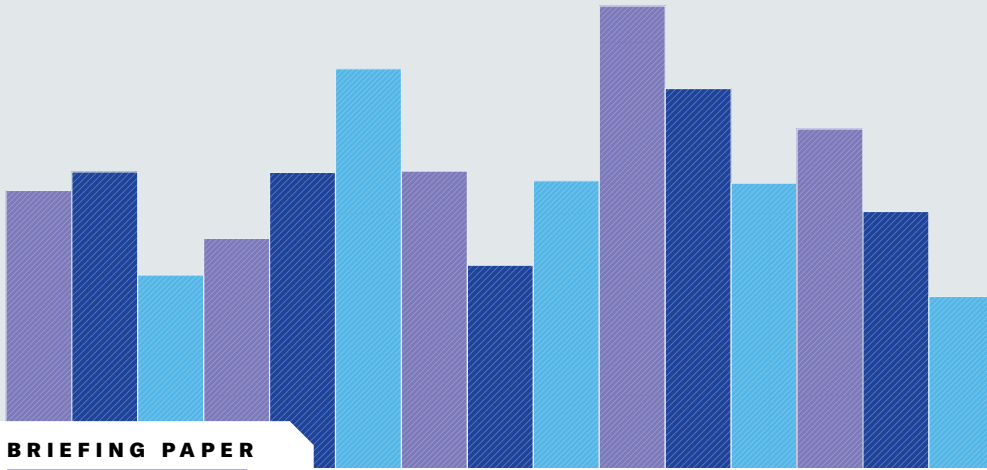




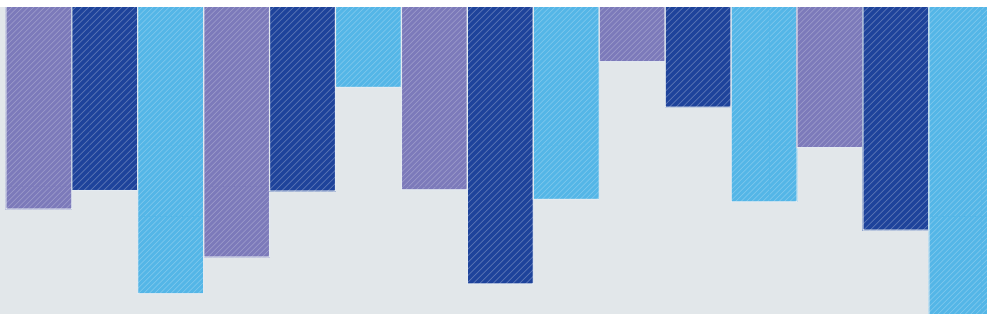
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BRIEFING PAPER

Using Value Stream Management to Speed Digital Transformation and Eliminate Silos



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When you're trying to move faster, visibility is critical. Visibility is how you choose your direction, navigate disruption, spot obstacles, and get where you need to go. This is just as true for business leadership as for race car drivers. However, too many enterprise leaders lack the necessary visibility to accelerate their digital transformations.

These leaders are stuck with data that provides a stale, imprecise view of where the business was. They're navigating opaque processes and siloed teams, meaning bottlenecks and other obstacles are only spotted when it's too late.

This lack of visibility is one of the primary aspects that leave teams struggling to reduce the duration between the inception of an idea and its delivery to market. That is why value stream management (VSM) is in urgent demand today.

At its core, VSM is about aligning teams, workflows, and investments with one key aspect: customer value. With VSM approaches and solutions, organizations can begin to boost collaboration, data transparency, and workstream efficiency—all to deliver greater value to customers.

We've sponsored this Harvard Business Review Analytic Services report to highlight some compelling ways VSM can shape business performance and outcomes. I hope you'll find this report both insightful and inspiring as you look to propel your organization on its VSM journey.

This report shows how enterprise teams have leveraged VSM to gain visibility into the product life cycle, workstreams, metrics, and funding priorities. For example, by harnessing a unified approach to analytics, the Boeing team could achieve better visibility and alignment with value—and in the process, realized hundreds of millions of dollars of savings in just two years. Rather than responding to across-the-board budget cuts, teams have the visibility to ensure they're funding the highest-value work.

In addition, this report outlines how the Verizon team has made more accurate, data-driven decisions. By enabling the free flow of information and improving process visibility and business intelligence, the organization has gained efficiencies in governance and staffing that netted them millions of dollars in cost savings. Instead of bouncing from one project to the next, teams across Verizon see how everything they do is tied to the bigger picture and have a clear understanding of how they add value.

Read on to discover essential strategies for speeding transformation and boosting customer value.



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Using Value Stream Management to Speed Digital Transformation and Eliminate Silos

Achieving a sustainable competitive advantage is nearly impossible without speed to market and a repeatable approach to value creation. Successful digital transformation requires firms to optimize the expensive and complex process of creating customer value. That process starts with the idea for a product or service and then extends to the development of it—the pinnacle being the delivery of that product or service to customers. Yet product or service innovation, along with the complex process of creating customer value, is often inhibited by organizational inertia caused by siloed teams, budgets, and management objectives.

To disrupt this inertia, companies are looking to supplant siloed processes with “value streams,” combining a distinct game plan with cross-functional teams to move a business idea for a product or service from concept to completion. To harness and accelerate value streams, companies are deploying value stream management (VSM), an agile software-based approach to removing barriers to fast execution. VSM software helps teams manage all the necessary tasks—including ideas, plans, budget, resources, and work efforts—in an integrated fashion without any silos or breakdowns in visibility and steering.

VSM software platforms surface once-siloed critical information and provide answers that were once unavailable to decision makers at all levels of an organization. “Looking at value streams helps you to understand where there’s waste and what are the causes for quality problems in manufacturing or programming,” says Christoph Roser, a professor of production management

HIGHLIGHTS

Value stream management (VSM) software platforms surface once-siloed critical information and provide answers that were once unavailable to decision makers at all levels of an organization.

VSM platforms address the entire spectrum of value stream challenges to advance innovation by not only reducing barriers between business units but also improving collaboration and scheduling, creating data transparency, managing dependencies, and eliminating duplicative workstreams.

A successful VSM implementation requires not only senior executive support but also the cooperation of nearly every individual in the organization.

“Looking at value streams helps you to understand where there’s waste and what are the causes for quality problems in manufacturing or programming,” says Christoph Roser, a professor of production management at the Karlsruhe University of Applied Sciences in Germany.

at the Karlsruhe University of Applied Sciences in Germany. “What are the reasons for the fluctuations in why you are busy or sometimes have idle time? Where should you start, and which problems should you solve?”

Rooting out opaque processes is often necessary to release an organization’s capacity to innovate cost-effectively on agility, speed, and quality, but the ability to achieve this catharsis is often elusive. When The Boeing Co., the global aerospace manufacturer based in Arlington, Va., needed to greatly improve its product development, it embraced VSM. “We always thought we were doing a good job of producing value until we started to work through this,” says Lynda Van Vleet, Boeing’s portfolio management systems product manager. “In our first two years, we saved hundreds of millions of dollars. But that wasn’t our goal. I think a lot of organizations look at this as a way of saving money because you usually do, but if you start out looking at it as a way of creating value, that just comes along with it.”

Adopting VSM brings its own challenges. While VSM software helps break down silos, it also puts pressure on the organization to change legacy approaches to product management and project investment. Employees are asked to focus more on their role in providing a product or service and less on their role in a particular business function, such as marketing, product assembly, or accounting. For example, engineers once exclusively assigned to a Boeing aerospace unit were shifted to broader engineering roles, which


enabled the creation of cross-functional teams, reducing resource “overlaps,” according to Van Vleet. By making this shift, employees could focus more on creating value—simultaneously improving the organization’s resource deployment and waste reduction.

This paper will examine the critical components of value stream management and highlight how companies are using VSM platforms to align stakeholders across planning and execution and, by doing so, are mitigating risk and managing performance efficiently from inception through the delivery of innovative and value-rich products and services.

Karlsruhe University’s Roser, a former McKinsey & Co. consultant who spent five years as a senior researcher for Toyota in Japan, believes that regardless of what software tools or product management approach organizations deploy, every business or product improvement is ultimately about finding a problem and solving it. “At the end of the day, you have to look at the details of what’s going on and what you need to change to improve it,” he says.

The Value of Greater Visibility

Organizations face several challenges when developing products and services. Most organizations aim to achieve a “first mover” advantage but struggle to reduce the time from the inception of an idea to product delivery. VSM platforms address the entire spectrum of value stream challenges



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Visibility into the product life cycle is important when business silos persist and a lack of shared visibility into workstreams, data, or funding priorities still hinders firms from optimizing the creation of digital or physical products or services. Lacking process visibility, organizations can be impeded when trying to achieve KPIs such as improving their time to market or their average time to resolution of problems.

Boeing is a 106-year-old company with a substantial legacy; despite that history, however, the organization has been open in recent years to improving its management approaches to innovation, safety, and even company culture. When the management team embarked on its VSM journey seven years ago, Boeing, like many large manufacturing companies, was awash in portfolio management tools and steeped in continuous improvement approaches such as Lean, Six Sigma, and Kaizen. To accomplish such things as faster time to market, the initial objective was to enable management to achieve deeper process visibility across disparate business units and functional teams.

“Before we adopted value stream management and our sophisticated processes, we actually had no idea what work was being done in each of our organizations,” Boeing’s Van Vleet explains. “So, for example, is everything we are doing status quo,

or are we doing a lot of new future development, not just for an airplane we’re working on now but for the future capabilities of our aerospace industry? We had no idea of our mix because we couldn’t look across everything and see dependencies.”

Van Vleet’s VSM team soon realized that project financing needed to align with each portfolio investment rather than a business unit. And each portfolio investment had to be justified from a resource standpoint. However, the team also noticed that each IT group had its own analytics teams, and “we had people in every organization doing the same thing,” says Van Vleet. Boeing management seized an opportunity to establish an important precedent, creating a single analytics team to realign the work more efficiently and achieve “consistency with all of our analytics,” she adds.

As Boeing gains experience managing value streams, the company is refining how it funds projects to focus on maximizing the potential of each product or service. Rather than doing centralized budget planning, the company will determine funding by what product managers say they need to achieve their objectives and key results. “It took a long journey from 2015 to 2023 planning to get there,” Van Vleet says. “It’s been a journey, and the success has been amazing.”

Awareness of Budget Silos

Until it started using VSM, Boeing’s spending plans could change because of macroeconomic concerns, and the company

would sometimes implement uniform budget cuts across all departments. “But that was the worst thing you could do because it doesn’t tell you if you are funding the highest-value work,” Van Vleet warns. “By looking at the value of work, we can budget correctly and not just look at the dollars.”

Traditionally, organizational budgets have been tied to departmental goals and management objectives, such as the production of a certain number of widgets or press releases or the hiring of a certain number of software engineers. Funding is tied to these tasks regardless of whether they contribute to even larger value-creation objectives, such as higher customer satisfaction or employee retention or improved product safety. Worse, when business objectives change over the course of an annual budget cycle, organizations may lack the means to redirect their investments.

When Boeing needed to make a shift in its budget plans because of airplane safety concerns and how they might affect the company’s business, the VSM team sprang into action. “For example, the 737 Max airplane had to take priority,” says Van Vleet about spending on technical assessments and safety testing for the jet. “That was the highest initiative of Boeing at the time: to get that airplane up and running again. Is there a business case supporting this work? Is the work technically feasible? All of it made it strategically our most value-added work, and our work (and funding) was prioritized according to that. So, the processes we had in place didn’t change—just the work priorities changed.”

At Verizon, a multinational telecommunications company based in New York, VSM platforms were also not the first solution the company embraced in an effort to break through business silos and organize work according to a standard set of goals and objectives. “We’re in a data-intensive tech field that moves faster than a project plan or traditional roadmaps,” says Jason Newman, senior manager, systems engineering, Connected Solutions Group strategy and operations at Verizon.

Verizon’s telecommunications products and services were growing so fast that management felt it needed new methods to manage the increased volume of work, explains Newman. “We had some siloed organizations, and everything worked great within the silo, but as the company introduced products that crossed boundaries—the method of everyone focused on their own space wasn’t cutting it.”

The organization not only needed to expand its capacity to manage faster product cycles but also needed to establish a “free flow of information” between business teams. “You can’t look down the value stream with obstacles in the way,” Newman explains. The VSM team believed that improved process visibility would enable Verizon executives to better assess the impact of strategy shifts. VSM equips executives with the information to quickly understand “who is impacted and which strategic goals might be jeopardized,” according to Newman. “Also, we know whom to bring to the table to hash that out. That’s much more than typical scenario planning.”



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Verizon saw the immediate value of heightening process visibility and improving real business intelligence. Newman’s team leverages the VSM platform’s machine learning and artificial intelligence to “consume data and help contribute to decision making.” Surfacing deeper information enables more accurate data-driven decisions. “Just the efficiencies gained from governing and staffing provided cost savings,” says Newman. “What you see is maximizing the ROI.”

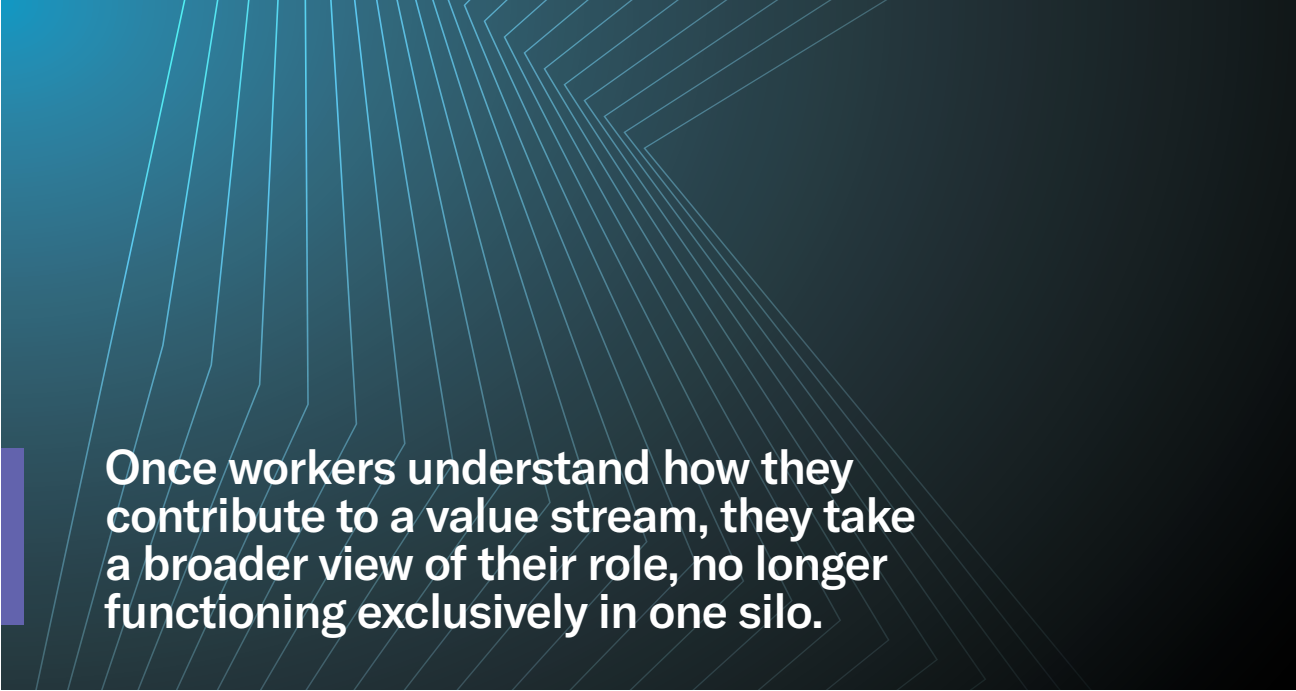
Navigating a Cultural Shift

Both Verizon’s and Boeing’s VSM teams discovered that changing legacy business function silos requires obtaining employee buy-in to the process changes to come—especially the ones that impact employees’ daily work and priorities. The changes mark what Newman calls “a cultural shift. It’s the nature of how we work in this new way.”

Of course, changing company culture is notoriously difficult. Roser believes that the cultural shift isn’t just about how an individual’s workflow or priorities may change. In the big picture, a company “should have a problem-solving culture, not a blame-somebody-else culture. That’s why so many projects for improvement fail, because they don’t follow through on fixing problems that pop up.” Roser fears that the bigger the company, the harder it is to change the culture.

Cultural factors can also have a big influence on the process of creating innovative products and services, says Roser. He believes that innovation can be aided by the process of value stream mapping, a visual representation of a process flow and the steps to take an idea from inception to product or service delivery. “Every value stream must have a bottleneck,” Roser explains. In illuminating the problems, he adds, “a value stream map is a visualization tool that can help sort out differences.”

Changing the culture in a quest to break down traditional business unit silos often leads to reassessing the roles of individual contributors. Once workers understand how they contribute to a value stream, they take a broader view of their role, no longer functioning exclusively in one silo. “You



Once workers understand how they contribute to a value stream, they take a broader view of their role, no longer functioning exclusively in one silo.

support multiple business units—it's not necessarily confined within your own team," says Verizon's Newman. "That's part of the transparency of the free flow of information. That's a cultural shift."

As employees began to understand their role in a particular value stream, their engagement began to improve—and they experienced much less burnout. "People were scattered and bouncing from one project to the next," says Newman. "Burnout happens in a world without controls." In adopting the value stream approach, the difference is that now employees can "see how everything they do is tied to the overall picture. Knowing and seeing where you add value is a huge value to this process."

Still, Verizon employees may have wondered if the realignment of roles would impact their responsibilities. "We had too many people wearing too many hats," concedes Newman. But Verizon seized the opportunity to refocus employees on performing higher-value work instead of plugging multiple holes. For example, rather than focus on manual tasks, such as data entry, employees were encouraged to make more strategic decisions. As a result, Newman says, "teams are constantly becoming more efficient."

While there are constant disruptions in workstreams due to competitive pressures and market shifts at Verizon, teams have the flexibility to adapt, says Newman. "We can share with those most impacted by a changing process why this is the best path forward." As a result, the VSM team encounters


"less change resistance because everyone understands why we're changing, and that leads to an improvement in productivity."

A successful VSM implementation requires not only senior executive support but also the cooperation of nearly every individual in the organization. In that sense, it represents a significant undertaking and an opportunity for a cultural transformation that requires extraordinary transparency and deft communication.

Conclusion

Value stream proponents such as Verizon's Newman and Boeing's Van Vleet believe that organizations waste valuable resources by taking a traditional siloed business unit approach to generating value for customers, partners, and employees. The efforts by both companies demonstrate how organizations can improve value stream creation by taking a portfolio approach to VSM, enabling them to optimize multifunctional product development continuously.

There are many different ways to view and manage value streams, but specialized software that can handle dynamic processes appears to be the most efficient way to share real-time information with stakeholders. Data is the lifeblood of the value stream approach, and with automation, the software can surface information continuously and more completely than manual alternatives or assessments that occur in annual



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budget planning cycles. The faster and more thoroughly data surfaces, the better the decision making.

Now comfortable with its VSM approach, Boeing is preparing to invest in what Van Vleet calls “second-century enterprise systems,” which provide a unified view of Boeing’s global supply chain network. The company evaluated its future productivity needs and emerging business requirements, including potential investments in planes, security, and infrastructure, and aligned on one cross-functional system to manage Boeing’s vast supply chain. Rather than organize Boeing’s product or service value streams by business unit, as they had in the past, Van Vleet says, “We now have all of our engineering functions

together. We’re starting to move to a One Boeing model, so functions that should operate as one are starting to do that. We are starting to see the value of the cross-functional areas.”

Boeing’s advance to another VSM level isn’t surprising since it’s a natural transformational adjunct to the value-creation effort. Verizon sees no end to its transformational efforts either—and is ready to evolve and adapt to constant changes. “The thing with value stream management is you’re never actually done—there’s no finish line—and it’s an ongoing process,” says Newman. “Value stream management lets people do the work they’re supposed to do instead of getting caught up in work about work.”



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