

An AgileCraft White Paper

Bridging the Bimodal Divide Between Waterfall and Agile



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A handwritten signature in white ink, appearing to read 'S.E.', positioned below the printed name.



AgileCraft

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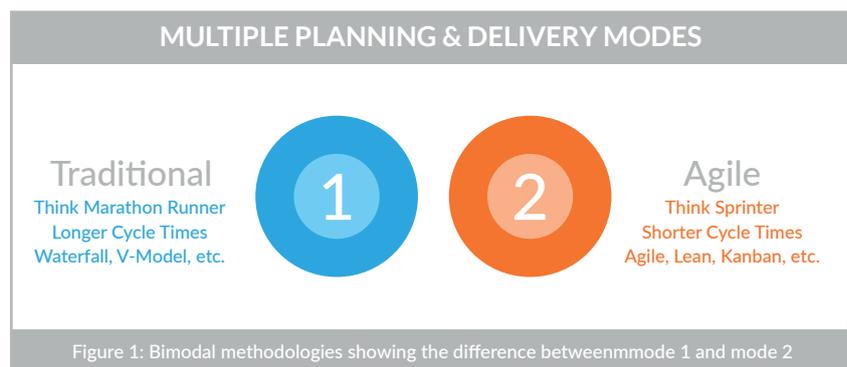
Moore's law predicted in 1965 that computing power would dramatically increase while costs would decrease exponentially.¹ This theory has historically held true—we've witnessed explosive growth in almost all areas of technology. This phenomenon includes processors, microchips, batteries, cellphones, vehicles, and many other products. In short, technology innovations will continue to disrupt nearly all segments of commerce and production.

While the consensus among chip manufacturers is that Moore's law is a fact (until recently), the same theories of increasing demand for smarter, faster, and leaner software may not be possible. To keep pace in a more sophisticated software-rich world, enterprises must either look to become an innovator or risk being left in the dust by the competition.

Choosing the Best Methodologies

Software drives much of the intelligence for these fast-paced technology product offerings. And as we all know, there are good and bad approaches (or methods) to deliver this software.

Many of these enterprises are following an approach that mixes traditional IT methodologies with those built to deal with the dynamic nature of today's technology. Gartner calls this approach bimodal, and warns their clients and the marketplace to either prepare to incorporate digital innovations into the way they operate or risk being disrupted—or worse. Gartner recommends that “marrying a more predictable evolution of products and technologies (mode 1) with the new and innovative (mode 2) is the essence of an enterprise bimodal capability.”² This is depicted in figure 1.



While many development teams have lived in the world of agile for quite some time, most IT organizations have not taken that same approach to the broader aspects of their PMO, portfolio, and enterprise levels, nor have they incorporated their business partners into the world of agility. In my experience, many enterprises have agile teams under waterfall management.

¹ Wikipedia, Moore's Law

² Gartner IT Glossary



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There are some fundamental approaches to bimodal concepts and capabilities that organizations can follow in their agile adoption and transformation to reduce the risk of large-scale agile change management initiatives. You want to enable organizations to embrace a culture of innovation while allowing select projects to use traditional models. Let's look at a few key principles organizations can adopt to successfully drive the alignment, coexistence, and collaboration between waterfall and agile mindsets.

Taking the Bimodal Journey

Most software enterprises consider software and their company's ability to deliver software as a strategic asset. Because speed to market and providing innovative solutions represent competitive advantage, many companies are involved in some form of agile transformation. That usually results in a mixed, or bimodal, environment. This journey typically moves through four stages of evolution: team, program, portfolio, and enterprise (figure 2). As an organization progresses through each stage, concepts usually become easier to understand and implement.

Stage 1: Team

This stage, usually involving both agile and waterfall teams, reflects where most organizations are today. The teams are learning how to work together faster, more efficiently, and with greater quality. This may not be apparent to everybody. Management is still using traditional budgeting, finance, and planning methods, and the middle and top management layers have very little insight into the work being done at the team layer.

Stage 2: Program

At this level, the transition has expanded from the team to the program level. Teams have transitioned to agile and are realizing its value, but the product portfolio is still very much using a traditional waterfall approach. The organization's primary challenge becomes how to translate planning and progress reports between those charged with driving strategy (portfolio) using traditional methods and those charged with execution (program and team) using agile methods. The next two stages—portfolio and enterprise—are where organizations aspire to reach on their agile journey.

Stage 3: Portfolio

The organization is managing innovation-driven projects with an unknown set of requirements using an agile process. Highly predictable projects with well-defined scope, on the other hand, are managed in a more traditional way. A thin layer at the very top of the organization ties the two together through reporting, budgeting, and strategic alignment. Many in the analyst community would say that attaining this level is the core of the bimodal enterprise.

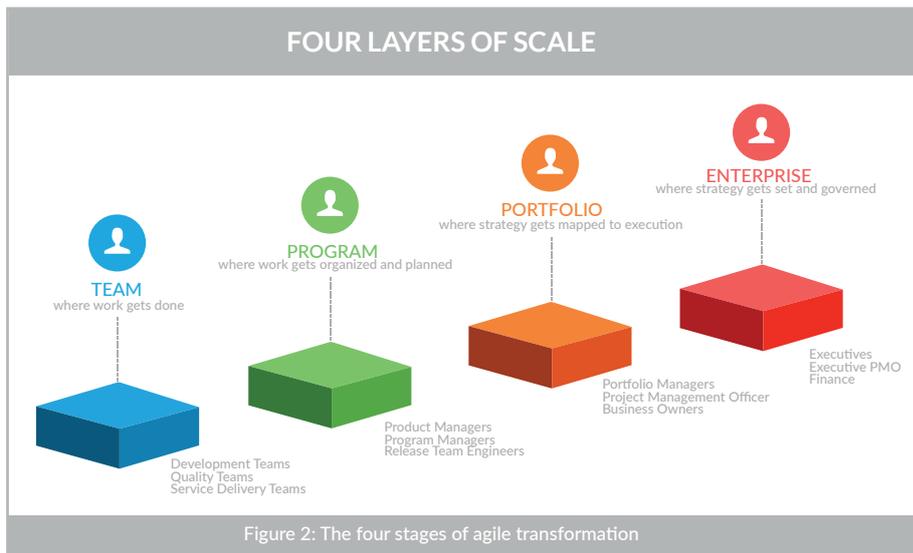


“Management must provide the tools and techniques so that both can peacefully coexist.”



Stage 4: Enterprise

The enterprise level is the ultimate destination, where the executives know where to place their bets in real time. Executives can determine if there is enough value in one budget or if funds should be reallocated to another budget. The ability to make those value decisions in real time and have those decisions drive all the way down to the teams doing the work bridges the gap between strategy and execution.



Staging Traditional Versus Agile

Figure 3 illustrates the four stages of a bimodal journey. The symbol “T” represents traditional methods and the symbol “A” represents agile methods applied at each stage. In the first stage we see mostly traditional methods, and as we progress to the later stages, an organization transitions to a fully agile enterprise.

Making a Bimodal Approach Work

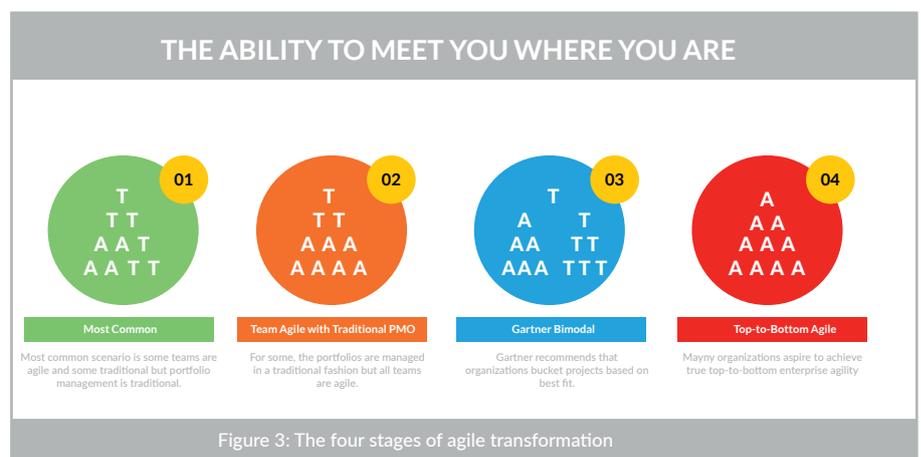
In a perfect example of taking a bimodal approach, development teams are engaged in long-term projects to build and maintain legacy systems, and other teams are charged with innovating to stay ahead of the pack. Management must provide the tools and techniques so that both can peacefully coexist.

Both modes offer significant advantages. By allowing some parts of the organization to keep operating using their existing model, organizations can maintain their current methodology while identifying other opportunities where agile thinking fits best. This approach allows the organization to begin implementing the transformation to agile without disrupting current traditional processes.

In another example, a CIO of an insurance company or bank could manage an enterprise resource planning (ERP) modernization project using traditional methods. Process, tools, and outcomes are well defined, and the abundance of legacy data provides a competitive advantage over younger companies. Meanwhile, shorter-term objectives around online banking and bill pay or mobile applications can follow an agile approach to support changing customer, market, or regulatory needs.

Key Principles for Bridging the Bimodal Divide

For a bimodal approach to succeed, alignment, collaboration, and transparency between agile and waterfall must be enabled to bridge the divide between the two distinct approaches. It implies a deep understanding of culture and balance.



There are five essential ground rules that organizations must follow to successfully drive alignment to a bimodal approach:

- 1. Institute a common language.** Align terminology and lingo early on, allowing agile and waterfall teams to effectively communicate. Do the development teams write requirements (traditional) or user stories (agile) to explain desired functionality? Is the complexity of a project measured in task hours (traditional) or story points (agile)? At the very least, try to create a Rosetta stone consisting of a comprehensive list of core terminology understood by all teams.
- 2. Construct a unified flow.** Define a centralized intake process, preferably one that is business case-driven. This means projects are funded through a gated approach, where value is the key driver. When ranking the value of projects, be sure to examine all facets of a project—such as revenue potential, cost, time to complete, and required resources.



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3. Implement a planning cadence. To align the way the business operates, have the organization conduct planning on a set cadence. Whether you use sprints, planning increments, monthly updates, or quarterly updates within an annual plan, recalibrate objectives when needed and agree to deliverables for longer timeboxed periods. This cadence also applies to those who prefer to plan continuously, implement a steady rhythm to plan releases, or synchronize teams and business units.

4. Define a single process to manage dependencies and risks. Create a unified way to manage risk and align handoffs among all teams. Map dependencies between work items and the teams that need to deliver them, and account for any differences in delivery time that could lead to risk. Tie dependencies to the risk value if the dependency is not fulfilled. Investigate recurring dependencies to reduce complexity in your projects and weaknesses in your architecture or organizational structures.

5. Enable multilevel reporting. Provide staff at every level of the organization—from executives to portfolio managers to project managers to developers—with one source of truth. The same data that is used to report on project progress at the team level should also translate into value and funding at the program and portfolio levels, respectively, and business strategy at the enterprise level. Reporting data should flow as easily from the bottom up (spend, results, predictability) as it does from the top down (strategy, goals, priorities).

Enterprise agility is required to effectively compete in every industry, especially the technology arena. At the same time, traditional approaches can provide stability and proven experience that edge out the competition. Therefore, a bimodal approach is the reality of today's digital transformations, and it may be here to stay. Driving alignment and coexistence between waterfall and agile will help your organization survive and thrive in this rapidly changing world.





About AgileCraft

AgileCraft delivers the most comprehensive software solution available for scaling Agile to the enterprise. AgileCraft transforms the way organizations enable and manage Agile productivity across their enterprise, portfolios, programs, and teams by aligning business strategy with technical execution. We work with your existing tools (Jira, Rally, TFS, etc.) and bring together Agile and non-Agile teams in one intuitive and open platform.

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