistently used in project execution.	Standard SDLC, architecture standards, and PM processes have been established and are in use across the organization.	Organizational responsibility is established for the continual improvement of the SDLC, architecture standards, and PM processes.

Building an Effective Project Investment Selection and IT Delivery Framework

To effectively address the root causes of project selection and delivery challenges, companies must understand their current level of maturity, build an improvement plan to increase the level of maturity, and establish the framework to manage the improvements. The organization is measured across the areas in the CSC M^5 Maturity Model and specifically addresses the organization's process, organization, and tool capabilities. Once the current strengths and weaknesses are understood, specific recommendations are identified and integrated into an overall roadmap for improvement.

Diagram 2 illustrates a recommended approach to building an effective project selection and IT delivery framework:

Diagram 2 – CSC's Improvement Framework

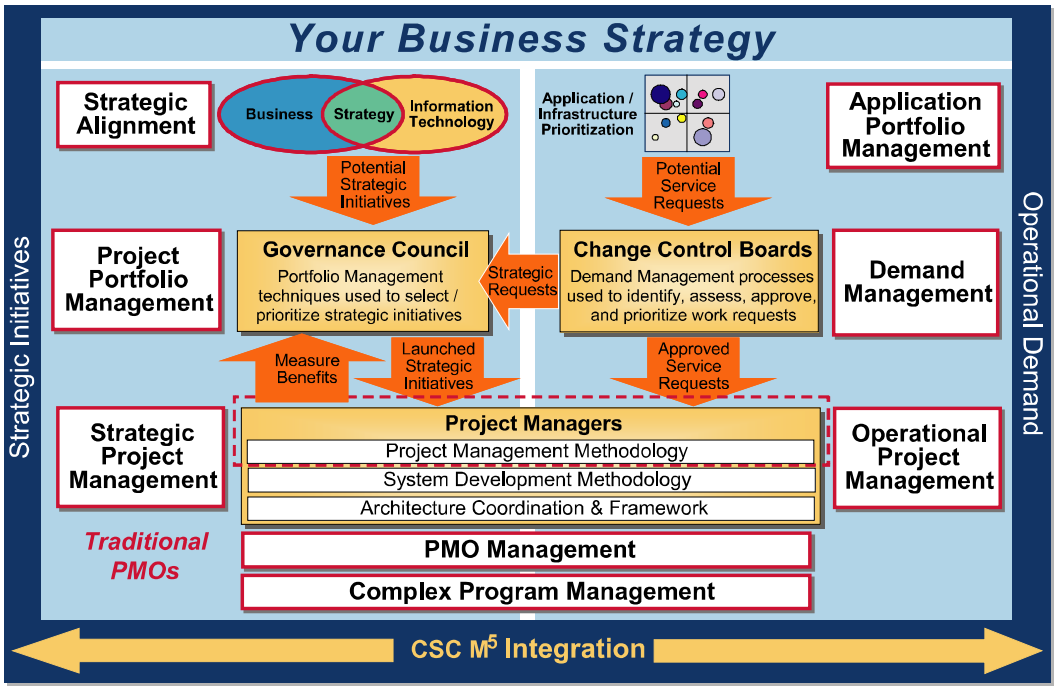


Plan: CSC's assessment methodology addresses all of the areas illustrated in the Maturity Model diagrams found on pages three and four but can be tailored to address the organization's highest priority areas. CSC uses a variety of assessment techniques including interviews, reviews of project artifacts and tools, and job shadowing to understand the organization's current capabilities. CSC leverages a comprehensive set of leading practice behaviors in the assessment areas to produce the final quantitative and qualitative evaluation of the organization's capabilities. Next, *recommendations* are developed to address the root causes of the organization's delivery challenges. Finally, the recommendations are prioritized and organized into an *implementation roadmap*.

Build: Improving the organization's delivery capabilities is a significant business change initiative. A program should be established with an executive sponsor, an overall project manager, a dedicated project team, and an advisory board to guide the team throughout the program. The project team will utilize a traditional lifecycle including design / develop / pilot / deployment phases to manage their initiatives.

Manage: The establishment of a permanent organization to oversee the day-to-day execution of the new model should be included in a deployment plan. Organizations should increase the responsibility of their existing PMO organization to provide management oversight over the functions illustrated in Diagram 3:

Diagram 3 – CSC's M^5 Framework



Recommendations

To begin the transformation, organizations must be open to changing the status quo. An executive sponsor must champion the vision and assist in eliminating barriers to change. In addition, companies must establish realistic expectations regarding the amount of change and rate of change the organization can absorb. Augmenting the organization with experienced resources is also vital to the overall success.

Organizations willing to take on these challenges will find the investment worthwhile. Through better alignment and consistent delivery, IT organizations can play a strategic role in satisfying the organization's business objectives.

To learn more about how you can reap the benefits of optimizing your IT investment contact:

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References:

2006 Annual Report *Technology Issues for the Financial Executives*, 8th joint publication conducted by FEI and CSC

CSC's M^5 Maturity Model

Acknowledgements:

- Chuck Coletta, Senior Partner, CSC
- Dennis DeGraff, Principal, CSC
- Pat Arsers, Partner, CSC
- Jim Blankenheim, Partner, CSC

About CSC

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WA07_0089