ERP upgrades are complex and often costly projects. For companies planning an ERP upgrade, strong project management is key to success. Perfecting a project management strategy ahead of time is a good way to keep an ERP upgrade on track, avoid common upgrade mistakes and ensure that time and money are not wasted.

In this SearchManufacturingERP E-Guide, site experts provide guidance for successfully leading an ERP upgrade project. Readers will:

- Get expert advice for developing a sound implementation strategy based on project-management methodologies
- Learn how to improve their ERP implementation strategies
- Find out how to make the case for an ERP upgrade
- Read best practices and tips to ensure that your ERP upgrade goes smoothly

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Project management best practices for ERP upgrades

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Project management methodologies can ease ERP software implementation

By David Essex, Site and News Editor

ERP software implementation projects are notorious for taking too long, going over budget and failing to deliver. But some manufacturers are having more success by adopting general-purpose project management methodologies, software tools and techniques that bring discipline and greater predictability to projects of any kind -- IT or otherwise. They've learned that knowing something about the project management discipline can make the difference between ERP success and failure.

The chief benefit of ERP project management is how it brings best practices to formulating project scope and managing change, according to Margo Visitacion, a vice president and analyst at Forrester Research.

"The reason ERP stumbles and falls as a project is you don’t have the appropriate person doing communication throughout the organization, and you don’t have appropriate scope management," Visitacion said. "There’s a lot of cultural change that comes with ERP. You’ve got to have the right stakeholders involved along the way."

Scope, time and cost are the three main constraints of any project, and they are often depicted as corners of a triangle: Change one, and the other two are affected. Philosophies about how to manage the constraints seem as numerous as the ERP software options. What all project management approaches have in common is a methodical process for bringing ideas to reality through careful planning, design, execution and testing, all documented in ways that encourage stakeholder cooperation and accountability. Above it all is a software-enabled process for controlling and monitoring work so it stays on task, on schedule and under budget.

What a PMP knows

Most project managers in North America are certified by the Project Management Institute (PMI), receiving the title project management professional (PMP) after training in the
Project Management Body of Knowledge (PMBOK -- pronounced “pimbok”). A competing organization called PRINCE2 dominates certification in the United Kingdom and a few other countries.

PMBOK-managed projects have five major phases: initiation, planning, execution, monitoring, and closing.

“It’s a guideline -- it’s not a rule,” said Sanjay Swarup, an electrical engineer and PMP who chairs the PMI’s special-interest group for information systems.

The planning stage includes requirements management as well as identifying tasks and estimating their duration. Execution covers system design and deployment and any development required for custom applications or data integration. In the closing phase, the project manager closes the financial books and handles remaining administrative issues, such as releasing the project team and specifying the vendor’s post-deployment obligations. Requirements management is one of the most important planning steps because it sets the tone for the entire implementation project.

“It is very important to record all the requirements very early in the document and have the agreement of the customer,” Swarup said. “It can have impact on the scope, the schedule, [and] the cost.”

The process often includes the drafting of a requirements traceability matrix (RTM), a table -- not technically required by the PMBOK -- that shows all project requirements and documents for their design, planning and testing. Swarup said he has seen ERP projects go off track when requirements were piled into documents that exceeded 200 pages without an associated planning document to show how the requirements were to be executed.

“Everything is in trouble at that point,” Swarup said.

Visitacion agreed that poor requirements planning is often where projects go wrong, even at the biggest companies. “If you don’t alert your users to the cultural changes that are coming along, you’re not going to have the right requirements defined,” she said. “A requirement is not just looking at what you want to do, but how you want to do it.”
Where to get good project management

There’s “lowercase” project management that everyone says they do, and then there’s the more rigorous kind, backed by academic research and methodologies and run by people certified to apply them. Is there a middle ground, a way to bring disciplined project management to ERP implementations without hiring PMPs?

“A PMP does not a great project manager make,” Visitacion said, acknowledging the title provides a level of assurance that matters to some companies. “A PMP definitely has the knowledge around the practices, but it doesn’t necessarily mean they’re an experienced project manager. I wouldn’t focus on whether they’re a PMP, but whether they have the track record. Some of the best project managers I know only recently got their PMP.”

Swarup, whose day job is as project manager for the global consulting firm, Cap Gemini, claimed PMPs are more committed to maintaining project discipline. “In our company, getting certified is a job requirement,” he said.

Besides consultants and in-house PMPs, manufacturers can find similar expertise in their ERP vendors, and ERP systems are typically sold with the vendor’s implementation methodology. But consultants seem divided on whether the vendor methodologies are adequate, and PMPs say regardless, they don’t help to manage multiple, often unrelated projects in portfolios that draw on shared resources.

Some companies, especially larger ones, centralize management of all major projects in a project-management office (PMO). But having a PMO doesn’t guarantee the use of formal methodologies and enabling software.

That’s what Sri Donkena, PMP, found when he went to work for Hydro One, a Toronto-based power-transmission company that is implementing mobile ERP connections for its field workers. “Everything is scattered,” Donkena said, referring to the company’s multiple budget spreadsheets. “There’s no way one person can go and see everything.”

However, Hydro One’s PMO puts a business and IT people under the same umbrella -- a best practice, in Donkena’s view -- and he is pushing to consolidate the company’s project
systems. “It’s a big cultural change,” he said. “They are used to their own systems and their own applications, and they feel that it’s already there, so why are we making a change now?”

Donkena had previously managed a major ERP software implementation at Apotex, a Toronto-based manufacturer of generic drugs, working with consultants from Deloitte Canada. The project came in on time and under budget even after the scope was enlarged. Donkena instituted a streamlined, 5-10-page “project charter” (another PMBOK document) that described the high-level requirements approved by Apotex’s line-of-business managers. The charter fed into a longer requirements document, and both formed the basis of an RTM.

Donkena attributes the success to the company’s use of formal methodologies and PMPs, know-how Apotex developed over six years by sending around a dozen employees annually to PMP training.

Is all that training really necessary? Donkena said it is hard to learn how to apply the PMBOK just by reading it. Still, he said, many companies can benefit from following at least some of the PMBOK steps to bring more structure to their ERP implementations.
Building a better ERP implementation strategy

By Steve Phillips, SearchManufacturingERP.com Contributor

What are the ingredients of an effective ERP implementation strategy?

The first major elements include management education, involving key stakeholders in planning, and lining up outside help if necessary (while remembering that, in the end, the client, not the consultants, owns the plan).

One of the first things to decide is the ERP implementation methodology, which will determine how the project is managed. Generally, there are three types of ERP implementation methods to consider: traditional, rapid deployment and somewhere in between. Each has advantages and risks, and which one is the right fit depends upon the organization and its project objectives. No matter what anyone tells you, one size does not fit all.

While the methodologies have some steps in common, their focuses and deliverables set them apart. For example, the traditional approach tends to emphasize up-front discovery and design steps, such as current process analysis, improvement opportunities, "to be" processes and software knowledge transfer. It is traditional in the sense that it employs many of the software development lifecycle concepts that originated in quality management circles. The basic idea is "measure twice and cut once," with the goal of reducing back-end rework. The potential downside is slow decision-making and paralysis through analysis.

When is a rapid ERP deployment strategy a good idea?

Rapid ERP deployment strategies are geared toward getting there faster. They rely on pre-configured templates to drive software setup and on prototyping to flesh out the final design, configuration, and business processes. The methodology is meant to expedite decision-making, enforce zero tolerance for software modifications, reduce or eliminate interfaces and data conversions that can expand the project scope, and fit the business into
software best practices. While few will argue with the intentions, the risks include quality issues and software that doesn't address business needs.

So which approach is best? The honest answer: It depends. In general, if management has set high expectations for the financial return on investment, lean toward the traditional approach. It provides more opportunities to re-engineer business processes and not simply automate them or have them be dictated by the software.

On the other hand, if the primary objective is to implement the software as soon as possible -- and there are legitimate business reasons for doing so -- consider rapid deployment. But when in doubt, take the traditional methodology. Err on the conservative side to avoid the risk of shutting the business down when the software is rolled out.

**Must-have steps in an ERP implementation plan**

Every step in an ERP implementation plan is critical. However, the most successful ERP implementations place special emphasis on the following:

- **Senior management roles and responsibilities.** If managers learn nothing else, they need to understand their project responsibilities. No doubt, this will require education, coaching and follow-up. Such "upward delegation" of project tasks is absolutely necessary.

- **Identifying all dimensions of project scope.** Scope definition drives project expectations, schedule and budget. It is also a tool to control the project. Few deliverables merit formal management sign-off, but scope is one of them. What's more, many assumptions are made during the planning process. Document all of them and get management to sign off.

Most projects have a broader scope than first meets the eye. When left to interpretation, the definition can lead to surprises, such as "scope creep" and desperate, last-minute cuts to stay on schedule and under budget.
• **Develop a valid schedule.** Do your homework; don't just throw darts to come up with dates. Whether anyone likes it or not, the schedule must reflect reality. It must capture scope, resource commitments and the details that go into a project. It also drives the great majority of the budget. Develop an invalid schedule, and you will eventually blow the budget.

• **Software knowledge transfer.** Learning extends beyond the initial ERP project team training. There must be a strategy to manage the knowledge-transfer process throughout the project cycle. The more knowledge clients have, the more they are empowered to participate in the design, setup, testing and support of the software long after the consultants have walked out the door.

• **Involve, listen and over-communicate.** Experts can talk all day about sophisticated and expensive "change management" programs, but the task is really pretty simple. Get people involved in the issues that directly affect them, ask for feedback, address legitimate concerns, and over-communicate. Doing so will disarm 95% of those who might otherwise stand in the way of the project. It doesn't mean you should let every wish drive the project. It does, however, require planning for design reviews, software demonstrations, departmental meetings, and other communication events. Senior managers, the project manager and the entire project team are responsible for carrying out these tasks.

**About the author:** Currently an IT manager at a manufacturing company, Steve Phillips has 25 years of experience in implementing ERP systems. He is a member of SearchManufacturingERP.com's panel of experts. He blogs about ERP project management at Street Smart ERP.
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How to make the case for an ERP upgrade

By Alan Joch, SearchManufacturingERP.com Contributor

If you want Mitch Pisik to spring for an ERP upgrade, don’t talk to him about bits and bytes. The president and CEO of Breckwell Products, a manufacturer of home heating products, wants to hear about only one thing: cash flow.

“What’s the incremental cash outflow for hardware, software and training, then the incremental cash inflow for increased efficiencies, higher sales, improved margins, lower costs?” Pisik said. “If you sell it as a revenue and cash-flow enhancement opportunity, it will be viewed as such [by senior managers].”

Pisik isn’t the only one who thinks this way. ERP consultants and systems integrators agree that selling the business benefits of an ERP upgrade is essential when IT budgets remain tight and top managers resist any new spending, particularly for expanding large-scale ERP systems that have already cost hundreds of thousands -- if not millions -- of dollars.

“We hear a lot of people say, ‘I’d rather quarantine my ERP base and invest in new product development or a better supply-chain platform,’” said Bob Parker, group vice president of research at IDC Manufacturing Insights. “Given the constraints, they are making the choices around business value rather than IT efficiency.”

Nevertheless, ERP remains the heart of business-process and financial-management systems, and delaying necessary upgrades or not taking advantage of innovations can impede productivity, security and regulatory compliance efforts. Here’s how ERP veterans make the ERP upgrade business case, using arguments that resonate with CEOs and CFOs.

ERP best practices for upgrades

First, while it’s natural for senior execs to focus on the cost of the investment, IT managers should steer the conversation toward the larger idea of how an ERP upgrade can improve operational efficiency or customer service. Start by assessing current performance, including any glaring gaps, then talk about potential improvements. “Tell them: ‘Here’s how...”
we could be doing business, and here’s how ERP can be a tool that’s going to help us get there,” said Paul Sita, principal of Innovative IT Consulting, which specializes in ERP systems for midsized companies.

IT managers can’t talk the talk alone. Elicit help from the business-unit managers who suffer the pain of underperforming ERP applications. “They can demonstrate where it takes a superhuman effort to keep things running or where there are a lot of wasted steps,” Sita explained. “Top management probably doesn’t even realize where some of those inefficiencies are.”

Now it’s time for the money talk. Describe how the new ERP features will address specific shortfalls and work with business managers to estimate potential savings in costs and staff time.

The ROI of ERP upgrade innovations

CEOs and CFOs may not be impressed with the latest and greatest ERP technologies, but sometimes these innovations offer important reasons for upgrades. Just make sure to translate techno talk into the language of business benefits. One prime example is the trend to embed business-intelligence (BI) and analytics tools within ERP applications.

While initial ERP implementations focused on re-engineering business processes, today’s BI-infused upgrades revamp decision-making processes, according to IDC’s Parker. This allows business managers to use concrete data to identify poorly performing products and decide when to eliminate them. Conversely, analytics can flag when to accelerate an internal product-development effort because of changing market conditions. For procurement managers, analytics can quantify the tradeoffs of sole vs. dual sourcing a particular product, including factors such as tooling costs and the risk of shortfalls.

“Explain to management that an upgrade allows you to better use all the good information you’re generating with your current ERP system, thanks to tightly integrated analytics, portals and collaboration technologies,” Parker added.
The importance of some ERP innovations extends far beyond internal operations. Many tier 1 OEMs and distributors have spent the downturn squeezing out inefficiencies by automating key components of their supply chains. This requires their partners to upgrade internal systems for sophisticated electronic transactions and for exchanging data about customer demand, inventory levels, production schedules, and forecasts.

**Reducing risk in ERP upgrades**

Another compelling argument for expanding ERP systems is the risks that arise when companies delay upgrades for too long. At the top of the risk list is running ERP versions that are unsupported or minimally supported by the vendors, said John Hoebler, director of enterprise systems at MorganFranklin, a systems integrator. Companies can become cut off from the constant stream of patches and fixes that close security vulnerabilities or address features requested by user groups, Hoebler said.

Finally, an upgrade is also an opportunity to reduce the costly, customized code that might have seeped into the ERP implementation. Over time, this housekeeping step can cut cost-of-ownership expenses by 20% to 30% by easing the development efforts needed to maintain and revise the application, Parker said.

Sita is currently helping one of his clients to document the benefits of an ERP upgrade. The customer now runs a highly customized, 10-year-old version of an ERP application that needs $1.1 million in new spending.

“Upper executives always start off by thinking, ‘Why should I spend a million dollars for new ERP features?’” Sita said. “But of course the choice isn’t $1 million vs. zero. From a pure dollars and cents perspective, there’s a cost of doing nothing because of the inefficiencies that exist in how they currently operate.”

**About the author:** Alan Joch is a freelance writer who specializes in enterprise applications and network technology.
Tips for avoiding common pitfalls of ERP upgrades

By Eric Kimberling, SearchManufacturingERP.com Contributor

Given the competitive landscape of the ERP industry, enterprise software solutions are changing by the minute. Leading software vendors pour millions of R&D dollars into their solutions to keep up with or surpass the competition. In addition to the "Big 3" ERP vendors, tier II and III vendors are constantly improving the functionality of their products, often releasing new versions at least once a year.

This is mostly good news for ERP customers and a key reason why companies often choose commercial off-the-shelf enterprise software: so they can directly benefit from the R&D investments and improvements made by the vendors. The bad news is that the same innovation cycle makes upgrades more common, which can be as costly and disruptive to an organization as replacing an entire ERP system.

With all this in mind, organizations should watch out for several common pitfalls when embarking on an ERP upgrade project. Here are four tips for avoiding them:

1. **Set realistic expectations.** IT departments and software vendors are notorious for oversimplifying enterprise software initiatives. Just as with full implementations, it will not be enough to upgrade the software, flip the switch, and expect changes to take effect overnight. ERP upgrades take time, money and other resources, and your project plan should be developed accordingly.

2. **Use the upgrade as an opportunity to reassess the functionality of your ERP software.** Most companies grow and evolve from the time they implement an enterprise software solution until they embark on a major upgrade, which can cause misalignment between the software and the company’s business requirements. Just as your business evolves, most enterprise software also evolves and improves over time, so it is important to use ERP upgrades as an opportunity to reassess the modules and functions that you are leveraging. Look for advanced functionality and new software that your vendor may have developed or acquired since your last upgrade, and identify the best opportunities for purchases that will deliver a clear return on investment. For example, several of our clients
have found during the economic downturn that adding customer relationship management (CRM) to their core ERP software allows them to enjoy immediate improvements to top-line revenue that more than cover the cost.

3. **Identify ways that the ERP upgrade can help you realize measurable business benefits.** It’s amazing how many organizations never fully realize the business benefit potential of their enterprise software. In fact, according to a survey in Panorama’s 2010 ERP report, more than 41% of organizations fail to realize at least half of the expected business benefits. More often than not, the failure has little or nothing to do with the software itself; instead, it happens because companies don’t leverage the full potential of the software. Upgrades can be a good time to reassess opportunities to take full advantage of more extended modules or functionality, retrain people on how to use the software more effectively, or redesign business processes to better fit the upgraded software.

4. **Don’t forget all that soft “people” stuff.** Even more than new ERP implementations or replacements, ERP upgrade projects are often driven by IT departments and treated as pure technology initiatives. But major upgrades can be just as disruptive and involve as much change to an organization’s people and processes. Such change is even more pronounced if your organization hasn’t upgraded in several years. For this reason, it is important to develop a comprehensive organizational change management and training plan to ensure that employees understand the changes to their business processes and job responsibilities.

The key is to bear in mind always that an upgrade is similar to a full implementation in requiring changes not just to software but to a manufacturer’s business processes and the roles and responsibilities of its people.

*About the author:* Eric Kimberling is president and founder of Panorama Consulting Group, a Denver-based firm that helps companies with ERP software selection, ERP implementation, organizational change management, and benefits realization.
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