


An abstract graphic composed of interconnected nodes and lines forming a network. The nodes are colored in a gradient from yellow at the top to blue at the bottom, with red and purple in the middle. The lines are thin and connect the nodes in a complex, web-like pattern. The overall shape is irregular and organic, resembling a stylized map or a complex data structure.

# PERSPECTIVES

VOL. 11

THE AGILE  
IMPERATIVE  
**WINNING  
AT DIGITAL**

**TATA** CONSULTANCY SERVICES



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## A WORD FROM KRISHNAN

# Being Digital Means Being Agile

Large, global companies that compete in a rapidly digitizing world need agile practices to test new digital business models, create new digital products and services, and continually personalize the customer experience. In other words, to be digital, your organization must be agile.

The agile movement has accelerated from a crawl to a race this decade, for one primary reason: the industry-disruptive power of digital technology.

Back in 2001 when they wrote the Agile Manifesto, the 17 authors called for agile team members to be in the same room. But that's now an outdated and risky notion, for two reasons: Very few global companies have all the professionals they need for their large and growing agile development workload. And, today's agile teams must be composed of corporate strategists, product and service experts, and business process professionals, not just software developers. For any agile team, that knowledge can rarely be convened in the same room.

In this 11th issue of *Perspectives*, we explain essential agile practices that have been paying off at major enterprises—practices that are enabling them to scale agile for a Business 4.0 environment.

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**Krishnan Ramanujam**

President, Business and Technology Services  
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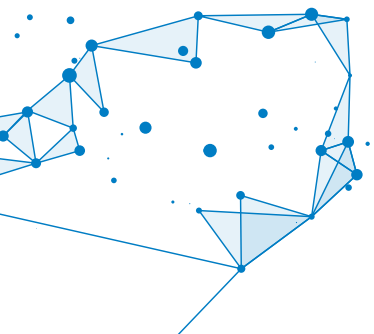
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# INTRODUCTION

**Agile's Day Has Truly Arrived**



## Author

**By Krishnan Ramanujam**

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**The software development community has been using the term 'agile' for more than 20 years. But over the last decade, agile approaches have jumped the tracks to the rest of the business world.**

The reason is clear: The success of large companies now depends on using digital technologies to reinvent their business models; automate and monitor the performance of their products and services using embedded wireless sensors; use technologies to bring intelligence and personalized interactions with customers; and make all this possible by tapping into the huge on-demand computing power of cloud providers.

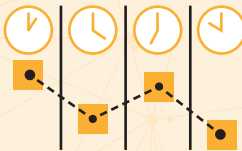
Each article in this issue of *Perspectives* dissects today's urgent need for companies to have industrial-strength capabilities in agile to manage their businesses. We group the articles in three sections.



# The Essence of Agile



In **'Embracing Agility Means Agility by the Business, for the Business,'** Nidhi Srivastava of TCS discusses why big companies must embrace agile practices when they build new businesses, design new business processes, and develop the systems that support them. As she explains, a big reason is that 'digital natives' (companies born on the Internet like Google, Facebook, Uber, Airbnb and Amazon) have inherent advantages over older companies. Established companies need to get agile quickly to compete. However, Srivastava also shows why they shouldn't attempt to make every part of their organization agile all at the same time. Instead, they need to phase in agile approaches carefully.



The next article in this section explains how in the early days of agile software development, the idea was to bring business people and software developers into the same room. Today, that's a quaint notion. Agile teams in many enterprises stretch across time zones. It's now unrealistic to expect all agile team members to sit side by side. In their article **'How to Make Location-Independent Agile Work'**, K. Subramanian and Mohammed Musthafa S. explain how to make dispersed agile team members work as one.



It may seem like a 21<sup>st</sup> century phenomenon, but the mandate for big companies to become more 'agile' actually goes back decades. As MIT Sloan School Prof. Michael Cusumano reminds us in our recent interview with him **'From Making Autos to Making Software: The Evolution of Lean and Agile'**, in the 1980s Japanese automobile manufacturers were producing cars faster on the assembly line than their U.S. and European peers, with less labor, and fewer defects—all the while reducing the time it took to develop new models.



Cusumano and his MIT colleagues referred to these manufacturing methods as 'lean.' In many ways, it was a precursor to agile.

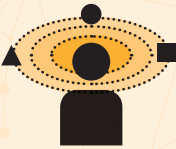
Software powerhouse Microsoft, which Cusumano studied in the 1990s, applied what are now called 'agile' practices to designing and developing software—before the authors of the Agile Manifesto put their label on the practice and posted their document in 2001. In our interview, Cusumano lays out what's new and old about agile.



## Applying Agile



Innovation is a fundamental reason why companies adopt agile management practices—that is, the ability to source promising ideas and turn them into new products, services, processes and even new businesses at lightning speed. In their article **‘Enterprise Agility: Pushing Innovation to the Edge of the Organization’**, TCS consultants Courtney Wood and Apala Mukherjee show why some of the best agile adopters have empowered their people on the front lines to identify new business opportunities.



If you think that agile is something everyone below you in your organization needs to learn (but not you), then think again. In their article **‘Effective Leadership of Agile Organizations: Building a Culture of Servant Leadership’**, Nidhi Srivastava and Carl Shea discuss why leaders of organizations that wish to become agile must absorb the mindsets and master the skills required to make those below them successful.



In the last article in this section, we are honored to have a pioneer of Silicon Valley-style lean and agile approaches. He is Steve Blank, a Silicon Valley entrepreneur who has been a cog in the wheel of the lean startup movement. Blank more recently has been teaching lean startup approaches to big, longstanding organizations, both in business and government. He tells us about that in our interview with him **‘The Tall Task of Getting Big Companies and Government to Innovate Like Lean Startups’**.

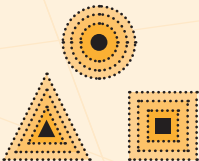


## Agile at Work

Taking the lead from the digital natives they increasingly compete against, two industries have been at the forefront of adopting agile practices: retail and financial services. In their article **'How Retail CEOs Can Drive Agile to Grow Their Business'**, Rajashree R. and Pratik Pal of TCS explain how several large retailers have used agile approaches to bring innovative business models, business processes, and customer offerings to market faster. They show why taking half-measures with agile don't go far enough in keeping retailers competitive.



Because money essentially is a product that can be fully digital, banks and financial services firms have been under attack for years from digitally savvy startups that have made mortgage and auto loans faster, payments and payment processing easier, and stock trades cheaper. In their article **'Fending Off the FinTechs: How Agile Financial Services Firms are Transforming Their Businesses'**, TCS consultants RamanaMurthy Magapu and Sathish Sankaranarayanan explain how a number of established financial institutions have used agile approaches to strike back successfully. They also explain how to get past the barriers that hold financial services firms from embracing agile practices.



Finally, in our last article **'Why Your Agile Team is Better Off Dispersed: The Case for Location-Independent Agile'**, I explain why large companies around the world now need to significantly scale up their agile approaches to process improvement, product and service development, and business model innovation. I show why scaling up agile requires making it truly location-independent.

# THE ESSENCE OF AGILE

**Embracing Agility Means Agility  
by the Business, for the Business**



## Author

**By Nidhi Srivastava**

Global Head, Consulting Practices, Tata Consultancy Services

The push for agility in software development started nearly 20 years ago. But today, with technology becoming essential to the way business is delivered, agility in the IT function alone is not enough.

To make much faster changes in their product, service offerings, and the business processes that support them, companies need to implement agile principles and approaches throughout the enterprise. Enterprise agility encompasses all components of an enterprise's design and management: its strategy, people, processes, technology, and infrastructure. The goal is to deliver what customers want, and to continuously adapt to market and customer changes.

As with all transformations, this is a tall order. It involves altering the DNA of the organization, and how it senses and responds to the marketplace. Asking every function in a large organization to adopt agile principles all at once is a huge undertaking likely to produce both false starts, occasional resistance, and cynicism.

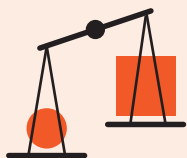
This is the holistic challenge of embracing enterprise agility to create a flexible, adaptable, responsive, and more competitively fit organization.

Achieving enterprise agility takes commitment. It means investing in people skills, in new tools and technology, and in a workplace organized to encourage teamwork.

It requires making the organization's culture flatter. It calls for adjusting decision-making styles, including the speed at which people make them. It means spending time and resources on change management to sustain these new ways of working.

The effort pays off. Enterprise agility improves collaboration. It leads to a higher quality of products and services delivered. It speeds time to market for those offerings. It improves processes for creating demand (through marketing, sales, and R&D) and for generating supply (through production and distribution). It strengthens customer service. It boosts productivity.

**And the need for enterprise agility is clear. Established companies are learning that digital startups have three distinct advantages that enable them to make rapid inroads into markets once ruled by incumbents. These digital natives:**



1. Do not have to compete on the same terms, with the same strategies, business processes, and legacy systems as incumbents to pursue market opportunities. (For example, to compete with taxi services, Uber and Lyft do not have to maintain a fleet of vehicles.)



2. Can develop digital systems far more rapidly, using testing, and data from customer trials to ensure a higher likelihood of success. (Consider Amazon's continual adjustments to its web store offerings.)

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3. Typically develop these digital systems rapidly using lean-agile approaches (as do Airbnb, Spotify, and Google, among others) rather than traditional, sequential, time-consuming waterfall project management.

While the business urgency to create an agile enterprise is clear, it's unrealistic to ask every executive running every business function to adopt agile approaches immediately. Eventually, organizations that wish to compete in a digital world will have to embrace agile as a new way of working, but because the transition is a significant shift in how business process and product managers operate, and what they value, asking them to do so at once is likely to be met with resistance.

Area	Traditional Organization	Lean-Agile Organization
<b>Organizing People</b>	<ul style="list-style-type: none"><li>• Leaders delegate</li><li>• Traditional hierarchy</li></ul>	<ul style="list-style-type: none"><li>• Leaders empower</li><li>• Flatter organization</li></ul>
<b>Culture and Process</b>	<ul style="list-style-type: none"><li>• Strictly defined roles</li><li>• Structured groups with assignments</li></ul>	<ul style="list-style-type: none"><li>• Self-organizing teams</li><li>• People develop skills to take on multiple roles</li></ul>
<b>Tools and Technology Infrastructure</b>	Monolithic architecture	Modular architecture with micro services

**Figure 1:** Differences Between Traditional and Lean-Agile Organizations

A better approach to an enterprise’s agile transformation begins with a tight focus on a core set of activities within a business function, making those activities agile, and then demonstrating their benefits to the rest of the organization—and then replicating that work elsewhere to scale it across the organization. We call this embracing agile at the core of value generation for the enterprise, and using success to enable change to ripple across until it transforms the entire business.

The road to any large endeavor begins with a thoughtful assessment to determine where to begin.

**Where to Begin**

Deciding which part of an enterprise to make agile first should start with an agile readiness assessment to identify the business area best positioned to adopt agile practices. This area will become the agile pilot for the enterprise. And as agility depends upon a foundation that makes it possible to develop and test new products and services iteratively and quickly, this determination should start with



Company	Business Activity with Focus on Agile	Reason for Focus
<b>PayPal<sup>1</sup></b>	Product development	Shift from projects-based work to product focus to emphasize team accountability to quality customer experience
<b>Kraft Foods<sup>2</sup></b>	Marketing	Changing consumer behaviors required faster metabolism; real-time decision-making for defining consumer targets and communicating marketing messages
<b>Zappos<sup>3</sup></b>	Customer service application	Strengthen the company's reputation for quickly responding to customer requests for information about goods for sale, to generate more loyalty and future business

**Figure 2:** Examples of Companies That Have Embedded Agile in Their Business

an examination of the existing ways in which people are organized, the culture in which they work, and the processes, technologies, and tools they use to accomplish that work.

Figure 1 provides a simplified view. It includes characteristics in place that describe a traditional organization (or functions within an organization)

before it adopts lean-agile principles, along with the characteristics that describe organizations and functions after they have adopted them.

A critical consideration in discussing how enterprises become agile is noting that it is not an all-at-once proposition. Figure 2 shows how companies have incorporated agile techniques in parts of their businesses to meet specific business needs.

<sup>1</sup> TechTarget SearchCIO, Four Pillars of PayPal's 'big bang' Agile Transformation, August 2014, accessed March 13, 2018, <http://searchcio.techtarget.com/feature/Four-pillars-of-PayPals-big-bang-Agile-transformation>

<sup>2</sup> Forbes, How Data Nourishes Agile Marketing at Kraft Foods, October 26, 2014, accessed March 13, 2018, <https://www.forbes.com/sites/avidan/2014/10/26/how-data-nourishes-agile-marketing-at-kraft-foods/>

<sup>3</sup> Fast Company, How Zappos Uses One Week Work Sprints to Launch Big Projects Fast, July 11, 2014, accessed March 13, 2018, <https://www.fastcompany.com/3032947/how-zappos-uses-one-week-work-sprints-to-launch-big-projects-fast>

Performing an agility assessment calls for analyzing the organization's work activities and separating them into two categories:

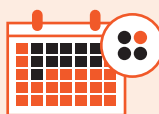


**Pattern A** applies to the parts of the organization working on software development, maintenance, and operations. This includes areas such as IT, operations, and quality assurance testing. These IT-centric functions are poised to adopt lean-agile principles as well as agile methods and practices. By lean and agile principles, we use the terms outlined in the Scaled Agile Framework:<sup>4</sup>

- Respect for people and culture, in which people perform work to benefit customers;
- 'Flow', describing how teams achieve optimized work processes to create continuous and sustainable value;
- Innovation, in which producers create new products for customers to validate;
- A focus on relentless improvement.



## Scrum



## Sprint

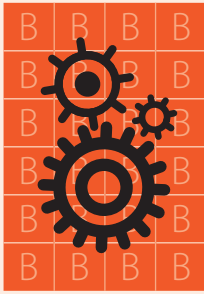


### Stand-up meetings

Agile methods include **scrum** (in which the product owner works with team members to identify priorities for development), **sprints** (periods lasting a set period of time in which the team develops minimally viable products to test), and **stand-up meetings** (daily, or regular team meetings to get fast status updates).

While in most organizations it's common for Pattern A activities to occur in IT-centric functions—after all, agile began as a software development movement—they can also occur in other functions. Some companies will find these activities in sales (such as with a customer app), or in HR (if recruiting is central to that company's business model).

<sup>4</sup> Scaled Agile Inc., Lean-Agile Mindset, November 17, 2017, accessed March 13, 2018, <http://www.scaledagileframework.com/lean-agile-mindset/>



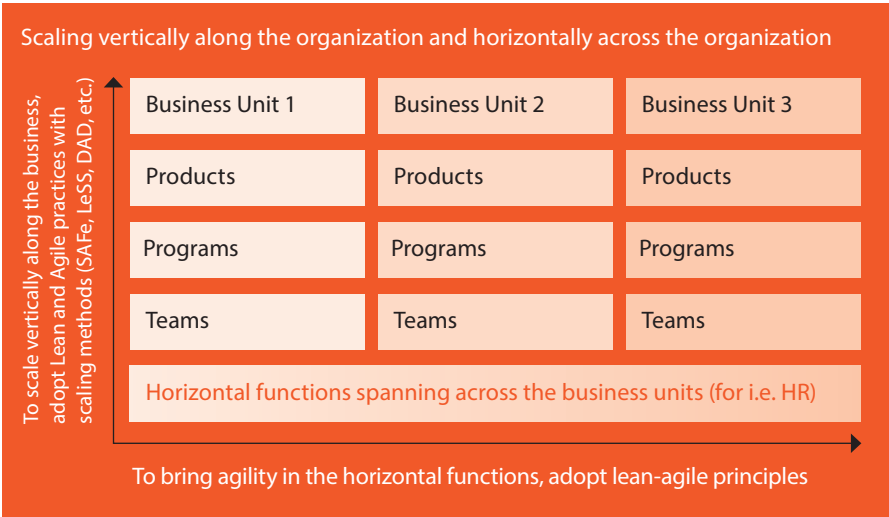
**Pattern B** applies to business functions such as strategy and planning, marketing, finance, HR, R&D, learning and development, and others. These functions are well suited to adopt lean-agile principles, but not necessarily all agile methods. The adoption of agile methods and practices should be reviewed for their applicability and real benefits, as opposed to force-fitting agile to proven business processes.

## Selecting an Agile Pilot Project

The next step after identifying the area of a company to make agile is selecting a pilot project. An ideal pilot project should be neither too short (to be credible and representative) nor too long (so the company can see timely outcomes and benefits). We typically recommend three-month pilots, giving the company sufficient time to inspect, adapt, and adopt lessons after four or more iterations during the project.

The pilot project should matter to the larger organization—but not be a top priority. Top priority projects will place too much pressure on a project team engaged in what is also a learning exercise. On the other hand, unimportant projects will not gain adequate commitment by participants, and will fail to establish credibility for lean-agile approaches.

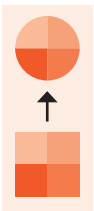
A successful pilot project provides proof that lean-agile practices are valuable. It demonstrates to leaders and the organization that they can execute an agile project in the company's core. With a successful pilot complete, it's time to build on that experience.



**Figure 3:** Scaling Agility Across the Enterprise

## Spreading Lean-Agile Practices to Other Areas

The decision to bring the benefits of lean-agile practices to other areas of the company typically requires choosing between two paths. To spread agile approaches across an enterprise, companies either can scale lean-agile practices vertically within a business unit or horizontally across business units.



**Vertical scaling** within a business unit calls for adopting lean and agile practices using proven frameworks. Scaling methods such as the Scaled Agile Framework (SAFe), Large Scale Scrum (LeSS), and Disciplined Agile Delivery (DaD) are all well-established examples of frameworks that companies can follow to promote and propagate lean-agile practices and methods. For example, a retailer could first adopt agile for its portfolio of merchandising products in a particular value stream (the steps required to make goods for available for sale, and then sell them). Next, it would adopt agile methods and practices for supply chain products related to the same value stream.



**Horizontal scaling** would follow a similar pattern by emulating the successful experience in the company's core in a different business unit, bringing lean-agile practices to the new functional area. For example, a company could begin in its development organization, and then bring lean-agile principles to operations, and later to customer service.

Whether scaling horizontally or vertically, success factors include:

- ✓ Creating a competency pool within the organization using a construct such as an agile center of excellence where talented staff can practice agile principles and methods, and be available to work on subsequent projects. This can help a company disseminate agile approaches effectively.
- ✓ Business support. The goal of spreading lean-agile practices throughout the enterprise is nothing less than a thorough transformation. In our experience, agile enterprise transformation succeeds best when the business drives changes, and IT works as an equal partner.
- ✓ Building cross-functional, agile teams with people possessing the authority to drive change. Cross-functional knowledge will help the team to spread agile ways of working when the company moves from a pilot project in one area to adopting agile ways of working in another. This team will create clarity for stakeholders, defining both the roles they play, and the work they do.

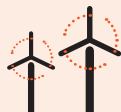
To initiate the journey to spread agility to other parts of the organization, start by using the agile readiness assessment to identify areas for improvement that are well positioned to adopt the new practices. Then prepare a transformation roadmap, for second, third, and more projects, and functional areas. Organize teams around value streams in the business area so the team's work is focused on projects valuable to customers (whether external or internal). Invest in coaching to help teams learn lean-agile practices and methods.

During projects, inspect results and adapt accordingly. Review progress according to relevant business metrics. Track outcomes. Conduct regular retrospectives to identify project areas that met or exceeded their goals, and those that could be improved. Correct course and adapt as required to meet the company's objectives.

## Results from the Field

**The examples of two companies that disseminated lean-agile principles across their organizations illustrate the kinds of benefits others can expect.**

### Example 1: A large Australian energy company



**Problem:** Challenges included new energy options like solar and wind, stiff competition from new market players and new energy regulations giving customers more choice in providers.

**Solution:** The energy company adopted agile across the enterprise with the goal of reducing time to market for new products to support frequently changing business priorities. It increased its capability to develop fit-for-purpose solutions to compete in its market, and prepared for a major digital transformation.

Driven by its CEO and CIO, the company's initiative reorganized business and IT based on customer experience value streams. The company established capacity-based agile teams with a 'core and flex' model (core team members were helped by people with right skills added as needed). It made investments to improve collaboration, including redesigning the work floor, and strengthening the technology infrastructure to support distributed agile teams. It automated software development and operations activities using DevOps practices.

**Results:** The company achieved a 90% reduction in deployment time for software products, a 40% reduction in production incidents that could lead to disruptions, and faster resolutions of application problems, leading to higher customer loyalty.

### Example 2: A large U.S. retailer



**Problem:** Traditional project delivery methods were unable to meet business expectations for quality and timeliness. Functional silos dominated. Too many interdependencies among applications meant that software products depended on other software products to work—making them unreliable and inefficient.

**Solution:** Reorganized the enterprise, transforming it into a business portfolio-based product organization. It switched to agile and Scaled Agile Framework delivery methods across all business lines. A technology refresh included infrastructure upgrades that supported automation, including DevOps. New work spaces were created to improve collaboration and agility for business stakeholders and development teams.

**Results:** The retailer saw an eight-fold increase in annual product deployments. New product features reached the market 40% faster than before. Production problems fell by 20%. IT costs dropped by 20%. And IT infrastructure improvements led to a 95% reduction in lead times needed for providing required resources.

## Time for an Agile Enterprise

Lean-agile is a proven approach being adopted by all types of enterprises. For companies facing new competition, especially from non-traditional, digitally native companies, not pursuing lean-agile is not an option.

When starting this journey, draw the vision for agility at an enterprise level. Every company is unique, so, where to start and how to scale will be different for everyone. But prioritizing the need for speed is always the same. Then experiment, learn, and adapt.

And do not look for perfection; do not fear failure. In agile terms, failure is an opportunity to learn, refine, and improve the organization, and the result. Fail quickly. Learn. And then go fast.

## How to Make Location-Independent Agile Work

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While it is very beneficial to have all the team members of small agile teams co-located, insisting on having all inter-related agile teams in the same location is not worth the effort and is unrealistic in today's global business environment. In fact, in the last article of this issue of Perspectives ("Why Your Agile Team is Better Off Dispersed: The Case for Location-Independent Agile"), TCS makes the case that agile programs whose teams are distributed can more quickly develop new processes and systems that are more on target with customer needs.

In our own work, we have observed several hundred projects that use location-independent agile teams. Given the challenges involved, it is clear that one way of working does not fit all projects.

For example, some projects may be best suited to having agile teams co-located, at least at first, while others may succeed best with contributions from different agile teams in many places. Companies that are new to agile approaches can also benefit from starting with co-located teams as they work to build distributed capabilities. Which model a company



chooses will depend on a variety of factors, including the business knowledge needed and where it resides, whether the work is urgent or has non-negotiable constraints, and the maturity of the organization's agile development processes.

### **There are three aspects to successfully implementing location-independent agile teams:**

1. Assess the organization's distribution of business expertise, the nature of work, and agile maturity.
2. Choose the right agile working model to meet the organization's needs.
3. Continuously improve the agile capabilities of the teams to gain the benefits of location-independent agile.



### **First: Assess the Organization**

**Use the three criteria referenced above to determine the organization's capabilities for location-independent work. Answer these questions:**

- **What is the level of business expertise and other skills required, and to what extent do they exist at a specific location?** If a location lacks business expertise, it will require more of it to be able to support agile teams there. As team members accumulate experience, they will build business knowledge, making them both more valuable, and more able to work as part of a distributed organization.
- **How urgent and volatile is the work?** At first, location-independent agile teams should focus on work that is neither urgent nor volatile. If the work is both, if it has non-negotiable constraints (such as overnight fixes, intra-day scope changes, or regulatory requirements), or if there is a need for constant access to the project owner, it's best to work with teams in the same location, if at all possible.
- **How mature is the organization?** When teams are relatively new to agile approaches, team members should be co-located. Having a common understanding of agile culture, especially among the leadership, indicates the organization can succeed with location-independent teams.

Having a clear understanding of the organization's starting point will point leaders to select the best approach for moving forward.



## **Second: Choose the Right Location Model**

**We have identified four potential models for organizing agile teams, ranging from teams that should start in the same location to those that can be effective in a highly-distributed arrangement (see Figure 4). Descriptions of the models follow:**

### **Local (Model 1)**

This model is best when the teams are new to the business area, when continuous access to a product owner is paramount, or when regulatory concerns require the project to be executed in a specific geography. However, when a project or program is ready to scale up, enterprises will need to consider evolving to one of the other models.

### **Minimally Distributed (Model 2)**

The product owner and a few members of a project or program are located together as one team, while the rest of them work together as another inter-related team in a different place. This model requires the teams to understand the underlying business processes for their product. They will still need frequent access to the product owner and infrastructure teams for business decisions and infrastructure privileges.

When it's time to expand the project or program, enterprises using the Minimally Distributed model will need to adopt one of the remaining two models for quick on-boarding of talent in additional locations.

## Location-Independent Agile Model

	Model 1	Model 2	Model 3	Model 4
<b>Business Knowledge at Distributed Location</b>	Not Applicable	Medium to High	High	High
<b>Nature/Criticality of Effort</b>	Regulatory/ Urgent/ Volatile	All Except Regulatory/ Urgent/Volatile	All Except Regulatory/ Urgent/Volatile	All Except Regulatory/ Urgent/Volatile
<b>Organization's Experience in Agile Way of Working</b>	Nil to Low	Low to Medium	Medium to High	High

**Figure 4:** Four Models of Location-Independent Agile

### Significantly Distributed (Model 3)

The product owner and few members of a project or program team are located together as one team, while other teams working with them reside in multiple locations. Enterprises that have already distributed teams with a shared understanding of the business processes of a project or program are well positioned to adopt significantly distributed agile work processes. This model not only offers the scale for enterprises to deliver large programs as well as frequent releases by increasing their access to the right talent, it also provides for business continuity.

### Fully Distributed (Model 4)

The product owner may be at any site, while the rest of the project or program team members are grouped in agile teams across distributed locations. These teams each include product specialists with sufficient business knowledge to drive day-to-day decisions within a framework defined by the product owner.

A Fully Distributed model is useful when enterprises need to empower teams with independent decision-making capability, such as when business experts do not have enough bandwidth to drive product leadership on a daily basis.

We have observed that many organizations experience dramatic benefits after successfully deploying one of these four location-independent agile models. For example:

- Location-independence makes an enterprise more agile. Using the minimally distributed model (Model 2), a large U.S. retailer with a delivery team of 1,500+ members in India reduced its IT operations costs by 20% and improved end customer satisfaction by 40% in 18 months. These benefits resulted from a combination of steps, including role rationalization, product re-architecting, and the application of DevOps practices for automating new product deployment. (DevOps is an approach to IT software development and operations that emphasizes automation to speed up software building, testing, and installation.)
- Location-independence makes an enterprise more productive. By using all 24 hours available to execute

work in parallel across time zones, an organization can accomplish more in the same time than co-located teams that are limited by an eight-hour work day. Leveraging 24-hour, five-days-a-week development coverage with significantly distributed (Model 3) teams across U.S., India, and Mexico, a large financial company was able to cut the time it took to introduce new products to market by 78%.

- By sharing skills across multiple teams in different locations, companies can accelerate work without requiring business experts to participate in daily decision making. One U.S. retailer was able to complete an integrated channel delivery project in just 11 months with fully distributed teams (Model 4) by leveraging the domain skills of product specialists in many locations. While product owners still have to make prioritization decisions and confirm product acceptance, they can delegate significant amounts of knowledge work involved in product development.



# 3

## Third: Improve the Agile Capabilities of Teams

**Organizations that want to move from the Local model to one of the location-independent models can improve their agile capabilities in five ways:**

### 1. Build business knowledge-oriented teams at distributed locations.

Consistently seek to optimize each team's product and business expertise by promoting the team structure around business concepts. A U.S. retailer was able to move from a fully co-located model to a minimally distributed model in three months by relocating some experienced team members with business knowledge to another location, and leveraging their expertise to form a new team around this business knowledge.

### 2. Configure teams to take advantage of time-zone differences.

For effective collaboration and communication, agile teams need a minimum overlap across time zones. Calibrate each team's work hours so that as one team heads home, another team can pick up the work, with enough time for communication to ensure it continues at a steady, sustainable pace, with minimal confusion.

Take the experience of a leading U.S. bank as an example. The bank had one team in Texas, and another in Chennai, India. The teams adjusted their hours to overlap based on how much time they needed to resolve their interdependencies. They became motivated to improve how they worked to reduce the number of overlapping hours they needed.

### 3. Minimize planning overhead.

An Australian retailer synced up the sprints and product releases of its three agile teams, reducing the teams' planning time by 20%. To achieve such results, it's critical to automate as much of the teams' work as possible using DevOps automation and design engineering practices.

- 4. Create a 'one team' culture.** Teams across the enterprise should use the same agile practices, same work and infrastructure privileges, and share common work characteristics. Culture coaches can help geographically distributed teams understand and appreciate their cultural differences, ensuring the teams have healthy working relationships.
- 5. Plan the right distribution of work across locations.** Organize the work to minimize dependencies across teams while maximizing workflow. At a European telecom provider, software development teams were originally aligned on horizontal areas such as routers and signal processors. When it created agile teams, it restructured to focus on business features such as customer gateways, thereby reducing dependencies among the horizontal areas and enabling more frequent and value-added product releases.

## Overcoming Skills, Process, and IT System Challenges

As the scale of change involved suggests, aligning multiple agile teams located in different time zones and countries is a complex endeavor. Challenges may emerge involving shortages of the right skills, employees' adapting to new work processes, and a company's IT infrastructure.

To get the most from location-independent agile teams, an enterprise needs to put people with the right skills in the right places. In addition to universal coaching and training in agile practices, one way to do this is to train team members in more than one skill.

For example, instead of having some team members who are application developers and others who are testers, train some people to be adept at both jobs.

Legacy ways of working, and employee attitudes toward them, can hinder the cultural change needed to pursue agile. Some employees will have trouble adapting. They can benefit from coaching that goes beyond teaching agile techniques to practicing new roles. Hands-on practice will help them understand the benefits of pursuing agile approaches to their own work lives.

One important stumbling block to setting up distributed agile teams is frequently the existing enterprise IT architecture which may not support agile ways of working. The systems that underlie the work of developing and releasing new products must be able to handle increased production loads. For example, if an agile team has to produce a product in two weeks, and the supporting architecture requires

more than a two-week lead time to schedule a test, the agile team will fail to meet its deadline and become demotivated. Furthermore, the ripples of that failure will hurt productivity across other teams and degrade the company's ability to innovate. Leaders should assess the strength of the company's IT architecture when they start planning for agile adoption to identify the necessary improvements.

## **Capturing the Benefits of Location-Independent Agile**

It is possible to take advantage of distributed agile teams and thereby maximize enterprise productivity and innovation, but companies need to know how to do it correctly.

That means knowing yourself—your business expertise, where it resides—and the level of your agile maturity. It also means determining the right location model for your work—local, minimally, significantly, or fully distributed—based on your business's needs, goals, capabilities, and the competitive landscape.

As your organization gains experience, you can move up the ladder toward a more fully distributed model. With advancement comes the opportunity to acquire additional benefits from organizational agility, as well as the ability to compete more successfully on a global scale.



## From Making Autos to Making Software: The Evolution of Lean and Agile

Interview with Dr. Michael Cusumano


Michael A. Cusumano<sup>5</sup> is a professor at the Massachusetts Institute of Technology's Sloan School of Management in Cambridge, Massachusetts. For more than 30 years, he has conducted research and taught classes on software company strategy, product development and entrepreneurship, as well as (early in his career) manufacturing and product development methods in the automobile and consumer electronics industries.

He has published 13 books and more than 120 articles and columns on these topics. His latest book (*Strategy Rules: Five Timeless Lessons from Bill Gates, Andy Grove and Steve Jobs*, published with David Yoffie in 2015) has been translated into 17 languages and received widespread media acclaim. He has also lectured and consulted to nearly 100 organizations around the world.

In the last two years, Professor Cusumano had been on leave from MIT and served as VP and Dean at the Tokyo University of Science. Because of his extensive studies over the last four decades on software development, product development, manufacturing, and (more recently) software business strategy, he possesses unique insights on technology and technology-based business strategy and product development.

<sup>5</sup> Michael Cusumano, MIT Sloan School of Business, Faculty and Research, accessed March 15, 2018, <http://mitsloan.mit.edu/faculty-and-research/faculty-directory/detail/?id=41459>





**TCS:** *Your research on lean management practices dates back more than 30 years. Can you tell us about the genesis of lean thinking?*

**Michael Cusumano:** As part of my doctoral thesis on the Japanese automobile industry, and eventually for a book I published (*The Japanese Automobile Industry: Technology and Management at Nissan and Tokyo*, Harvard University Press, 1985), I analyzed the Toyota production system in the 1980s. I studied their productivity at the company level—units [outputs] per company as well as value-added—and I adjusted for things such as labor hours, capital investment, and capacity utilization. Toyota was producing vehicles with half the number of people [used by the American companies], but with the same amount of capital equipment. That was interesting.

So what was ‘lean’ at that time was the number of people.

Then, a student of mine—John Krafcik, who was working on his master’s thesis here at the MIT Sloan School—studied the Japanese production system at a more abstract level. John took this thinking to the assembly plant level: What was productivity like there? What degree of automation did they have in the assembly plants? What management practices did they use?




A number of us here at MIT worked on this research and debated what was the right term to describe these management practices we saw at Toyota. John came up with the term 'lean.' Today, he is CEO of Google's automobile self-driving subsidiary, Waymo. At that time (1988), John published a companion article to mine (on Japanese manufacturing innovations) in the *MIT Sloan Management Review* called 'The Triumph of Lean.'<sup>6</sup>

That started the whole thing. Since then, lean has been applied to everything under the sun. But the original idea was doing roughly the same amount of work in terms of having the same number of outputs or products, with much leaner staff.

A book that came out in 1990, *The Machine That Changed the World*<sup>7</sup> [by the three co-directors at the time of MIT's International Motor Vehicle Program, James Womack, Daniel Jones, and Daniel Roos] documented that the Japanese car makers were assembling cars in less than half the time the U.S. manufacturers were—12 hours vs. 25 hours.

<sup>6</sup> MIT Sloan Management Review, Triumph of the Lean Production System, Volume 30, Fall 1988, accessed March 15, 2018, <https://www.lean.org/downloads/MITSloan.pdf>

<sup>7</sup> Amazon, *The Machine That Changed the World*, 1990, accessed March 15, 2018, [https://www.amazon.com/Machine-That-Changed-World-Production/dp/B007ZHTZ8Y#reader\\_B007ZHTZ8Y](https://www.amazon.com/Machine-That-Changed-World-Production/dp/B007ZHTZ8Y#reader_B007ZHTZ8Y)



**TCS:** *By the mid-1990s, your research began focusing on product development in the automotive sector. Tell us more about that.*

**Cusumano:** One of my doctoral students at the time (Kentaro Nobeoka) and I studied automotive product development. An earlier study by two of our colleagues (Kim Clark and Takahiro Fujimoto, who published the research in their book *Product Development Performance*), found U.S. automobile companies were generally taking 60 to 64 months to develop a new vehicle. The Japanese were pretty close to a 48-month schedule and doing it with about two-thirds the engineering hours.

But we had identified a problem in our research in the mid-1990s: The Japanese automakers had become in many ways too lean. They weren't sharing much technology across projects within the same company.

Their heavyweight projects might appear lean if you look at them individually. But if you look at a company with a portfolio of products, the Japanese heavyweight project management teams were too self-contained. They weren't sharing very much. So it was actually becoming expensive for them to develop new automobiles. Nobeoka and I wrote more about that in our 1998 book<sup>8</sup> (*Thinking Beyond Lean*).

**TCS:** *So then you shifted your research on automotive manufacturing and product development to the software industry. Tell us more about that.*

**Cusumano:** I actually shifted my major research emphasis to software engineering even before I published my first book in 1985 on the Japanese automobile industry. Large-scale software development became my main focus from 1984.

<sup>8</sup> Amazon, *Thinking Beyond Lean*, September 4, 1998, accessed March 15, 2018, [https://www.amazon.com/Thinking-Beyond-Lean-Transforming-Development/dp/0684849186#reader\\_0684849186](https://www.amazon.com/Thinking-Beyond-Lean-Transforming-Development/dp/0684849186#reader_0684849186)



When I wrote my doctoral thesis at Harvard in the early 1980s, it was clear to me that the next future challenge for Japanese companies would be writing software. In a post-doctoral project I did at Harvard Business School from 1984 to 1986, half of my time I spent studying consumer electronic projects with a Harvard professor, Richard Rosenbloom, and the other half I spent studying Japanese ‘software factories’—i.e., largely how the big Japanese computer manufacturers such as Fujitsu, NEC, and Hitachi developed their software.

Then I published a book in 1991—called *Japan's Software Factories*—on who started the factory idea, how they evolved, and so on. The Japanese essentially copied how U.S. computer manufacturers like IBM ran their own software development centers in the 1970s and 1980s, because the Japanese companies were mostly making IBM-mainframe compatible hardware and software. I got interested in the question of whether Japanese companies could apply the expertise they had accumulated in manufacturing and engineering—quality control,


project management, and so on—to large-scale industrial software.

I found most were taking IBM approaches to software development. There was nothing lean about it, by the way. It was almost the complete opposite of lean or what we would today call agile.

**TCS:** *So it was true waterfall approaches to software development?*

**Cusumano:** It was very waterfall. However, Japanese software developers were good at quality. But they didn't have a good business model for making money from the software itself. They were essentially selling hardware like IBM had done for many years, building operating systems and some applications. But they didn't really know how to make money from software.

After this study came out in 1991, from being very interested in software and the new personal computers, I decided to ‘follow the money,’ as I like to say. Who was actually making money from software? It was Microsoft. Yet nothing had really been written about how Microsoft developed software.



In 1992 or so I suggested to an IBM person (Stan Smith), who was doing a master's thesis under me at MIT, that he write his thesis comparing mainframe and PC software development. So he compared IBM and Fujitsu with Microsoft and Lotus, and got an interview at Microsoft, and I went with him there. When I heard the story of how Microsoft was developing software, I immediately knew this was very, very different from the waterfall world of software development that I had learned.

Almost all the principles of agile development—  
Microsoft was doing back then.  
They just didn't call it that at the time.

So I immediately pitched a book to Microsoft, which eventually had to be approved by Bill Gates, which he did. I co-authored it with a professor of computer science, Richard Selby, because Stan went back to IBM. [Cusumano and Selby published the book, *Microsoft Secrets*, in 1995.]

**TCS:** *So what did you learn about the ways that Microsoft developed software in the 1990s?*


**Cusumano:** Since this interview is about lean and agile management approaches, I think you'll find this interesting: Almost all the principles of agile development—Microsoft was doing back then. They just didn't call it that at the time.



They did certain things differently. But the basic tenets of daily builds, continuous integration testing, working around small chunks of code, features, small feature teams—Microsoft developers were all doing those things. I must note that the company wasn't doing this in all of their [product] groups. But they were doing it in their best groups—Excel and Word, among them. The Excel group pushed these techniques the furthest. Eventually all development groups in Microsoft adopted these practices, with some variations.

We never called it 'lean,' but they thought of themselves that way, especially when they compared themselves to IBM.

**TCS:** *So now we circle back to agile development. When you look at your research over the last 30-plus years, starting with manufacturing and product development processes in the auto industry, and then moving to software development and software business strategy more recently, are there any principles in developing and making cars that transcend to software?*



**Cusumano:** At a higher level of principles, there are a half-dozen points that I make. The most critical one is about waterfall's sequential approach to development vs. doing things concurrently or in parallel. In both cases, when you do things sequentially it's going to take a longer time.

So why was GM's product development cycle 64 months back then? It was because of the way they scheduled things. They had certain bottlenecks and couldn't do certain things in parallel because they had never tried to do them in parallel. When we looked at how the Japanese auto companies got product development down to 40-42 months, they were doing a whole bunch of things in parallel. For example, they were starting their manufacturing preparations and die manufacturing almost concurrently. They were sharing information with the different teams. As soon as they could figure out the dimensions of a car door, the die guys would start working. They didn't wait until the whole car was designed. So they started overlapping a lot of those phases.

If you look at waterfall vs. agile/lean methods, or what Selby and I called the 'synchronize-and-stabilize' approach, which is the name we used in the book about Microsoft, the company was doing a lot of things in parallel. They would start writing code before they had a complete specification. Sometimes they never got a complete spec. They would start integration testing as early as possible; they didn't wait to test a system until the end.

Another thing we found was that there could be a lot of wasted effort if you have to redo a lot of work. If you built a prototype of a software product and showed it to customers early, you could eliminate a lot of those changes later on. Even if you were doing a lot of what seemed to be re-work, or fixing bugs, early by throwing code into integration tests early, you were still saving yourself a lot of time in the end.

Firms that did early prototype-driven development—and not just throw-away prototypes—but working prototypes, and then did small incremental but frequent builds, and continuous design



and coding reviews ended up with higher productivity and better software quality than software developed through waterfall-ish approaches.

**TCS:** *So the last thing we come to is the topic of building software for Internet applications. You've written about this too, starting 20 years ago, comparing how one of the early Web browser companies (Netscape) and Microsoft competed against each other in the early days of the Web.*


**Cusumano:** When Netscape came to market with one of the first Internet browsers (Navigator), they had basically copied some of Microsoft's practices. They were doing daily builds, for example. But one of the things that was very different with Netscape is that they weren't printing software on disks and putting disks in boxes and shipping boxes to stores and that kind of thing. They weren't delivering software that way. They also weren't necessarily delivering software to PC manufacturers. That's the way that Microsoft delivered software; that slowed the cycle.

Netscape was just posting new versions of Navigator on its website and you downloaded it. So we saw at Netscape that they would have new releases every week, or every other week. That was a completely different way of developing and releasing software. In Microsoft, those would all be internal releases. In Netscape, they were public releases.

Microsoft came up with its own browser (Explorer), but the first couple of versions weren't very good. But by version 3 they had caught up and Netscape got bogged down. Netscape had added all these features around the browser and they were not as disciplined as Microsoft. So eventually the daily builds wouldn't work. They had around 30 million lines of spaghetti code; those are the phrases Netscape engineers used internally.

So Netscape did things too fast and they were not very disciplined at testing. We think Microsoft won the browser wars because they actually had a better browser by the time you got to version 3 or 4. And then, of course, Netscape sold itself to AOL, although the code lives on in Firefox.





**TCS:** *And of course, since those early Web days of browser wars, we're seeing whole industries being upended by the Internet: media, retailing, banking, the taxi, and hotel industries, and many more. What do you think that means for the way companies develop software, and whole Internet-based businesses that of course require software?*

**Cusumano:** I must admit that I don't know much about how these companies develop software these days. But I don't see software development as a problem for them. Whereas 30 years ago software development was a huge problem, the bigger problem now seems to be their strategy or business model.

Perhaps software development is much less of a problem today because people have more knowledge of what good practices are, and that they've largely abandoned, although not completely, the old waterfall style. They have become much more careful about how and when they use the waterfall and are more eclectic in methods.

In addition, a lot of big companies today have outsourced their software development. That's another reason why it's not a problem. These companies may have some lean in-house staffs, but outside specialists are building a lot of their software, although that might be different for defense companies or large banks, or small Internet startups.

In general, once companies stopped trying to force square pegs into round holes, or force a methodology that might work for space shuttle software but is not necessary for a smartphone app, then software development got a lot easier for a lot of companies.

# APPLYING AGILE

**Enterprise Agility:  
Pushing Innovation to the  
Edge of the Organization**



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Threatened by digital competition, many companies are embracing lean-agile approaches to accelerate innovation to remain market relevant and fiscally viable. When companies master them, these approaches become a competitive advantage in harnessing talent and capability, a key tenet of what we call Business 4.0.

Using lean-agile approaches to nurture innovation requires mastering the discipline of generating new ideas and managing the subsequent innovation portfolio based on strategic or other business outcomes sought. It means applying lean-agile precepts *not only* in those functions directly involved in the development and delivery of products and services to end customers, *but also* throughout support functions and shared services.

## The Meaning of Enterprise Agility

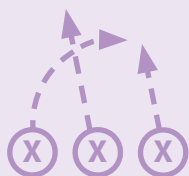
To match the accelerating speed with which their market sectors are changing, companies must take a broader approach to becoming innovative—an approach that we refer to as ‘enterprise agility.’ By that, we mean **an organization that can adapt all the core elements of its business—its strategy, product and service offerings, the business processes that create and fulfill demand for those offerings, its people’s skills, and technology and IT infrastructure—at the pace that’s required to stay competitive and solvent.** That, in turn, means adopting a lean-agile culture throughout the organization, not just in software development.

**While there are three broad dimensions to achieving enterprise agility—strategy and process, people and culture, and tools and technology—in this article, we discuss the elements that are conducive for innovation:**

- 1. Strategy formulation** to guide the organization’s innovation efforts;
- 2. Cultural transformation** to change values, beliefs, mindset, and behaviors at all levels; and
- 3. Focused experimentation** to improve everything.

Let’s look at each element.

# 1



### Strategy Formulation

A key step in enterprise agility is outlining a company’s innovation strategy: what it seeks to accomplish through innovation, and how. This strategy requires executives who are aligned, engaged, and committed to innovation. They must communicate consistent messages across the enterprise about the goals, why they matter, and how every employee in every function and group can contribute. Top managers must then encourage the next level of leaders to successively spread, contextualize, and reinforce those same messages in their business units and functional areas.

Strong governance is another element of the innovation foundation. This allows the right distribution of responsibility and accountability, and ensures transparency in decision-making.

We recommend establishing a balanced scorecard that is consistent with the enterprise's innovation strategy.

By measuring the effectiveness of ongoing activities against a list of strategic goals, a company can focus on efforts that will deliver a continuous pipeline of innovations.



## Cultural Transformation

But developing and communicating an innovation strategy is not nearly enough. Leaders must give their people the motivation, training, and tools to make it a reality. They must encourage continuous dissatisfaction with the status quo, while rewarding creativity.

Leaders must also develop competencies in lean-agile techniques:

- **Empowered teams** who can develop minimally viable products and services to test with customers, to 'fail fast' and learn from iterative attempts.
- **Systems thinking:** focusing on how a system's parts interrelate, and how that system works within larger systems.
- **Design thinking:** idea-generation and problem-solving that looks at human behavior and needs, in addition to business and technology factors.<sup>9</sup>

<sup>9</sup> Harvard Business Review, Design Thinking, June 2008, accessed March 13, 2018, <https://hbr.org/2008/06/design-thinking>

Leaders who commit to the lean-agile approach must also commit to rethinking where they surface ideas for improvements everywhere, including those for new products and services. Such leaders will also create an entrepreneurial work environment that extends to the edges of the company—outside (those that touch customers) and inside (those that support those who touch customers).

### The following is what a snapshot of that environment looks like:



**Outside edge.** Here, an agile enterprise empowers frontline people who interact directly with customers, including employees in customer services, sales and delivery, to discover unfilled customer needs. For example, it could be an idea for a new product or service offering, or a better way to deliver that product or service.



**Inside edge.** This is about support functions such as HR, finance, legal, and procurement working to improve the ways they help their customer-facing colleagues. This means rethinking traditional ways of working that rely on narrowly defined specialized roles, predictable scope, pre-defined timelines, budgets and staffing. New thinking—about improving existing systems and service—will enable faster responses not only to the internal customers, but will improve the organization's ability to serve external customers.

For example, think of a traditional contracting process with fixed terms. If a new type of customer service option requires a more flexible scope with few pre-defined requirements, adaptive procurement, and legal functions will be poised to make that a reality faster than before.

By adopting lean-agile ways of working where innovation is an everyday phenomenon, the people at the outside and inside edges of an agile enterprise will be able to create and implement new ideas more rapidly.

Yet it takes more than people and ideas. It also requires lots of agile experimentation. Two internal TCS information systems (a collaboration platform and a digital learning system) are good examples. Our company needed to enable training and development to go beyond the classroom, so that employees could be located anywhere, and learn at their own pace. Teams working on the systems used both design thinking and agile development practices to collect and evaluate ideas, and apply constraints (such as information security policies, scalability at the enterprise level, and technical debt<sup>10</sup>). They used agile development methods to sharpen ideas and create prototypes. They used DevOps to push minimally viable products into production so that end users could test them and provide feedback quickly.

**The results:** Fresco Talk, the collaboration platform, grew quickly to 60,000 TCS employees without an in-house marketing campaign before spreading out across the company globally. The digital learning platform, called Fresco Play, went through fine-tuning with end users in the real world business environment before it was rolled out to 400,000 employees.

Forward-looking companies are also collaborating outside of their corporate walls to harvest innovative ideas from their ecosystem partners. A leading U.S. audio equipment manufacturer and a major toy maker are each tapping partners (such as TCS) to generate new product ideas through a structured ideation process. The two companies then flesh out the most promising ideas and test them with business stakeholders before they enter product development cycles.

<sup>10</sup> Technical debt refers to the work a team will later need to perform to address problems that were not apparent at the time the software product was first developed. See Agile Alliance, Introduction to the Technical Debt Concept, accessed March 13, 2018, <https://www.agilealliance.org/introduction-to-the-technical-debt-concept/>

# 3



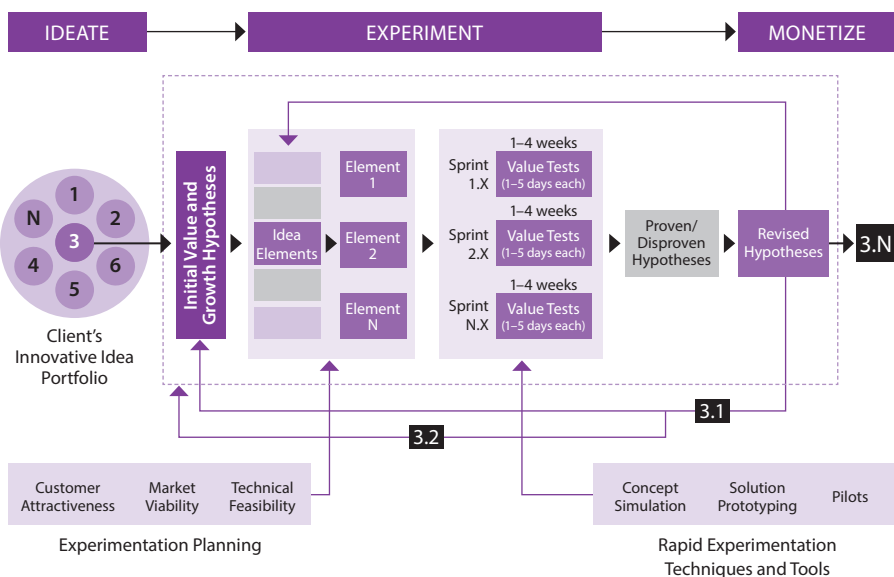
## Focused Experimentation

As the initiatives above show, leaders must set up a system to vet incoming ideas for market relevancy and technical and financial practicality, by testing and improving them with feedback from customers (or, customers' proxies, such as market experts or customer service representatives, when actual end-customers are not ideal evaluators for confidentiality or competitive reasons).

An approach we have seen work is the Rapid Iterative Experimentation Process (RIEP). See Figure 5. With RIEP, a company sets up a system to evaluate incoming ideas by applying criteria consistent with its innovation goals. It builds a portfolio of the best ideas that, in light of corporate strategy and market conditions, balances risk and opportunity. It can perform experiments to determine which ideas are well suited for market introduction, and then bring the best products and services into production.

The experimentation stage embodies the lean-agile approach and is particularly important. It is a rapid, iterative process of solution prototyping, concept simulation, and testing to validate ideas along multiple dimensions. This process will quickly and cost effectively prove or disprove critical hypotheses about an idea's customer attractiveness, market viability, and technical feasibility. It gives internal investors (for example, the





**Figure 5:** Rapid Iterative Experimentation Process

CEO and business unit heads) the information they need to more confidently make decisions to pivot, halt, or continue with ideas in the portfolio.

Large companies practicing RIEP often start with a centralized group—some call it an innovation lab or design studio or agile studio—to perform the experiments. In smaller firms such as startups, the culture demands an ‘all-hands-on-deck’ approach where likely everyone is involved.

## Enterprise Agility at Work

Empowering people on the edges of your business to see and experiment with new concepts has been a key ingredient to the rise of some of the most successful digital companies: Facebook, Amazon, and others.

Take Facebook. “You’d be surprised by how much of the product roadmap over time is set, not by us talking about what we think we should do and deciding, but by engineers coming with ideas,” said co-founder and CEO Mark Zuckerberg.<sup>11</sup> Facebook stages regular hackathons in which its engineers develop initial prototypes of new products and product features. These have led to some of its best offerings—Chat, Live, and the platform on which developers make games. Hackathons have also led to its first video player.<sup>12</sup>

Amazon also promotes a culture of experimentation at the front lines. Says *Lean Startup* author Eric Ries: “I know examples where a random Amazon engineer mentions, ‘Hey, I read about an idea in a blog post. We should do that.’ The next thing he knows, the engineer is being asked to pitch it to the executive committee. [CEO] Jeff Bezos decides on the spot.”<sup>13</sup>

When Sun Life Financial opened its fourth innovation lab near its Toronto headquarters in 2017, the 153-year-old financial services company cited its ability to bring agile teams together to meet, not just with each other, but also with area startups to exchange ideas. The innovation labs have elevated Sun Life’s ability to connect with customers, something which Alice Thomas, chief digital technology officer, said is emblematic of the company’s digital transformation. “It’s adapting to how clients want to engage with us,” she said.<sup>14</sup>

<sup>11</sup> Business Insider, Mark Zuckerberg Reviewed the Coolest Stuff Facebook’s Engineers are Working on, December 6, 2016, accessed March 13, 2018, <http://www.businessinsider.com/mark-zuckerberg-reviewed-coolest-facebook-hackathon-projects-2016-12>

<sup>12</sup> Inc., Facebook’s Engineers Are Working on 5 Pretty Cool Innovations, December 12, 2016, accessed March 12, 2018, <https://www.inc.com/jessica-stillman/5-of-the-coolest-innovations-currently-being-built-by-facebook-engineers.html>

<sup>13</sup> Vox, How Amazon Innovates in Ways that Google and Apple Can’t, December 28, 2016, accessed March 13, 2018, <https://www.vox.com/new-money/2016/12/28/13889840/amazon-innovation-google-apple>

<sup>14</sup> IT World Canada, Sun Life’s Chief Digital Technology Officer Readies for Silicon Valley - Inspired HQ Launch, February 27, 2018, accessed March 13, 2018, <https://www.itworldcanada.com/article/sun-lifes-chief-digital-technology-officer-readies-for-silicon-valley-inspired-hq-launch/390998>

## No Time to Lose

Now is the time to develop enterprise agility. Many companies face imminent threats from the changing business environment, with crowdsourcing of new ideas, open source technology, and a myriad of service providers with niche skills, products, and services that are readily available via digital channels. They are all seeking connections with your customers.

And it's no secret why. Innovation at the edge has become a way of life at companies like Google, and Facebook. Established enterprises like Sun Life Financial and many others are actively investing in creating their own agile organizations.

To start, build a culture that puts a premium on creativity. Encourage innovation throughout the organization. Invest in experimentation. As digital competitors accelerate their pace of innovation, established companies must empower their employees at the edge, enabling its front lines to generate innovative ideas, and then put its weight behind the most promising ones.

## Effective Leadership of Agile Organizations: Building a Culture of Servant Leadership

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The articles in this issue of *Perspectives* show that many C-suite leaders say they believe in agile and lean approaches to making their organizations stronger and more responsive to change in the rapidly evolving digital world. However, how they make decisions (often through a classic multi-level hierarchy), delegate the skills they value most in others, and deal with failures from below is antithetical to making their organizations more responsive to change. In other words, many senior leaders have not adopted the right mindsets and behaviors to help their organizations become more agile.

For example, a global manufacturer organized an agile work team to spearhead a \$50 million project to create a single global ordering system. The goal was two-fold. First, to

balance manufacturing loads and output among plants, generating supply chain efficiencies. Second, to reduce redundancies in regional support systems.

The project ran into problems. Making one key decision (how long customers would have to cancel an order) stalled the project for months. The team was afraid to make a wrong and consequential decision across the dozens of countries in which the company operated. So, it kicked the question upstairs to the executive suite. After top management mulled a decision for weeks, it pushed it back down, and told the team to 'figure it out.' But the team was reluctant to do so. Work stopped, and a big and important initiative, presumptively using agile approaches to get its work done, ground to a halt.

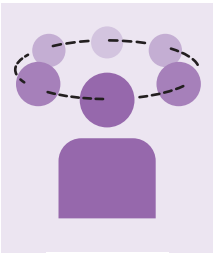
This scenario is not at all unusual among large companies that try to master lean-agile approaches to implementing new, digitally-enabled business processes. The work of the best agile teams can slow to a crawl when senior executives aren't able to change the way they lead.

It's one thing to train employees on agile and lean processes and tools; it's another to change:

- The way leaders make decisions and empower team leaders
- How leaders communicate organizational goals, and how they react to success and failure
- The hierarchy leaders establish to control resources and manage results
- The power leaders invest (*or don't invest*) in agile teams

Unless leaders adopt agile mindsets to manage agile teams, they can create obstacles instead of facilitating the agile approaches to developing new products, services, and processes that all businesses need today.

# What It Takes to Change Leadership Mindsets



Changing leadership mindsets and behaviors requires effort. Leaders in established companies typically have achieved their position based on their experience, expertise, and skills. It's common for them to sit atop a pyramid-style hierarchy. At the top, leaders are accustomed to making decisions to be carried out by those below them. As they manage from above, a 'frozen middle' layer—the people who work

Area	Traditional Leadership Competencies (Change From)	Agile Leadership Competencies (Change To)
Anticipatory Abilities	Predict and control	Sense and respond
Responsibilities	Making great decisions	Helping teams make great decisions
Source of Power and Respect	Authority based on rank, experience, skills, expertise	Skills in empowering others through emotional intelligence, relationship building, treating individuals as equals
Focus of Improvement	Focus on self	Focus on others' improvement
Communications Direction	One-way, top-down communications	Two-way communications and peer relationships
Focus of Decisions	Hierarchy-driven decisions with multiple approval and verification steps	Trust in teams to make team decisions
Mistake Posture	Assign blame to those responsible for failure, creating culture of fear	Learn from inevitable failures, celebrate lessons, adapt, and move forward
Leadership Culture	Focused on 'outer game.' Results oriented meritocracy-based organization. Leaders' reaction to followers: "You are only important to me for what you are doing for me now. Our relationship really isn't important beyond this moment in time."	A leader's 'internal operating system.' Focused on both the 'outer game' (traditional leadership traits) and inner game <sup>15</sup> (building trust with team members, exhibiting emotional intelligence and empathy). This leader says to team members: "You are important to me because of your whole self, what you have done for me in the past, now, and in the future. Our relationship is important." Such leadership empowers teams to focus on results.

52 **Figure 6:** Changing Leadership Styles for Agile Organizations

between the very top executives and the front-line employees—typically play it safe. Fearing failure, these middle managers resist innovative ideas and new perspectives.<sup>16</sup>

Lean-agile approaches call for the opposite decision-making style. In agile, teams organized around a product or issue make the decisions. Organizations made up of multiple agile teams are capable of quick, mid-course adjustments that enable the organization to sense and respond to customers and market stimuli. Teams experiment with solutions, learn from mistakes and improve with all subsequent iterations.

For enterprises moving to lean-agile styles of leadership, individual leaders will have to bridge the gap between old styles and new. This will require training—coaching for the leaders who must empower teams to succeed—and the leaders' personal commitment to make these changes.

## Teaching Successful Leaders How to be Agile



Leaders are central to building and sustaining a lean-agile culture. Because many leaders have risen in a traditional hierarchy, they will exhibit behaviors that have made them successful in the past even as the organization commits to change its way of working. Changing those behaviors is challenging, and the reason why coaching is so important.

Coaching begins by assessing an individual's current leadership style and how that style can work in a lean-agile environment. It then helps a leader adopt new behaviors—new tools for engaging teams, empowering them to make decisions, and do their best work. Coaches help leaders who are accustomed to command-and-control, top-down decision-making, and adopting a lean-agile mindset.

<sup>15</sup> Outer game and inner game part of the "conscious leadership" concept cited in *Mastering Leadership - An Integrated Framework for Breakthrough Performance and Extraordinary Business Results*, Robert J. Anderson and William A. Adam, 2015

<sup>16</sup> The Globe and Mail Inc., What is the Frozen Middle, and Why Should it Keep Leaders up at Night?, May 2, 2017, accessed March 13, 2018, <https://www.theglobeandmail.com/report-on-business/careers/leadership-lab/what-is-the-frozen-middle-and-why-should-it-keep-leaders-up-at-night/article34862887/>

Effective coaches tailor their teaching to an individual's leadership style and behaviors, holding a mirror up to a leader so she can see both what she is doing and her impact on others. Does she instill fear or trust in team members? Does she possess the emotional intelligence required to take every team member's personal concerns and points of view into account as she communicates the team's priorities? Surveys show low employee engagement across the board. Gallup's 2017 survey found only a third of U.S. employees engaged at work.<sup>17</sup> This is why so-called soft skills are critical.

Coaching sessions make a leader aware of what he does now that can either enhance or inhibit the adoption of an agile culture. Often, behaviors learned over years working (and flourishing) in traditional cultures don't translate to an agile environment. Agile organizations are flatter, with lower-level people authorized to make decisions. For some leaders, it takes practice (and confidence) to learn how to engage

with those employees and cede to them the control they are accustomed to having. Coaching exercises can provide opportunities for these leaders to understand what it takes to invest the time and effort required to develop the personal relationships with team members that allow leaders to engage effectively, and thereby empower team members to succeed in agile ways of working.

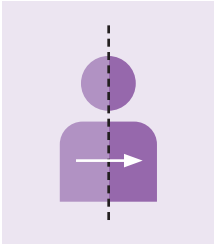
The effort to adopt an agile mindset requires building trust throughout the organization, starting with leaders. Examples of trust include:

- Showing confidence in teams to make decisions
- Understanding failure as a learning opportunity rather than a reason to assign blame
- Cultivating individual relationships with colleagues and appreciating their value (instead of fostering a superior-underling dynamic as in traditional work cultures)

<sup>17</sup> Gallup, State of the American Workplace, February 2017, accessed March 13, 2018, <http://news.gallup.com/reports/199961/state-american-workplace-report-2017.aspx>



## The Commitment Required to Change



Adopting an agile leadership style first requires a program that builds awareness among both leaders and

teams that the organization is changing. It's important to seek buy-in, or informed consent from both leaders and teams that they not only agree to adopt an agile approach, but they also will engage in discussions to understand why they are moving to agile and the challenges they will confront.

Next, organizations often bring in experienced teachers to guide the transition. A leader going through this process can benefit from an outside perspective to help her envision what she will need to do. The transition to an agile culture takes time—typically more than a year to complete—and it affects all aspects of the organization.

The third element involves learning about agile methodologies, and a leader's role in supporting the teams implementing them. Again, the differences between traditional and agile ways of working are vivid. In agile approaches, teams typically deliver value in small increments, rather than in big chunks. Governance models allow for visibility into the process as team members communicate continuously about the group's activities, progress, and challenges—and adapt based on needs that change regularly. Agile teams require strong backing from executive sponsors who make it possible to recruit people from across the organization as needed, including a product owner from the business to lead a team, ensuring it has the right number of people as well as the right tools, and a working environment that will allow them to deliver the products the enterprise needs.

## Lessons from Leaders at Amazon and Facebook



Companies like Amazon and Facebook, which began as startups and have profited from an agile culture, provide lessons about empowering teams to do their best work. Leaders at these organizations are doing more than removing obstacles in the way of teams trying to do great work. They are leading by example.

To maintain Amazon's startup culture, Amazon founder and CEO Jeff Bezos promotes 'high quality and high velocity decisions.'<sup>18</sup> This includes recognizing and correcting poor choices quickly, and adopting a strategy he calls 'disagree and commit': supporting a team's decision if the members believe in the choice even if he doesn't. For example, Bezos approved an Amazon Studios production even though he had doubts about it. "Consider how much slower this decision cycle would have been if the team had actually had to convince me rather than simply get my commitment," he writes.

These decisions go in more than one direction. Amazon Studios is not afraid to fail fast by canceling new shows. It canceled 'The Last Tycoon' two weeks after releasing a season's worth of episodes.<sup>19</sup> This approach embodies agile thinking. To avoid complacency, Bezos remains obsessed with keeping his company thinking that it's always 'Day 1' of business.

Facebook's flat organizational structure and acceptance of failure to improve is another example of the lean-agile mindset. "You have to embrace organizational failure," COO Sheryl Sandberg says. This goes hand in hand with making sure top executives are not driving every decision; everyone feels their input is welcomed and encouraged.<sup>20</sup>

<sup>18</sup> Amazon, 2016 Letter to Shareholders, April 12, 2017, accessed March 13, 2018, <https://www.amazon.com/p/feature/z6o9g6sysxur57t>

<sup>19</sup> Variety, The Last Tycoon Canceled at Amazon, September 9, 2017, accessed March 13, 2018, <http://variety.com/2017/tv/news/the-last-tycoon-canceled-amazon-1202552964/>

<sup>20</sup> Entrepreneur, Sheryl Sandberg Shares 7 Ways to Build Resilience into your Company Culture as you Scale, June 1, 2017, accessed March 13, 2018, <https://www.entrepreneur.com/article/294948>

Sandberg also emphasizes the role that empathy plays in leadership at Facebook. She says she believes in team members bringing their ‘whole selves’ to work, acknowledging that employees have personal lives they bring to their jobs. “It means we are there for each other, we are flexible with what people need, and then we can form the relationships that create collective resilience.”<sup>21</sup>

Such examples show that leaders can serve their organizations best by empowering their teams, and, as companies like Amazon and Facebook demonstrate, scale, and growth, are not obstacles to maintaining a lean-agile culture.

## Agility is About People



**Embracing agility is about more than technology. It is about people.**

As companies and leaders embrace agile methods, it's imperative for them to invest

in their people and organizational cultures, not just in the technology stack, or in agile development and delivery of DevOps to automate technical capabilities. That investment is important because succeeding in creating a lean-agile organization requires changing how decisions are made, the way teams are formed, and the way they work together.

<sup>21</sup> Ibid.

Embracing agility also calls for changing how organizations measure and recognize teams and leaders. That means establishing incentives and rewards for teams, not just individuals. And it means measuring the success of leaders based on how they help others grow.

Indeed, embracing agility is about creating a more equal ecosystem. Rather than an organization built around departments or groups or functions that become silos, agile requires every stakeholder to contribute value to the whole organization. It calls for each individual to see that value and their purpose beyond any one function or department.

When done well, the people in an agile organization see their work in a team as meaningful, and their organization's work as making a positive difference for its customers, and, ideally, the world.



## **The Tall Task of Getting Big Companies and Government to Innovate Like Lean Startups:**

### Interview with Steve Blank

Steve Blank has been at the epicenter of the 'lean startup' movement since he ignited it in 2006 with his book *The Four Steps to the Epiphany*. A Silicon Valley entrepreneur for 21 years who founded or was involved in the launch of eight technology startups (both successes and failures), Blank left that world in 1999 to teach and consult on startups.

Today, Blank's Lean LaunchPad approach (which he teaches at Stanford University, the University of California, Berkeley, and Columbia University) is taught at more than 75 universities worldwide. What's more, lean startup methods have been embraced by a number of government and scientific organizations. Blank's Stanford class became the curriculum for the National Science Foundation Innovation Corps in 2011; since that time, over a thousand scientists and engineers have taken the course to help commercialize their ideas. Blank also co-created the Hacking for Defense and Hacking for Diplomacy programs, which use lean startup methods to address critical national security problems. You can read his extensive writings at [www.steveblank.com](http://www.steveblank.com).

At the turn of the century, one of Blank's students was Eric Ries, who launched two companies that Blank had funded. The first practitioner of Blank's lean startup method, Ries took the concept mainstream after publishing two books, *The Lean Startup* and *The Startup Way*.



From his Silicon Valley outpost, Blank has continued to publish books about lean startup methods as well, including the bestselling *Startup Owner's Manual*<sup>22</sup> (co-authored with Bob Dorf). In addition, Blank has been an author or co-author of eight *Harvard Business Review* articles, including a May 2013 cover article ('Why the Lean Start-Up Changes Everything'<sup>23</sup>) and an article in *HBR*'s November–December 2017 print edition ('When Founders Go Too Far'<sup>24</sup>).

He recently talked about his lean startup principles, the reasons why big, established companies, and government agencies need to adopt them, and the challenges they've had in trying to do so.

**TCS:** *Your ideas around the lean startup have jumped the tracks from the startup world to the big-company world and to the government. But before you talk about how large organizations are using them, take us back to the evolution of the ideas.*

**Steve Blank:** It started just from a very personal basis. I was a serial entrepreneur. I did eight startups in 21 years and retired in '99. When you're a practitioner, you don't have time to think about big picture stuff; you just do what you are told. If you're lucky and good, you get to do it again.

When I retired, I started thinking about the innovation of entrepreneurship. It struck me that in the 20<sup>th</sup> century, startup investors treated startups like they were nothing more than smaller versions of large companies. It was a big idea.

<sup>22</sup> Amazon, *The Startup Owner's Manual: The Step-by-Step Guide for Building a Great Company*, March 2012, accessed February 5, 2018, [https://www.amazon.com/Startup-Owners-Manual-Step-Step-ebook/dp/B009UMTMKS#reader\\_B009UMTMKS](https://www.amazon.com/Startup-Owners-Manual-Step-Step-ebook/dp/B009UMTMKS#reader_B009UMTMKS)

<sup>23</sup> Harvard Business Review, *Why the Lean Start-Up Changes Everything*, May 2013, accessed February 5, 2018, <https://hbr.org/2013/05/why-the-lean-start-up-changes-everything>

<sup>24</sup> Harvard Business Review, *When Founders Go Too Far*, November–December 2017, accessed February 5, 2018, <https://hbr.org/2017/11/when-founders-go-too-far>

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What [startup investors] essentially said was, “If big companies are doing [business] plans, we want a plan. Big companies do five-year forecasts, so obviously before we invest we need to see the forecast.” And “Big companies hire sales, marketing, and [business development] people on Day 1, that’s what we want you, the startup, to do.” And “Big companies build their products with waterfall engineering, which is a serial process that specifies all the features and then works for the next year or two to delivering them for Release 1.0.”

## Startups are not smaller versions of large companies. Large companies are large because they execute a known business model.

But it wasn’t until I retired and started thinking about this that I realized it was wrong—big time! Startups are not smaller versions of large companies. Large companies are large because they execute a known business model. A known business model is 95% of what large companies do. It’s “Gee, we know our channel, we know our customers, we know our pricing, we know our competitors, we know lots of stuff.” And most of this stuff is continuing to fill the pipeline with product line extensions and new features, painting it blue or whatever. That is a known business model.



By contrast, startups have very few things that are known. Startups are searching for a business model. Yet business schools have built 100 years of tools and techniques for executing known business models of existing companies. Remember, business schools were designed to graduate people with degrees in business administration. Therefore, we were building tools to help those administrators. But no one had consciously said that perhaps we need a management toolset in a management stack for innovators. It didn't exist. The language barely existed.

So I started reading all the literature about innovation. The irony here was that very little literature existed about startups. There was literature about corporate innovation—Rita McGrath stuff, Clayton Christensen stuff, and so on. But I felt it was about innovation in the context of environment that was primarily focused on execution.


To make a long story short, I wrote *The Four Steps to the Epiphany*. That was the first time anyone ever described the

difference between search (startups) and execution (existing companies). That kicked off the lean startup movement by describing one of the three components of lean: the customer development process. I said a startup has no facts about real customers when the people in that startup stay inside their building. Therefore, they need to get the heck outside.

Then one of my students, Eric Ries, said, “Steve, you grew up in the 20<sup>th</sup> century with waterfall engineering, where products were built serially, but startups are now using something called agile engineering, where they’re building the products iteratively and incrementally. That is a perfect fit for customer development. So why don’t we combine customer development and agile engineering.”

Then I ran into someone named Alexander Osterwalder, who had figured out how to map a 40-page business plans into a single diagram called the business model canvas. So I adopted Osterwalder’s canvas as a living scorecard for first articulating the hypotheses a





startup needs to test, and then to keep track of what they learned—using my customer development process, as well as to test the minimal viable products we were building using Eric’s agile engineering method.

## Those three components—business model design, customer development, and agile engineering—became the lean startup.

One key idea of this lean method was this notion that we’re learning new things as we talk to customers and test minimum viable products. And as we learn, we give startups permission to make substantive changes to their business model. These changes are called a pivot. It’s hard to remember, but in the old days—and this still happens in corporations—once your plan is blessed, any deviation is considered a failure instead of as learning.

Geez! What were we thinking?

**TCS:** *So the venture capitalists in Silicon Valley in the 1980s and ‘90s got nervous if the founders changed their initial business model.*

**Blank:** Yeah, and [when that happened] they fired the founders. Any failure was treated as a failure of the individuals, not a failure of the initial hypothesis or assumptions. That’s a huge idea. Huge. Their belief was, “There can be nothing wrong with the plan. I funded it! It must be an execution problem.”

By the way, it wasn’t that the founders were always right. But there was no notion that they needed to be testing and exploring their [company’s] hypotheses—about customers, about features wanted, about pricing, channel, etc. ... The other problem was that we started staffing and building a burn rate per the business plan. I remember being in companies where the only thing that [went according to] plan was our burn rate! You kind of go, “I don’t think this is right,” even though you got three-quarters of the plan correct.

So I said, “What’s wrong with this movie?”




**TCS:** *When you stopped launching companies in 1999, venture capital was abundant. So perhaps the VCs were not too worried about many of their portfolio companies failing, as long as they had a few winners that more than made up for the losers.*

**Blank:** During the last dot-com boom (around 1999), we didn't need any of this [lean startup] stuff because we had infinite cash. Post dot-com crash, people were being pretty judicious about time and resources, and lean made all the sense in the world. The irony is that now with funds like Sequoia and even more so like Softbank, [having huge funds] makes up for everything. Their approach is "It doesn't matter, I'll buy my way in."

The irony is that the need for lean has now moved from startups, which had to be judicious with cash, to [established] corporations, which are actually much more threatened than startups.

The real surprise for me is that some startups now have more capital than large corporations.

Herein lies the opportunity of using lean startup approaches in corporations. Big companies that survive are no longer just delivering what McKinsey called Horizon One innovation (incremental features, colors,



supply chain efficiencies, and so on), and Horizon Two innovation (satisfying the needs of existing customers with new products). The ones that are going to stay in business are now acting like startups by delivering what McKinsey 30 years ago called the third horizon of innovation—i.e., disruption. Apple, the computer company, getting into music. Amazon, the ecommerce company, buying Whole Foods.

Large corporations have great managers dealing with Horizon One and Two types of innovation. The problem is they are facing continuous disruption; they have Horizon Three problems now, but the wrong leadership to deal with them. If you got your MBA more than three years ago, everything you know about innovation is obsolete.

For the first time in the history of corporations, [established] companies are not setting the rules. The rules are changing rapidly. That's why you see all this M&A activity and people just trying to figure out what the new rules are. There is probably more innovation and creative disruption right now of corporations since maybe in the gilded age in the U.S. [the late 1800s].

**TCS:** *So largely speaking, how have large companies reacted to the lean startup ideas since you started publishing them?*

**Blank:** Between my work and Eric Ries' work [who in his book wrote about their application at GE and Procter & Gamble], there has been recognition and adoption at various levels. But it's hard to turn super tankers. Remember, large corporations can innovate not only by using lean methodologies to build internal innovation; they can also buy companies.



**TCS:** *What are the biggest challenges large companies face in adopting lean startup approaches?*

**Blank:** It's the other way around.

The issue is not about adoption of lean. The issue is about dealing with continuous disruption. Lean is just a tool in a tool set. It is not the answer. It is a component of this: "How do I change the engines of the plane while it's in flight? Am I reconfiguring the product line? Am I going digital? Am I changing channels? Am I reinventing the company? And am I willing to bet my job, and is my strategy aligned with my investors and my board?"

**TCS:** *So what five years after Harvard Business Review published your article on the lean startup, are big companies doing enough to make their ventures lean?*


**Blank:** I keep telling [HBR] they ought to be writing the article, "Why the Lean Startup Changed Nothing." [He laughs] [The article] mostly resulted in innovation theater: a set of activities, typically like incubators and accelerators inside a company, that generate great coffee cups, posters, and lanyards, and almost nothing else. My test [for their effectiveness] is this:

Did it move the top or bottom line? What I often get back is, "Let me show you our 'Dogs at Work Policy.'"

What I've learned is that companies don't just need to build a lean startup process. They need to build an end-to-end innovation pipeline that has a funnel on the left and deliverables on the right. If you don't know the ratio of funnel ideas to deliverables, you're going to get it wrong. The big mistake is confusing activities with deliverables. When I ask them about deliverables, the answer for some 90% of them or more is they have none yet.

You're not going to believe this, but it turns out the people who are doing it right is the U.S. government.

The approach plays out slightly differently for government agencies. But because the government is being disrupted, the consequences are even greater than they are for companies. Macy's can go out of business in the U.S. and the country will still go on. We can't afford to have part of our Defense Department go out of business from being disrupted.



They get it. They understand it. Their disruption is pretty clear. In the 20<sup>th</sup> century, the country was essentially facing a single adversary. Now you need a scorecard. They need to scale [their innovations] to today's [much higher] number of adversaries. They now realize the answer is not only tech, which is machine learning and robotics and whatever, but also innovation processes that are radically different than the way they've been building requirements and acquiring products and services.

The Defense Department has adopted not just lean but this notion of an innovation pipeline incredibly fast. The 2018 National Security Strategy, written by the Secretary of Defense, is probably one of the most important innovation documents so far of the 21<sup>st</sup> century. It said, *"Organize for innovation. The Department's management structure and processes are not written in stone, they are a means to an end—empowering the warfighter with the knowledge, equipment and support systems to fight and win. Department leaders will adapt their organizational structures to best support the Joint Force. If current structures hinder substantial increases in lethality or performance, it is expected that Service Secretaries and Agency heads will consolidate, eliminate, or restructure as needed. The Department's leadership is committed to changes in authorities, granting of waivers, and securing external support for streamlining processes and organizations."*

It feels a lot like the lean startup take-up that we had in Silicon Valley. It's catching on in the U.S. government, and it's saving lives.

# AGILE AT WORK

**How Retail CEOs Can Drive Agile  
to Grow Their Business**



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Retail CEOs now have the memo. Yes, Amazon was the No. 1 online retailer in the United States in 2017, with \$94.7 billion in online sales, almost 20% more than in 2016. Yes, Amazon acquired the Whole Foods high-end healthy foods supermarket chain, thus expanding its reach into brick-and-mortar retail. For retailers, confronting competition from digital-first enterprises is like the proverbial drinking from the fire hose: more than they can handle. Retail CEOs also know these challenges require digital transformations that make their companies faster at innovating, introducing new processes, products, services, and marketing campaigns. And they also realize it's about optimizing their store and online operations, and being more adept at experimenting with new business models.

Retail leaders also understand that their companies' technology problems have become customer pain points. Consumers can see if a store's online prices differ from those in-store. If a mobile payment option isn't available or isn't working, customers may go elsewhere. If a personalization algorithm offers mismatched products or services, customers will be disappointed. In this environment, it is critical to address problems as they occur. And that requires them to be agile and adaptive.

However, introducing agile approaches into their business—a proven means for speeding efforts to innovate and compete—is difficult. But it is no longer an option. Realizing this, several retailers worldwide are on an end-to-end value chain transformation to become agile, digital enterprises.

## **The Reluctant Agilists**

While there is great enthusiasm across the retail industry for agile adoption, there is also great resistance—frequently from functional managers fearful of losing authority, and from leaders reluctant to flatten their organizations—exacerbated by an industry-wide unfamiliarity with agile fundamentals.

We have seen some retailers attempting partial adoptions of the agile approach—what we call ‘proxy agile’. They do this by slicing existing projects into smaller projects, hoping to gain speed. The IT organization’s ways of working may change, but the business decision-makers do not. These projects retain the overall scale of traditional ‘waterfall’ software development projects and thus cannot respond quickly to (or even collect) customer feedback. Nor can they test and release products rapidly enough. As a result, they fail to help retailers make rapid innovations.



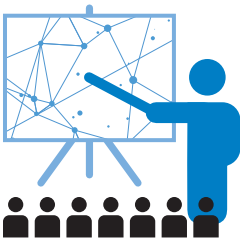
## Breaking Through the Barriers

Agile calls for sweeping changes in deep-rooted ways of working. It starts with leadership. Used to a command-and-control management structure and its associated behaviors, the C-suite has a propensity to attribute the barriers to agile to 'somewhere down there' within the organization. Instead top executives need to be ready to model the following behaviors:

- Values-based leadership
- People empowerment and distributed leadership
- Test and learn leadership
- Product leadership
- Partnership and engagement among business and technology experts

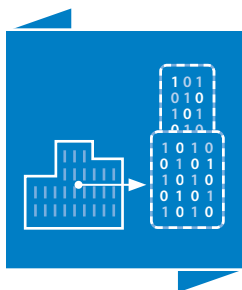
Agile leadership also demands empowering change agents in agile teams, and providing support so they can drive transformation.

**This work is not easy. Here are seven ways retail organizations can overcome the most common barriers to agile adoption:**



### **1. Espouse strong leadership commitment.**

Paying lip service to agile is not sufficient; the CEO, and all top-level executives, must be committed and engaged. This commitment begins with education: engaging coaches and trainers who can teach business stakeholders the principles of agile, and conduct exercises to practice and inculcate its collaborative and inclusive methodology. All business leaders should understand and internalize both the need for change and the essence of the agile approach. They must assume product ownership, including responsibility for defining the product roadmap and instituting short feedback loops to learn from and act on end-user feedback.



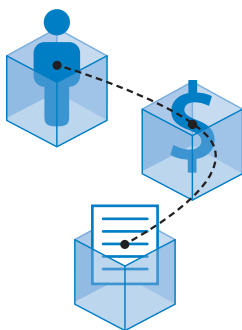
## 2. Create a transformation blueprint.

The CEO must also recruit his or her executives to work with technologists to identify how to serve customers better, prioritizing initiatives that provide the most value for all stakeholders. This group must create a transformation blueprint to help leaders understand what the company will look like after agile adoption, how it will operate, and what their roles and duties will be.



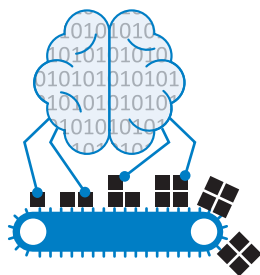
## 3. Establish communities of practice (CoPs).

The company should set up communities of practice to drive agile adoption and motivate cultural change. When the agile transformation is under way, the CoPs should provide governance for the effort, and metrics to produce evidence of benefits such as improved customer satisfaction scores or faster time to market for new products and processes—especially improvements in the software development lifecycle.



## 4. Replace traditional ways of scoping projects with value-driven scoping and budgeting.

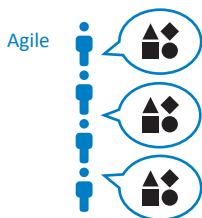
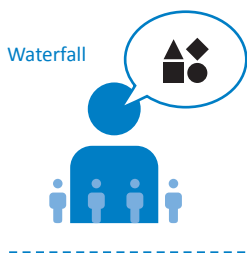
The old ways of organizing, staffing, budgeting, and planning projects must be replaced with value stream-based funding. Retailers should launch high-value, low-cost initiatives first, and delegate scoping and budgeting to agile delivery teams. We recommend following a quarterly cycle for portfolio demand planning, discovery, prioritization, and funding to enable delivery based on business value.



## 5. Adopt intelligent automation.

Agile approaches to delivering new services won't work without embracing the automation of IT systems. This means adopting a machine-first delivery model, with DevOps automating the work of engineering and operations for software building, testing, and product introductions.

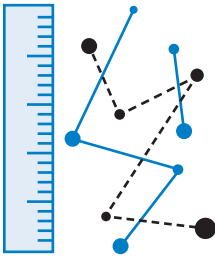
Retailers also must invest in building capabilities for AI-driven automation of engineering processes to enable fast and frequent delivery of customer products and services, while reducing development overhead. One of the most interesting areas of AI is seeing how the technology can be used to improve estimates. AI is well placed to provide agile teams guidance on decisions in which there is a complex interplay between different variables and a lot of data available from previous projects.



## 6. Manage organizational change.

Project managers and application developers accustomed to the waterfall method are used to having months to plan, and a year to build a new product, while their bosses call the shots on features and scope. The agile approach flips that, with the team making those decisions and working on short projects in iterative bursts. This can be disconcerting. Every team member should understand the organization's current state of operations (as well as its competitive position), why the change is necessary, how it will happen, and what it will take to make it successful. This strategy helps ameliorate the all-too-human fear of change while addressing future uncertainties.

Ongoing communications and coaching is essential. A communications channel such as a mobile app can help answer any questions on the transformation journey and share information at appropriate milestones. Mechanisms must be set up for experience gathering and knowledge management. A learning academy can offer advice, instruction, and support. Such programs will enable agile team members to work closely with agile coaches, scrum masters, product owners, and the engineering and operations teams to design just-in-time interventions. These interventions can be designed as experiential learning through case studies, scenarios, and performance aids based on an analysis of the organization's performance.



## **7. Measure the progress.**

Organizations must develop a framework to assess the impact of changes and choose the right communication strategy for measuring progress and delivering feedback. Establishing a change agent network for each business area by work function and by geographic location will support the ongoing effort to drive change management associated with adopting agile. Providing a dashboard view for the organization is crucial to frequently assess the progress of the agile transformation journey. Evangelize success stories and discuss lessons learned for quick adoption of needed adjustments.

## Cruising Down the Agile Stream

Agile approaches do not prescribe a standard operating model. Organizations must determine what specific capabilities are relevant in their customer context and experiment (people, process, technology, and operating model) by using pilot projects and fine-tuning their approach.

The best way to introduce agile techniques is to eliminate large waterfall projects immediately, and replace them with work designed to be accomplished quickly.

When that work is tested with customers and they react positively, project managers and developers begin to see the benefits of receiving immediate feedback. They will warm to their task—especially if their efforts are reinforced and rewarded by management. Although this may sound straightforward, in practice it requires time, patience, and persistence.

An anecdote from our experience shows that leaders can make an important difference. We recall being at an executive meeting with a retailer's functional heads, who were striving to become more agile. After a presentation and discussion on what an agile transformation required, the head of store operations stood up to volunteer that his group be the first to adopt agile. It turned out that company wanted to relaunch a new mobile application for store associates, and the executive wanted to provide his staff members with capabilities to do their jobs better. While stores are typically the most challenging environments in which to introduce agile, this executive saw the urgency of the need to change and seized the chance.

## The Benefits of Agile Adoption

When it comes to agile adoption, two major questions surface in boardrooms: How can agile really help? What difference does it make if our enterprise becomes “fast”?

The experiences of several leading retailers that have transformed themselves into digital-first enterprises offer answers. A digital-first enterprise is product-centric. It is a technology-led organization that relies on automated systems. It invests in a modern architecture and takes advantage of cloud computing.

Becoming digital-first has helped several retailers create a unique and differentiated customer proposition. It enables them to make intelligent decisions and quick adjustments empowered by customer feedback, thus increasing their organizations' resilience in the rapidly evolving retail environment.

In addition, agile development methods have helped them adopt new business capabilities quickly like expanding their product lines, offering new fulfilling methods, convenient payment options, and an interconnected customer experience. Agile methods also enable intelligent decision making. These retailers have harmonized their mobile apps, websites, and stores to provide a seamless, consistent experience for customers who switch between devices and modalities. Figure 7 provides snapshot examples of what leading retailers can achieve by becoming agile.

Retailers are using different strategies for beefing up their digital portfolios.

Retailer Benefit Categories	Best Buy	Target	Walmart
<b>New Payment Offering</b>	Started try-before-you-buy rentals for some products <sup>25</sup> and introduced Apple Pay. <sup>26</sup>	Introduced Wallet, payment function in Target smartphone app. <sup>27</sup>	Walmart Pay, QR code-based payment system unveiled in 2016, central to retailer's digital wallet which also offers a retailer-branded credit card via smartphone app. <sup>28</sup>
<b>Faster Delivery of Products</b>	Best Buy online sales rise as a result of ship-from-store capability. <sup>29</sup> In a test, Best Buy offered faster delivery than Amazon. <sup>30</sup>	Target unveils same-day delivery service, <sup>31</sup> acquired Grand Junction to make faster deliveries, <sup>32</sup> and Shipt to offer same-day in-store delivery. <sup>33</sup>	Walmart expands Pickup Towers, self-service in-store stations that enable shoppers to get their online orders using a smartphone, to 700 stores. <sup>34</sup>
<b>Introduce New Product Lines</b>	The recently launched in-home advisor program provides a Best Buy expert to suggest products and services to help customers accomplish their goals. <sup>35</sup>	Target sets a goal of introducing more than 12 new product brands every 18 months. <sup>36</sup>	Walmart gained a presence in more niche product lines through acquisitions of online retailers like Bonobos, ModCloth, Hayneedle, <sup>37</sup> and Moosejaw. <sup>38</sup>
<b>Websites and Mobile Faster</b>	Best Buy sees its improved digital customer experience resulting in high online sales growth. <sup>39</sup>	Updated Target.com allows Target to be more nimble while delivering a consistent experience across devices, leading to higher conversion rate on mobile devices. <sup>40</sup>	Walmart adds in-app features like Store Assistant, Mobile Express returns service, Scan & Go mobile checkout, to enhance the shopping experience. <sup>41</sup>
<b>Fulfillment—Way to Get Goods</b>	Best Buy embraces omni channel fulfillment; half of online orders shipped or picked up from stores. <sup>42</sup>	Target tests next-day delivery service in Minneapolis <sup>43</sup> and offers free two-day shipping. <sup>44</sup>	Walmart rolling out in-store kiosks to pick up goods ordered online to as many as 650 stores. <sup>45</sup>
<b>Localization and Pricing</b>	Best Buy price matches all local retail competitors (including their online prices) and products shipped from and sold by select major online retailers. <sup>46</sup>	Target offering increased localization and personalization in assortment in stores and online. <sup>47</sup>	Walmart's price matching policy extends to items sold on Walmart.com. <sup>48</sup>

**Figure 7:** The Benefits of Being Faster, Examples from Leading Retailers

## Agile Retail: It All Starts at the Top

Agility at the enterprise level is about applying the principles and values of agile to create an organization level ecosystem that embraces and supports agile. All the departments including support teams such as Marketing, Sales, Finance, and Administration start espousing a 'by default agile' mindset. Cultivating such a digital, agile environment requires strong commitment from the leadership team. They must make the transformation their top priority, and define, lead, and communicate the transformation.

At the end of the transformation, organizations will have a blended team of business and technology managers who are highly productive in driving on demand capability releases on a resilient technology platform that responds to any system glitch.

Agile retailers not only serve their customers better, they are better able to compete with emergent digital natives, with a chance to win. This makes the effort worth it.



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## Fending Off the FinTechs: How Agile Financial Services Firms are Transforming Their Businesses

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Few stories better illustrate the challenge facing banks and financial services firms than the swift rise of Quicken Loans and its online Rocket Mortgage unit. Quicken Loans used Rocket Mortgage's 2016 launch to increase its loan volume by more than 7% to \$96 billion. Rocket alone closed \$7 billion in loans in its first year, immediately placing it among the top 30 U.S. mortgage lenders.<sup>49</sup> Quicken Loans, meanwhile, increased its U.S. mortgage market share six-fold over the last 10 years, from less than 1% to 5.7% in 2017.<sup>50</sup>

<sup>49</sup> Housing Wire, Here's How Much Rocket Mortgage Helped Quicken Loans in 2016, March 7, 2017, accessed March 13, 2018, <https://www.housingwire.com/articles/39505-heres-how-much-rocket-mortgage-helped-quicken-loans-in-2016>

<sup>50</sup> Bloomberg, Big Banks Have Ground to Recapture in Mortgage Lending, January 12, 2017, accessed March 13, 2018, <https://www.bloombergquint.com/gadfly/2017/01/12/big-banks-have-ground-to-recapture-in-mortgage-lending>

How did Rocket propel Quicken Loans? The parent company's CEO credits it to embracing agile approaches in which "the entire team works towards the common goal of making life radically simple for our clients through innovation and passion."<sup>51</sup>

But the mortgage business is by no means the only financial services segment in which companies have adopted agile techniques to blow by competitors. FinTechs and startups, sometimes working with established financial services firms, have made real inroads in all banking products, services, and markets. Take the example of Vantiv. Now merged with Worldpay, the U.S. based payment processor has used agile processes to become a global payments-processing leader in 146 countries, handling \$1.5 trillion in transactions per year.<sup>52</sup>

Agile adopters such as online-only U.S. banks like MovenBank and AllyBank boast about offering competitive financial products and a better customer experience than many of their brick-and-mortar brethren. Online wealth management firms like iQuantifi are using robo-advisers and algorithms to provide financial advice to clients. Digital mortgage lending platform provider Roostify has partnered with JPMorgan Chase to let home-buyers track loan applications online.<sup>53, 54</sup>

<sup>51</sup> Quicken Loans Press Release, One for the Thumb: Detroit-Based Quicken Loans Named Computerworld's #1 Best Place to Work in IT for Fifth Straight Year, June 12, 2017, accessed March 13, 2018, <https://www.quickenloans.com/press-room/2017/06/12/one-thumb-detroit-based-quicken-loans-named-computerworlds-1-best-place-work-fifth-straight-year/>

<sup>52</sup> Cincinnati Enquirer, Vantiv Transforms into Worldpay, Likely Region's Newest Fortune 500, January 17, 2018, accessed March 13, 2018, <https://www.cincinnati.com/story/money/2018/01/17/vantiv-transforms-into-worldpay-likely-regions-newest-fortune-500/1041795001/>

<sup>53</sup> Roostify Press Release, Chase to Launch Customer-Driven Digital Mortgage Experience, February 16, 2017, accessed March 13, 2018, <https://www.roostify.com/press-release-archive/2017/2/16/chase-to-launch-customer-driven-digital-mortgage-experience>

<sup>54</sup> Housingwire, Roostify Focuses on the Consumer Experience with Education and Transparency, December 1, 2017, accessed March 13, 2018, <https://www.housingwire.com/articles/41981-roostify-focuses-on-the-consumer-experience-with-education-and-transparency>



Mobile payment platforms also represent a threat to the banking and financial services industry. AliPay, the digital wallet operated by Alibaba offshoot Ant Financial, boasts 520 million Chinese customers representing 51% of China's \$11 trillion internet payment market, and the company is expanding outside China.<sup>55</sup> Its rival, WeChat Pay, linked to the WeChat message service offered by Tencent, accounted for 40% of that market in 2016<sup>56</sup> and has moved into Malaysia.<sup>57</sup> Both services' mobile payment volumes dwarf totals logged in the U.S. Mobile payments also have driven growth at PayPal, whose latest quarterly profit rose 32% rise in its most recent quarterly report, powered in part by Venmo, the company's social payment platform, and by partnerships with big banks like JPMorgan Chase, as well as tech titans like Google, Apple, and Facebook.<sup>58</sup>

Those digital-first giants provide their own challenges, as researchers expect Apple, Facebook, and Google to drive growth in payments through their customers' smartphones.<sup>59</sup> Mobile devices have given consumers powerful tools for conducting a universe of financial transactions, and they expect their banks (like their stores and governments) to work 'anytime, anywhere,' like their favorite apps.

<sup>55</sup> Economist, China's Digital-Payments Giant Keeps Bank Chiefs Up At Night, August 19, 2017, accessed March 13, 2018, <https://www.economist.com/news/business/21726713-ant-financial-500m-customers-home-plans-expand-chinas-digital-payments-giant-keeps>

<sup>56</sup> Financial Times, China Moves to Impose Order on Mobile Payments Boom, December 28, 2017, accessed March 13, 2018, <https://www.ft.com/content/b7866e7c-eb8e-11e7-bd17-521324c81e23>

<sup>57</sup> Business Insider, Tencent's Expansion of WeChat Pay into Malaysia is Important for its Long-Term Success, November 22, 2017, accessed March 15, 2018, <http://www.businessinsider.com/tencent-expands-wechat-pay-to-malaysia-2017-11>

<sup>58</sup> Reuters, PayPal Tops Profit Estimates, Lifts Target on Mobile Payments Growth, October 19, 2017, accessed March 13, 2018, <https://www.reuters.com/article/us-paypal-hldg-results/paypal-tops-profit-estimates-lifts-target-on-mobile-payments-growth-idUSKBN1CO2ZW>

<sup>59</sup> Juniper Research, Why 2018 is the Year of Social Payments, January 2018, accessed March 13, 2018, <https://www.juniperresearch.com/document-library/white-papers/why-2018-is-the-year-of-social-payments>

While banking leaders understand the need to adopt agile approaches to counter such disruptive competition, their existing processes, systems, and organizational structures stand in the way of adoption. Even some with agile teams still take months to do what nimbler competitors do in days or weeks.

Banks and financial institutions that wish to compete with truly agile organizations all face the same question: Can we become agile enough, fast enough?

## **The Missing Link: Unprecedented Cross-Functional Collaboration**

Executives at large banks and financial services companies run into familiar problems trying to deploy agile teams and scaling agile across the enterprise. While each institution takes an approach best suited to its context, the lack of a common vision ('Why agile?') and what it means to adopt the agile 'way of working' leads to many failing to deliver the business value they anticipated.

These institutions run multiple lines of business, with organizational structures and processes to support each one.

But these structures and processes typically create distance between marketing, research, legal, and other participants in agile teams. Instead of collaboration, there are hand-offs: the marketing team hands off a decision to the finance team, and the finance team adds information and hands the decision off to the IT team to develop a solution. This adds time and static to the development and launch of new financial products.

The IT landscape at big banks is another major barrier to agility. Over time, through mergers, acquisitions, and other changes, their systems have become complex and unwieldy. Implementing a simple feature in a customer engagement system, for example, requires difficult integration work, and iterative testing to make sure the new feature works well with other features and doesn't break them. In addition, there typically is little automation available to test and release

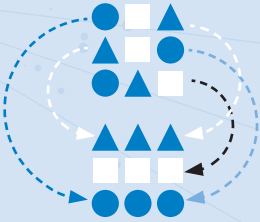
software. In this environment, agile teams inevitably confront bottlenecks and grow frustrated.

These problems share a common theme: Business and IT managers must work continuously together to bring new products from conception to market. If they don't, agile methodologies will never achieve the speed for which they were created. Agile won't work without a unity of purpose, a one-team approach.

In short, becoming an agile organization calls for a transformation that engages people, systems, and processes at all levels. Agile is not just about creating software.

## Coming Together Around Agile

To overcome the impediments to becoming agile, financial services companies must take three paths:



### 1. Organizational assessment and planning.

They need to define their vision, identify the internal impediments to agility, and create an enterprise transformation roadmap to overcome them. This is about having a change management strategy, adequately supported with resources. Any systemic change requires a feedback mechanism to collect and analyze stakeholder reactions. Addressing the feedback is what drives progress.



### 2. Implementation preparations.

The goal of agile transformation is to create customer value quickly. Therefore, companies should establish teams organized around discrete pieces of the customer experience. Those teams will work best when managers demonstrate 'servant leadership'—i.e., acting frequently to remove impediments that can slow the work of digital product teams, rather than operating in a traditional command-and-control mode.



### 3. Technology platform and engineering culture.

To support the agile deployment of new products, financial services firms need to employ modern IT architectures and designs, like micro-services and application programming interfaces (APIs) that take advantage of the latest technology infrastructure designs, and cloud-based systems. What's more, product engineers must adopt a culture of automated systems—converting manual technology work into automated work wherever possible.

## Empowered Teams are at the Center of the Action

Self-organizing teams staffed with people from all relevant functions are the heart of an agile organization. They, not their superiors, must be allowed to decide what they can deliver—in weeks, not months—based on the resources they have.

These teams have the power to make these decisions because they are backed by the business's leaders. That only happens when everyone in the C-suite understands and visibly demonstrates (through daily attendance at team meetings if need be) that agile adoption is necessary to the organization's future.

Why do all CXOs need to be on board? Because only they can give teams the flexibility to define the scope of their work and prioritize goals based on the business value their products deliver to customers. Banks succeed with agile

adoption when they have business-IT teams in which members share ownership of the work: the delivery of new functions to customers.

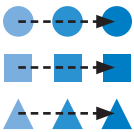
A company's technology foundation also is critical to optimizing agile teams. Leading practitioners of agile methodologies adopt DevOps strategies that automatically release new features after the team develops them. DevOps empowers a company to collect timely feedback from customers about new digital products. That feedback enables teams to quickly improve the product, the customer experience or both.



## Building the Team: How to Do it Right

Agile teams must possess all the required skills for assessing customer needs and developing new products and product features. As such team members must include representatives from all functions that impact the customer experience—i.e., marketing, sales, finance, HR, IT, research, operations, and other groups.

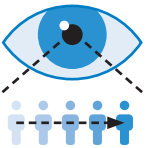
### Four other principles are crucial to the success of these agile teams:



#### 1. Organizing teams by features.

Any team should focus on customer journeys, mapping, and improving a consumer's experience at every step of his or her interaction with the bank. For example, a team could work to make the loan origination process more efficient. Team members would examine every step in the workflow, from routing documents to how consumers upload them online to ensure requirements (consumer credit histories, loan eligibility, bank account validation, employment, and property value check) are met as seamlessly and effortlessly as possible.

We have seen agile teams cut days from this process by eliminating activities that don't add value. For example, in the mortgage lending process, customers can provide electronic signatures for documents instead of coming into the bank, a move that saves time, and reduces mistakes. Electronic systems to check an applicant's credit history and other changes have trimmed six or seven days from the loan approval process, meeting customers' desires for a faster, easier-to-use process.

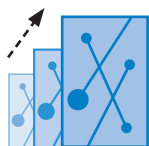


#### 2. Develop team skills for analyzing and improving customer value streams.

Team members must be able to dissect what information and expertise are necessary to improve key customer processes. That requires cross-functional teams that can ask questions such as:

- What are the key elements and business processes central to the bank's operations?
- How many handoffs are happening between systems and functions?
- What tasks add value—and don't (and thus could be eliminated)?

Mapping a customer process such as ‘from inquiry to cash’ will shine a light on ways to improve workflows and eliminate waste. However, the team working on that process must be composed of members from all the functions that impact that process.



### **3. Scale those agile skills.**

Banks that want to adopt agile approaches are wise to start small—even with one team—before going big.

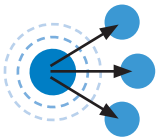
However, once a bank makes one agile team successful, the goal should be to create many more agile teams across the organization. That will help it to build a culture of rapid, iterative, and customer-responsive change.

When that happens, banks will have a flatter organization in which middle managers can move from a command-and-control mindset to servant leadership, assisting teams instead of running them.

All this requires extensive training and coaching by agile experts. Team members must master agile approaches, as well as their roles on the team. Managers must be trained how to shift their style from supervising subordinates to empowering them. Work areas need more open spaces and flexible seating arrangements. They will foster greater collaboration and improve team productivity (while also appealing to millennial team members). Tools that help team members collaborate—especially chat applications, document repositories, and project management software—are also instrumental to boosting team productivity.

Functional Area	Key Features / Capabilities Supported
<b>Sales Processes Across Product Lines</b>	<ul style="list-style-type: none"> <li>• Prospect campaign execution</li> <li>• Prospect management</li> <li>• Customer offer</li> <li>• Commissions</li> <li>• Product matching</li> <li>• Product sales support</li> </ul>
<b>Loan Origination (Mortgage, Auto)</b>	<ul style="list-style-type: none"> <li>• Know Your Customer (KYC)</li> <li>• Employment verification</li> <li>• Validate bank details</li> <li>• Credit history check</li> <li>• Loan eligibility check</li> <li>• Asset valuation</li> <li>• Documentation management</li> </ul>
<b>Retail Bank—Accounts and Deposits</b>	<ul style="list-style-type: none"> <li>• Account opening, account activation</li> <li>• Transaction posting, balance checks</li> <li>• Service interest computation, tax computation, fees</li> <li>• Support functions—KYC, customer statements</li> </ul>
<b>Common Reference Data Used Across the Bank</b>	<ul style="list-style-type: none"> <li>• Client/party management</li> <li>• Product management</li> <li>• Market data management</li> <li>• External agency management</li> </ul>

**Figure 8:** Banking Features Ripe for Reuse



#### **4. Build once, use many times.**

When a team develops a hit feature for customers, the organization should look for other parts of the business that could reuse it. This principle is especially relevant to banking and financial services. Figure 8 shows common examples that we've seen of banking features that agile teams are repurposing in their companies.

## How Agile Can Pay Off

Banks with agile cultures introduce new products and services much faster. They also are quicker at identifying and making cost reductions. Customer ratings also improve. The impact can be eye-opening:

- A U.S.-based financial services company cut the time it took to introduce new features 55% and the time to test them 70%. The cost of product development fell 40%.
- A leading U.S. mortgage banking services provider reduced the time it took to roll out new product features by as much as 75%, from an average 3-6 months to 6-8 weeks. What's more, the percent of customers who used the new features jumped from 50% to 87%. Not surprisingly, the company's JD Power customer survey ratings rose.
- A large global bank deploying a digital channel for consumers who wanted a mobile-first experience cut the cost of customer research by 94% after adopting agile approaches. It also reduced the time it took to execute payments by 60%, and the average time it took customers to open a new brokerage account by 75%.

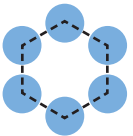
## Success Takes Work: Making Agile Change Stick

Even as financial services company executives recognize the need to adopt agile approaches, generating benefits like those described above won't be easy. Three challenges routinely emerge: winning over key business stakeholders, organizing geographically dispersed teams, and embracing an agile culture across the enterprise. However, each challenge can be overcome.



**Collaboration with business stakeholders.** While bringing business and IT people together in agile teams is vital to their success, at some banks decision-makers see both the company's problems and solutions as belonging to IT. Even when technology is central to addressing an issue, however, agile efforts will fail without participation from business functions.

Success with agile requires cross-functional collaboration and direct participation. Teams should include a role for a business-side participant who serves as team leader or product owner. Team meetings should be frequent, with regular presentations, and product demonstrations to business leaders. Teams must also convince business leaders they must devote time to the effort.



**Distributed teams.** When a group of software developers created the Agile Manifesto in 2001,<sup>60</sup> they emphasized the value of face-to-face conversation.<sup>61</sup> In today's business environment—with teams often spread across the globe—that's not always possible.

Managing this challenge demands emphasizing the close communication required among all team members. Teams can still collaborate over long distances when they skillfully distribute work tasks. They can even hasten progress. This still requires regular meetings and leveraging collaboration tools. It also involves the extensive use of what's referred to as 'information radiators': large charts, physical or digital, to track team member tasks and to communicate and sustain team momentum. This information must be available to all team members, whether or not they work in the same room.

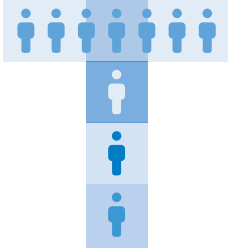
<sup>60</sup> Agile Manifesto, History: The Agile Manifesto, accessed March 13, 2018, <http://agilemanifesto.org/history.html>

<sup>61</sup> Agile Manifesto, Principles Behind the Agile Manifesto, accessed March 13, 2018, <http://agilemanifesto.org/principles.html>



**Embracing an agile culture.** Culture change is hard. Many managers loath ceding control. To get them to embrace agile, its value must be demonstrated to them. For example, a team can show metrics such as data on customer reactions to minimum viable products (MVPs) and subsequent customer feedback on the iterative improvements to those products.

Skills development is another element of an agile culture. Banks should cross-train team members so they gain additional skills. That will reduce the number of handoffs to other teams, which will increase productivity. We have seen banks train business analysts to perform quality function tasks (such as working on test specifications in addition to product specifications), and developers pick up testing skills, and vice versa.



By working together, team members can also gain 'T-shaped' skills. By this, we mean they bring knowledge and experience in a particular area (the vertical bar of the T) and leverage knowledge gained from working with experts in other areas (top of the T).

Agile methodologies embrace 'fast failures'—flaws in a product or service idea that a team discovers early and then fixes. This makes it possible to show how the early lessons learned from such failures can save time and money later as compared to traditional approaches.

There are likely to be some in the organization who resist the effort to move to agile. To bring detractors on board, leaders can implement a comprehensive change management strategy—building awareness, cultivating participants' acceptance, and enabling them to understand the benefits ('what's in it for me'). Demonstrating quick results from the effort will help win over colleagues who are skeptical of agile.

The message needs to be this:  
The company's competitiveness depends on it.

Once these barriers are overcome, it should become obvious that the adoption of agile is making the organization stronger. Agile should be breaking down barriers across the organization, and focusing it on what matters most to customers—and not on products or product features that aren't generating value. And combined with DevOps practices that automate the release of new technology-enabled features, agile can bring more coherence to a bank's effort to develop IT systems that were not integrated from past mergers and acquisitions.

Leaders at banks and financial services companies know that innovative, fintechs are working hard to take their business, and they are agile for a reason. Agile approaches are critical to making established financial services firms grow faster, become more competitive, and serve customers better, especially online.

# CONCLUSION

## Why Your Agile Team is Better Off Dispersed: The Case for Location-Independent Agile





## Author

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When the signatories of the 'Agile Manifesto' spelled out a new way to develop software in 2001, the sixth of their 12 guiding principles was having agile team members work in the same room. "The most efficient and effective method of conveying information to, and within, a development team is face-to-face conversation," the authors said.<sup>62</sup>

But 17 years later, this is not only impractical for many initiatives, it has become a big liability. Letting agile team members work from different locations is now a must. And it is one that a growing number of companies are proving to be both paramount and possible.

What other companies have found is that having agile team members operate from different sites gives them three advantages in digital transformation: *skills*, *knowledge*, and *speed*. In this article, I will explain why location-independent agile teams can beat agile teams whose members occupy the same room, and thus why companies must be prepared to make their agile initiatives location-independent.

<sup>62</sup> Agile Manifesto , Principles Behind the Agile Manifesto, accessed April 17, 2018, <http://agilemanifesto.org/principles.html>



## **Ignoring the Sixth Principle: Most Agile Teams are Already Location-Independent**

It's not hard to see why the authors of the Agile Manifesto urged companies to create agile teams that work in the same room. The ability to have face-to-face conversations on demand can increase trust, accelerate decisions, and spawn better ideas.

It's a key reason why online music company Spotify has grown from zero to \$5 billion in annual revenue since it launched its streaming service in 2008, and 39% alone between 2016 and 2017.<sup>63</sup> With more than 160 million subscribers today to its streaming music services, Spotify (whose legal headquarters is Luxembourg) divides its agile teams into four types: 'squads', 'tribes', 'guilds', and 'chapters'. Each squad works out of the same room (with one room devoted to each squad). A squad typically consists of six to seven people who produce the code that's put into use often daily on the firm's site for music listeners and music sellers.

<sup>63</sup> Fortune, Spotify IPO: What You Need to Know Now that the Paperwork is Public, February 28, 2018, accessed April 17, 2018, <http://fortune.com/2018/02/28/spotify-ipo-what-you-need-to-know/>

Rapidly growing born-digital companies like Spotify are held out as agile exemplars. As two Forrester research analysts Amanda LeClair and Jeffrey S. Hammond stated in a 2017 report, “Co-locating software development teams is the ideal.”<sup>64</sup> We certainly understand the sentiment. But it’s outlived its usefulness, as most organizations that use agile methods are now saying. Despite the benefits of co-located teams, several studies have found that the clear majority of those organizations are using remote members in their agile teams:

- According to Forrester, only 12% of agile development shops at large companies have 100% co-located teams. The survey was based on 1,867 respondents.<sup>65</sup>
- A VentureOne survey of 3,880 people at mostly North American and European organizations found 86% had agile teams whose members worked at multiple locations.<sup>66</sup> The company’s 2015 survey on agile practices found more than twice as many (82%) had location-independent agile teams compared with the number three years earlier (35%).
- Scott Ambler + Associates’ survey found 71% of companies had agile team members who worked offsite.<sup>67</sup>

In our work at global companies, we have observed hundreds of successful location-independent agile projects. One such company is ABN AMRO.<sup>68</sup> With five million retail customers, its retail banking business is one of the top three in the Netherlands. From 2013 to

<sup>64</sup> Forrester, Get The Most Out Of Distributed Agile Teams, April 27, 2017, accessed April 17, 2018, <https://www.forrester.com/report/Get+The+Most+Out+Of+Distributed+Agile+Teams/-/E-RES137389>

<sup>65</sup> Ibid

<sup>66</sup> VersionOne’s, 10th Annual State of Agile Report, 2016, accessed April 17, 2018, <https://versionone.com/pdf/VersionOne-10th-Annual-State-of-Agile-Report.pdf>

<sup>67</sup> Ambysoft, Agile at Scale Survey, 2016, accessed April 17, 2018, [www.Ambysoft.com/surveys/agileAtScale2016.html](http://www.Ambysoft.com/surveys/agileAtScale2016.html)

<sup>68</sup> ABN AMRO, Barclays Global Financial Services Conference, September 11, 2017, accessed April 17, 2018, [https://www.abnamro.com/en/images/Documents/050\\_Investor\\_Relations/Financial\\_Disclosures/Presentations/2017/Barclays\\_Global\\_Financial\\_Services\\_Conference\\_New\\_York\\_2017-09-11.pdf](https://www.abnamro.com/en/images/Documents/050_Investor_Relations/Financial_Disclosures/Presentations/2017/Barclays_Global_Financial_Services_Conference_New_York_2017-09-11.pdf)

this day, the bank has progressively embraced agile approaches to developing new digital banking services. Since then, the time it takes to test and build new digital offerings has been reduced by 60%. ABN AMRO has also cut by 83% the time it takes to shift new digital services or service updates from production into the marketplace (from 12 to two weeks).

“Our agile way of working now facilitates the quick implementation of ideas,” said ABN AMRO CEO Kees van Dijkhuizen in the bank’s 2017 annual report.<sup>69</sup>

That’s crucial given all the new digital competition for consumers’ banking business. “Digitalization and changing client behavior is moving far faster than we reckoned,” said van Dijkhuizen. One of the bank’s many digital innovations is a smartphone app called Tikkie. It allows customers to send payments to family or friends through text messages. By January 2018, more than two million ABN AMRO customers were using Tikkie—double the number just six months earlier.<sup>70</sup>

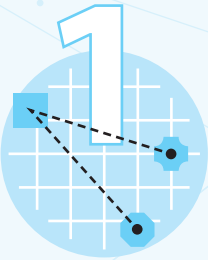
Since 2016, a U.S. insurance company has dispersed 70% of its previously co-located agile teams to location-independent teams operating in three geographies. Those teams include software developers in offshore locations on the other side of the world.

<sup>69</sup> ABN AMRO, Annual Report - Interview with the CEO, 2017, accessed April 17, 2018, <https://www.abnamro.com/en/about-abnamro/annual-report/interview-with-the-ceo/index.html>

<sup>70</sup> ABN AMRO, Tikkie Success Reaches 2 Million Users, January 29, 2018, accessed April 17, 2018, <https://www.abnamro.com/en/newsroom/press-releases/2018/tikkie-success-reaches-2-million-users.html>

# Three Reasons for Location-Independent Agile

**So why are most companies ignoring the Agile Manifesto's Sixth principle? We believe it comes down to three reasons:**



## **They must tap important but rare skills from afar.**

Agile teams require skills from multiple disciplines these days: software development, business processes, data science, and more. And, of course, each team needs someone well-versed in agile. (For example, Spotify's 'squads' each have an agile coach.) Many of these skills are in huge demand and short supply. Companies located in areas in which software development and analytics skills are not abundant must bring those people on their agile teams. In many cases, that will mean tapping into them from afar. Yet some companies still tap skills from afar even when they are locally abundant. Consider the immensely popular blog site WordPress, which generates 153 million unique monthly viewers in the U.S. alone. Its parent company (Automattic) is based in San Francisco. Yet nearly all its 699 employees work from their homes in 62 countries.<sup>71</sup>

<sup>71</sup> Automattic, About Automattic - All Around the World, Building a New Web, and a New Workplace. Join Us!, accessed April 17, 2018, <https://automattic.com/about/>



## 2

### **They need essential knowledge that doesn't exist locally.**

While it's not easy to separate 'knowledge' from 'skills,' I consider skills to be the capability a person gains from doing something many times. Knowledge, on the other hand, is possessing information on a topic; those with the most information on it become experts that others go to for advice. For example, I can become highly knowledgeable about the sport of soccer (as many sportswriters are), but never become highly skilled at playing the game (as many sportswriters are as well). In the context of agile, many teams need to tap the brains of experts—not just the skills of other team members. This expertise could be about the messages on an important new user screen (i.e., is it clear and compelling?). Or it could be about deep customer insights that only someone in your firm's market research department possesses—i.e., the person who conducted the research. Or it could be some other knowledge—i.e., knowledge from people with rare expertise and who don't have the hours to commit full-time to any agile team. While you may not need this knowledge every day on an agile team, you might need to draw on it frequently. And if you want to draw on it frequently, you are very likely to need these people to share their expertise via web meetings or conference calls.



## 3

### **They need to make rapid decisions and not force people to travel to make them.**

If you accept the need to have skills and knowledge of professionals from other locales on your agile teams, then you must also accept the fact that you can't wait for these people to travel to the location of your core agile team before you can make key decisions. That adds days (or even longer) to your schedule. This will especially be the case if you're drawing on knowledge experts from outside your company—i.e., people whose expertise is in such high demand that they don't need to travel anywhere to impart it.

Mastering agile demands teams that are self-organized and disciplined, with a razor-sharp focus on goals and daily progress—thus the preference for having team members in one place to facilitate collaboration. Attempts to assemble a team in one location, however, can run into problems. It may be costly to move people, even temporarily, to co-locate them, and not everyone will agree to it.

Leaders are likely to face resistance if they try to force people with domain knowledge from the business side

(marketing, finance, HR, etc.) to relocate to wherever the agile team members work. Furthermore, a large organization may have hundreds of agile teams and not enough business experts to assign to all of them.

Agile projects in many companies have grown in size and territory—across offices, states, countries, time zones, and even continents. Many large enterprises have skilled professionals in various disciplines all over the world collaborating to develop online business processes and the underlying systems.

Mastering agile demands teams that are self-organized and disciplined, with a razor-sharp focus on goals and daily progress.

## Making the Location-Independent Team Click: Four New Agile Principles

At the risk of sounding like I'm writing my own Agile Manifesto (trust me, I am not), I do want to offer some new agile principles for companies that want their location-independent teams to thrive. These are messages for the leaders of an organization who can play a highly influential role in setting the rules for how globally dispersed, eclectically skilled, and ethnically and culturally diverse people need to work together.



### 1. **Ensure intellectual harmony.**

Make sure at the outset that all agile team members understand each other's domains and terminology, to achieve a common understanding of the terms and manners in which they must work together.



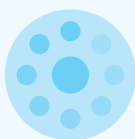
### 2. **Promote role equality.**

Ensure unwavering respect for everyone's expertise (i.e., no caste system).



### 3. **Protect strongly.**

Fiercely protect the dispersed agile team from the internal corporate attackers (especially when the investments mount and the returns are still in the future).



### 4. **Convert widely.**

Convince skeptical executives to become agile advocates—i.e., why this approach is essential to their and the organization's success.



Locating all agile team members in the same room has become a well-intended but quaint myth. Instead, companies must create location-independent agile teams: groups working on the same effort not located in the same place. In this way, enterprises can tap the talent needed to innovate and remain competitive wherever it resides in the world, generating more and better ideas for improving digital processes or products.

The biggest reason why most companies are ignoring the sixth principle of the Agile Manifesto is that it no longer makes business sense.

Leaders who understand the severe limitations of forcing people with the skills and knowledge to be in the same room day in and day out are making location-independent agile teams work, and work well.

## About Perspectives

*Perspectives* is Tata Consultancy Services' management journal. Since 2009, *Perspectives* has provided the best and most practical thinking of TCS experts—consultants who have helped many of world's most successful companies solve key business challenges. The journal also publishes interviews with leading authorities on business, management and economics, as well as case studies on companies at the leading edge.

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