

## CONTRIBUTORS

### FEATURES



**NEIL BAKER** is a freelance writer who specializes in corporate governance, internal audit, and risk management issues. He has been editor of *Internal Auditing*, the member magazine of The IIA-UK and Ireland, since 2000.



**RUSSELL A. JACKSON** is a freelance writer based in West Hollywood, Calif. He has more than 25 years of experience covering financial, clinical, and legal issues for business, health-care, entertainment, and law publications.

**BRAD AMES, CPA, CISA**, is an internal audit director for Hewlett-Packard in Palo Alto, Calif. Ames works closely with the company's governance groups, customers, and external auditors to gain an ongoing view of emerging risk enterprisewide.



**DENNY BERAN, CIA, CCSA, CPA, CFE**, is senior vice president of audit for the JC Penney Co. Inc., based in Dallas. Beran has spent his 40-year career with the company and is The IIA's 2011-2012 chairman of the board.



**FREDERICK BROWN, CISA**, is an IT audit manager with Hewlett-Packard in Houston. Brown has 12 years of audit experience specializing in IT outsourcing, e-services, Web application, IT project management, and data center auditing.



**CHANDRASEKHAR KRISHNAMURTHY, CIA, CISA, CA**, is director, internal audit and ERM, at the Hydro Ottawa group in Ottawa, Ontario, Canada. He has worked in India and the United Arab Emirates and across a diverse array of industries.

### DEPARTMENTS

#### AUTHORS

**ED MCCAULLEY, JD, CPA**, is an audit director at Accume Partners in Columbia, Md.

**SHANNON BUCKLEY, CIA, CPA, CISA, CGEIT**, is a senior auditor at Bupa International in Sydenham, Victoria, Australia.

**SRIDHAR RAMAMOORTI, PHD, CIA, CPA, CFE**, is an associate professor of accounting and the director of the Center for Corporate Governance at

Kennesaw State University in Georgia.

**R. LUKE EVANS** is an independent consultant for entrepreneurs and small business in Cambridge, Mass.

**JIM JORGENSEN, CIA, CPA, CISA**, is president and CEO of Cross-Check Compliance LLC in Chicago.

**NEIL KARAN, CISA**, is an internal controls specialist for an oil

and gas corporation based in Calgary, Alberta, Canada.

#### EDITORS

**DAVID O'REGAN, CIA, FCA**, is auditor general in the Office of Internal Oversight and Evaluation Services at the Pan American Health Organization in Washington, D.C.

**STEVE MAR, CFSA, CISA**, is director of IT audit for Nordstrom Inc. in Seattle.

**NORMAN MARKS, CPA**, is a vice president for SAP and lives in San Jose, Calif.

**PAUL J. SOBEL, CIA**, is vice president and chief audit executive for Georgia-Pacific Corp. in Atlanta.

**DICK RILEY JR., PHD, CPA, CFE, CFF**, is the Louis F. Tanner Distinguished Professor of Public Accounting at West Virginia University in Morgantown.

# IT Project Management

**By engaging with project team members, IT auditors can assist in the successful delivery of technology projects.**

BY SHANNON BUCKLEY

A GOOGLE SEARCH ON THE PHRASE “failed information systems project” generates about 13.5 million hits. Reviewing these failed projects reveals hundreds of millions of dollars wasted and a significant amount of analysis of what went wrong. Typical reasons include poor governance, complex technology, and loose business requirements. Yet despite such overwhelming evidence, organizations have not learned from previous mistakes.

The business operation of a typical IT organization can be divided at a high level: delivery of projects and ensuring the smooth operation of systems and infrastructure. IT audit functions have a strong focus on high-risk operational areas such as security, change management, and IT operations, but at times auditors lose focus on project management, which accounts for a large share of total IT spending.

To start, auditors must understand the difference between a program and a project. A program consists of various projects or activities to deliver a larger business outcome. A project is a set of interrelated activities to meet a specific goal. Three factors that influence any project are cost, time, and quality.

An IT project can expose an organization to risks such as:

- ❑ Change to business processes and culture. Implementing and developing a large project involves significant change for business processes and people, which can harm the organization if it is not managed appropriately.
- ❑ Ill-equipped project structure and processes. Poor project management practices and lack of skilled personnel can lead to inadequate control of project activities, impacting timely delivery.
- ❑ External factors from the project such as differing political agendas and

funding models, which can have a significant impact on delivery.

- ❑ Poorly defined business requirements, which can lead to projects not meeting users’ expectations.

Auditors need to be aware of risks related to several components in reviewing a project throughout its life cycle.

## PLANNING

At the planning stage the auditor needs to work with the project manager or business sponsor to determine how the auditor will be engaged. This means deciding at what points in the life cycle the auditor will be involved and in what form this involvement will take place. The auditor may sit on the project steering committee and perform detailed reviews of key deliverables such as reviewing the business requirements, design documents, and test output.

The auditor must clearly articulate what reporting activities will be undertaken and to whom matters will be reported. Key principles that should drive the interaction between the project manager and the auditor are transparency, confidentiality, timely feedback to the project team, and a pragmatic view. It is worthwhile to document the scope of the work that has been agreed to and distribute it to key stakeholders.

There is value in having the auditor assess and provide an opinion on business case assumptions, risks, and data. The auditor can obtain a real understanding and appreciation of the project objectives. More importantly, early involvement can help identify the auditor as a partner to the project team members.

During the life of a project things change, and the auditor must adapt to understand the changes and assess their

For more technology articles, visit the “ITAudit” section of [www.InternalAuditorOnline.org](http://www.InternalAuditorOnline.org).

impact on the project. Guidance such as *GTAG 12: Auditing IT Projects* can assist the auditor in ascertaining the specific controls to consider throughout the project.

**EXECUTION**

Many deliverables and processes can have an impact on project implementation. Auditors should consider reviewing several activities and processes during the project life cycle.

**DEFINITION OF CRITICAL SUCCESS FACTORS** It is important to understand what the critical success factors are for the project by asking, “How will we know that the project has been a success?” and “What does project success look like?” These factors should be as detailed and measurable as possible, and must be revisited throughout the project.

**PROJECT QUALITY PLAN** The quality plan defines areas and metrics that will be used to gauge the project’s success or failure. Some components that are usually included in a quality plan are:

- ▣ Customer expectations. For example, the customer expects the system to respond within a specific amount of time (e.g., 10 seconds).
- ▣ Go-live criteria. These are the minimum criteria that need to be met before the system implementation.
- ▣ Adherence to organizational policies and processes.

**PROJECT PLAN** In reviewing the project plan the auditor needs to consider:

- ▣ Is the plan realistic? Are there a sufficient number of people with the specific skill sets needed to deliver the project by the target dates and at the desired quality levels?
- ▣ Are the forecasts appropriate and based on a sound methodology?
- ▣ Are dependent projects and activities considered?

**GOVERNANCE STRUCTURES** The auditor should consider the appropriateness of the project governance structure components:

- ▣ *Steering committee.* The auditor should determine whether a steering committee exists, who sits on the committee, and whether its members have the right technical skills and decision-making authority.
- ▣ *Team meetings.* The auditor should review the meeting’s attendance,

timeliness (e.g., weekly), and formality (e.g., meeting minutes).

- ▣ *Program office.* The auditor should ascertain whether the program office performs any review, such as monitoring project reports and making periodic health checks.

**PEOPLE** A crucial factor in the success of the project is its people. The auditor should gauge the team dynamics, competencies, leadership, and culture as well as ascertain how effectively the key personnel perform their roles and responsibilities.

**RISK AND ISSUE MANAGEMENT REGISTER** The auditor should ensure that the project team has the processes and capabilities to identify, manage, and monitor risks and issues. The auditor should review the risk and issue log to ensure items are acted on timely. The registers should be reviewed at team meetings, and high risks should be reported to the steering committee and business sponsors for action. The auditor also needs to ensure the project’s risk management methodology is appropriate.

**CHANGE MANAGEMENT** A key factor in successfully delivering a project is how changes to scope are managed. “Scope creep” occurs in most projects, particularly later in the project life cycle as the business requirements are fleshed out and the business realizes that some items have not been included or if the development effort becomes more complex to implement. A formal change management process should be defined and followed. Criteria should be established to define what is considered a change. These requests should be categorized against priority criteria as well.

The auditor should review the change request log to ascertain the number of requests and those that have been approved as formal changes to the scope. The impact to the project also must be considered.

**BUSINESS REQUIREMENTS AND DESIGN DOCUMENTS** The auditor should review key business and design documents to ensure that appropriate controls are considered and input is obtained from the relevant business teams. Approvals for key documents also should be reviewed. Moreover, the auditor should determine whether a requirements traceability process is in place to ensure that all requirements are considered, designed, and tested.

**TEST PHASE** The auditor should review the test strategy and approach. These are typically developed early in the project life cycle. The detailed test plan also should be reviewed. A sample of test cases should be selected for re-performance or review of test results.

**GO-LIVE** Before implementation, the auditor should review the decision-making process for the go-live decision. Typically, the project steering committee should ensure that all agreed-upon functionality and key success factors have been achieved. The auditor should ensure that minimum criteria have been met and advise the decision-making body of the outcome.

**REPORTING**

Periodic project reports should be prepared by the project manager on a weekly or biweekly basis and distributed to senior stakeholders. These reports contain pertinent information on project status, including tracking to schedule, actual vs. budgeted costs, key deliverables, change register, and issue and risk logs. The report also should clearly state an overall assessment, which is usually completed via a “traffic light” schema:

- ▣ *Green* — The project will be delivered on time and within budget.
- ▣ *Yellow* — The project is experiencing issues in some areas and needs action to ensure that it can be delivered.
- ▣ *Red* — The project will not be delivered on time and within budget.

The auditor can provide real-time advice to the project team about control design and the appropriateness of actions to address risks by attending team meetings and speaking with key stakeholders.

**THE AUDITOR’S ROLE**

The role of the internal auditor will vary according to the phase of the project and the risk exposure the project faces. The auditor should bring an independent set of eyes to the process and a mind-set of a project partner. This can enable the auditor to provide advice before a solution is developed and implemented.

TO COMMENT on this article, email the author at [shannon.buckley@theiia.org](mailto:shannon.buckley@theiia.org).

SEND ITAUDIT article ideas to Steve Mar at [steve\\_mar2003@msn.com](mailto:steve_mar2003@msn.com).