Big Delivery in Small Packages

ENTERPRISE RESOURCE PLANNING PROJECTS ARE NOTORIOUS FOR RUNNING LATE AND OVER BUDGET. AGILE CAN HELP.

BY MATT ALDERTON

One lunch with a casual acquaintance

three years ago changed the way Jason Fair, PMP, thought about enterprise resource planning (ERP) projects.

"We were just networking. I said, 'What do you do?' She said, 'I'm an agile coach.' I didn't know what that was," recalls Mr. Fair, CEO of Genesis Consulting, a Glen Allen, Virginia, USA-based consultancy specializing in ERP solutions. "She said, 'I help my customers on their software projects. I make them more productive, help them create better software so customers have higher customer satisfaction, improve the quality of their product and increase the velocity at which their teams work.'

"I said, 'Wait a minute—I want all that.'"

As an ERP expert, not a software developer, Mr. Fair wondered: Could he apply agile techniques and best practices on his projects to realize the same benefits?

Three years later, he insists the answer is yes. "On one of my recent projects, we introduced agile to an ERP project team of 16 people. They had a portfolio of about 10 projects waiting to get done, but based on their budget and constraints, they were only able to get two of those done in that fiscal year," he says. "I came

in, introduced agile, and we ended up increasing the productivity of their team by 250 percent."

That efficiency boost, from eliminating waste and increasing collaboration, enabled the team to pull two more projects into the next fiscal year's timeframe—projects that resulted in bottom-line savings of US$10 million directly tied to the introduction of agile, Mr. Fair says.

But agile presents as many risks as opportunities, particularly on ERP projects that touch all of an organization's capabilities. Therefore, before implementing agile techniques, consider the potential payoffs and pitfalls alike.
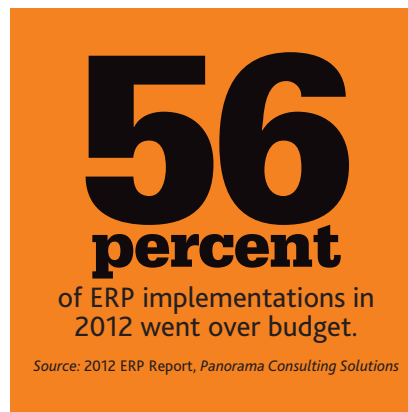
Agile Opportunities

The purpose of most ERP projects is pretty straightforward, says Michael Zwiener, PMP, manager of enterprise software development at IT services provider Realcognita Pty Ltd., Perth, Australia. "ERP systems make it easier for an organization to control structured and optimized workflows," he says. "They can also allow a real-time view on an organization in terms of key performance indicators using the benefit of a single source of data."

As is often the case, however, that value comes at a price. More than half—56 percent—of ERP implementations went over budget, according to Panorama Consulting Solutions' *2012 ERP Report*. The average cost overrun was over US$2 million, 25 percent of the total estimated ERP implementation budget. Furthermore, 54 percent ran over schedule.

"The main reason this happens is that most organizations without ERP systems lack defined interdepartmental processes," Mr. Zwiener argues. "The departments are structured as closed entities, often without much regard for interfacing with other parts of the organization. As a company begins planning an ERP system, too little emphasis and budget are allocated to

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Source: 2012 ERP Report, *Panorama Consulting Solutions*

the task of finding and optimizing the processes. This leads to an under-specification and results in extensive changes once the system parts have to 'grow' together."

Because they're usually launched with fixed budgets and schedules, ERP projects are typically managed using a traditional waterfall methodology. Their susceptibility to change is what makes them ideal candidates for agile.

"Using rapid prototyping frameworks with agile project management methodologies will save most ERP builds a lot of time, money and pain for the reason that they are designed to support changes," Mr. Zwiener says.

In particular, agile techniques can benefit ERP implementations by:

- **Emphasizing business value:** An ERP system is only successful if it meets the needs of the business; agile allows teams flexibility to shuffle tasks to ensure that the most valuable deliverables get done. "Traditional projects will go along, then they'll start to run out of money, so they cut things out of the scope. What happens then is something at the very end of the project plan doesn't get delivered because of time and budget constraints, even though it was really important," says Alan Campbell, PMP, senior consultant at ERP consultancy ArcherPoint, Atlanta, Georgia, USA. "Under agile, you push the most important deliverables to the front."
- **Minimizing risk:** ERP implementations are by nature long-term projects, lasting anywhere from several months to several years. As a result, the probability of errors is especially high. "One of the problems in ERP is that teams go away and develop for three months, and when they come back, the stakeholders say, 'That's all wrong,'" Mr. Campbell says. "Under agile, we break things down into 15-day sprints. It's iterative. So, if there is a miscommunication of the requirement initially, it's only for 15 days instead of three months. The miscommunication of the requirement can be rectified immediately, versus delivering some-

thing that doesn't meet the requirements at the end of the project, as in traditional waterfall methodology."

- **Eliminating waste:** Agile is based on lean processes that remove non-value-added activities such as downtime. As a result, agile components such as daily stand-up meetings can help project teams deliver ERP-related functionalities faster. "During the 15-minute meeting, each team member says, 'This is what I did yesterday, this is what I'm going to do today and these are the obstacles I need help with,'" says Nenad Simeunovic, vice president of services at global IT services company Merit Solutions, Wheaton, Illinois, USA. "If

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there's a challenge, we can address it on the spot and move on. As a result, there are fewer distractions, and progress is being made on a more consistent basis."

Agile's benefits are especially appealing in the current volatile economy. "The departments are reluctant to tackle large-scale projects as one big initiative with scope, time and resources locked. Instead, they are looking more to deliver functionalities in iterations, where flexibility is allowed—even expected—due to rapid changes happening in the marketplace and in the organization. We can no longer guarantee that our planning for today will be applicable in nine months," says Mr. Simeunovic.

Proceed With Caution

Nevertheless, agile remains a rarity among ERP implementations. Although lack of familiarity is one reason, fundamental characteristics of agile inhibit its adoption on ERP implementation projects.

One of those barriers is that agile was originally intended for use on software-development projects. "There are aspects of ERP which are totally unrelated to software development, and software agile methodologies do not tackle those aspects," says Vjekoslav Babić, PMP, managing director of IT services firm Fortempo Ltd., Zagreb, Croatia. "While software-development components of ERP projects can easily be managed through agile approaches, many other aspects, such as change management, process management and training, cannot."

The scope of ERP projects, which can span the entire enterprise, presents another barrier to the iterative nature of agile. These interdepartmental dependencies contradict the standard agile hierarchy because they make it difficult to deconstruct projects.

"ERP software handles a large number of functionality in different departments and often integrates dozens of processes," Mr. Babić says. "For example, it is very difficult to address only a small increment in functionality in sales if the process involves manufacturing, warehouse and quality-control departments. When deploying solutions, deploying only small incremental packages can involve complex workarounds to enable all other departments to keep working."

Along with tactical barriers, agile poses cultural challenges, argues Mr. Fair, who says team members often struggle with common agile practices such as:

- **User stories:** Decomposing work into user "stories" requires a new frame of mind that challenges typical ERP thinking. "People have a very difficult time transitioning the way they think about their work into stories," Mr. Fair says.
- **Scrum boards:** Scrum boards—which show the entire team's completed tasks, what's in progress and what's outstanding—create a level of transparency and accountability that ERP teams may not be used to. "Traditionally, with large ERP projects, you're hiding behind a 5,000-line project plan," Mr. Fair says. "With agile, you can visibly see what all the different pieces of work are, where they are and who's working on what. You can very quickly identify where there are constraints, and that makes people very uncomfortable in the beginning."
- **Stakeholder participation:** On agile projects, stakeholders are treated as team members. Instead of coming in at the end, they provide feedback at the end of every sprint throughout the project. "That means we are going to fail sooner and more often," Mr. Fair says. "That's a good thing, but people just aren't used to it."

Achieving Agility

Despite the inherent challenges of agile, its ability to increase speed, productivity and business value means it remains an attractive option for ERP implementation projects. The trick, say the experts, is to integrate agile slowly, faithfully and flexibly.

"I daresay that this is largely a trial-and-error game," cautions Mr. Babić. "Agile in ERP is still, by and large, unexplored territory, and most of the best practices are still merely speculative and tied to specific cases."

Yet, following a few pieces of advice from experienced ERP practitioners can mitigate the risks:

- **Choose a good first project.** Because not all ERP projects are good candidates for agile, choosing the right first project is important in order to establish initial success. "Selecting a project that has the right scope, the right complexity and the right talent with

Selling Executives on Agile ERP

Getting senior executives to sign off on an agile approach requires diligence during the enterprise resource planning (ERP) sales process, says Kent Willumsen, owner of IT services firm KentW Ltd., York, England. "Executives often already have experience with phased projects but are skeptical as to what agile can provide," he says. "So, the sale process may have to be educational, to emphasize the benefits of agile. The key message is that agile provides earlier visible results, better risk management and improved organizational engagement. These are words executives like to hear."

the right knowledge base is going to help you have a successful project," says Mr. Fair. He recommends a project that is low-risk and involves software with which the team is already intimately familiar. Build on those small, early successes with a rigorous lessons learned process.

■ **Provide training.** Staffing agile ERP projects is tricky. While Scrum masters are experienced in agile, they may not be flexible enough to accommodate ERP-specific alterations to the approach. Likewise, experienced ERP practitioners are likely set in their waterfall ways.

"If the size of the project justifies the cost, it certainly pays to have all involved project managers do training in agile, simply to create a common language," says Mr. Zwiener. "This is comparable to the way a sports team gains strength by training in the same skills."

■ **Facilitate collaboration.** Because a key focus of agile is eliminating waste, teams must be able to communicate quickly and in real time.

For dispersed teams, achieving that might require establishing a virtual office environment or frequent Skype connections. "With agile, you're eliminating downtime and waste where you have to wait for somebody," Mr. Fair says. "So being able to sit side-by-side, business analyst with developer, is key."

■ **Remember the big picture.** Although agile approaches often focus on minutiae, ERP projects demand a larger vision. Successful implementation, therefore, requires

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a balanced approach. "Agile is about making sure we make the progress we have promised for the next 20 business days," Mr. Simeunovic says. "A lot of times, that can cause people to lose sight of the bigger picture."

Mr. Zwiener's solution is to appoint a traditional ERP project manager to work alongside a Scrum master. "It often pays to involve a project manager with a lot of industry expertise and not necessarily a lot of agile experience," he says. "This project manager can manage the project on a high level."

Though adopting agile processes can help ERP projects stay on budget and on schedule, a new approach doesn't mean a completely new way of doing everything. "It's not agile versus waterfall," says Mr. Simeunovic. "It's picking up the best tools from both worlds and applying them to the appropriate situations. That's where success lies." **PM**