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# Rally® (formerly Agile Central)

## Discover the Benefits of Agile: The Business Case for a New Way to Work

**White Paper**

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# Deliver At the New Speed of Business

You're operating in a world that's global, responsive, customer-focused, and technology-driven. With software as the key driver of growth, innovation, efficiency, and productivity, how you deliver software says a lot about how you'll compete in this world. A world written by software spells opportunities for those who capitalize on it and risks for those who don't. The companies that survive—and thrive—in this world will be agile companies: those able to quickly and confidently respond to change, deliver value faster than the competition, and build high-quality products that customers really want.

# Why Agile?

The agile approach to developing software—and managing work in general—is your passport to success in the application economy. Agile promises a range of benefits: faster time to market, increased productivity, fewer defects, cost savings, and better employee engagement.

- Companies that are deploying agile at scale have accelerated their innovation by up to 80 percent.[1]
- A summary of research on project management methods found that agile approaches yielded 29 percent better cost, 91 percent better schedule, 97 percent better productivity, 50 percent better quality, 400 percent better satisfaction, and 470 percent better ROI than the least effective traditional methods.[2]

## Agile Tenets

Agile methods help you build and deliver products incrementally, get value to customers quickly, and keep development work aligned with business needs. Agile approaches emphasize these tenets:

- Disciplined project management to minimize waste and deliver on schedule
- Self-organizing, cross-functional, and collaborative teams
- Customer satisfaction through delivery of software in short, frequent cycles
- Frequent inspect-and-adapt sessions for continuous improvement

## Results to Expect

You can expect to see results when you adopt agile approaches.

### Get to Market Faster

Anyone with a smartphone knows we're living in an app economy, where customers expect product updates and improvements on a regular basis. When you get your releases out the door on a regular cadence, you'll not only deliver value to customers faster than your competition, but you'll also generate revenue sooner as well.

### Build High-Quality Products that Customers Value

Agile's user-centric approach delivers value in short cycles so customer feedback can be integrated into the development process. This enables you to align your strategy and development work around building what customers want most. Agile approaches also integrate testing into the development process, which improves quality and helps identify defects prior to release.

1. McKinsey & Company, "An operating model for company-wide agile development," May 2016, http://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/an-operating-model-for-company-wide-agile-development
2. Dr. David F. Rico, PMP, CSM, Notre Dame of Maryland, "What is the ROI of Agile vs. Traditional Methods?" 2008, http://www.davidfrico.com/rico08b.pdf

### Reduce Risk and Eliminate Waste

Traditional software development consisted of long planning, design, and development phases. This resulted in infrequent, big-bang releases that often failed to meet expectations. By delivering value to customers more frequently and integrating their feedback, you can respond more effectively to the market and reduce the risk of expensive market misses.

### Collaborate Better

Self-organizing, cross-functional teams are the foundation of successful agile practices. These empowered teams don't just produce better products and services, they also produce more engaged employees. According to a study by Coleman Parkes, organizations can increase employee productivity by 22 percent by adopting advanced agile principles.[3]

### Gain an Edge on the Future

A report from Accenture found that high-performing organizations are six times more likely than other organizations to have adopted agile methodologies.[4] And Computer Economics' "IT Spending and Staffing Benchmarks" study estimates that 83 percent of businesses plan to implement agile (up from 59 percent previously).

## Agile Foundations

Agile approaches have been around for decades but were codified in 2001 with the Agile Manifesto[5], a lightweight set of values for managing software development projects which include:

- **Individuals and interactions over processes and tools**
- **Working software over comprehensive documentation**
- **Customer collaboration over contract negotiation**
- **Responding to change over following a plan**

Agile is an umbrella term for a variety of work-management approaches that share common principles. These principles include: cross-functional collaboration, focus on customer value, iterative and incremental delivery, limiting Work in Progress (WiP), and continuous improvement.

Once considered a fad, agile has matured into a popular and respected set of development methods. It has expanded outside of software development and IT into sectors like banking, management consulting, automotive manufacturing, and healthcare. Companies are moving to agile methods because the global marketplace demands they bring products that better reflect their customers' needs to market faster. The traditional waterfall approach—with its sequential phases and heavy investment in large-scale, upfront design—lacks the flexibility to help organizations respond swiftly to changing markets. Agile approaches offer faster delivery, higher quality, and an engaged development team that can deliver on its commitments.

3. Coleman Parkes research commissioned by CA Technologies, "Accelerating Velocity and Customer Value with Agile and DevOps," Jan 2017, https://www.ca.com/us/rewrite/articles/agile/accelerating-velocity-and-customer-value-with-agile-and-devops.register.html
4. Accenture, "High IT Performers: Defined by Digital and Driving Growth," 2013, https://www.accenture.com/us-en/insight-digital-it-research
5. Mike Beedle, Arie van Bennekum, et al., "The Agile Manifesto," 2001, http://agilemanifesto.org

## It's About More than Just Software

Agile isn't just a software development methodology. To deliver customer value faster, organizations need to improve their organizational structure, processes, ceremonies and culture. What started as a movement around software teams is now an enterprise-scale business approach, applied across teams in distributed office locations—and it's an operational model in which companies use their business agility as a competitive advantage.

## How Agile is Different

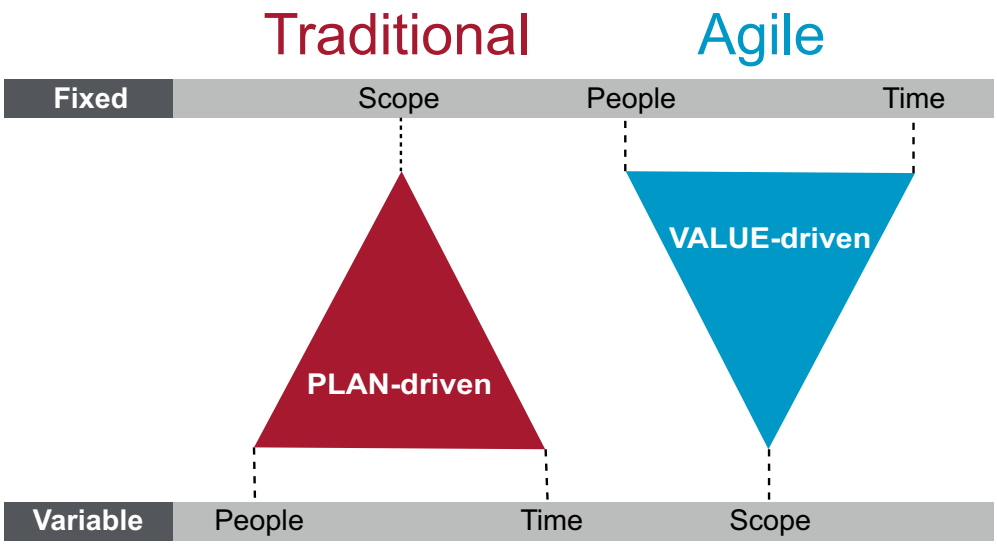
All projects need to be managed within common constraints: scope, people (resources), and time. Traditional project failures include exploding costs and schedules, often caused by scope changes. Traditional or waterfall methods attempt to lock down scope so that time and resources can be planned and controlled. Agile assumes resources and time are fixed and sees scope as variable.

The following table compares traditional development to agile development.

| Traditional Development | Agile Development |
|---|---|
| Plan-driven | Value-driven |
| Fixed scope | Variable scope |
| Variable resources | Fixed resources |
| Variable time | Fixed time |

In fast-changing environments, a variable-scope approach allows you to adapt to changes, risks, dependencies, and feedback while still delivering working software on schedule. You manage risk by ensuring the teams always work on the highest-value features first. When the unexpected happens—as it always does—and you run out of time or money, you'll still have delivered the highest-value features.

**Figure 1: Compare Traditional Development to Agile Development**



# Agile Methodologies

Scrum has become the most prevalent agile approach due to its simplicity and application to a wide variety of work. Lean is borrowed from Japanese manufacturing approaches (think Toyota) and focuses on eliminating waste while improving flow along an entire value stream. Kanban, which developed from lean manufacturing approaches, is a useful method to facilitate flow, eliminate waste, and provide transparency into work in progress. XP (eXtreme Programming) provides important guidance on the technical practices that enable rapid, incremental development. Emerging flavors of agile—including test-driven development, behavior-driven development, and set-based engineering—address the specialized needs of the broad range of users today.

## Scrum

Derived from the game of rugby, Scrum is the name of a project management framework in which self-organizing, cross-functional teams deliver shippable, working software in a set time period called a sprint. In each sprint (typically a duration of two weeks, although it can vary from one week to one month), team members do the following:

1. Plan the work they can commit to finishing in a sprint.
2. Build a backlog of features broken down into user stories.
3. Gather for daily standups (fifteen-minute meetings during which team members share daily progress and any blocks).
4. Complete each story from the ideation phase to produce functional, production-level code.
5. Demo working software to stakeholders and collect feedback.
6. Perform a retrospective, during which they review the sprint and commit to improving process and product.

**"Delivering high-quality end products quickly requires new ways of working, including agile development, rapid release cycles, automated testing and deployment, and a 'test and learn' approach to changes."**

**Source:** McKinsey[6]

## Meet the Team: Overview of Agile Roles

Agile teams (often known as the Scrum team or delivery team) comprise the engine that powers agile's success. Research has shown that the optimal team size is seven, plus or minus two members, and that stable teams (in which members aren't frequently reassigned) produce the best results.

**Scrum Masters** help enable the teams to be successful. They facilitate team members' relationships with outside stakeholders, remove obstacles, and run efficient standups and other collaborative meetings. Scrum Masters are servant leaders, not to be mistaken for project managers. Instead of command-and-control management tactics, they use collaboration and facilitation to help teams focus on making and meeting commitments.

**Product owners** own the vision of the product. They represent the needs of the user or customer by deciding what work goes into the backlog, how it's prioritized, how changes are integrated, and when the work is *done*. Product owners ensure teams understand the business value of their work.

6. McKinsey & Company, "Reinventing IT to support digitization," May 2014, http://www.mckinsey.com/business-functions/digital-mckinsey/ourinsights/reinventing-it-to-support-digitization

**Team members** contribute to the team's completion of its work by planning and finishing user stories. Team members may be developers, testers, user experience researchers, engineering specialists, marketers, or other discipline-specific roles. These contributors work cross-functionally to build and deliver a product.

**Manager roles** (such as engineering director, IT director, portfolio manager, program manager, business development manager, and executive-level leaders) perform a range of important functions, especially for organizations practicing agile at scale. They provide budget and cost inputs, instill trust and transparency, manage external stakeholders, coordinate multiple teams, facilitate career development, own issues or risks, and manage vendor contracts.

# Agile at Scale

Scaling agile, especially in large, enterprise companies, isn't just about adding more agile teams. It requires integrating agile principles into your organizational structure, company culture, process, operations, and strategic thinking. For the best results, you'll scale horizontally (coordinating and aligning teams of teams) and vertically (connecting development work to company strategy and portfolio initiatives).

Agile approaches may seem simple, but scaling beyond the team-level isn't easy. It requires coordination, a willingness to transform, practice, collaboration, and continuous improvement. These major efforts will yield agility, flexibility, and overall organizational health. This is where you really see the promise of agile in delivering four-times results in speed, productivity, time to market, and—ultimately—your bottom line.

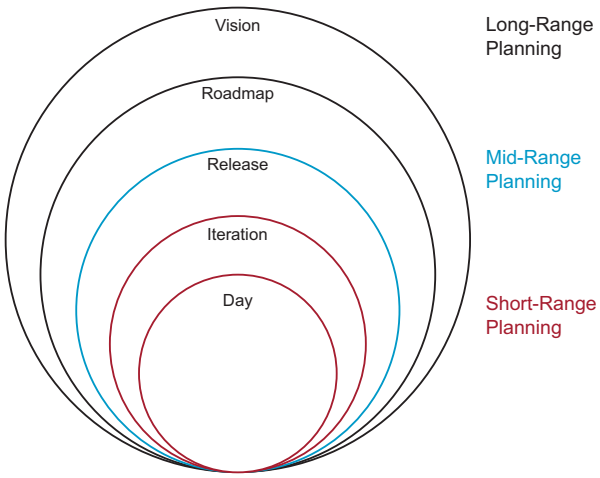
If Scrum and team-level agile help you establish cadence and synchronization, then agile at scale means taking that cadence and synchronization to the next level. If you're looking to scale these efforts, then consider how you'd answer these questions:

- How does work flow to your teams?
- How far into the future do you plan?
- Do you include people from outside IT or engineering in your planning?
- What happens if the world changes after you plan?

## Cadence

Enterprise scale agile requires longer-range planning. A strategy or company vision feeds into the creation of a product roadmap, which is then broken into releases, which contain multiple iterations (or sprints).

**Figure 2: Planning in Enterprise Scale Agile**

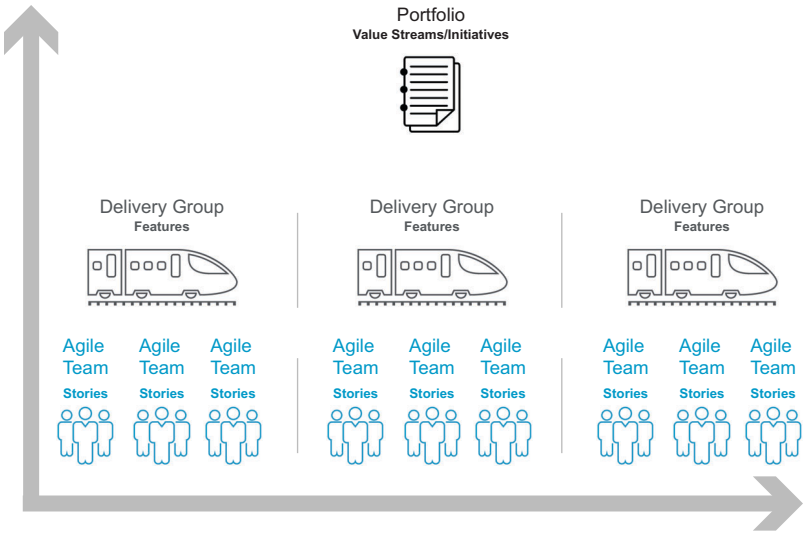


In addition to their daily and iteration planning, teams must come together regularly to plan their releases. They are joined by other members of the business responsible for delivering value to customers, such as engineering leaders, portfolio directors, managers, and executives who hold the company vision.

## Synchronization

Organizing multiple agile teams around a synchronized cadence is imperative to building a high-performing execution engine. Multiple teams working toward a common release objective are often referred to as a delivery group or release train. The team timeboxes (iterations) should be synchronized with the program timebox (release).

**Figure 3: Organization of Agile Teams**




Establishing successful scaled synchronization and cadence within a large company is no small feat, but many of the best practices for scaling agile already have been identified and codified. The most well known of these practices is the Scaled Agile Framework (SAFe). Other practices for scaling agile include Disciplined Agile Development (DAD), Large-Scale Scrum (LeSS), and Nexus. Regardless of which practice you choose, you'll want to assemble a transformation steering group of business and technology executives—supported by a cross-functional group of leaders. This group will be dedicated to implementing agile practices at scale and focused on helping the company power through obstacles and resistance.

## Release Planning

Whereas sprint planning is done approximately every two weeks or at the start of each iteration, release planning (also called program increment planning or big room planning) is done several times per year (commonly every 10 to 12 weeks). Release planning serves as a way to bring the company vision and product roadmap into the same room as the people who will be executing on it. At an enterprise company, release planning may involve several hundred people connected to a particular value stream, working across two days to identify risks, make adjustments, and finalize a delivery plan.

This event typically has four key parts:

- An executive sets the vision and context for the work to be done, so that those doing the work understand the business drivers for its importance.
- During team breakouts, the delivery teams plan and prioritize their feature backlogs, slotting stories into sprints according to the work they believe they can commit to finishing within the release.

- Scrum Masters, product owners and leaders help surface and resolve any needed adjustments, risks and dependencies when the teams reassemble.
- Everyone involved votes on their commitment to the plan for the work to come.

Many companies traditionally perform planning as an annual management-only meeting that is disconnected from the contributors who actually do the work. The release planning ceremony is the crux of successful agile at scale—it directly maps your company's business strategy to your execution engine.

When companies factor in the run rate for a development organization, they find release planning to be an investment that quickly pays for it self.

**"Organizations that move from basic to advanced agile adoption can increase business growth by up to 33 percent."**

**Source:** Coleman Parkes research commissioned by CA Technologies[7]

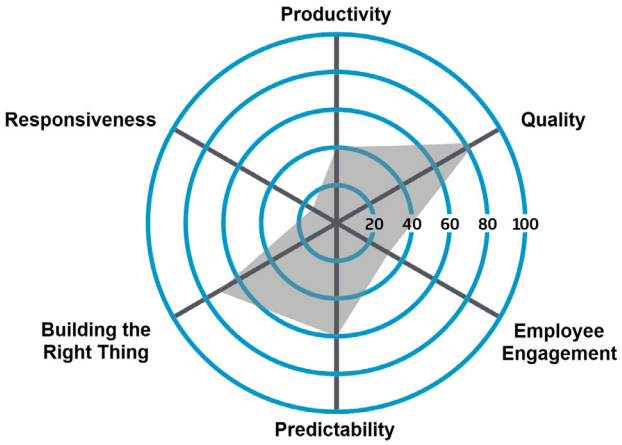
# Building an Agile Business

As the pace of change accelerates and disruption becomes the norm, the most successful companies are differentiating themselves by sensing market opportunities and responding more quickly and confidently than the competition. Organizational agility of this order requires architecting your whole business for speed, adaptation and opportunity. It means breaking down silos between departments and engaging marketing, sales, finance, operations and the executive suite, so you can steer the entire company in the right direction. Agile organizations practice three types of agility: delivery agility, portfolio agility, and business agility.

## Delivery Agility

High-performing agile teams are the foundation for an agile business, with speed and performance forming a competitive advantage. Speed helps you monetize incremental value and realize revenue sooner. It taps the voice of the customer early and often, so you can build the right thing.

**Figure 4: Build the Right Thing for the Customer**

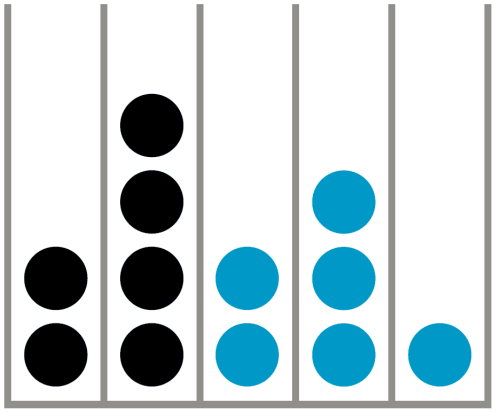



7. Coleman Parkes research commissioned by CA Technologies, "Accelerating Velocity and Customer Value with Agile and DevOps," Jan 2017, https://www.ca.com/us/rewrite/articles/agile/accelerating-velocity-and-customer-value-with-agile-and-devops.register.html

## Portfolio Agility

When applied to portfolio management, agile practices can help you implement your strategic vision, make informed trade-off decisions, and optimize how you allocate available resources. These performance gains free up resources for growth and innovation. Agile organizations use these dividends to create opportunities, with focus and insight into the highest-value initiatives. A responsive planning and funding cadence reduces risky investments and keeps you aligned to your highest business priorities.

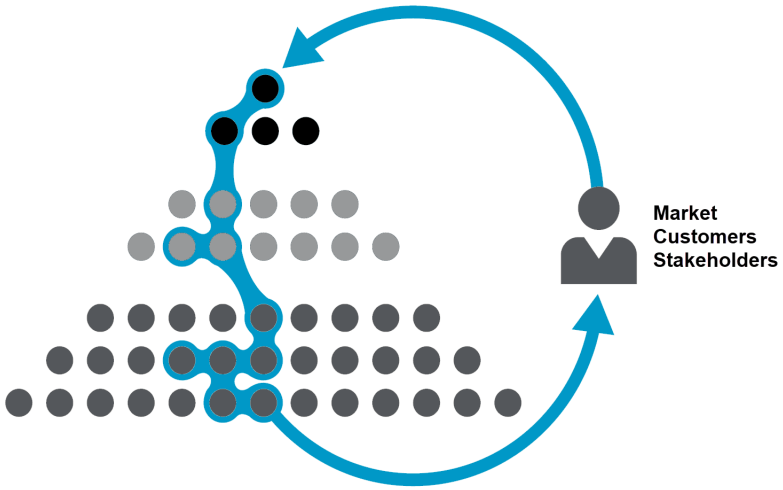
**Figure 5: Keep Aligned With Your Priorities**



## Business Agility

The highest level of agility requires organizing people around creating value. This doesn't mean reorg; it means connecting stakeholders throughout your organization by breaking down internal silos and forming value-focused teams. By aligning people and teams around customer value and taking a disciplined approach to managing change, you can respond to, and pursue innovation with full steam. With a deliberate approach to investing in innovation and growth, you can create change within your market and become the disruptor, instead of the disrupted.

**Figure 6: Align People and Teams Around Customer Value**



# Get Started With Agile

Does your company suffer from any of these symptoms?

- Unrealistic plans
- Frequent pivots
- Customer dissatisfaction
- Lack of commitment
- Quality or technical debt issues
- Risks that explode
- Delayed delivery
- Frequent impediments caused by dependencies
- Unstaffed priorities
- Low developer morale

If so, then it might be time for you to consider a new way to work. Now is the time to get started with agile.

**"To succeed in the digital age, digital business professionals must redefine how they deliver value to their customers and how they realign their people, processes, and technology for agility."**

**Source:** Forrester Research[8]

Whether you're just learning about agile or want to improve what you're already doing, we can help.
Visit ca.com/agile to take the next step.

8. Michelle Beeson, et al., Forrester, "Understand The Digital Business Landscape," February 2017, https://www.forrester.com/report/Understand+The+Digital+Business+Landscape/-/E-RES115756