

## The Current State of Agile Method Adoption

David Norton

As the pace of agile adoption increases, development organizations must understand the different levels of agile maturity. CIOs and product and development managers need to assess where they fit on the maturity scale, and which level offers the biggest return in their organizations.

### Key Findings

- Agile adoption and penetration rates are being overestimated. Although the number of companies that are adopting agile practices is, indeed, reasonably high, most organizations use agile in a very small percentage of their overall work.
- An agile maturity framework is necessary to help make the case for adoption, process improvement and benchmarking.
- Current adoption rates for agile and iterative methods are between 15% and 25%, when taking into account penetration and maturity, with waterfall still the dominant approach. The pace of agile adoption is increasing.

### Recommendations

- Understand your IT organization's agile maturity level when deciding your agile adoption strategy.
- Aim to introduce agile practices at Level 2 (repeatable) or at a more-integrated Level 3 (defined).
- Organizations at agile maturity Level 1 (ad hoc) should take urgent steps to regain control of the development process by formalizing the move to agile.

### What You Need to Know

Increasing numbers of IT organizations are electing to move away from waterfall life cycle development to iterative- and agile-based processes. As organizations develop a benefits case for this move, it's important to understand adoption levels in the industry, and at what agile maturity level this adoption is taking place. To enable a more insightful discussion, we have developed an agile maturity framework.

Within the agile community, claims have been made of adoption rates as high 70% in commercial and vendor organizations; however, this misrepresents the real situation. The vast majority of Gartner's clients still report waterfall as the dominant process in application development in their organizations or application offshore models (that is, skills, tooling, development processes, and organizational and business interactions are primarily focused on sequential tasks with fixed boundaries and artifacts).

Why are the reports of agile use so high? One reason is that organizations do not report how mature their agile practices are when affirming the use of agile methods. Thus, saying "Yes, we use agile" has a completely different meaning, in terms of business benefit and organizational impact, in a low-agile-maturity organization when compared with a high-agile-maturity organization.

### Agile Maturity Model

Because there is no agreed-on agile maturity model, use the maturity model definitions as a common framework (see "Maturity Assessment for Application Organizations: Software Process"). The model definitions are designed to take into account the mixed approaches of agile and prescriptive practices at ever-increasing levels of maturity. This is necessary because agile is just one approach, and it is possible for an organization to have a high level of agile maturity, but for agile to still not be the dominant approach in the organization.

Taking into account agile maturity, and based on client interaction, Gartner breaks down agile adoption trends as follows:

- **Level 0 (Nonexistent)** — There is little or no evidence of agile or iterative practice adoption in the development organization. A plan-driven prescriptive approach to development is taken, typified by a waterfall software development life cycle.  
**Observation:** These are the diehard waterfall development organizations exhibiting Type C behavior (risk and change aversion).
- **Level 1 (Ad Hoc)** — Agile and iterative practices are used sporadically and inconsistently across the application development organization. No formal controls or reporting, regarding the effectiveness of the practices, exists. It is unlikely that there is executive sponsorship for agile practice adoption. Agile practices are likely to be mixed with prescriptive practices in the same project. There is no strategic or tactical adoption strategy.

**Observation:** This is where most organizations reporting to use agile practices sit, with agile practices "cherry-picked," often at the team level, and informally mixed with prescriptive methods. The classic example of this is "We take an agile approach to

documentation," which translates to "We are poor at documentation, but now we have a reason."

- **Level 2 (Repeatable)** — In a Level 2 organization, agile and iterative practices are established in work teams or departments, but there is little consistency in approach across the application organization. The practices are repeatable in individual projects or teams. Individual agile initiatives are likely to have senior business and IT management support, but with no single, strategic agile adoption strategy. Reporting is not consistent across agile projects, lacking organizationally agreed-on metrics.

**Observation:** When organizations make the formal decision to adopt agile, this tends to be the maturity level they feel most comfortable with initially. It's a tactical adoption, project by project. This is often easier to champion based on individual business cases.

- **Level 3 (Defined)** — A Level 3 organization has a set of defined and documented agile and iterative practices and processes across each application discipline category. These processes are communicated across the entire application organization and are followed consistently. Agile adoption has executive sponsorship, with a consistent benefits message for the IT organization and the business. Process improvements are undertaken at individual team and project levels, based on retrospectives. In organizations using agile and waterfall, there are clear decision criteria for method selection. Metrics and reporting are consistent across agile projects.

**Observation:** The Type A, and some Type B, organizations that adopted agile practices in the late 1990s or early 2000s have matured to Level 3. However, some of our small and midsize business clients have made the strategic decision to adopt agile across their entire development organizations, effectively jumping in at Level 3. Increasingly, development organizations based on Capability Maturity Model Integration are looking to adopt agile at this level.

- **Level 4 (Quantitatively Managed)** — A Level 4 organization has a set of measures that indicates whether the agile practices are working well, or if they need improvement; thus, a Level 4 organization clearly understands its limitations. Such an organization has a consistent measurement program that is part of the work process (embedded in the process and based on mostly automated data collection), and consistently uses these measures to identify gaps. In organizations using agile and prescriptive practices, productivity and quality metrics are normalized for comparison. The benefits of agile and iterative approaches are reported using delivered business value.

**Observation:** Organizations at this level have usually been agile service providers, or offshore organizations using agile as a market differentiator. Some end-user organizations (most notably manufacturing) have combined lean practices and principles with agile practices to achieve this level of maturity.

- **Level 5 (Optimizing)** — A Level 5 organization understands its agile practices and processes, knows its limitations, and has clear accountability and responsibility for regular improvement. The Level 5 organization is consistent, is reliable, and regularly improves and changes based on measures. Optimization is based on value chain principles covering upstream and downstream development activities. In organizations using agile and more-prescriptive practices, optimization takes place across those organizations.

**Observation:** At this level of agile maturity, the "air is starting to get very rare." Evidence for this level of agile maturity is limited and mostly anecdotal. Like Level 4, it is only an

organization with high maturity in process improvements that can claim this level of agile maturity.

## Bottom Line

Table 1 gives the range of agile adoption, based on client feedback and market observation. Gartner places the percentage of IT organizations that are using agile or iterative at a productive level of maturity (Levels 2, 3, 4 and 5) between 15% and 25%. We have deliberately dismissed Level 1 because, at that level, agile practices may be of little demonstrable benefit.

**Table 1. Agile Adoption Levels**

Level	Pessimistic	Optimistic
0	25%	20%
1	60%	50%
2	8%	15%
3	5%	10%
4	1%	3%
5	1%	2%

Source: Gartner (December 2008)

As part of an agile readiness assessment, IT development organizations should assess their current agile practice maturity at technical, project management and organizational levels. Practices should be assessed for, among other things, their effectiveness and adoption levels in the organization. Adoption should follow initial pilots, and should normally be Level 2, with the aim of developing a consistent set of agile practices at Level 3.

Organizations may elect to adopt agile practices across their entire enterprises, or to use agile as one of many methods. A mixed practice model does not exclude high maturity; thus, it is possible to have Level 5 practices alongside a model-driven or even a waterfall process.

## RECOMMENDED READING

---

"Maturity Assessment for Application Organizations: Software Process"

"Waterfalls, Products and Projects: A Primer to Software Development Methods"

## REGIONAL HEADQUARTERS

---

### **Corporate Headquarters**

56 Top Gallant Road  
Stamford, CT 06902-7700  
U.S.A.  
+1 203 964 0096

### **European Headquarters**

Tamesis  
The Glanty  
Egham  
Surrey, TW20 9AW  
UNITED KINGDOM  
+44 1784 431611

### **Asia/Pacific Headquarters**

Gartner Australasia Pty. Ltd.  
Level 9, 141 Walker Street  
North Sydney  
New South Wales 2060  
AUSTRALIA  
+61 2 9459 4600

### **Japan Headquarters**

Gartner Japan Ltd.  
Aobadai Hills, 6F  
7-7, Aobadai, 4-chome  
Meguro-ku, Tokyo 153-0042  
JAPAN  
+81 3 3481 3670

### **Latin America Headquarters**

Gartner do Brazil  
Av. das Nações Unidas, 12551  
9º andar—World Trade Center  
04578-903—São Paulo SP  
BRAZIL  
+55 11 3443 1509