Audit’s Role in Corporate IT Initiatives

Monitoring and Controlling System Implementation and Integration Risk

Agenda
Audit’s Role in Corporate IT Initiatives

- Initiative Definition and Risks
- Example
- Project Risk Assessment and Evaluation Framework
- Take Aways
- Questions & Discussion
Room Temperature

- How often do your company’s projects fail?
  - Never – Sometimes – Often – Always – Don’t Know
- How often do projects fail to deliver pre-defined business objectives?
  - Never – Sometimes – Often – Always – Don’t Know

Key Themes

- Projects are important and typically terribly managed
- This is a business issue – not only an IT or project management issue
- Auditors can play a key role helping secure project success, expected benefits and good governance
Initiative Definition and Risks

Projects: How Work Gets Done

- Companies typically have two types of activities:
  - Process or day-to-day activities and
  - Projects or activities with defined resources, timing and outcomes
  - Example projects: System implementation, process re-engineering, product launch, mergers/JV, facility consolidation, Sarbanes-Oxley
- Corporate Initiative activity is material and fluctuates over time; typical IT project spending runs from 1% to 25% of IT costs for large organizations\(^1\)
- While incremental or marginal to overall costs, initiatives are often key to new customer or regulatory requirements – they keep the lights on or support key incremental business opportunities to increase revenue or margins
- Each business capability and process existing today was a project at one point in time
- As a project is discrete – deciding what to do, or not do, is the most critical point of control

\(^1\) E&Y estimates, value may be considerably greater; fluctuates over time

Business evolves over time as a function of the collective results of projects.
IT Projects—The Value Gap

- Performance Varies: “Range of effectiveness varies as much as 15 to 11”
- “Over 30% projects cancelled; less than 20% successful based on schedule, cost and quality”
- The Standish Group reviewed 23,000 IT projects reporting 28% failed (abandoned) and 46% were late and over-budget.
- “…only 14% of CFOs believe IT spending is under control, and only 36% believe CIOs are effective at controlling IT spending.”

1 PMO’s: Projects in Harmony, Shawn Bohner
2 The Chaos Report, The Standish Group
3 The ROI of IT, Martha Heller, PTRM Performance Measurement Group

Drivers of Change

- Better control and planning of projects through structured planning, identified control points and effective reporting and progress tracking.
- Better optimization of skills and resources through realistic planning and estimation and resource management.
- More effective communication between project management, program manager, team members and stakeholders through clear roles, responsibilities, objectives, lines of authority and communication mechanisms.
- SOX and more specifically 404 is making this a Board Room issue.
Increase Shareholder Returns Across the Project Portfolio

- Project Portfolio Returns and Risk -

Shareholder benefits

Efficient Frontier: Best potential risk adjusted returns

Company’s portfolio of potential risk/return outcomes

Initiative Definition and Risks

What Could Go Wrong/Risks

- Poor project selection
- Poor project definition – wrong scope
- Poor project execution
- Wrong team
- No sponsorship
- Organization or adoption challenges
- Accountability and objective oversight
- Project risks related to time, cost and quality
- Project obsolescence
The Balancing Act

Corporate initiatives are inherently dynamic with potentially conflicting and mutually exclusive objectives. Managing trade-offs is key.

Audit’s Mandate

High risk and high reward creates a mandate for oversight and an opportunity for adding value for auditors.

“Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization’s operations.” (IIA Standards)
Initiative History

- Sporadic history of successful project/initiative implementation – ~50% Failed
- Audits of systems and processes identified problems that could/should have been corrected during implementation
- Board mandate for IA to provide “go/no-go” assessment for all “major initiatives”

**Originally**
- Largely focused at point-in-time, deliverable 2 weeks prior to go-live
- Evolved to blend of regular monitoring coupled with traditional “point-in-time” 2 week deliverable

**Today**
- Need for more frequent “points-in-time” that occur much sooner than 2 weeks prior to go-live—Continuous Approach
Audit Objectives

- Support the delivery of a project that meets the financial and business objectives.
- Achieve stakeholder expectations to provide continuous independent oversight and early warnings about changes to the project’s risk profile.
- Help ensure well-controlled business processes are implemented the first time.
  - Financial
  - Operational
  - Compliance
  - Technology
- Assess project progress as it relates to the original business case and budget, as approved by executive management in the context of the business environment.
- Apprise Steering Committee and the Project Management Office (“PMO”) about potential deviations from the original business case, timing and validation, if any.

Key Audit Activities

- Assess initiative portfolio and prioritize initiatives for review
- Review and validate business case and project plans
- Map Audit’s organization to the Project organization structure
- Identify key dedicated resources from Audit to provide on-going project advisory feedback
- Provide ongoing feedback by participating directly in regular project team meetings
- Establish clear issue escalation and communication protocols for Audit
- Perform post project review and embed key learnings into future efforts
IT Project Prioritization

<table>
<thead>
<tr>
<th>Hi Priority</th>
<th>Top Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Priority</td>
<td>Low Priority</td>
</tr>
</tbody>
</table>

Value/Criticality

Organization Relationship

Steering Committee

Business Process Committees

Initiative Management

Project Management

Business Experts

Audit Team 1

Audit Team 2

Audit Team 3

Audit Team 4

Other Initiative

Audit's Role in Corporate IT Initiatives
Stakeholder Relationships

Project / Initiative

- Executive Management
- Interdependent Initiatives
- Vendor Quality Assurance
- Internal Audit
- External Audit
- Project Team
- Integration Team

Outcomes Can Be Astounding

- Improved project completion for multi-million dollar initiatives from less than 50% success to approaching 100%
- Increased accountability and visibility for key initiatives – Real Time
- Reinforced project discipline
- Delivered results – Not issues
- Elevated Internal Audit visibility and relationships
- Improved executive confidence and reliance on Internal Audit as a business partner
Evaluation Framework

Initiative Governance

- Business Objectives & Governance
- Management
- Cross-Project Integration
- Business Process Integrity
- Application Security
- Infrastructure Integrity
- Implementation Integrity
Project Risk Assessment

Project Governance and Management
- Objective: Exceeds Quality, Cost and Time Expectations
- Identify, assess and monitor control mechanisms
  Examples include:
  - Project charter, business case and budget
  - Project structure, roles and responsibilities
  - Project planning and project plan
  - Milestone management process
  - Project deliverables

Cross-Project Integration
- Objective: Coordinated and integrated project
- Identify, assess and monitor control mechanisms
  Examples include:
  - Design and effectiveness of communication plan
  - Requirements definition/integrated process design
  - Responsibility / ownership management
  - Milestone and critical path synchronization
Project Risk Assessment

Business Process Integrity
- Objective: Efficient, Effective and Controlled Business Processes
- Identify, assess and monitor control mechanisms
  Examples include:
  - Transaction integrity (security, completeness and accuracy) with interfacing systems
  - Test scenarios and script effectiveness
  - Management key performance indicators
  - Transactional and cycle level business process controls (automated and manual) to achieve financial, operational, and compliance objectives

Application Security
- Objective: Security-enabled Business Processes
- Identify, assess and monitor control mechanisms
  Examples include:
  - Strategy and technical design
  - Security administration
  - Password controls
  - Roles and responsibilities/segregation of duties
  - Security logging, reporting and monitoring process
Infrastructure Integrity

- Objective: Secure, Reliable and Available Information
- Identify, assess and monitor control mechanisms
  - Examples include:
    - Network, operating system, middleware and database management system security and administration
    - Capacity planning and performance management process and assumptions
    - Backup and recovery, business continuity plan
    - Physical security

Implementation Integrity

- Objective: Useful and Quality-Driven Product
- Identify, assess and monitor control mechanisms
  - Examples include:
    - Testing results and approval
    - User training content and program effectiveness
    - Service level establishment and monitoring process
    - On-going maintenance process
    - Contingency Planning
## Typical Deliverables

<table>
<thead>
<tr>
<th>Audience</th>
<th>Deliverable</th>
<th>Planned Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Committee</td>
<td>Business Case Validation</td>
<td>Project initiation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Periodically based on environment &amp; milestones</td>
</tr>
<tr>
<td>Project Teams</td>
<td>Input to risk management, process redesign and controls</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Project Teams</td>
<td>Updated issues log</td>
<td>Weekly</td>
</tr>
<tr>
<td>Project Teams</td>
<td>Milestone Status Updates and Go/No-go Memorandum</td>
<td>At significant milestones and At least two-weeks prior to go-live date</td>
</tr>
<tr>
<td>Steering Committee</td>
<td>Milestone status and risk presentations</td>
<td>Bi-Monthly / Monthly</td>
</tr>
<tr>
<td>Steering Committee</td>
<td>Validation and assessment of scorecard information</td>
<td>Quarterly</td>
</tr>
<tr>
<td>Audit Committee</td>
<td>Project Status</td>
<td>Audit Committee Meetings</td>
</tr>
<tr>
<td>Program Management Office</td>
<td>Post-Implementation Audit</td>
<td>90 Days After End of Project</td>
</tr>
<tr>
<td>Project Steering Committee</td>
<td></td>
<td>360 Days After End of Project</td>
</tr>
<tr>
<td>Capital Committee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audit Committee</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Business Case Validation

#### Quantitative Program Assessment

<table>
<thead>
<tr>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Benefit($/Yr)</td>
</tr>
<tr>
<td>Improve reliability 1%</td>
</tr>
<tr>
<td>Reduce maintenance costs 5%</td>
</tr>
<tr>
<td>Reduce inventories 5%</td>
</tr>
<tr>
<td>Resources: Program and Project Management</td>
</tr>
<tr>
<td>Reduce time to benefits capture 20%</td>
</tr>
<tr>
<td>Reduce cost of benefits capture 10%</td>
</tr>
<tr>
<td>Architecture Integration: Develop, Design and Operate</td>
</tr>
<tr>
<td>Reduce design, development and support cost</td>
</tr>
<tr>
<td>Reduce data integrity and transaction risks</td>
</tr>
<tr>
<td>Total:</td>
</tr>
</tbody>
</table>

---

1 Very high-level estimates by E&Y based on data available, directionally accurate.
## Sample Evaluation Framework

### Project Risk Assessment Dimensions
- **Process**: The process is designed to efficiently achieve the underlying control objectives.
- **Execution**: The execution of the control objectives is occurring effectively.
- **Dependencies**: Slippage at this stage of the project will have repercussions on this or other projects.

### Project Risk Assessment Indicators
- **Open (White)**
  - Related activity not yet started or not applicable at this time.
- **Lower (Green)**
  - No significant problems or issues identified, area appears on plan.
- **Moderate (Yellow)**
  - Issues or potential problems currently not impacting critical path or significantly impacting project economics or scope.
- **Higher (Red)**
  - Significant issues with potential impact to the critical path, project economics or scope.

### Evaluation Framework

<table>
<thead>
<tr>
<th>Project Risk Elements</th>
<th>Sample Project</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infrastructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implementation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Application Security</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Risk Evaluation: Green**
- Project is designed and efficiently functionally achieving control objectives.
- Execution: Operations are performed as expected.
- Dependencies: Minor or no dependencies among the various sub-aspects, stability among the E&Y project.

**Risk Evaluation: Yellow**
- Project may be experiencing a few initial operational issues.
- Risk may exist, but the project is moving forward and is not impacting operational stability.
- Dependencies: Risk may exist, but the project is moving forward and is not impacting operational stability.

**Risk Evaluation: Red**
- Project is experiencing significant operational issues.
- Risk exists, and the project is not moving forward.
- Dependencies: Risk exists, and the project is not moving forward.

---

*Ernst & Young*

Quality in Everything We Do

Audit's Role in Corporate IT Initiatives
**Post-Implementation Topics**

- Business Case and Benefits
- Business Process
- Infrastructure
- Application Security
- Implementation Integrity
- Lessons Learned

**Take Aways**
**Auditor Reality Check: Ten Things to Think About**

- Communicate, communicate, communicate
- Roles and responsibilities
- Flexibility and timing
- Chain of command
- Manage expectations
- Deliverable focus
- Facts and data supporting qualitative assessments
- Don’t underestimate commitment
- Need specialists
- Politics as usual

**Lessons Learned**

- A clear, objective, detailed, and measurable business case is critical before going ahead
- Post-audit outcomes to plan and learn. This is not just to time and budget – but business outcomes
- Integrating with team helps “bake in” risk and project management best practices
- Independent, executive level reporting for transparency and accountability
- Continuity counts – it is hard to meet the business objectives if you do not know or understand them
- This is Business Management - not just Project Management
Do You Know?

- What do you spend on Corporate Initiatives?
- What is the process for managing Initiatives?
  - Selection and Definition?
  - Execution?
  - Accountability and Continuance?
- How much could this be worth to your company?

Resources

- Information Systems Audit and Control Association
  - www.ISACA.org
- Project Management Institute (PMI)
  - www.PMI.org
- Ernst & Young
  - www.ey.com
  - Tim Stephens, tim.stephens02@ey.com, 415-951-3034
  - Tom Magee, thomas.magee@ey.com, 650-849-4734
  - Jan Bono, jan.bono@ey.com, 925-977-3987
## Questions/Comments