Making an Enterprise System Work for Your Organization
There are a number of potential pitfalls that could prevent an organization from maximizing its return on investment in an enterprise system. Having some guidelines in place can help protect a substantial technology investment during rough economic times.

Originally attractive to the public sector because of the Y2K technology crisis, modern enterprise solutions provided a ready fix to what was perceived at the time as a pervasive problem. In more recent years, the trend in the public sector is to purchase enterprise solutions for their capability to effectively meet modern user requirements such as self-service, social media, and government transparency. But the public sector needs to make sure it is using its current enterprise systems to their full potential and not becoming too quick to replace modern applications.

THE ISSUE AND WHY IT MATTERS

ERP systems make use of proven technologies (sometimes in the form of “bolt-on” third-party applications) to improve the balance between responsiveness and stability, allowing modern solutions to react efficiently to changing business needs and customer requirements. Right now, it is possible to log onto an ERP application anywhere in the world and conduct business. Right now, it is possible to have information such as bus arrival times pushed to citizens’ cell phones and computers. In the future, it might be possible to merge government solutions with citizen appliances, like a smart phone that allows residents to check the availability of a picnic shelter they see in a park and reserve the shelter and pay the rental fee on the spot. Citizens increasingly expect these capabilities. Fortunately, modern technology solutions do not require a huge amount of programming effort — although they do require public-sector organizations to make some changes.
The impact of citizen expectations can be substantial. For example, the City of Philadelphia, Pennsylvania, plans to spend as much as $120 million in technology infrastructure over the next several years to streamline business and reduce costs. Most organizations will not spend this much, but they will still devote a substantial amount of limited resources to identifying the right technologies to invest in. That means the finance officer (and the technology officer) need to figure out what technologies will maximize efficiencies and service, and how to protect the organization’s investments in technologies.

**TECHNOLOGY IS AN ENABLER**

Jurisdictions often want to make a substantial technology investment such as purchasing ERP software because of the bells and whistles. Being able to implement employee self-service or business intelligence, or the ability to distribute reports with scorecards are very attractive. Focusing on such features loses sight of the true objective, however.

Other organizations have different reasons for considering an ERP system. Take, for example, an executive officer who invested in an integrated system while facing sizeable expenditure reductions, including layoffs and other drastic measures. He felt that his current legacy management systems had become a liability and that he couldn’t use them the way he needed to — so he could analyze his operations more efficiently and identify opportunities for improvement. He was able to outline his vision for how technology could be used to aid business transformation within his organization.

Initially, there might not seem to be that much difference between these scenarios. However, the executive officer who had a clear business purpose for the technology investment viewed technology as an enabler and was able to envision an alignment of technology with a business requirement. Technology projects that do not align business requirements with technology solutions generally fail.

**OPTIMIZING THE ORGANIZATION FIRST**

Unfortunately, aligning business and technology is not easily accomplished. In general, during the beginning stages of enterprise projects, organizations have every intention of aligning business and technology. But those good intentions fade as the project progresses. There are many reasons why, but it generally boils down to the availability of resources or the organization’s ability to absorb the change associated with the new business application. A 2003 *Government Finance Review* article describes how difficult it can be to implement best practices that are imbedded in commercial off-the-shelf software:

Studies suggest that organizations don’t fully realize the reengineering potential of ERP. One reason is that with pressures to keep projects on time and on budget, project managers sometimes decide to waive the installation of some of the software features included in the business case used to justify the software investment in the first place. Another reason is that customers underestimate the amount of change their organizations can withstand during the initial rollout. Sometimes even when there is time to achieve reengineering benefits, implementation firms find it more profitable (especially in fixed-bid deals) to “slam in” the software without working with the client at a granular level to configure for best practices. Many organizations find themselves undertaking the real process improvement efforts after the software has been installed.

ERP projects continue to have problems described in this 2003 article. In some extreme cases, organizations have retired, replaced, or severely cut back system functioning on solutions that were installed around 2003, and the reasons described in the above quote were often cited as reasons why an ERP project did not reach its potential.

Often, a jurisdiction primarily blames the software for a failed project or mismatched expectations about how the system should function. In reality, the software is rarely the problem. Organizational shortcomings are usually the root cause for ERP project failures. It makes sense to “fix the house before you buy new furniture.” In other words, establish the organizational infrastructure before embarking on a major business solution project.

**GOVERNANCE**

An organization that was selecting an ERP provider asked each vendor to describe what assurances they require for
a successful implementation. Each vendor emphasized the need for an executive sponsor and an empowered decision-making structure. They also said the project team needs to be representative of the system stakeholders. The vendors were so adamant about these requirements that they almost implied they would not proceed with a project until these factors were in place.

Project decision structures and other governance requirements are typically part of project management best practices. Without them, a project can quickly go out of control in terms of scope, schedule, and budget. Applying this standard to public-sector projects can be difficult, however, because of the nature of the organization. Unlike in the private sector, most public-sector organizations consist of semi-autonomous divisions. In the best cases, public-sector divisions will collaborate to achieve a common end. In the worse cases, the divisions compete against each other in a fractured environment. Most jurisdictions fall between the two extremes, of course.

Also, the inefficiency of an ERP project team’s decision making is related to how convoluted the project team structure is. Many are complex, and although the team appears to have a clear line of decision making, the reality is that groups of team members might be seeking clearance from individual executives, rather than the entire executive team.

Large or small, the most successful technology projects have strong executive leaders who emphasize technology as an enabling tool and a clear strategic vision for the organization. They also delegate routine project decision making to an empowered project team. Successful projects maintain these leadership traits throughout the lifecycle of the project — strong executive leadership is also required for managing post-implementation change control.

STRATEGIC VISION

Ensuring that all project team members and stakeholders are moving in the same direction is crucial to a successful project. The vision should be stated clearly, and the expectations should be incorporated into the vision statement. The following famous quote by President Kennedy meets these criteria: “First, I believe that this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the moon and returning him safely to the earth.”

Kennedy’s vision for conquering the moon was so effective that it resonated throughout all the tiers of NASA. It was reported that when janitorial staff were asked about the significance of their jobs, they replied that they were helping to put a man on the moon.

Once the vision is defined, project leaders should ensure that the message is communicated throughout the organization. In highly contentious organizations, it may become necessary for executive sponsors to sign off on the vision statement and to incorporate the statement into contract documents, such as the statement of work. In most cases, however, formal sign-off and contract authorization is not required.

ENABLED PROJECT TEAM

The popular theory for ERP project teams is to assign the best and the brightest staff to the project team, but there are several issues with this approach. First, it might not be ideal for an organization to think of staff members who are not assigned to an ERP project as not being the best and the brightest. Second, staff members who do fall within the best and the brightest category are often chosen for multiple projects, which can limit their effectiveness on any one project. Finally, since organizations tend to draw on the same resources over and over, a minority of people are, in effect,
shaping the future of the organization. It can be amazing to realize that an organization consisting of tens of thousands of employees might be using the same ten or 15 employees for a majority of their enterprise projects.

Organizations need to cast a wide net when implementing enterprise projects. They should focus on leaders, out-of-the-box thinkers, and other experienced staff. Ideally, an enterprise project team should consist of staff members the organization cannot afford to assign to the project. That is, if an organization (including sub-organizations) will not miss a staff member while he or she works on the project, then the project team does not want that staff member either.

To be practical, a project team cannot have hundreds of decision makers. Certain staff members will need to be assigned to leadership positions (e.g., technical lead, general ledger lead) within the project team. Other identified staff members might participate as part-time subject matter experts. The key is to avoid having the organization being shaped by one set of resources.

CORE COMPETENCIES

Project team members should possess certain core competencies to ensure quality decision making. Although the private sector views the term “core competency” as a way of defining competitive advantage, it can also refer to an organization’s ability to channel highly effective resources to create the greatest value for its customers.

Although competencies will be defined by the project objectives, effective project teams are able to apply best practices throughout the process. For software projects, core competency can be defined as a fundamental understanding of software configuration, business functions, and industry best practices. Other types of projects might have different sets of core competency expectations.

ENTERPRISE OWNERSHIP

A common misconception about enterprise systems is that a single owner should be responsible for managing the application. This is not the case. Modern applications are based on processes, and it is expected that process owners manage the application. Imagine a purchasing director dictating to the chief information officer how a server should be configured. Conversely, imagine the chief information officer dictating what accounts should be added to the general ledger. The approach is impractical, yet most governments find it completely acceptable to turn ownership of an enterprise-wide application over to one department.

Organizations should be prepared to distribute the ownership of an enterprise application over multiple departments. For example, the purchasing department might manage the procurement module; the human resources department might manage the employee administration modules; the finance department, the general ledger; and information technology, the software infrastructure. Coordination of configuration is managed through an integration group.

Although the ownership of the application is distributed throughout the organization, the public sector typically requires that the group of activities related to managing the application be managed by a single entity because the group of functions requires a budget and a sense of accountability. Although many approaches have been used to achieve distributed ownership, the key to success lies in the organization’s ability to drop formal barriers and collaborate on managing the application.

TRAINING

Consistent quality management of enterprise applications cannot be achieved without an equally strong training approach. The assumption that training should address only software is outdated. Process-based applications require users who are knowledgeable in their field, understand organization strategy, and can make use of best practices. Software based on best practices will assist the user but will not necessarily provide the right overall strategy. This is analogous to driving a car: Best practices exist in terms of road laws, the standard location of the car’s pedals, and the requirements for a driver’s license, but the rules are not going to tell the driver the best way to get from point A to point B.
Training needs to address this shortcoming. Obviously, the training program should ensure that users have fundamental knowledge of the software. What is not so obvious is that users also require training in their functions, best practice research, and ways of using technology to achieve strategic goals. That is, they require training in determining the best ways to get from point A to point B. Consider the entire end-to-end process when developing training programs. This means that a comprehensive training program should address software, hardware, business functions, and business analysis.

AUDITING

Many successes are achieved by reviewing past results, which is why doing a post-project assessment is often cited as a best practice in project management. This can be a difficult exercise since most project participants naturally become defensive during the process. Nonetheless, to avoid the mistakes of the past, organizations need to do post-implementation audits.

The post-project audit should focus on answering the following questions:

1) Was the business value realized?
2) Were the project goals met?
3) Was the project completed on time and on budget?
4) What lessons were learned?

Similar projects outside of the organization should also be considered and valued. The end of the process should include proper documentation of the results, and the documentation should be reviewed before new projects are undertaken.

PERFORMANCE BENCHMARKS

Measuring the effectiveness of a project is important to defining the return on investment. Developing performance benchmarks allows the organization to establish a base measure at the beginning of a project and then measure the effect of the project on that benchmark. This is achieved by taking the same measure at some point in the future, after the project is complete. The difference is then included in the return on investment. A fairly standard benchmark, for example, is to measure the amount of time it takes to pay an invoice before and after the project. Jurisdictions should wait several months after final acceptance of the system to take the second measure, during the trailing end of the learning curve and after the system has become fairly stable.

ESTABLISHING STANDARDS

Finally, the organization should strive to be consistent in its management of enterprise technology. Some organizations develop policies and procedures based on industry standards such as the Information Technology Infrastructure Library, Control Objectives for Information and Related Technology, and others. The key is to implement consistent policies and procedures, preferably based on best practice standards.

ASSEMBLY REQUIRED

Assembling the support organization is often an afterthought on an ERP project. This is akin to building an airplane and forgetting to find a pilot to fly it. Contrary to common practice, the best time to begin developing the support organization is in the early stages of the project, since the latter stages of an ERP project are often consumed by testing.

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and go-live activities. An earlier look into the future support organization also allows planners to develop scenarios based on the progress of the ERP implementation.

Many factors affect the design of the future support organization. How a system is implemented can affect the scope of the support organization. The organizational culture might influence the size and activities of the support organization. Geography might affect the location of the support center or support centers. The political environment might affect the governance of the organization. Many factors must be taken into account when forming the support organization, but certain foundations are required for a successful operation.

The application needs to have a functional and technology owner. Someone must be responsible and accountable for the configuration of the application. To ensure consistent knowledge transfer, an organization should ideally assign at least one full-time equivalent position (FTE) to major functions, major processes, and system administration. This may be a challenge for smaller (or even some larger) governments. In these cases, it might be possible to assign a single FTE position to groups of functions (e.g., human resources), so long as the design is simple. The organization might also use out-of-the-box strategies — or example, if multiple departments house technology resources or implement similar services such as receivables billings, planners should consider accessing these resources to augment support organization activities.

There must be a clear and consistent process for responding to issues, requests, and other inquiries. As part of system deployment, ERP projects usually implement a help desk procedure, accompanied by an escalation process. Successful ERP organizations also incorporate change management and communication strategies as standard practices for deploying new functions. To ensure consistency and facilitate support, no issue or request should be closed until the status has been communicated and the resolution has been properly documented.

An integrated application requires a comprehensive change control process. It should always be assumed that any change made to the application, even if the change seems benign, will have a rippling impact across the system. This means that changes to the application should not be taken lightly and, more important, changes should be thoroughly tested. Organizations that fail to implement an appropriate change control policy typically find themselves with a less-than-optimum future configuration that cannot be undone without substantial repairs.

**CONCLUSION**

To determine if your organization is using its enterprise applications effectively, ask yourself the following questions: Is your organizational culture a barrier to finding effective solutions? Do you use existing knowledge effectively? Does your organization have the right infrastructure to ask the right questions and to implement the best solutions? If your organization has not addressed the points dealt with in this article, your organization cannot address ERP optimization effectively; it would not have a stable surface to build on.

This article is one in a series on ways a jurisdiction can maximize its return on investment in an enterprise system. In the next issue of *Government Finance Review*, we will focus on optimizing an ERP system.

**Notes**


5. The Information Technology Infrastructure Library is a widely used set of concepts and practices for IT services management, development, and operations; go to http://www.itil-officialsite.com/home/home.asp for more information. The Control Objectives for Information and related Technology is a best practices framework created by the Information Systems Audit and Control Association and the IT Governance Institute; go to http://www.isaca.org/Knowledge-Center/COBIT/Pages/Overview.aspx for more information.

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