



Transitioning to Agile? Consider These Key Practices for Success

As a federal IT manager looking to deliver rapid business value and return on investment, you are probably considering agile over traditional waterfall methods. Are you wondering where to start and if you can pull it off? Read on to learn about key practices that you can use to implement an agile delivery organization.

How Do you Organize for Agility?

No matter what kind of project you have planned, transitioning to a new delivery approach can be risky and daunting—but not impossible. Making the switch from traditional to agile project delivery is a significant change but can deliver quick results if you take advantage of lessons learned from the field. Consider the following perspectives when introducing agile methods into your organization.

Establish an Agile PMO

Transition your Program Management Office (PMO) to an agile PMO and let your teams follow the agile methodology they feel fits best. Create maximum flexibility for your agile project by establishing an agile PMO that accommodates the progress of the project and professional growth of your team. The first step toward getting more flexible projects is to identify tools that can be used by agile development projects and then find the right set for each project. Establish standard tools for source control, work management, documentation, builds, and deployments to begin adopting an agile DevOps culture that will significantly reduce project risks. A DevOps environment facilitates collaboration and communication among your team members while automating the process of product delivery and improving existing infrastructure. These measures translate to faster, more frequent, and more reliable development cycles when building, testing, and releasing software. The agile PMO will

Here are five reasons for adopting agile:

1. Fast, high-quality delivery to market;
2. Increased business value, transparency, and high-quality solutions;
3. Better management of changing priorities;
4. Quicker response to cyberissues; and
5. Continuous access for all stakeholders to maximize transparency.

The following are some examples of tools that can centralize your agile development activities:

- JIRA
- Cucumber
- HipChat
- Slack
- Confluence
- Jenkins
- Chef
- AWS
- Azure

identify the types of reports that can be used to accurately convey the project's progression, e.g., burndown charts and velocity graphs. The agile PMO will play a critical role in establishing a flexible agile development process that provides accountability, transparency, and automated development operations for all stakeholder communication while ensuring alignment with strategy.

Create and Empower Cross-Functional Agile Team(s)

Transition your current integrated product team (IPT) and create cross-functional agile team(s) with the right size and the right skill sets. Teams should be limited to five to eight members with a dedicated scrum master, implementation lead, database administrator, and business analysts included. The ideal agile development team will range from business analysts to different technology stack resources (e.g., Java and .NET developers) to help facilitate a unified team. With a distribution of the right skill sets, your team members are able to facilitate, collaborate, and be accountable. If the team is distributed, establish communication and collaboration tools to increase collaboration. Over time, teams mature to become self-organizing and self-disciplined, with individuals taking accountability for managing their own workload and shifting work among themselves based on need or fit.

Lessons Learned—Agile projects have been known to be more successful than traditional ones, with 39% of agile projects reporting success, compared with 11% of waterfall projects, as discovered in the Standish Group's 2015 CHAOS report.¹ However, they can pose many challenges in the federal sector due to the upfront need to know the full cost of the project and to centralized decision-making management structures. Therefore, you must conduct periodic process reflections for lessons learned by regularly reviewing areas that require improvement. A consistent, planned retrospective after each agile iteration is integral in achieving this objective.

Bring Out and Maintain High Business Value

The greatest benefit of an agile approach is the business value it brings. By prioritizing product backlog items through story mappings and providing the client product owner with ownership over the product backlog, agile teams are primed to deliver high business value as well as continuously track and build on that business value. The product owner must be furnished with the power to make decisions across all business units to ensure maximum flexibility. Also, exploring the full range of options available for automated tools (e.g., JIRA and Cucumber) that can be implemented into your project will provide opportunities to capitalize on their time- and resource-saving capabilities as well as added transparency.

Use Agile Methodologies to Maximize Flexibility

Agile methodologies—when combined with the agile DevOps infrastructure previously mentioned as well as test-driven development and behavior-driven development—maximize code coverage and continuous integration and delivery. They ensure high-quality delivery and build on successes. When product owners can access integration environments at any time, they have the flexibility to gauge their development team's progress.



¹ Standish Group, 2015 Chaos Report, accessed November 9, 2016, from <https://www.infoq.com/articles/standish-chaos-2015>.

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Manage Change Along the Way

Your agency may face other challenges when embracing new methods for IT or non-IT projects. For instance, it may want to consider establishing functions or features rather than waterfall artifacts in its deliverable schedule. Here are ways you can ease the transition:

Create Flexible Funding Models to Fund Agile Projects—The Office of Management and Budget published the *Contracting Guidance to Support Modular Development*² after working with the U.S. Congress and agencies to analyze existing working capital funds and other vehicles for pooling funds and extending availability of funding. This guidance document serves to help you better understand the process and use of flexible funding models to support agile programs within your agency.

Align Contracting Practices to Suit Modular Approaches—Based on your agency's practices and the type and nature of your IT investments, find ways to create and use contracting methods that will support modular approaches. You can take advantage of existing contract vehicles before looking to create new ones. Agile-specific contract vehicles are offered by certain agencies such as the U.S. Citizenship & Immigration Services' Flexible Agile Development Services contract. The General Services Administration's 18F organization employs an agile services delivery model and offers consulting services to federal agencies for ghostwriting their RFPs by using its expert agile resources. By establishing partnerships and collaboration with industry, you will have a better understanding of technology evolution as it relates to your needs.

In a Nutshell... If you have a large multimillion dollar project, you want to consider these key practices in delivering in a modular way. To reduce risk and ease the transition, organize for agility by establishing an agile PMO, transitioning your current IPT to agile team(s), promoting an entrepreneurial and collaborative culture, and establishing DevOps toolsets. Transition the PMO's role to support agile teams. Encourage sharing successes. Identify and eliminate constraints to meeting your goals by delivering business value, aligning contracting practices to suit modular approaches, and creating flexible funding models. To ensure quicker deployment execution, use experiences from past deployments as learning tools for success.



² The White House, Contracting Guidance to Support Modular Development, June 12, 2012, accessed November 9, 2016, from <https://www.whitehouse.gov/sites/default/files/omb/procurement/guidance/modular-approaches-for-information-technology.pdf>.