

Agile in Government: Can Agencies Make It Work?

In September 2010, Federal Bureau of Investigation Chief Information Officer (FBI CIO) Chad Fulgham took over management of the Sentinel case management system, one of government's prime examples of a runaway major information technology (IT) project. After 10 years of development, more than \$450 million invested and only two phases completed, Fulgham decided to switch to Agile development in order to buck the trend and complete the project by the end of fiscal year 2011.

Major IT projects within the government continue to be blamed for billions of wasted taxpayer dollars. With increased transparency in government, examples of failed projects, schedule lapses, technologies becoming obsolete before they are launched and cost overruns are more widely known. And then there are those projects that required years of heavy investments that never launched at all.

To ensure IT investments deliver benefits early and often, U.S. Chief Information Officer Vivek Kundra has made "modular" development one of the building blocks of his 25-point IT management reform plan which was launched just three months after Fulgham took the reins of Sentinel's development. The adoption of a "modular approach with usable functionality delivered every six months" is one of three requirements for approving funding of major IT programs. To support modular development, the plan refers to creating a new IT budget model, revamping the process for justifying and monitoring IT investments, and implementing the right program management and acquisition practices. Within a few days of this plan's launch, the Department of Defense announced Section 804 of the 2010 National Defense Acquisition Act, which requires

a new acquisition process for IT systems, including "early and continual involvement of the user; multiple, rapidly executed increments or releases of capability; successive prototyping to support an evolutionary approach; and modular, open-systems." These approaches closely relate to the industry's emerging best practice of Agile project management.

Many government project and program managers have seized upon the plan's references to the modular approach as a prescription for Agile project management, which enables project teams to deliver working products or prototypes in increments for customer input that later feeds into succeeding iterations. But although frequent changes in requirements might make government programs seem good candidates for Agile, it is not a cure for all projects. It won't work when:

- The organization requires formal change management processes and extensive documentation
- Projects have high regulatory compliance requirements
- Projects have a team consisting of novice team members in key roles
- Customers/users have limited involvement

If funding for IT programs is truly contingent upon taking a modular approach to program and project management, the more urgent question is, are other agencies ready for Agile?



Just as important, agencies would need to institute significant changes to their management practices, processes and tools in order to move from a traditional waterfall to Agile development approach.

What can agencies do to prepare their people and the work environment for Agile? The first step is for agencies to evaluate their portfolios and decide which projects are suited for Agile. The approach should be tested on a small innovation project from the portfolio or on smaller tasks within a traditional waterfall implementation. Next, agencies need to decide to what extent Agile will be applied on the first group of projects. Taking a hybrid, iterative approach can help agencies achieve better results while avoiding schedule delays and any other short-term negative consequences of a major change initiative.

The People Factor

Management and Governance

Regardless of the extent of an organization's shift to Agile, people can and will pose the most formidable barriers to adoption. For this reason executive or senior management support is critical, along with a management style that puts more emphasis on leadership and collaboration than command and control. Managers accustomed to delivering unvarying results using consistent, set processes will likely resist the transition. Senior executives can preempt such resistance by promoting change as a necessity and dedicating resources to make that change possible. Agile should be positioned as essential and, therefore, a fundamental part of every IT professional's job, not an additional duty.

The Team

Agile teams are integrated—and, ideally, co-located—project teams (IPTs) by definition. Members must possess the personality and work styles suited to self-governing, collaborative and adaptive teams. Unlike traditional project teams, Agile teams are led rather than managed by a project manager (PM). The Agile PM's primary role is to remove barriers that might impede the team from getting the job done. Each team member's work is held up to scrutiny as members perform periodic peer reviews. Meetings take place each day to coordinate and communicate in a way that streamlines, if not obviates the need for, certain documentation. Everyone is accountable for the performance of the team and is similarly rewarded. Because success depends highly on the team's expertise and familiarity with Agile methods, there is no room for amateurs, even when the agency takes a hybrid approach. As an IPT, they must be attuned to the impact Agile will have on the supporting infrastructure—e.g., acquisition strategy, contractor award evaluation criteria, performance metrics put into quality assurance surveillance plans and the changing needs of the customer, also a key member of the team. Given such tight interdependence within an Agile team, adding and removing team members are often more difficult than in traditional program teams.

Mr. Kundra commented at a recent PMI® annual event that "...too many project managers are trained on paper only... This lack of hands-on training hinders our ability to manage large, complex projects." Agile projects will be no exception if the new team members are certified but unqualified. Because most government teams will be new to Agile methods, they will need to learn the use of new tools, techniques and methods and a new vernacular. Training should follow a learn-practice-perform format, providing adequate exposure to core concepts followed by hands-on workshops and coaching sessions to help teams apply what they've learned on actual projects in order to increase their mastery and confidence in the process. In addition to on- and off-site experts, other support options include such online resources as Webinars, templates, checklists and a repository of lessons learned.

Stakeholders

Executives will need to initiate and facilitate dialogue with stakeholders to clearly understand requirements, limitations and risks before communicating the urgency of adopting an Agile approach. Once the organization shifts to Agile, stakeholders will likely

miss the traditional milestones for making budgeting and staff decisions, and balk at their frequent, close involvement with the IPT's activities. However, most stakeholders will soon appreciate how their greater involvement translates to more control over how to prioritize features and where those priorities fit in the iteration and release schedule. They can ensure activities deliver customer value at each iteration, and better understand the impact new features will have on cost and schedule.



Process and Tools

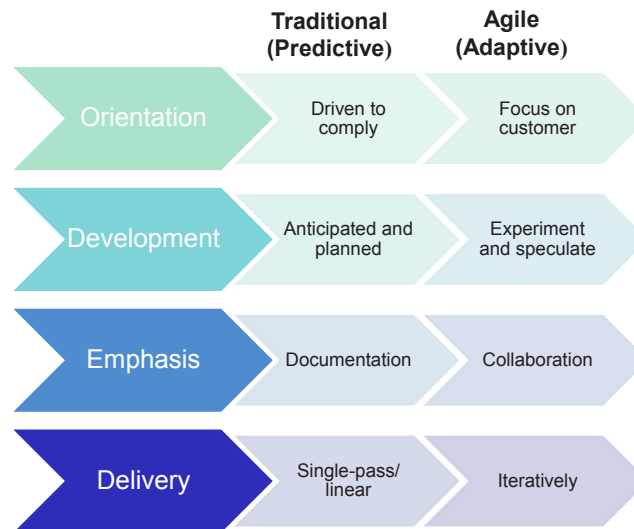
The Agile approach requires a fast-paced work environment. Slow decision making, elaborate documentation and rigid processes will only undercut its benefits. Close, frequent collaboration and communication minimizes documentation and the use of artifacts, which in turn will have an impact on contract administration and the historic use of concrete acceptance factors. Although modular contracting is by no means new in government—in fact, Section 35 of 1996’s Clinger-Cohen Act stipulates agency heads should use modular contracting for major IT systems acquisitions—the process has had few adopters over the past 15 years.

Having the right tools in place at the outset will lower the risk of processes failing to meet customer needs. Whether the team is partly distributed or co-located, collaboration tools, which often include blogging and instant messaging capability, will go a long way to improve the effectiveness of intra-team interactions and knowledge sharing in an environment where lean thinking trumps details, documentation and artifacts are kept to a minimum, and deadlines are iterative. The same online library that helps make the shift to Agile will also help deliver program results.

Government CIOs and their teams are closely watching whether Sentinel can be transformed from a half-billion-dollar failure to one of federal IT’s success stories. By May 2011, 10,000 FBI employees were using Sentinel’s existing capabilities and a broader release is expected in September. The delivery is long overdue, as development of a next-generation case management system for the FBI had actually started in earnest back in 2001. Whether Sentinel will succeed this time is no doubt a question on everyone’s mind. If funding for large IT programs is truly contingent upon taking a modular approach to program and project management, the more urgent question is, are other agencies ready for Agile?

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Traditional Approach vs. Agile Approach



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