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**Operations Practice**

# Lean management or agile? The right answer may be both

Through thoughtful design, agile and lean management can be the perfect match for companies in search of lasting performance improvement.

*by Stefan de Raedemaecker, Christopher Handscomb, Sören Jautelat, Miguel Rodriguez, and Lucas Wienke*

**Has there even been a time** when customers were more demanding of the companies serving them? Industry 4.0 technologies—many barely imaginable only a decade ago—have already enabled genuine breakthroughs in cost, convenience, and customization, creating extraordinary value for buyers while raising the performance bar for producers ever higher.

And then there's the volatility that never entirely disappears, flaring up in crises that can upend everything from supplier relationships to entire business models—all prevalent in today's current landscape as COVID-19 creates widespread disruption. It complicates leaders' efforts to make lasting changes in their organizations—efforts that historically have required years of sustained effort to take root.

Institutions ranging from aerospace manufacturers to tax authorities have nevertheless persisted, focusing their efforts on lean management and agile. Both methodologies have proven their worth as integrated systems for helping improve performance.

The mistake we find many leaders and organizations making is believing they need to choose between the two. In fact, that's not true. Not only is choosing unnecessary, but the two methodologies complement one another in ways that increase the impact they generate, often by deploying Industry 4.0 technologies to speed transformation. Under this best-of-both approach, top-performing companies combine tools, ways of working, and organizational elements from each to form a custom solution that meets the company's unique needs more completely and quickly than has been possible.

## Lean's legacy, agile's momentum

Lean management has helped organizations create value for over 70 years. Starting in the 1940s with its roots in the Toyota Production System , lean management has spread from manufacturing to service operations and just about every other department and function at companies, governments, and non-governmental institutions around the world. Lean organizations seek to identify and eliminate activity that is not valued by the customer or end user. This systematic analysis of processes and value streams to reduce waste, variability, and inflexibility boosts performance in cost control, product quality, customer satisfaction, and employee engagement—often simultaneously. Moreover, these companies apply a mindset of continuous improvement and flexible working processes in which all employees contribute new ideas and suggestions, so that the organization becomes better over time. Freed from non-value-generating tasks, people focus more on what matters to customers.

Agile is more recent, originating in software development in the 1990s accelerating after the release of the Agile Manifesto in 2001. Over the past decade, agile has rapidly expanded into other industries, such as telecommunications and banking—and, more recently, heavy industries such as mining and oil and gas.

Rather than the traditional process of developing a new product or service—which used to be highly sequential and time-consuming—agile is much quicker and more flexible. Agile models call for iterative development that aims to get an early prototype of a new product or service out into customers' hands as quickly as possible. Teams then capture feedback and iterate via quick cycles, refining the product or service over time. Agile approaches have since expanded beyond the realm of product development, and companies are increasingly organizing for agility across all their activities.

## Better together

A common misconception is that lean management and agile are mutually exclusive, based on fundamentally different principles and approaches and applicable for very different types of activities. Lean management is for routine, repeatable operations, this thinking goes, while agile only applies to projects or creative tasks. Therefore organizations, departments or functions need to pick one and focus on it exclusively.

However, that argument reflects a fundamental misunderstanding of both lean management and agile. In reality, both systems have been successful across a range of environments, and both share a similar set of foundational objectives: to deliver value efficiently for a customer; discover better ways of working to continuously learn and improve; transparently connect strategy and goals to give teams meaningful purpose; and enable people to contribute and lead to their fullest potential (Exhibit 1).

These objectives apply to any team or activity across an organization. There are, however, different ways of achieving them. Both lean management and agile provide team models, ways of working, and toolkits that can be deployed in any way that makes the most sense for an organization (Exhibit 2). The fact that

the two systems build on the same foundational beliefs makes their elements highly complementary. Morever, operational excellence often cannot be achieved through lean management or agile exclusively but rather through the combination of both systems, using associated toolkits.

**Connect talent and unlock value**
Team models are organizational constructs that bring together individuals in an operating model to deliver value. Lean management introduces team models such as work cells, in which teams work together to complete steps that previously happened separately and were vulnerable to delay. Meanwhile, agile relies on concepts such as cross-functional teams and flow-to-work pools, which follow the same underlying philosophy. Some

Exhibit 1

## Lean management and agile share a set of foundational objectives.



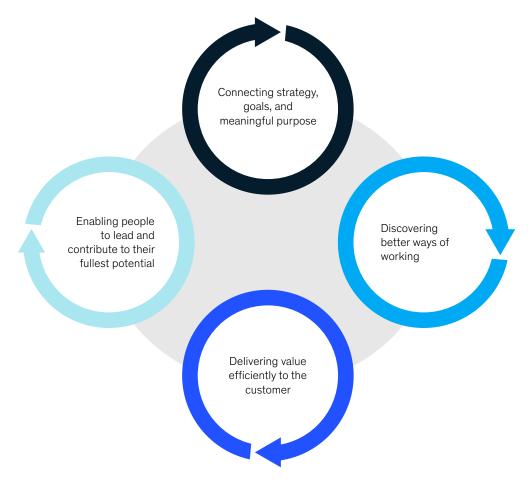Connecting strategy, goals, and meaningful purpose

Enabling people to lead and contribute to their fullest potential

Discovering better ways of working

Delivering value efficiently to the customer

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Exhibit 2

**Agile and lean ways of working build on a common mindset.**

| Level | Lean management | Agile | |
|---|---|---|---|
| Team models | • Work cells<br>• Expert choreography<br>• Segregating variability<br>• Relationship service cells | • E2E[1] cross-functional squads<br>• Flow-to-work<br>• Self-managing teams<br>• Specialist pools | Deployed as needed, based upon the nature of the activity |
| Ways of Working | • Lean management practices<br>• Kaizen/continuous improvement<br>• Kanban/visual workflow management<br>• Jidoka/self-monitoring automation | • Scrum<br>• Extreme programming<br>• Kanban | |
| Toolkit (examples, non-exhaustive) | • Standup/daily performance dialogue<br>• Value-stream mapping<br>• Leader standard work<br>• Root-cause problem solving<br>• 5S/workspace management<br>• Visual management | • Daily standup<br>• Backlog<br>• Sprints | Applicable everywhere across the organization |

**Underpinned by a common mindset and consistent set of principles**

[1] End-to-end.

ideas are similar across both systems but with different names. For example, lean management's relationship service cells, an advanced type of work cell for longer-cycle projects, have many features in common with agile's self-managed teams.

**New and better ways of working**
Ways of working are approaches or processes that teams use to get work done over time. Lean management includes integrated management practices and continuous improvement, or kaizen, with agile adding "scrum" teamwork management and extreme programming, emphasizing short development cycles and frequent releases. Not surprisingly, some ways of working, such as visual management tools, appear in both lean management and agile.
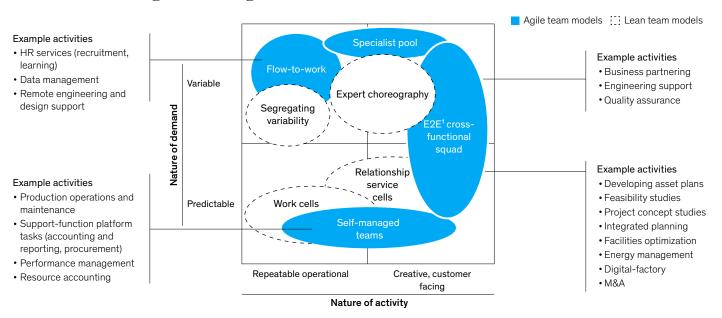
Typically, when someone says, "Lean management is for routine, repeatable operations," they are really talking about something like a lean work

cell applying a methodology for continuous improvement. Similarly, an assertion such as "Agile is for creative product development" typically conflates agile with a cross-functional squad applying scrum, which requires a high level of communication for a team to achieve a common goal. Such statements fundamentally misconstrue both systems.

The right team model, way of working, and tools to use will depend on the nature of the activity being conducted (Exhibit 3). While lean management indeed was created for highly repeatable and predictable processes, over time it branched out to expert choreography, which coordinates complex interactions so that interdependencies are resolved before they become blockages, and relationship service cells, where processes center on a single point of contact with the customer. Agile found its origin in creative, customer-facing environments, but concepts like multifunctional

Exhibit 3
**Different lean-management and agile team models are suited to different activities.**



Agile team models ▪   Lean team models ⬚

**Example activities**
- HR services (recruitment, learning)
- Data management
- Remote engineering and design support

Nature of demand

Variable

Predictable

**Example activities**
- Production operations and maintenance
- Support-function platform tasks (accounting and reporting, procurement)
- Performance management
- Resource accounting

Specialist pool

Flow-to-work

Expert choreography

Segregating variability

E2E[1] cross-functional squad

Relationship service cells

Work cells

Self-managed teams

Repeatable operational            Creative, customer facing

**Nature of activity**

**Example activities**
- Business partnering
- Engineering support
- Quality assurance

**Example activities**
- Developing asset plans
- Feasibility studies
- Project concept studies
- Integrated planning
- Facilities optimization
- Energy management
- Digital-factory
- M&A

[1] End-to-end.

and self-managed agile teams are now also being used in back-offices or call centers. The best selection of team models, ways of working and tools may be a combination from both lean management and agile.

## The value of two

A growing number of companies are getting better results under a best-of-breed model than they could by applying either lean management or agile systems on their own. Consider the following two case studies.

### Financial institution dramatically improves customer service

A financial services provider was struggling with customer service. Its contact center was taking far too long to resolve inquiries—up to eight weeks in some cases—in part because the specialist teams were overwhelmed by the sheer volume of customer requests. Worse, the firm had no designated owner for the entire customer-service journey. Instead, it operated under a traditional structure in which requests were passed from one function to another. Each function operated independently, tracking performance metrics only for their own slice of

the process. No one was looking at the entire experience from a customer's perspective.

The company used a combination of lean management and agile tools to improve. From the lean management toolkit, it used value-stream mapping and design thinking to completely rethink and restructure the customer experience for a given transaction or process. It also revamped key performance indicators to better reflect specific goals—for example, how fast a customer could get his or her issue resolved. From agile, the company created self-managing, cross-functional teams to improve collaboration and foster accountability. The new self-managing team enabled employees to handle all types of customer requests from end to end. Management also established a single point of contact for each process to reduce the number of internal handoffs and improve customer engagement.

Collectively, this approach led to a 90 percent reduction in the average time required to resolve a customer issue. Not surprisingly, customer satisfaction scores increased by 30 percent, as

did employee engagement. The reorganization means that teams are no longer bogged down by bureaucracy and instead can see how their individual contributions have a direct result on the customer experience—and thus on the company's overall performance.

### A mining company creates a new operating system

In the second example, a global mining company had been deploying lean management tools among frontline units for more than a decade with significant success. Frontline operations at a mining site have several attributes—physical operations, a constant workflow, predictable customer specifications and repeatable processes—that make them ideal for lean approaches like six sigma.

However, commitment and progress had stalled in recent years. To jump-start gains, the company began to apply some agile tools, ways of working and team models. Even in a process industry like mining, many activities require cross-functional collaboration and operating in variable environments, from developing new strategies and engineering process improvements to deploying innovative technologies. Agile team models such as the cross-functional squad are ideally suited to that kind of work and delivered impressive results: dedicated improvement squads increased engineering velocity by 200 percent, and a cross-functional "fuel and energy" transformation squad identified and delivered $10 million of value within months.

More broadly, the company found that the agile transformation could be the banner to improve and reinvigorate the existing lean management program among frontline units. The company selected a few specific tools from the agile toolkit and integrated these into daily, lean management-led operations.

The company established four-week sprint cycles—a time period that aligned with the rotation of workers at the front line. At the beginning of each sprint, teams gather to look over the plan for the upcoming four weeks and identify key events, such as major projects, visits by leaders, or onboarding of new employees, along with one or two themes where they want to explicitly focus their improvement activities. Similarly, at the end of each sprint, teams hold a retrospective session to analyze their performance against the objectives for that sprint and identify how they can work together more effectively in the future.

This relatively simple change—combined with a renewed focus on daily standups and visual management—led to a significant increase in engagement among the workforce with over 90 percent of frontline teams actively owning improvement initiatives and approximately 130 incremental improvements delivered within the first three months.

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As these two examples show, lean management and agile are both powerful systems, and companies don't need to choose between them as either-or options. Rather, companies can apply this all-of-the-above approach, choose the tools and applications that are most relevant for their needs, and thus generate even greater improvements across the entire organization.

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