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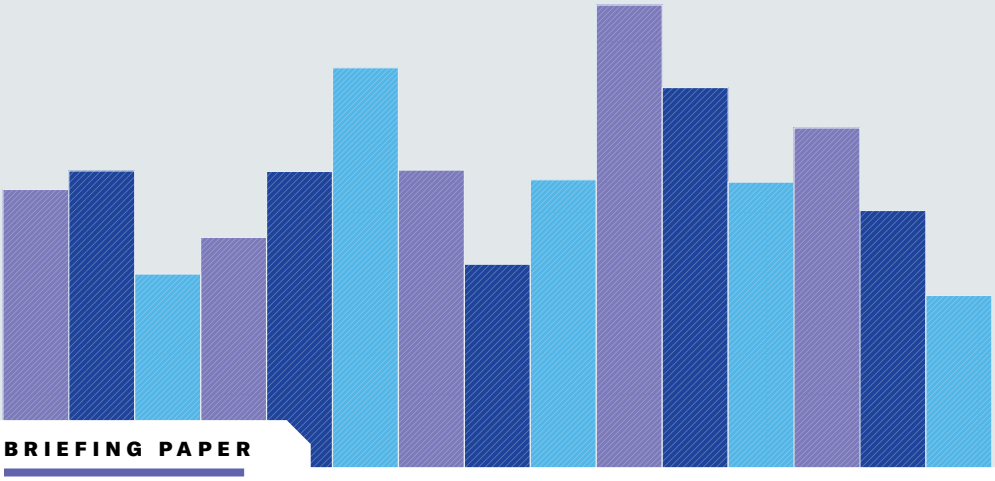
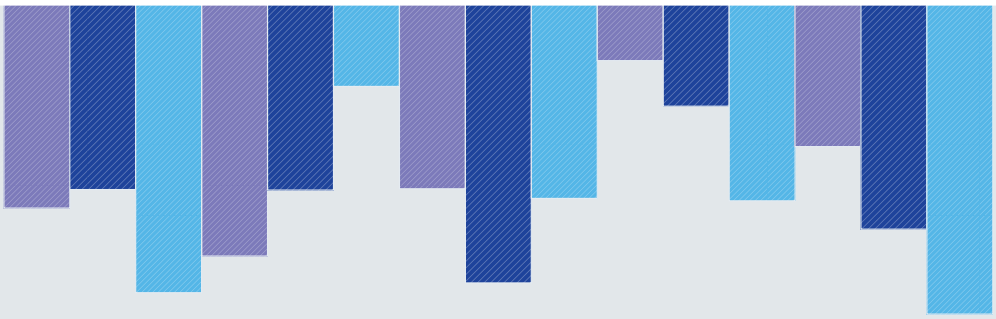


BRIEFING PAPER

Entering the Age of Data-Driven Digital Transformation with Value Stream Management



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External market conditions have proven plenty challenging in recent years. However, when it comes to digital transformation, it's often the internal obstacles that have been proving to be the most imposing.

To break through persistent barriers and achieve transformation objectives, leaders must have the right data. Too often, however, the data they need is locked away in functional silos. This is one of the key reasons why the disconnect between business and IT remains such a problem. Teams need to accurately track all facets of the digital value stream—including products, people, and processes—to manage and optimize transformations.

This is why establishing effective value stream management (VSM) is a vital imperative. With VSM, teams can gain the unified, cross-domain intelligence needed to optimize every step in value delivery, from planning and investment to development and rollout. Through VSM strategies and solutions, teams can finally bridge the gap between business and IT. In the process, they can break through the barriers that stifle digital transformation.

We're pleased to sponsor this Harvard Business Review Analytic Services report, which examines obstacles impeding digital transformation progress. This report also offers insights for employing strategies and tools to overcome these obstacles, drawing on insights from industry experts at Bain & Co. and International Data Corp.

This report also details some of the strategies and practical lessons drawn from the successful VSM initiatives executed at Tyson Foods, the largest food processor in the U.S.

Tyson's leaders knew they needed to transform their technologies to thrive in their markets. However, before moving to digital processes, they had to break down silos and transform their fundamental workflows, operations, and approaches.

Read on to find out how VSM strategies and solutions helped the team at Tyson establish the critical instrumentation they needed to manage these transformations. Through VSM, they've eliminated data silos and established a single, unified way to track spending and resources. They've closed the loop between investments and the value those investments deliver. In the process, they've gained the intelligence to prioritize, invest, and plan more effectively.

Take a look at the following pages and see how your organization can harness VSM to boost its odds of digital transformation success.

Serge Lucio

Vice President and General Manager of the Agile Operations Division

Broadcom

Entering the Age of Data-Driven Digital Transformation with Value Stream Management

The textbook idea of digital transformation is that it converts products, customer interactions, and business processes from analog to digital to achieve greater operational efficiencies and accelerate time to market or profitability. But digital transformation is no sure thing—it remains the white whale of modern business. Done properly, it catalyzes innovation, bringing new products to market with unprecedented speed and customer engagement.

Yet, done improperly, it can swallow resources, torpedo careers, and slow product development. As evidence that digital transformation is a hit-or-miss proposition, Bain & Co., a global consultancy, finds that "only eight percent of companies have achieved their targeted business outcomes from their investments in digital technology."[1] The Boston-based firm concludes that over 90% of organizations have struggled with digital transformation.

A decade into its existence, digital transformation remains more problematic than typical large-scale enterprise software deployments. Digital transformation challenges organizations to operate in new ways and adjust on the fly—leading to profound changes or misfires.

"The pace of digital disruption is only getting faster over time," observes James Anderson, a partner at Bain's London office. In response, companies aim to improve their clock speed, he says, but without proper instrumentation, companies cannot measure or receive the value they seek from digital transformation. Successful digital transformation compels organizations to harness and optimize all facets of the value stream—defined as products, people, and processes that generate products or services—which almost always extends to include partners, suppliers, distributors, and customers

HIGHLIGHTS

A class of software known as value stream management (VSM) helps organizations tame digital transformation's complexity by **surfacing data to optimize tasks** from the **ideation stage** through **planning**, **investing**, **resourcing**, **development**, **delivery**, and **release**.

Which investments will deliver the most value immediately? With VSM, one focus is on **assessing time to customer value for a pending product or service**.

With better data, executives gain **deeper insight into their planned business investments' costs and probable outcomes**, enabling improved resource allocation, risk management, and prioritization.

themselves. But often, organizations lack complete visibility into the entire value stream and cannot generate the desired customer innovation or even meet their digital transformation objectives. Missing data is often a problem. In today's enterprises, an estimated "69% report data is trapped and unable to be fully used," according to a Wakefield Research study commissioned by WANdisco.[2] Harvesting data insights and gaining operational speed are prerequisites for successful digital transformation.

To keep pace, Anderson says some organizations take an agile software-based approach to removing barriers to fast execution. A class of software known as value stream management (VSM) helps organizations tame digital transformation's complexity by surfacing data to optimize tasks from the ideation stage through planning, investing, resourcing, development, delivery, and release. Anderson says VSM and some portfolio-based management tools enable decision makers to answer questions such as "Do we have the right processes in place to harness data and translate it into value?" According to a November 2022 study by the Needham, Mass.-based research firm International Data Corp. (IDC),[3] more than three in five companies are piloting, using, or expanding the use of VSM in their organizations. Another recent IDC study found that more than four in 10 respondents are using or plan to use VSM to track software projects against their business's key performance indicators.[4] **FIGURE 1**

This paper will examine the essential components of value stream management and highlight how companies like Tyson Foods use technology and agile processes to achieve successful digital transformation outcomes, reducing risk while driving more innovation and higher value for customers and shareholders in particular.

"Digital transformation brings its own differentiated set of challenges on the one hand—and has dramatically enabled company responsiveness to dynamically changing business and competitive environments on the other," says Melinda Ballou, IDC's research director, Agile ALM, Quality & Portfolio Strategies. "By bringing this approach and understanding to a strategic level for executives and practitioners, VSM can help organizations overcome the interdepartmental blame game that often occurs when teams seek to address and remediate bottlenecks. By successfully engaging in VSM, organizations can improve collaboration and deliver efficiency and drive innovation faster."

Good Data, Strong Governance

Long before digital transformation became a board-level initiative, semiautonomous business units would connect as needed to build customer value. When a business unit required a new business application, it worked hands-off or asynchronously with developers on the information technology team. Software code was "thrown over the wall" to business stakeholders at various milestones.

The so-called waterfall development style became known for its inflexibility and inefficiency. Yet in the past decade, as digital transformation became a higher business priority requiring greater cross-team cooperation, this approach was gradually supplanted by more agile methods. Business stakeholders were paired with developers to produce software more iteratively and collaboratively with frequent touchpoints and milestones.

Creating digital products rendered the waterfall-style development approach almost completely unworkable, but the new agile methods of driving value required cultural shifts. "It's often quite new for companies that are used to managing their technology separately from the rest of their business, that have been organizationally siloed and haven't really got that kind of end-to-end product delivery model nailed," says Anderson. As a governance tool, VSM embodies all of these learnings.

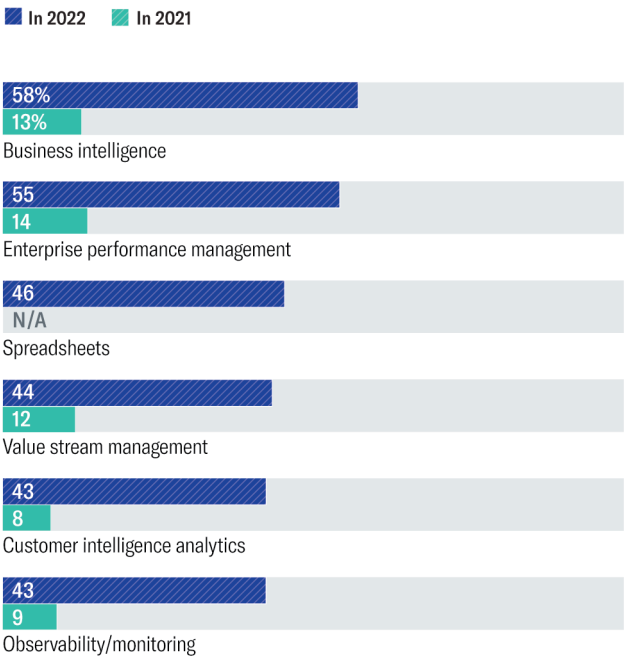
The quest for accelerated digital innovation is top of mind at Tyson, America's largest food processor and a $53 billion

FIGURE 1

Tracking Tools

Adoption of tools in the enterprise for KPI tracking grows

Does your organization use or plan to use any of the following types of tools to track software projects against business KPIs?



Source: Future of Digital Innovation Sentiment Survey, IDC, July 2022

multinational corporation that began as a poultry distributor 92 years ago in Springdale, Arkansas. Before kick-starting the company's journey from legacy analog to digital processes, the IT team realized it first needed to transform itself. The Tyson team adopted a portfolio-style management approach with VSM that deepened management's insight and visibility into spending, available resources, and how various investments create customer value. The initial phase of Tyson's VSM evolution is focused on software project prioritization but will shortly expand across the enterprise and tie into other business systems such as procurement and finance—no longer under the auspices of IT but rather a cross-functional group called Digital Enablement.

"We're at a point where everyone wants to move fast and transform—delivering faster, higher quality," says Chelsey Marr, senior director of the Tyson Technology Program Management Office. "Keeping the work streams on the rails is also a high priority," adds Marr. "You have to be quite sure that when you're changing how people work, you're enabling them to do it better or faster—and not slowing them down."

To bolster those objectives, Tyson established a Technology Council composed of business function leaders who select and prioritize projects intended to deliver the highest value to the company. The VSM software gives stakeholders the insights to assess the costs and potential return. "Anyone in the enterprise can jump in and see what's going on for business transformation and understand the business case and why we're even doing it," says Marr. In the past, Tyson business units or even IT stakeholders could only track technology project work that moved through a centralized capital request system. But that missed a lot of smaller projects that didn't require capital funding. At Tyson, gaining deeper value stream insight required improving project governance to achieve more efficient use of resources. Are developers overutilized or underutilized? "We have more visibility into metrics that matter in terms of how we work and use our people," says Marr. "It's easy to see constraints from competing priorities." Marr adds that with VSM, the company has gained a sharper "line of sight into what will be delivered, who will deliver, and how the results will be delivered. Adding a layer of governance, we have more rigor in place to protect business continuity and production environments throughout the enterprise."

The data layer that powers better governance also offers additional insight into where employees spend their time and how that time satisfies organizational objectives. According to Garrett House, senior manager for platforms and support at Tyson, VSM data insights are "directly correlated" to enterprise-wide employee goals and information technology employees' goals. Value stream management (VSM) data provides a go-to source for information, such as return on investment and project status, and can help managers determine whether KPIs have been met, which can impact compensation.

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Measurement That Matters

Tracking how an organization generates and delivers customer value is essential to a successful digital transformation, but it's also a lot easier said than done. Getting every business function leader aligned on measurement may require an executive- or board-level mandate. That's because key performance indicators often differ by business function while serving as the cornerstones of executive compensation agreements.

But then there's also the question of whether a firm gathers the right metrics. In some ways, KPIs are arguably not as well suited to agile-based workflows as objectives and key results, a goal-setting methodology focusing on short time frames, transparency, and collaboration.[5] The two methodologies complement each other, says IDC's Ballou, but there are others to consider. "We see organizations leveraging a range of metrics with VSM automation and adoption—from typical DORA metrics for software delivery (e.g., deployment frequency, mean lead time for changes, mean time to recover, and change failure rate) to enabling visibility into the core qualitative impact of initiatives (and blockages) to businesses."

According to Anderson, companies typically collect data points that form traditional financial metrics but eschew other indicators, importantly, for example, about end markets. "They have the data that they gather in their businesses around P&L [profit and loss], financials, invoices, cost centers—all this stuff accountants tell us to do—and not enough metrics around the customer," he explains. Consequently, organizations have struggled to "understand how their technology investments in digital transformation will generate customer value and impact the bottom line."

Chelsey Marr, senior director of the Tyson Technology Program Management Office, used VSM tools to discover that current demand exceeded 300% of the Tyson development team's capacity. Now, she says, demand runs at about 100%–120% of Tyson's capacity with the work review and prioritization framework in place.

In Anderson's view, brand touchpoints, or measurable customer interactions, are a "very important and leading indicator" of future profit and loss statements. He urges clients to "link customer lifetime value to actual behavior that drives spend and share of wallet." For example, companies should consider the experiences they deliver and how those experiences impact their Net Promoter Score, which is a customer rating that measures the likelihood of a customer recommending the company's product or service. He adds, "I think that has a lot of downstream impact on how people measure the value that they get out of digital transformation and where they prioritize their efforts and get the [desired] return on investment."

Prioritizing Investments

There's a classic, uncomplicated formula for projecting a return on technology investments where the return on investment equals net gain divided by cost. But prioritizing enterprise technology and software projects entails harnessing other data to determine how quickly your investment will produce that return. Which investments will deliver the most value immediately? With VSM, one focus is on assessing time to customer value for a pending product or service. If resources are unavailable, a promising project may need to wait in the queue.

Given digital transformation's reputation as a challenging objective, stakeholders don't always pack all of their ideas into a monolithic product or service launch. Accordingly, "the VSM process is iterative," explains Ballou. And there are practical reasons for this. "Organizations should review the results of the plan carefully to see if the identified changes result in efficiencies. As improvements are made to achieve the future state, teams will uncover additional hidden issues that must be addressed."

Prioritizing investments is almost always a matter of visibility into supporting data. In one instance, Marr used VSM tools to discover that current demand exceeded 300% of its development team's capacity. Now, she says, demand runs at about 100%–120% of Tyson's capacity with the work review and prioritization framework in place. Marr asks Tyson's Technology Council to use VSM to evaluate the highest-value items and "stack rank the portfolio," determining what can wait or possibly be grouped into a larger, value-added project. As a result, "Our Finance Transformation program, a multiyear, multi-project initiative that spans across all our business units, was accelerated once leadership could clearly see the value add in one place," adds Marr. "Once we were in a single system of record," meaning VSM, says House, Tyson's process of portfolio balancing and reprioritization led to the reduction or deprioritization of 30% of in-flight technology projects to "pivot focus to value-add initiatives. With this transformation, we've been able to work within our capacity and build in the ability to burst [resources such as coders] as needed in certain periods." The secret to this success was aligning Tyson's leaders on what was important.

Conclusion

With better data, executives gain deeper insight into their planned business investments' costs and probable outcomes, enabling improved resource allocation, risk management, and prioritization. "The winners of tomorrow are not necessarily going to be the businesses that have got the best assets or customer experience today," contends Anderson. "It will be the people who can iterate the fastest to adapt to the future. Where in that process do I need to improve so that I can make sure that my customer is getting good value?"

As Tyson Foods accelerates its march toward digital transformation, the organization plans to scale its VSM deployment and make even more informed business decisions. It will be able to answer classic "make or buy" questions such as whether it should perform particular work in-house or hire a third-party service provider.

"As we look at the future state, we become more strategic in how we use data," says House. "We have more data than we've ever seen historically." And one question remains for House: "How will we leverage this data to pull more wins and pursue more opportunities?"

Endnotes

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