

ORGANIZATIONAL READINESS:

Why Organizations Struggle to Adopt Agile

Mike Thompson and Mark Masuelli



INTRODUCTION

When [The Manifesto for Agile Software Development](#) was published in 2001, it laid out basic principles for improving the cycle time and quality of application development, testing and maintenance activities. Considered radical at the time, the Manifesto called for un-characteristic flexibility in designing, building and testing applications to ensure end products meet customer needs, even if those needs are in a state of constant change.

Software development was not a particularly fast process at the time Agile methodologies first were conceptualized and practiced and often were waylaid by changing business conditions, customer demands and time or financial constraints. Because traditional waterfall methodologies typically took a long time, there was a good chance that once a product reached the market it no longer met business requirements. Either the product itself had changed dramatically since the inception of the project or its features and functionality were no longer relevant to the business or its customers. Inherent inefficiencies in the traditional design, coding and testing cycles resulted in additional development time and delays as the team continually worked to catch up to the evolving business requirement or customer need. It was a vicious cycle.

Since its introduction more than 15 years ago, the four values and twelve principles set forth in the Manifesto have become central to Agile application development frameworks and methodologies. More importantly, for organizations that have mastered Agile principles, the business reasons for adopting Agile methodologies in the first place are becoming increasingly evident as they help lower risk, improve time to market, reduce development cycle time, increase stakeholder involvement and improve quality of application code.

Agile software development has become a dominant software delivery methodology for the provider community as evidenced by ISG's Insights Leadership Report [Best Practices in Distributed Agile Development](#). Among other things, the report finds that the number of software development projects completed by service providers using distributed Agile delivery models has grown, on average, 30 percent or more per year between 2012 and 2015. Furthermore, service providers indicate they complete 75 percent of their development projects using an Agile methodology across geographically distributed delivery locations.

While Agile development is widely used by service providers in support of their customers, many large businesses have struggled to introduce and adopt methodologies that emphasize rapid software development cycles, frequent code delivery, regular system updates or changes, and continuous user involvement in their IT delivery teams and organization. In many ways, the new method conflicts with the way traditional IT organizations work. This ISG white paper explores how an organization can gauge its readiness for adopting Agile methodologies in preparation for a new way of working.

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AN INCONVENIENT REALITY

Taking the first step in moving to Agile development is difficult for many companies because leaders inherently believe their organization, in particular the IT organization, should follow specific rules, policies and procedures so it can operate seamlessly as an integrated and well-oiled machine. They believe governance, operational processes and IT service delivery should fit together in a clear, predictable way.

This “mechanistic” view of the IT organization and software development function is at odds with Agile development methodologies, which require organizations to move away from traditional development structures and governance models and toward more dynamic and time-boxed frameworks that facilitate faster mobilization of resources and accelerated product development. As opposed to the often-stringent processes that govern the flow of work for many companies, Agile principles advocate for collaborative and adaptive teams, free flow of information, accelerated cycles of learning, rapid decision-making, direct interactions between the development team and the customer, and greater responsiveness to changing requirements.

In part to reconcile this disparity, businesses have attempted to translate service provider success with Agile development into a set of well-defined and codified steps or best practices that they believe can be followed, as if Agile was an award-winning recipe that could simply be followed step by step. The steps typically occur in this order:

1. Establish strong product ownership.
2. Put the right people, training and processes in place to ensure appropriate support for Agile (i.e., governance).
3. Assign strong onshore and offshore scrum masters.
4. Standardize using the “right” collaboration tools (e.g., Jira, Confluence, Rally, etc.).
5. Cap teams at ten members or fewer.
6. Virtualize the application test environment and test data management.
7. Deploy continuous integration tools (e.g., Maven, Jenkins, Chef and Perforce).
8. Build personal relationships to enhance collaboration.



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Unfortunately, reality is quite different, and the Agile method isn't a "one size fits all" solution for all development projects. For example, Agile development methodologies may make more sense for fast-changing, customer-facing applications on the front end of the business than they do for stable, transaction-oriented systems on the back end that don't require accelerated development cycles. Even where accelerated development cycles are required and greater agility is warranted, the pace and the specific steps needed may differ from project to project.

Taking a dual delivery requirement into account means being able to execute different IT application development and delivery models, some suited more for traditional or legacy-based systems and others for more customer-centric technologies, including those built on digital and mobile application platforms. This fact is often missed when an organization assesses its ability to move to this fundamentally different approach to software development.

ORGANIZATIONAL READINESS

Readiness is the level of preparedness of an organization's resources, systems and structure to address a situation, carry out a planned sequence of actions or effect change. Organizational readiness depends on the thoroughness of the planning, competencies of the personnel, adequacy of training and how well-established key support processes, services and systems are within the organization.

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Three attributes that factor most significantly in an organization's preparedness include:

- **Capability:** Skills and competencies of the resources involved.
- **Capacity:** Number of resources with the required skills and competencies.
- **Maturity:** Degree to which key processes and systems are in place and optimized.

CAPABILITY

An organization's ability to adopt Agile methodology depends largely on whether the business has the capability to affect the desired change across those parts of the business best suited to adopt it. An organization needs to define the skills and understand the individual and organizational competencies required to move to Agile and determine the degree to which they already exist inside the organization or whether it will need external support.

While it is not the purpose of this paper to set forth a template for conducting an organizational readiness assessment, the list of sample questions below will help identify and assess the individual and enterprise skills and competencies required to successfully adopt and master Agile development.



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- 1.** How comfortable are team members performing multiple roles needed to complete development activities (e.g., product management, requirements definition, development, QA/testing) as part of a development team? Are individuals organized and assigned responsibilities to a single role or multiple roles in today's organization?
- 2.** How well do individual team members work when assigned responsibilities that cut across multiple roles?
- 3.** How well-defined are the roles of business users/customers in the development process?
- 4.** How willing and able are business users to be involved in the development process? How integrated are they into the day-to-day activities of development teams?
- 5.** How comfortable are team members with rapidly changing business and/or technical requirements throughout the development process? Does today's development culture promote strict adherence to defined requirements in the face of evolving customer demands?
- 6.** How comfortable are team members working in non-traditional, highly collaborative ways?
- 7.** Are teams co-located or highly distributed? Are the team members practiced at capturing ideas and sharing information throughout the team(s) over the course of the development project?
- 8.** How empowered are individuals and teams to take ownership and make decisions related to software architecture, design, requirements and functionality throughout the development process?
- 9.** How experienced are team members in product and portfolio management? Are they capable of applying those competencies as part of the application development process?
- 10.** Do we have the right training in place to facilitate a transition to a new development system? Can our communications and change management processes support transformational change?
- 11.** How resilient, reliable and efficient are individuals and teams throughout the development process?



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12. How nimble, fast and adaptive are individuals and teams throughout the development process?

13. How well do individuals and teams use technology and automation to develop code, manage backlogs, structure application documentation, capture ideas and collaborate, test code and continuously integrate software products?

14. Can we accomplish this transformation ourselves or do we need to work with partners or providers to reduce the learning curve and improve our chances for success?

Understanding the degree to which an organization has these and other competencies is essential to assessing the business' overall readiness to adopt Agile development.

CAPACITY

Simply stated, capacity is about the ratio between skills available and skills needed to complete an Agile project. When organizations struggle to consistently staff Agile initiatives with an appropriate number of skilled resources as-and-when needed, they are demonstrating a low level of organizational capacity.

Assessing capacity is about identifying and evaluating who has the required business knowledge, technical skills and training to work in and support application development activities using Waterfall, Agile, Kanban and Lean methodologies; who can organize and align teams into pod or scrum structures; and who can manage product development using structured work, review and delivery windows (e.g., sprints, daily/weekly scrums and reviews). Team members capable of performing multiple roles in an Agile development project facilitate and increase organizational capacity by leveraging different skills over the life of the project.

Understanding capacity requires more than just mapping the skills of the IT development teams to skill requirements. It requires looking at the internal customer and business teams that support the work of the Agile-led IT organization. The traditional Waterfall mindset initially engages the customer, who then must wait sometime months until the product is delivered for the user-acceptance testing. The Agile development cycle is dynamic and requires daily interaction, direction and interplay with the programming team. This means both the developers and the business must have capacity. When customers think that they can "set it and forget it," the Agile development process breaks down.

MATURITY

Because Agile is about collaboration over process, an organization must fully understand what it takes to execute Agile methodologies and the maturity level of Agile capabilities across the enterprise. In addition to the availability of required skills and resources in the organization, another indicator of maturity in adopting Agile are [how teams are structured](#)

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and how well supported those teams are by optimized processes. A maturity continuum can help an organization assess how well it implements, institutionalizes and continuously improves enterprise processes. The organizational and enterprise process maturity definitions below provide insight into the stages of progression across a typical maturity continuum. Continua like this help an organization determine where they are in terms of relative maturity and better understand the degree of change required going forward to institutionalize transformational change.

- **Non-existent:** Complete lack of any recognizable process. The business does not recognize a need for the process or that there is an issue to be addressed. Client deliverables are not met. Project results, deliverables and customer satisfaction (CSAT) scores vary widely from project to project.
- **Initial/Ad Hoc:** There is some evidence that the business recognizes a need for a process or that an issue exists and needs to be addressed. In the absence of a standardized process, approaches tend to be applied on an ad-hoc basis by individuals and teams. Some client work is met, but the team focuses on break/fix issues and is typically “putting out fires.”
- **Repeatable but intuitive:** Processes exist and have been developed so that different people undertaking the task can follow similar steps and/or procedures. However, there is no formal training or communication of standard procedures, and responsibility is left to the individual to work through and around barriers or gaps in understanding. People carrying out the task must rely heavily on other individuals’ knowledge and experience applying the methodologies, tools and processes. If key personnel are missing, delivery and deliverables are at risk. Client work is met unevenly across the organization with the squeaky wheel often getting the grease.
- **Defined:** Processes and procedures exist and have been standardized, documented and communicated through formal training to practitioners and those in leadership positions. The business mandates that employees follow these standard processes, but deviations can occur when processes are poorly monitored or measured. The processes themselves tend to be unsophisticated and may only formalize existing practices. The feedback loop that helps the organization refine and improve processes and client work is imperfect. Clients are mostly satisfied, as CSAT shows green, but may be red underneath the surface.
- **Managed and measurable:** Management routinely monitors and measures compliance with standardized processes and procedures, documents deviations and takes action when processes appear not to be working effectively. Processes are constantly improved and, because of their routine nature, provide good practice for those responsible for carrying them out. Automation tools are used in a limited or fragmented way in measuring and monitoring the process. Existing client work runs smoothly, but there may be some dissatisfaction as IT may be slow to bring new ideas to the front.



Ultimately, readiness depends on whether those who are targeted for change understand the nature of what they will be asked to do in the future.

- **Optimized:** Processes have been refined to a level of highly standardized practice, based on the results of continuous improvement and maturity modeling with other businesses or benchmarks. IT is involved in automating the workflow and providing tools to improve speed, quality and effectiveness over time. Individuals and teams have moved beyond mastery of the process into continuous improvement and refinement to enhance how work gets done and accelerate speed of execution. IT proactively serves the client, bringing answers before the questions are asked.

Where an IT organization's core portfolio management, application development, application management and delivery processes lie on the maturity continuum is a clear indicator of how ready an organization is to move toward faster, leaner and more responsive ways of developing and fielding software in support of the business.

CONCLUSION

The Agile development methodology has been around for nearly two decades. Over that time, it has become a dominant software development and delivery methodology among IT service providers but less so for enterprises in general. Though businesses know they must react and deliver at the speed of today's changing business requirements – and that implementing Agile methodologies can deliver real business benefits – adopting Agile's dynamic, time-boxed frameworks goes against the grain of long-held beliefs that traditional organizational structures, governance, operational processes and IT service delivery will produce the best outcome.

These traditional views often get in the way of a company's efforts to change and transform. Organizations that are seriously considering moving to Agile development should conduct a rigorous assessment of their readiness – evaluating their capability, capacity and maturity – to help prepare them for the change that successful Agile development and frameworks require. Only then can an organization fully understand the magnitude of the challenge, develop a realistic roadmap to get to an Agile development environment and determine what, if any, outside help it needs to ensure success.

Ultimately, readiness depends on whether those who are targeted for change understand the nature of what they will be asked to do in the future. This is particularly true with respect to an organization's understanding of what Agile is, what is required of the enterprise to implement this transformative methodology and why it works. For more insight into these key questions, read [The Why of Agile: Understanding the Five Reasons It Works](#).

ABOUT THE AUTHORS

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