The State of Value Stream Management Report 2023

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THE STATE OF VALUE STREAM MANAGEMENT REPORT 2023

by the Value Stream Management Consortium (VSMC)

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A big thank you to our leader members, without whose support we would not be able to conduct this research:

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Executive Summary:
VSM Adoption is Advancing & Drives Performance

In this, the third year of our annual State of Value Stream Management reports, we focused on the theme of **leading with value**.

In the State of VSM 2022, we looked at VSM's position in adoption in the context of crossing the chasm and identified that we are at the early market stage. We see evidence that adoption continues to advance. The key indicators are:

- Advancements across the VSM implementation roadmap
- An increase in the practice of creating value hypotheses
- More organizations organizing around value streams
- More people aligning to value streams
- Value being measured more frequently
- DevOps toolchains increasingly connected to value streams
- Increased adoption of Value Stream Management Platforms (VSMPs)

We are continuing to uncover clear evidence that practicing VSM correlates with higher levels of organizational performance. Our research has shown that higher performing organizations are more likely to:

- Organize around value streams
- Be working with digital products
- Create value hypotheses—across the full scale of work items
- Define value hypotheses earlier in the product life cycle
- Put the customer first when they think about value
- Have faster flow—shorter lead and cycle times
- Measure the actual value realized by their work
- Use a VSMP
- Visualize their organization as a value stream network

Our respondents are mainly from large organizations—40% from those with over 10,000 employees—giving us great insights into enterprise adoption. The majority of our respondents are driving change within their organizations, with the most common job titles being 'coach' or 'transformation lead' for agile, DevOps, or lean. 60% are primarily creating value in their daily job for external customers—business (B2B 39.3%), or consumers (B2C 15.4%) or external partners (6.1%). The remaining 40% are primarily serving internal customers. For more information on our survey demographics, please refer to the final section of this report.

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Digital Value Streams Lead the Way

This year, for the first time, we asked how much of our survey respondents' work involves digital products, platforms or value streams. 75% responded 'a lot' or 'all of it'. This reflects the increasingly digital character of the economy, and that organizations have been digitally transforming for many years now. The trend described in previous reports continues to confirm the assertion that **'all companies are tech companies'**. When the VSMC was formed in 2021, our founders debated whether to focus our efforts across all VSM efforts in any organization or to aim more squarely at the digital value stream space. We are a small, new organization with limited resources and so we agreed to focus in on this aspect of VSM in the first instance. Additionally, we felt that VSM in its more traditional guise was well-covered by existing practitioners in the industry. To contribute something of value to the industry, it needed to be something original.

Our existence is born out of a renaissance in VSM driven by dual forces. Firstly in the advancement in the adoption of ways of working concerned with flow—particularly agile, DevOps, and Lean—and secondly in the associated development of technology platforms that support these ways of working. In particular, it's the platforms that support continuous integration and continuous delivery that make the resurgence of these value-centric approaches more accessible—as teams gain real-time data about delivery work and customer experience.

We also note that respondents with higher levels of digitization have higher levels of organizational performance—elite performers are twice as likely to be working with entirely digital products than those with low levels. Around 80% of respondents working in the higher performing organizations work mostly or entirely on digital value streams.

> "Delivering value continues to increase in complexity and is more digital than ever. The result is a growing emphasis on dependency management and coordination, which will only get you so far. Alignment and everyone knowing how to move together is much more powerful. Tremendous benefits come from alignment at all levels in a value stream, from strategic objectives to writing a line of code to releasing value to a customer."
>
> **Joshua Barnes**, VSMC Board Member, Founder at Process Mentors

How much of your work involves digital products, platforms or value streams?

5 - All of it	47%
4	27%
3 - Some of it	16%
2	7%
1	3%
0 - None of it	0%
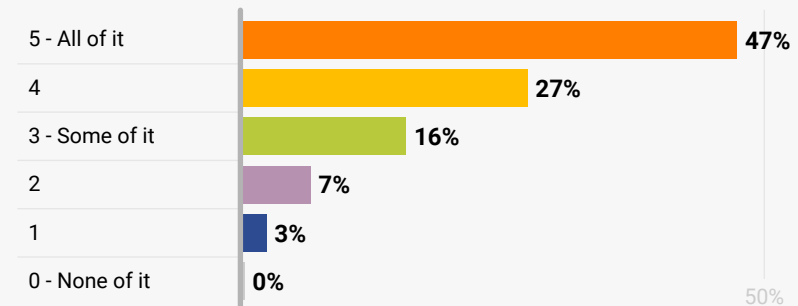
How much of your work involves digital products, platforms or value streams? (Grouped by organizational performance)

Legend: All of it | 4 | 3 | 2 | 1 | None of it

Elite performers
- All of it: 59%
- 4: 19%
- 3: 13%
- 2: 1%
- 1: 6%
- None of it: 1%

High performers
- All of it: 63%
- 4: 20%
- 3: 13%
- 2: 4%
- 1: 1%
- None of it: 0%

Medium performers
- All of it: 40%
- 4: 32%
- 3: 19%
- 2: 6%
- 1: 3%
- None of it: 0%

Low performers
- All of it: 33%
- 4: 33%
- 3: 17%
- 2: 17%
- 1: 0%
- None of it: 0%

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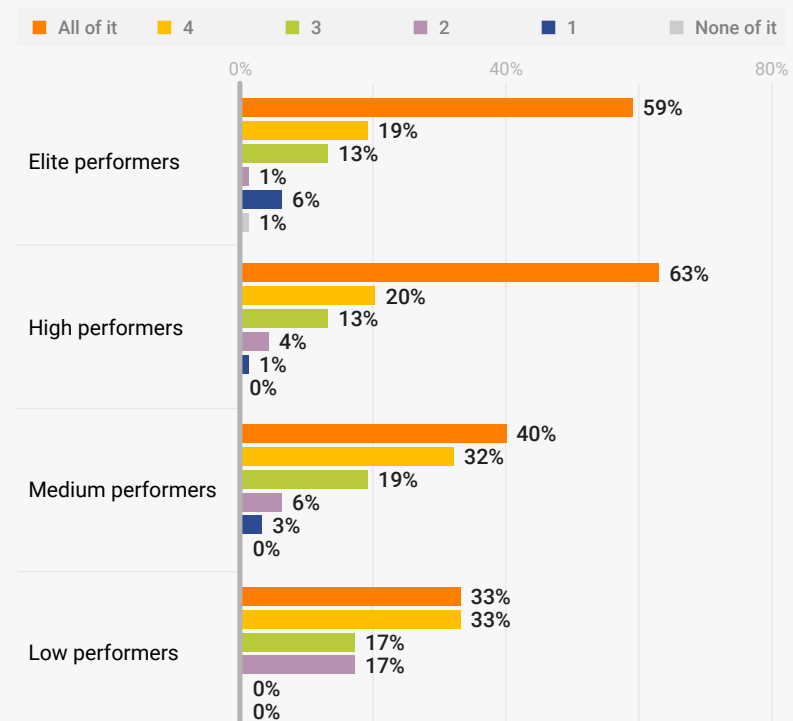
Wow Moments

15%
15% increase in the practice of continuous value measurement

20%
Elite and high performers are 20% more likely than low or medium performers. to measure value outcomes often or always

2x
Teams are 2x as likely to have connected their value streams in 2023 than 2022

4x
Connecting value streams means teams are 4x as likely to have a lead time less than 1 hour

4x
Elite & high performers are 3-4x more likely than low performers. to align people to value streams

2x
Elite performers are twice as likely to be using a VSMP as low or medium performers

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Planning for Value Delivery

VSM practices improve the efficiency and effectiveness of teams, but they also solve one of the biggest challenges facing organizations today—how to better connect technology teams, or software engineering, and "the business". The big gap is between the product management people and the technology people. When people understand that they are part of a value stream, their roles become clearer. When you organize for flow, you refocus the relationships between organization roles, and teams.

DevOps toolchains first evolved through focus on continuous integration and continuous delivery (CICD). As DevOps became mainstream practice, people started to see that the work started earlier, and finished later, than our initial assessments had considered. It started to incorporate planning tools like portfolio management, as well as product backlogs and service desk, monitoring and observability.

We undertook a piece of micro-research in 2023, Notions of DevOps Toolchains, working with the hypothesis that, "The industry is split in its opinion on where DevOps toolchains start and finish. Advanced level practitioners are more likely to think of a toolchain starting earlier i.e. at ideation rather than at code commit, and finishing later—not at release, but when a customer has received value from the change provided i.e. a value stream." We tested the hypothesis using the question, "Which of these descriptions most closely matches your notion of a DevOps toolchain?" with just two possible answers:

- A CICD pipeline
- End-to-end automation from planning to customer experience (including service desk)*

Which of these descriptions most closely matches your notion of a DevOps toolchain?
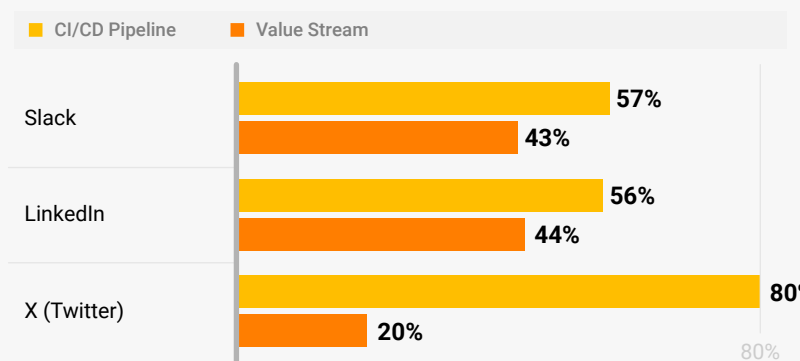
As you can see in the chart above, our hypothesis was well-founded—the industry is clearly split in its opinion. Notably, the communities of more advanced practitioners that live in our Slack workspace and LinkedIn community are much more likely to think of a DevOps toolchain as something that starts where the ideas start, and only finishes when the customer is providing feedback on the changes.

All of this to say that when we are managing by value, and managing the work stream that creates that value, we think about value right at the start of the process—the planning stages.

> "Value streams start and end with the customer. Therefore, value must be defined from the customer's perspective, and its journey must be measured all the way from need, to usage and feedback."
>
> **Chris Gallivan**, Principal Flow Advisor at Planview (a VSMC Founder Member)

The Practice of Creating Value Hypotheses is Increasing

Over 85% of respondents are creating value hypotheses. Year-on-year more practitioners are creating value hypotheses across a variety of work items increasing in granularity from portfolio epics to user stories. This suggests that the market is increasingly making the connection between planning and delivery, and thinking about the value of an idea as soon as it emerges. The number of respondents that don't create value hypotheses has dropped 10% since 2022.
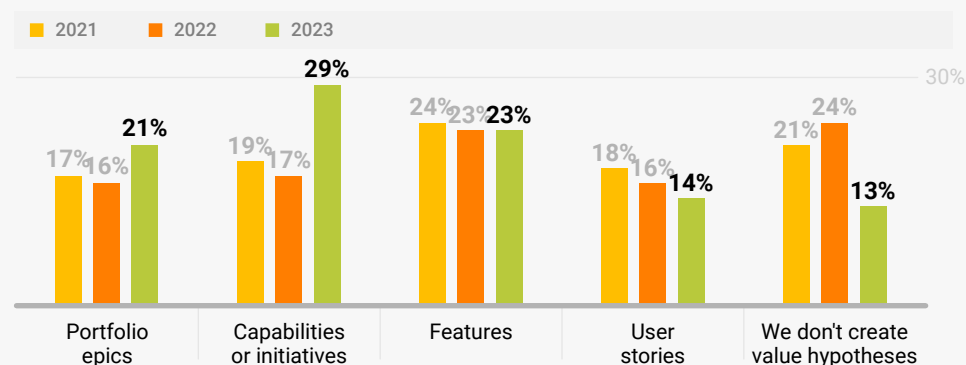
The bigger the work item, the more likely it will have a value hypothesis. The trend over the past three years is an increase in the proportion of value hypotheses applied to the larger work items, in particular capabilities or initiatives.

Higher performing organizations are more granular in their approach. As agile and DevOps ways of working direct behavior towards working in ever smaller batch sizes, we expect the user story to be the ultimate work item to measure in terms of value—because if we want real-time insights into customer experience based on the work we are doing, we have to be able to measure the work as it's released in these small work items.

> "It is interesting to note the increase over the years of attaching value to higher concept work items, such as portfolio epics and capabilities, and reduction to lower level work entities such as user stories. The correlation of value hypotheses and organizational performance suggests that there is a more general increase in associating value with all work items for higher capability organizations, but an even greater trend towards the use of epics. This is symptomatic of a broader business view of digital delivery today, and not just a development centric one."
>
> **Stephen Walters**, VSMC Influencer Member, Field CTO at GitLab

For which type of work item do you create a value hypothesis?

Legend: 2021 · 2022 · 2023

Work item	2021	2022	2023
Portfolio epics	17%	16%	21%
Capabilities or initiatives	19%	17%	29%
Features	24%	23%	23%
User stories	18%	16%	14%
We don't create value hypotheses	21%	24%	13%

For what work items are value hypotheses created? (by performance)

Legend: Portfolio epics · Capabilities or initiatives · Features · User stories · We don't create value hypotheses

Performance	Portfolio epics	Capabilities or initiatives	Features	User stories	We don't create value hypotheses
Elite performers	22%	26%	21%	15%	15%
High performers	22%	32%	21%	13%	11%
Medium performers	21%	31%	24%	13%	11%
Low performers	17%	31%	31%	7%	14%

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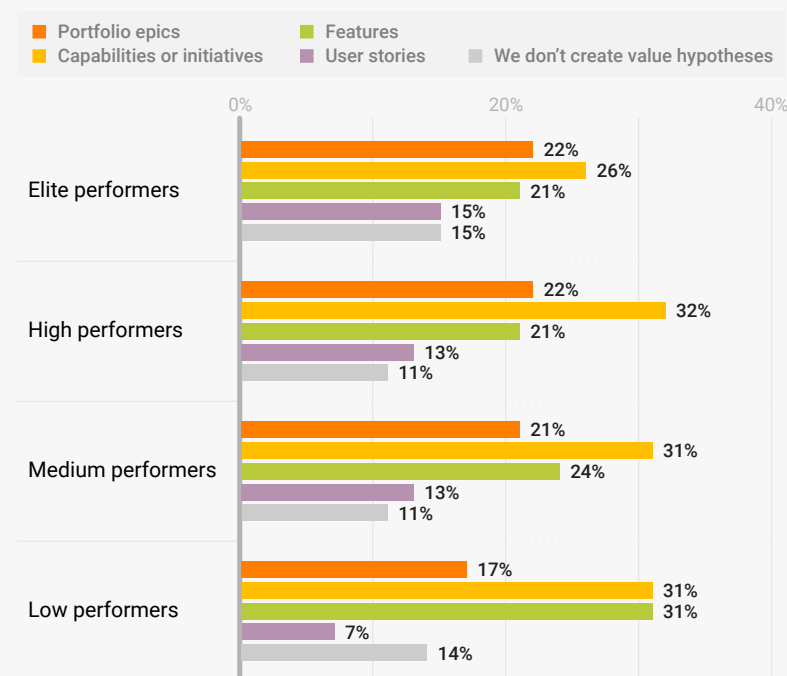
The Highest Performers Define Value Outcomes Sooner

Low performers are least likely to create value hypotheses when new features are defined and most likely to define them later—during feature creation. Elite performers are most likely to define new features during business stakeholder meetings or as part of their market research—early in the feature life cycle.

This suggests that higher performing organizations understand and manage the granularity of their work and how it travels through the value stream.
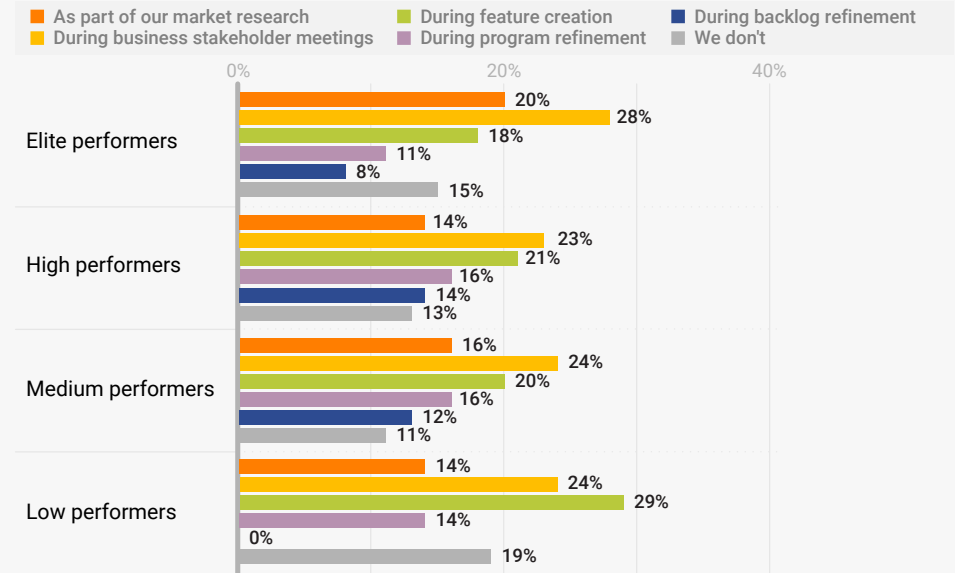
Higher Performing Organizations Put the Customer First

The highest performing organizations are most likely to prioritize customer value. The lowest performing organizations are those most likely not to be thinking about value at all. They are least likely to prioritize the customer or make the connection between customer and business value. At the core of VSM is customer focus. The logic is that happy customers buy more and recommend more, so if your business model makes sense, delighted customers equals a thriving business. The logic is borne out in the data here.
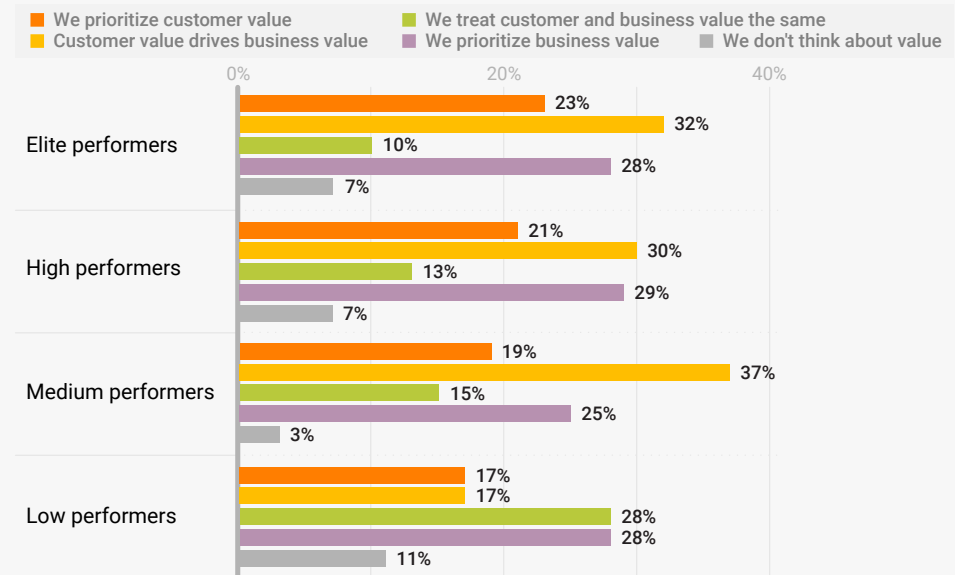
> "One of the biggest benefits to adopting value stream management is that all parties understand the criticality of delivering value to customers with minimal waste. This transparency and alignment changes the conversation from a futile "What can I do?" into a more empowered "What can we do?" High performing organizations realize that keeping a consistent customer focus across the workforce leads to greater benefits for all involved."
>
> **Ray Padron**, VSMC Influencer Member, Agile Transformation Lead at Phaedon

When are value hypotheses for new features defined? (by performance)

Legend:
- As part of our market research
- During business stakeholder meetings
- During feature creation
- During program refinement
- During backlog refinement
- We don't

Elite performers
- As part of our market research: 20%
- During business stakeholder meetings: 28%
- During feature creation: 18%
- During program refinement: 11%
- During backlog refinement: 8%
- We don't: 15%

High performers
- As part of our market research: 14%
- During business stakeholder meetings: 23%
- During feature creation: 21%
- During program refinement: 16%
- During backlog refinement: 14%
- We don't: 13%

Medium performers
- As part of our market research: 16%
- During business stakeholder meetings: 24%
- During feature creation: 20%
- During program refinement: 16%
- During backlog refinement: 12%
- We don't: 11%

Low performers
- As part of our market research: 14%
- During business stakeholder meetings: 24%
- During feature creation: 29%
- During program refinement: 14%
- During backlog refinement: 0%
- We don't: 19%

Which of the following statements most closely describes how you treat value in your team or organization?

Legend:
- We prioritize customer value
- Customer value drives business value
- We treat customer and business value the same
- We prioritize business value
- We don't think about value

Elite performers
- We prioritize customer value: 23%
- Customer value drives business value: 32%
- We treat customer and business value the same: 10%
- We prioritize business value: 28%
- We don't think about value: 7%

High performers
- We prioritize customer value: 21%
- Customer value drives business value: 30%
- We treat customer and business value the same: 13%
- We prioritize business value: 29%
- We don't think about value: 7%

Medium performers
- We prioritize customer value: 19%
- Customer value drives business value: 37%
- We treat customer and business value the same: 15%
- We prioritize business value: 25%
- We don't think about value: 3%

Low performers
- We prioritize customer value: 17%
- Customer value drives business value: 17%
- We treat customer and business value the same: 28%
- We prioritize business value: 28%
- We don't think about value: 11%

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What This Means:
How to Plan Work to Optimize Value Outcomes

Build value in from the start. From the very germination of an idea, articulate how its implementation will drive value for its customer. Then consider how you will be able to see the impact of the change that you have built for them in their experience.

Cascade your work items. Break your work down from the big ideas to the user stories that deliver the experiences piece by piece. This will align your strategy, goals, and execution, allowing you to trace your work from idea to realization. End user value may be achieved at user story, feature, or epic level. Tracking the value against the work item means that you can manage the work as it fragments through the organization, and makes it possible to make data-driven decisions and measure your progress.

Be customer-centric. As we have said in previous reports, customer delight drives organizational performance. Putting your customer and their needs at the center of everything you do puts you in the best position for success.

"The validation of early value hypotheses correlates with an organization's heightened performance. Notably, elite-level organizations initiate discussions about value as early as the market analysis stage and business stakeholders' conversations. I suspect this approach helps prevent the premature allocation of resources to non valuable initiatives. Given that it becomes challenging to accept the lack of value once the product development gets started or even pivots once features are rolled out, it makes sense that lower performers concentrate mainly on feature value."

Pavel Azaletskiy, VSMC Influencer Member, Founder & CEO at VSOptima

Delivering Value

VSM's practices provide active management around how we plan, deliver, and measure our work. This means connecting work items to value outcomes measured by customer experience. Our success depends on our ability to deliver across the people > process > tools paradigm. When we identify our value streams, we need to understand which people are working on them, and on which steps. We need to optimize those steps, the processes between and within them. We do best when we support those steps using tools and technology designed to measure the outcomes we seek—both efficiency (flow), and effectiveness (value realization).

In this section we consider the importance of organizing around value streams, how VSM practices impact delivery times, and what impact the tools are having on VSM adoption and organizational performance.

"From my experience, maximizing value requires alignment and coordination of the people, processes and technology. For such an alignment to succeed, it has to be underpinned by having a common language. That includes aligning on what the expected value is, the roles and responsibilities of the people and systems involved in the value stream, the objectives, and metrics it is measured by etc. Adopting VSM practices and VSM platforms enables organizations to define and align on their language, organize around their value and continuously improve based on aligned data and metrics."

Yaniv Sayers, ADM Chief Architect at OpenText (a VSMC Leader Member)

Organizing Around Value Streams is Trending Upwards

There is a 10% increase in people reporting that they are aligned to a specifically identified and explicitly named value stream since we first asked this question in 2021—evidence that VSM is evolving and maturing as a practice and is increasingly adopted by organizations worldwide.

Additionally, where nearly half of organizations said they didn't organize around value streams in 2021, the number is closer to a quarter now. So companies are twice as likely to organize around value streams today as they were just two years ago. In 2020, Gartner predicted that by 2023, 70% of organizations would be using VSM to improve flow in the DevOps pipeline—this data puts us close to that number. But different data sets are telling us slightly different stories. The previous chart demonstrates that only about a third of individuals are currently associated with a specific, named value stream.

This practice also correlates with organizational performance with elite and high performers 3x and 4x more likely to align people to value streams than low performers.

"One of the paramount signs that VSM is starting to move past the early adopters is the increasing percentage of organizations reporting that they are changing their organizational structure. After years of experimentation, organizations are now starting to truly adopt the principles of VSM and do the work required to fully reap the benefits."

Ted Sapountzis, VSMC Board Member and Group Vice President, Product & Customer Marketing at Planview (a VSMC Founder Member)

Yes: I am aligned to a specifically identified and explicitly named value stream.
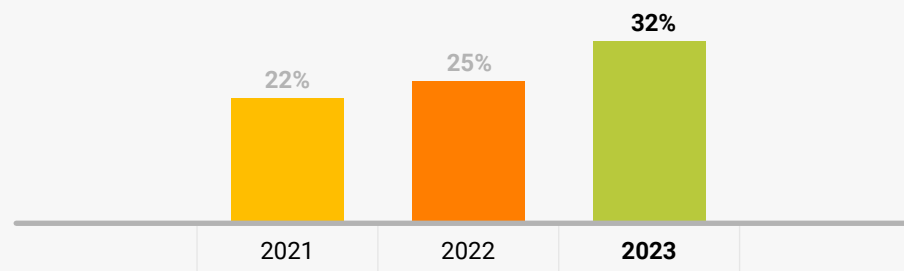
Are you aligned to a specifically identified and explicitly named value stream?
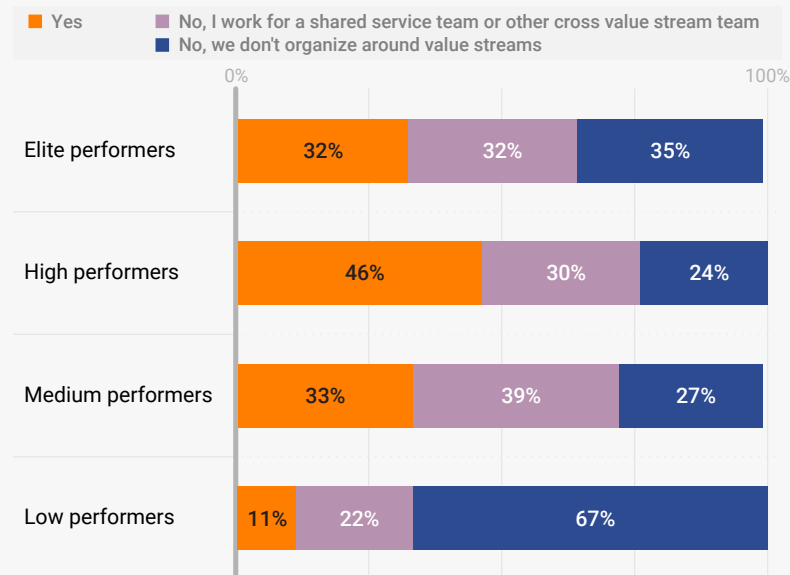
Lead Time and Cycle Time are Shorter in Higher Performers

We are painfully aware of the industry variation of definitions of lead and cycle time. We explored this in last year's report, which detailed research we conducted on the topic. However, we are determined to report on what flow metrics look like in organizations that perform differently so we use these definitions in our research:

- **Lead time:** defined as time from code commit to live in production
- **Cycle time:** defined as from idea registered to change is used by customer

Naturally, cycle times are longer than lead times according to these definitions. It is particularly interesting that the higher performing the organizations, the shorter both lead and cycle times are. Elite performers are the most likely (10%) to have lead times under one hour—twice as likely as low performers.
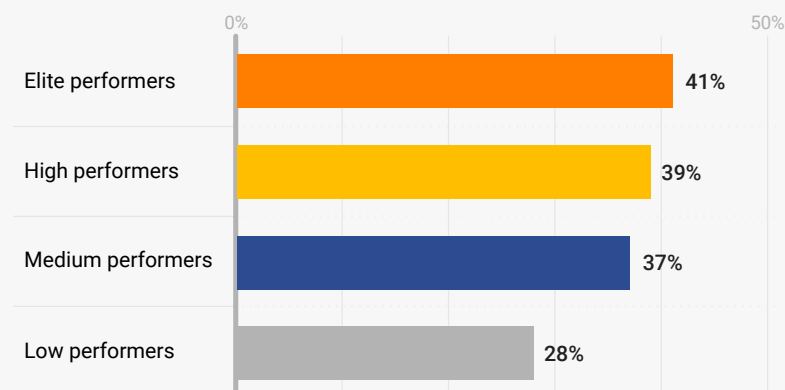
"High-performing organizations have cracked the code of efficiency by focusing intently on their lead and cycle times. These metrics are more than just numbers; they represent an organization's ability to rapidly respond to market demands, to innovate, and deliver value to customers. We've seen firsthand how a focus on these key metrics can drive transformative change, enhancing agility and keeping organizations ahead of the competition. This efficiency directly translates to better customer satisfaction, higher revenue, and a competitive edge in the market."

Dalibor Siroky, VSMC Board Member, CEO at Plutora (a VSMC Founding Member)

Lead time reported as longer than one month

Elite performers	36%
High performers	41%
Medium performers	49%
Low performers	50%
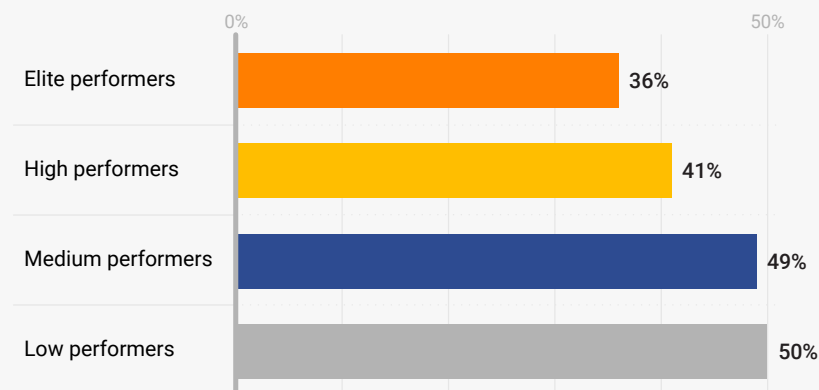
Cycle time reported as one month or less

Elite performers	41%
High performers	39%
Medium performers	37%
Low performers	28%

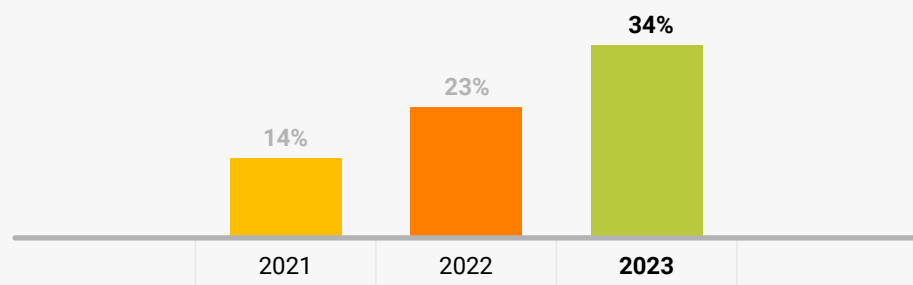# Tools Multiplicity is Decreasing, as VSM Adoption Matures

In each year of our research we have asked the question 'Where do you primarily view data about time to value?' Our hypothesis has been that as the market evolves and more people engage with measuring the flow of their work, or Time to Value (TTV), the more they will want tools that enable them to easily see that data.

Initially when teams start looking for this data, they start looking across the multiple tools that constitute their CICD pipeline or DevOps toolchain. Teams often start by creating dashboards that pull together views from multiple sources. As the importance of managing TTV grows, they begin to need more than that single pane of glass. They need a single tool that helps them see across the tools in the toolchain— or further across the wider value stream. This single tool could be bought, acquired as open-source, or built in-house.
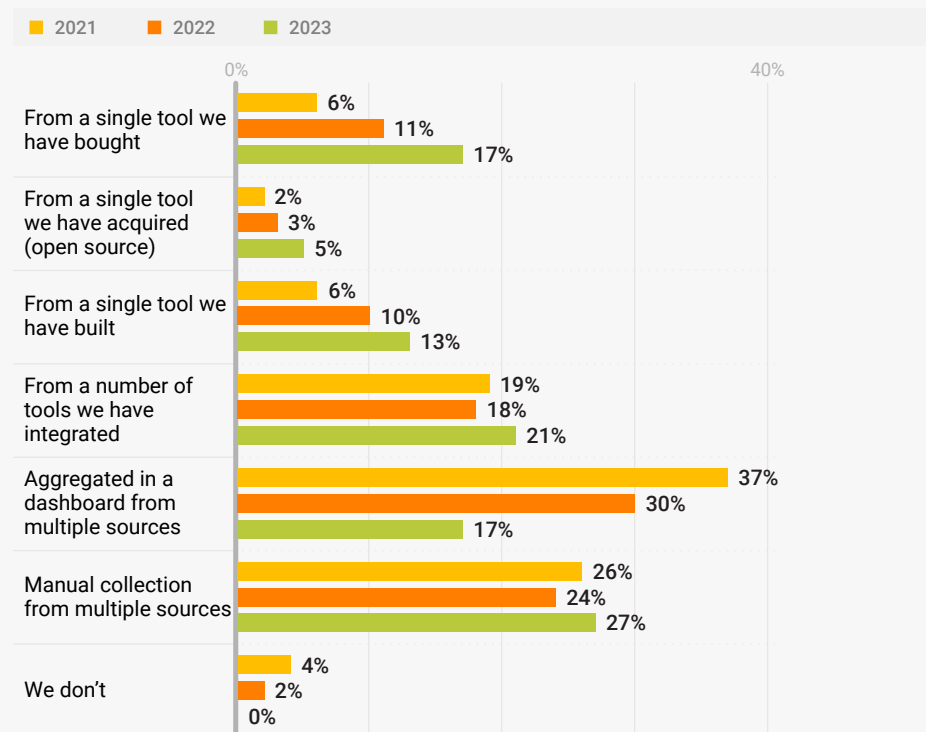
In this year's research, over one third of respondents report using a single tool—up from 13.5% in 2021. This is a significant indicator of the market evolving as VSM adoption increases. Aggregation into dashboards has halved over the same period from 37% to 17%.

Some key integration challenges lie ahead. At the moment, the industry lacks integration standards for VSM—something that we are actively trying to address in our work with the **OASIS Open VSM Interoperability Technical Committee** where the goal is to define a protocol for sharing data across platforms in the software supply chain and systems ecosystem.

Where do you PRIMARILY view data about time to value?

Legend: 2021, 2022, 2023

	2021	2022	2023
From a single tool we have bought	6%	11%	17%
From a single tool we have acquired (open source)	2%	3%	5%
From a single tool we have built	6%	10%	13%
From a number of tools we have integrated	19%	18%	21%
Aggregated in a dashboard from multiple sources	37%	30%	17%
Manual collection from multiple sources	26%	24%	27%
We don't	4%	2%	0%

We are primarily viewing data about Time to Value (TTV) in a single tool

2021	2022	2023
14%	23%	34%

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VSM Platforms Are On the Rise...
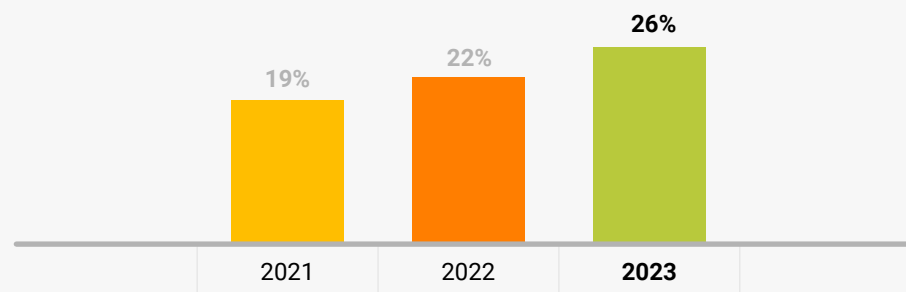# and Are Most Used By the Highest Performers

A Value Stream Management Platform (VSMP) is the single tool (bought, built, or OSS) from the previous question. The data we have collected here continues to show trends that indicate the adoption of tools that support VSM practices. Year-on-year, more teams are choosing to implement VSMPs.

We can also see that the highest performers are the most likely to be implementing a VSMP—whether they are in full implementation, piloting, or replacing a previous tool. High performers are 10 percentage points higher than low or medium performers in their VSMP adoption. Put in relative terms, high performers are 50% more likely to be using a VSMP than low or medium performer. Meanwhile, elite performers are almost twice as likely to be using a VSMP.
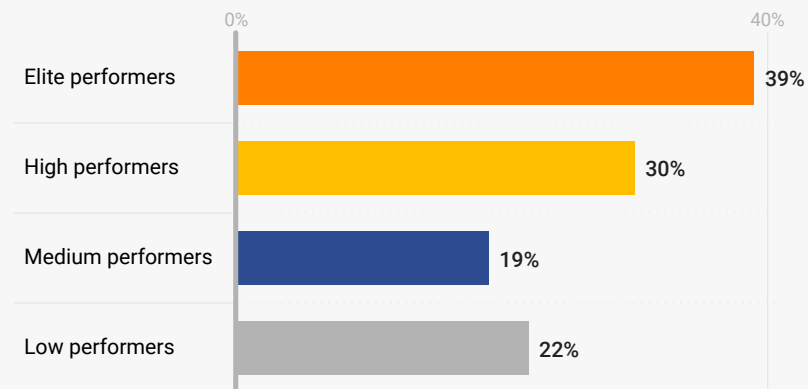
"VSMPs are helping break down traditional barriers of bespoke sets of data that only tell a portion of the story. We see more enterprises consolidate both tools and data to process and collect data across stages of software delivery lifecycle. As customers mature, we see a rise in presenting data to personas, like an application owner, in a more holistic fashion and we see an increase in customers desire to apply machine learning methods to these broader data sets to better manage trade off decisions, and become more predictive in their decision making."

Jeff Moloughney, VSMC Board Member, CSM at Digital.ai (VSMC Founder Member)

We are piloting or implementing a VSMP in my team or elsewhere in the organization

Year	Percentage
2021	19%
2022	22%
2023	**26%**

We are implementing, piloting, or replacing a VSMP in the organization

Performer	Percentage (0% – 40%)
Elite performers	39%
High performers	30%
Medium performers	19%
Low performers	22%

What This Means: Top Considerations When Working on Value Creation

Organize around value streams: As we've said in previous reports, this doesn't necessarily mean a big-bang, company-wide reorganization. It does mean looking beyond your team and departmental boundaries and applying system thinking to trace an idea from inception to customer to feedback. Understanding this loop informs what you choose to do next, while organizing your thinking this way will lead to customer centric decisions and brings the right people into the decision making process.

Manage your flow: Being able to continually inspect the flow through your value stream means you can empower your decision making with real data. It's likely you have the data available even if you can't see it today. So seek it out, create ceremonies (e.g. stand ups) where you actively inspect the data and learn to see within it the delays, bottlenecks, and waste. Then learn how to see—and measure—your improvements as you reduce the lead and cycle times to give your customers what they want sooner.

Use the technology: Tool adoption is on the increase and is most common with the highest performers. As an industry, we've spent nearly fifteen years building CICD pipelines and DevOps toolchains, but perhaps their greatest benefit remains untapped in most organizations today—the ability to see the progress of our work end-to-end and actively manage it. These technologies have enabled us to deliver software faster, and at higher quality, than ever before. Now it's time to harness the power of all that telemetry we have been collecting and focus it on optimizing the flow and value realization of our work.

"It's encouraging to see more people are measuring the value of their work and how it impacts customer value. That's very much in line with what we're hearing from our customers. Understanding and measuring how the work impacts desired outcomes—customer and business value—at every stage of the product life cycle makes a noticeable difference in how organizations drive improvement. Today's advanced VSM solutions make continual measurement easier leading to enhanced product quality, efficiency, and alignment across multiple cycles through better capacity planning, resource management, and risk mitigation."

Marla Schimke, Global Head of Product and Growth Marketing at Broadcom (a VSMC Leader Member)

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Measuring Value

Measurement is essential to effective management, **as purportedly established by Peter Drucker**. But it's essential not to be myopic when living by this maxim. Instead, incorporate a more nuanced approach—that measurement is the means for a conversation within a community about the work and outcomes they deliver today. A value stream is a community that collaborates to improve their shared customers' experience.

We put the customer first in VSM—and our data shows the highest performers who use the most VSM practices are customer-centric—however, customer experience is not the whole picture. We prefer **'total experience'** that recognizes the interconnectedness of customer, employee, and developer experiences. **Daniel Pink's research** famously identified we need to have autonomy, mastery, and purpose. Purpose means we work for a reason and we want to see a result. This means we need to be able to measure the impact and the value realization of the work that we do—not just for our customers' sake, but for our own. When we are happy, our customers are happy, and vice versa. It's a social contract to serve, help, and support each other on a daily basis through the digital products we deliver.

In this section, we consider what we are learning as a community about what and how we measure, about how we use that information to improve the flow of the work, and about the value realized by our work.

> "It's encouraging to see the year-over-year increase of continuous value measurement. Value changes over time and organizations that don't frequently inspect value achieved miss important opportunities to improve. New advancements in technology are increasingly allowing us to monitor value realization and I predict this will only improve in years to come. Continuous inspection will benefit companies that pursue this capability by increasing their profitability and user satisfaction."
>
> **Daniel Presten**, Chief Methodologist at NTT DATA (a VSMC Leader Member)
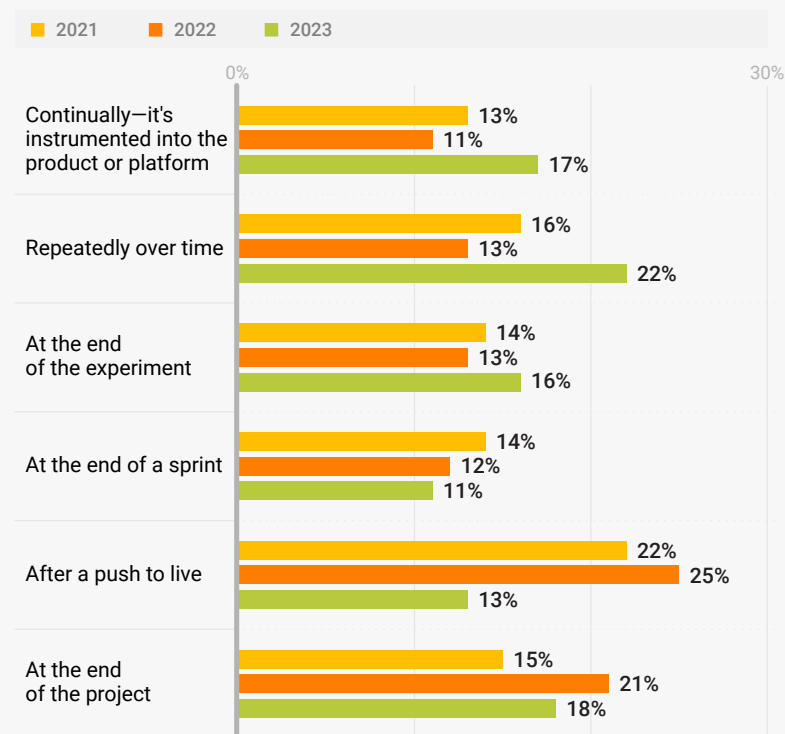
Actual Value Realized is Increasingly Being Measured

In each of the three years we've compiled this report, we asked respondents whether they measure the actual value they realize by their work. Less than 15% say they 'always' do, and over 55% of respondents measure 'rarely' or even less frequently than that.
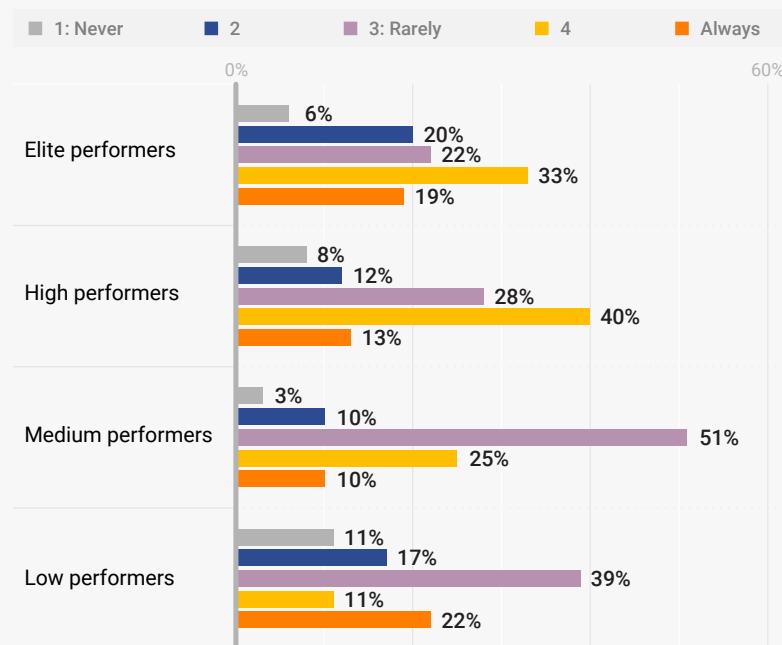
We found that elite and high performers are 20% more likely to measure value outcomes 'often' or 'always' than low or medium performers.

When value is being measured matters too. Year-on-year we are seeing an increase in respondents who measure continually (instrumented) or repeatedly, rather than at a single point in time—up 16% since 2022. This points to the increased adoption of both VSM practices and platforms.

When do you measure the value realized by your work?

2021 2022 2023

Continually—it's instrumented into the product or platform: 13% / 11% / 17%

Repeatedly over time: 16% / 13% / 22%

At the end of the experiment: 14% / 13% / 16%

At the end of a sprint: 14% / 12% / 11%

After a push to live: 22% / 25% / 13%

At the end of the project: 15% / 21% / 18%

How often do you measure value? (by performance)

1: Never 2 3: Rarely 4 Always

Elite performers: 6% / 20% / 22% / 33% / 19%

High performers: 8% / 12% / 28% / 40% / 13%

Medium performers: 3% / 10% / 51% / 25% / 10%

Low performers: 11% / 17% / 39% / 11% / 22%

"That's it, the loop is closed!? Is the 16% growth in the measurement of realized value a sign that the promises of agility are finally being kept? All the pieces of the puzzle are there, and now need to be fully integrated: from defining the expected elements of value to discovering, developing, and delivering software products or services in small increments, to measuring their realization. The hardest part for managers is to connect all the dots and rethink the system of working on the basis of a truly customer-centric culture. The good news is that they can now draw on VSM practices and platforms to achieve this, and highlight their impact on business outcomes!"

Patrice Corbard, VSMC Head of Content, Founder & CEO at SD ReFocus

Value Reporting Lines Matter

For the last three years, we have researched to whom teams report about the value in their product. Our hypothesis has been that when teams follow agile, lean and DevOps practices most faithfully, their answers will indicate more autonomy—so there will be in increase in people reporting to their team or not reporting to others, because this information is for their team to self-discover improvements ("We don't—this data is for our own decision making"). We have not seen this trend—in fact, that particular response is currently shrinking year-on-year.

The trend we are seeing most is more respondents reporting to business stakeholders (24% of responses, up 5% from last year) and, a new category, external customers, accounts for a further 8% of responses.
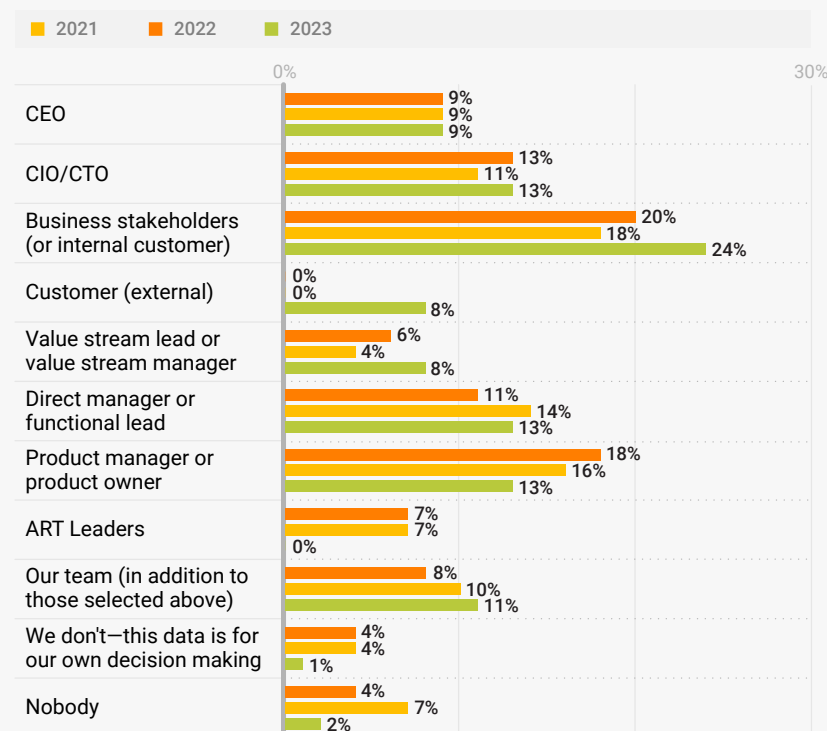
This year we have also investigated the relationship between organizational performance and reporting lines. We asked the question, "To whom does your team report about value in your product?" and discovered that 0% of elite performers reported that they didn't report on value to anybody—the only performance category not to—where 4% of low performers answered "Nobody".

The higher the performer, the more likely there are to report to their CEO. As you move the opposite direction, the lower the performer, the more likely to report to their CIO/CTO. This may well be an indicator that higher performing organizations have made better connections between their software engineering teams and the rest of the organization and bears further investigation in future research.

To whom does your team report about value in your product?

To whom does your team report about value in your product? (by performance)
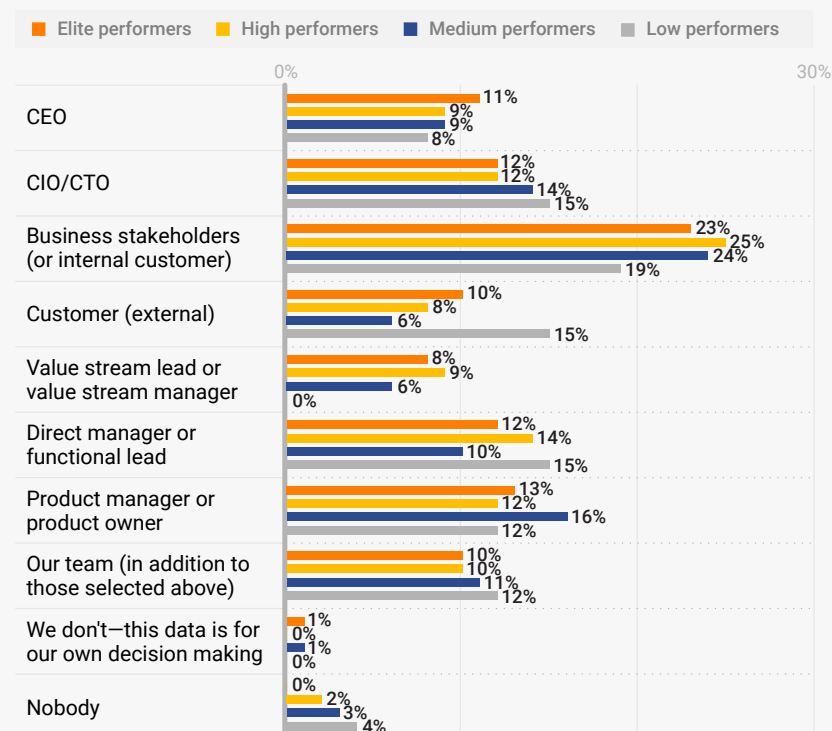
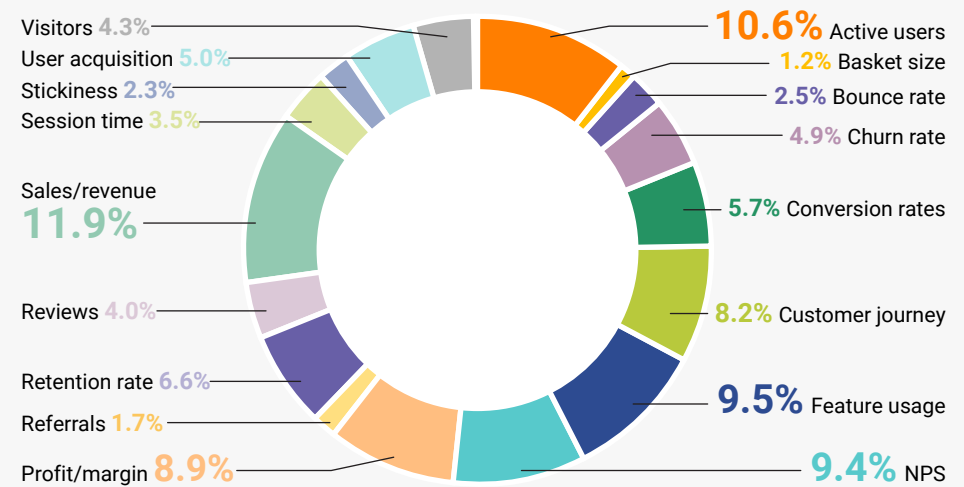# People Persist in Prioritizing Business Metrics Over Customer Metrics

This year, we added five new answer options to the question "which of these value metrics do you measure?". These five accounted for 34% of this year's responses:

- Active users (10.6%)
- Feature usage (9.5%)
- Retention rate (6.6%)
- Stickiness (2.3%)
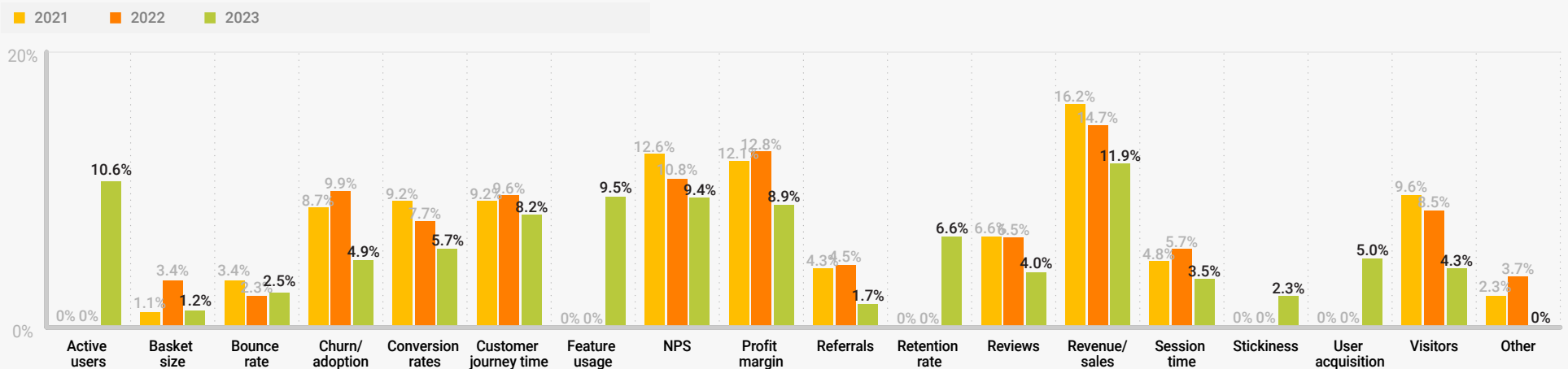- User acquisition (5%)

Of course, adding in responses like this makes looking at the year-on-year data much more complex, but adds perspective. We can see that some of the value metrics that pertain to business rather than customer experience—sales/revenue and profit/margin—remain persistently high, showing organizations continue to struggle to put the customer first. The most commonly used five metrics are:

1. Sales/revenue (11.9%)
2. Active users (10.6%)
3. Feature usage (9.5%)
4. NPS (9.4%)
5. Profit margin (8.4%)

Which of these value metrics do you measure?

Visitors 4.3%
User acquisition 5.0%
Stickiness 2.3%
Session time 3.5%
Sales/revenue 11.9%
Reviews 4.0%
Retention rate 6.6%
Referrals 1.7%
Profit/margin 8.9%

10.6% Active users
1.2% Basket size
2.5% Bounce rate
4.9% Churn rate
5.7% Conversion rates
8.2% Customer journey
9.5% Feature usage
9.4% NPS

Which of these value metrics do you measure? (3 most recent years)

■ 2021　■ 2022　■ 2023

What This Means: The VSM Metrics and Methods That Matter Most

Measure value realized: VSM means defining the hypothetical outcome of work at the earliest possible opportunity, then testing and refining it as often as possible. Granularity matters as it's much harder to measure the impact of a big batch of changes on customer experience than one or two small ones. Time matters too as value realization feedback evolves as more customers use new features and capabilities for longer, so it's no good just taking one snapshot after a successful deployment—the full story unfolds over time.

Think observability: The DevOps practice of 'telemetry everywhere' isn't just for incident management. Modern cloud-native practices like event-driven microservices and data streaming make it possible to have access to real-time insights into customer behavior for optimal adaptability. Teams must be able to access their data for their own value streams and products in order to make autonomous decisions.

Tailor your metrics according to the work: Sales, revenue, profit and margin remain lagging metrics for most organizations with the exception of the most advanced ecommerce environments—and even these will often be more interested in answering questions like which customers are most likely to churn? How long does it take to complete a customer journey? How well do we convert from an offer to a sale? Increasingly we expect AI, particularly in the form of predictive analytics, to take a leading role here and will explore in more detail in our 2024 survey and report.

"Elite performers understand what their customers value—and have processes in place to almost immediately deliver that value. By identifying high value items early, prioritizing appropriately and connecting execution with business need, value grows where demand flows. This allows elite performers to "create constancy of purpose toward improvement of product and service", a principle enshrined as one of the 14 points for management as originally ideated by W Edwards Deming."

Julian Fish, Director, Product Management at OpenText (a VSMC Leader Member)

"Despite high performers setting an example of customer-focus, it's easy for organizations to get caught up in local and internal targets, satisfying leadership and incremental improvements. It takes commitment, strategy, and effort to instrument the closed loop of a complete value stream, but high performers demonstrate the return on that investment."

Steve Pereira, VSMC Advisor, Consultant at Visible Consulting

Leading with Value

In this concluding section of the report, we reflect on what we have learned this year that is most pertinent to those leading VSM implementations in their organizations. Over half of our respondents self-identified as change agents responsible for driving change in their organization. But change is hard. It's hard because:

- Organizations often suffer from inertia, bureaucracy, and organizational scar tissue—controls over processes intended to improve quality and governance that often manifest as waste, delays, and bottlenecks
- Organizations are complex and frequently not designed for flow or with the customer at their center—they are hard to navigate and it's hard to see the work as it travels from idea to value realization
- People are reputedly **wired to resist**, and while this may be true, people are also very busy with 'business as usual' so finding the time to save time and make improvements is hard to find and rarely part of daily work
- Adopting new ways of thinking and working requires significant cognitive load, so clarity and alignment over goals and actions to be taken is needed to help people reduce the effort to change

We have learned of this as agile, Lean and DevOps practitioners. Analysts and practitioners alike have identified VSM as the key to unlocking the unrealized promises of what has come before. And it is a generational shift because we now have the technology to support us. **The State of DevOps Report in 2021** showed that many organizations have been unable to lift themselves up from the middle-performing tier. VSM is here to unlock these promises.

"Change is challenging. As a matter of fact, it always begins right where you are. Value stream-centric approaches allow organizations to identify their starting point. Regardless of your position in the business agility spectrum, the essential step toward improvement is visibility. Grasping the intricacies of your value streams or value stream network is paramount. Leaders bear significant responsibilities. While change is demanding, making decisions regarding change is even more challenging. VSM offers leaders the potential to "lead with value".

For those unfamiliar with value-stream centered approaches, VSM can seem daunting or beyond reach. The danger lies in shying away from the VSM journey due to a perceived lack of "maturity". In reality, embarking on this journey can be the very catalyst needed for continuous improvement. Modern VSM platforms have evolved to offer organizations the insights and capacities previously reserved for individual teams. VSM is not merely an addition; it's a pivotal ingredient that enables organizations to transition from a narrow 'IT Dev - IT Ops' DevOps perspective to a holistic Enterprise DevOps."

Ortwin De Witte, VSMC Influencer Member, Consultant at Flow 4 Outcome

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More VSM Implementation Roadmap Steps Are Complete: 'Connect' Doubles in a Year

In our first report in 2021, we introduced our VSM Implementation Roadmap which we updated in 2022, bringing the Vision step to the forefront and indicating the continuous, cyclical nature of the Inspect and Adapt steps based on feedback from our members. In 2022 we also asked survey respondents for the first time which steps in the implementation roadmap they had completed.

As we explained in last year's report, we hypothesize that when VSM adoption becomes mainstream across organizations, all practices described in the VSM Implementation Roadmap will be undertaken. This will mean that the columns in the graph here will flatten out, becoming equal to each other. This year, the second time that we asked this question, we can see evidence of this with the first four steps—Vision, Identify, Organize, and Map—which previously accounted for ⅔ of responses, all shrinking and now accounting for 58%.

The most dramatic change is on the Connect step, where we have more than double the responses than in 2022, pointing to the other evidence we have seen for the uptick in the technologies that support these practices and people learning how the data in their DevOps toolchains can be extracted and inspected. We also saw a drop from 10% to 6.9% in the volume of respondents who said that they had completed none of these steps.

When we looked at lead times, we discovered that those respondents who had completed the 'Connect' steps were 5-10% more likely to have a lead time of less than 1 week. Respondents who have not completed any of the steps on the roadmap are over 3x as likely to have the longest lead time, over 3 months, than any respondent who had completed any step on the roadmap—and 4x those who have completed the Connect steps.

Note: There are two Connect steps as one specifically asks about the VSMP:

- We have connected our DevOps toolchain and aligned the data to our value stream steps
- We have connected our DevOps toolchain using a Value Stream Management Platform (VSMP)

Which steps in the VSM Implementation Roadmap has your team completed?
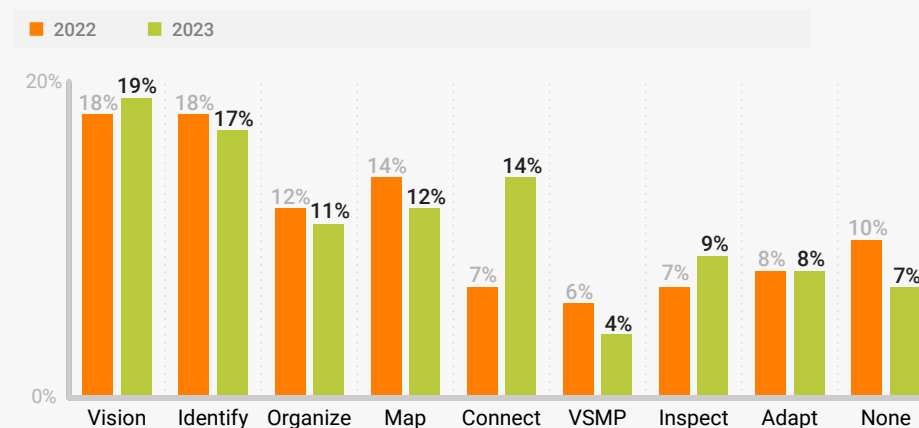
Lead times by steps complete in VSM Implementation Roadmap
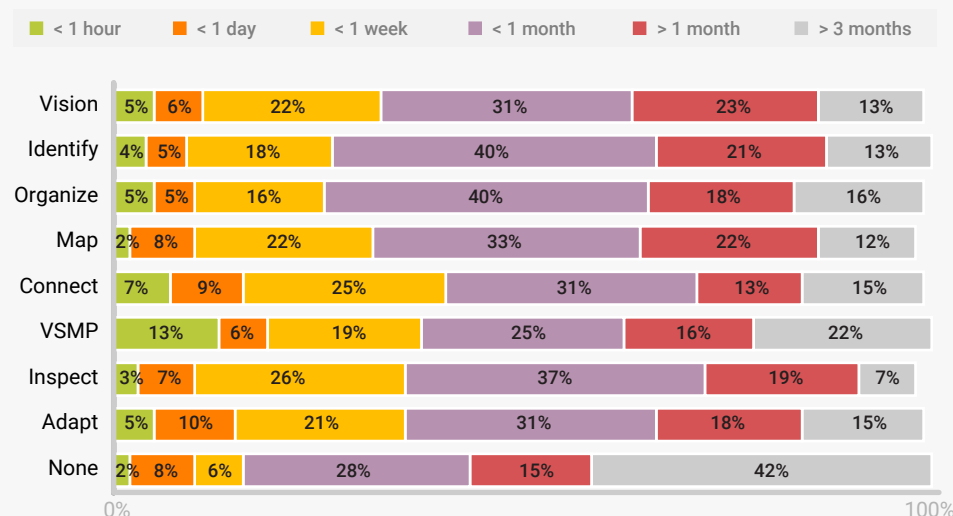
An Update to the VSM Implementation Roadmap: The Assess Step

In 2023, we are introducing a new version of the VSM Implementation Roadmap that includes a new step—Assess—and have updated the images. The Assess step is borne from the work that we have been doing with our Consulting Huddle at the VSMC* and the importance of being able to both baseline the current state when embarking on a journey, and being able to measure progress as an organization progresses on their journey. The Consulting Huddle collaborated on building a **VSM Assessment** with question sections that align with the steps in the roadmap. It's designed for consultants and enterprise practitioners—change agents—to use at the start and for continuous reassessment during their VSM implementation.

Additional industry research, such as VSMC Founder Member Planview's **Project-to-Product State of the Industry Report**, align well with our VSM Implementation Roadmap with their focus on clear definitions of value, customer-centricity, incorporation of inspection of flow and value realization metrics into operational reviews and the ability to respond at speed to feedback.

Start — Get going from wherever you are.

Assess — Where you are today? Scale your assessment from super-light, to whatever weight you need to spark the depth of evolution you want.

Vision — Set your long term vision and goals.

Identify — Identify your value streams—anything that delivers a product or service. You're aiming to accelerate the flow of value to the customer.

Organize — Find the people accountable for every step in each value stream.

Map — Bring the players in your value stream together for a mapping exercise. Find where the idea starts, and track every step until the value is delivered.

Connect — Connect the digital parts of your product delivery pipeline, aligned to the steps in your value stream map to start getting real-time data & insights into your value stream's flow.

Inspect — You've automated your value stream map, now use it! Set goals for your value stream and use retrospectives to determine where you are.

Adapt — Use your insights to design and perform experiments that adapt and optimize your flow so you can continually delight your customers.

Our VSM Huddles are small communities within the VSM Consortium who meet regularly to help each other with implementation challenges, do research, and publish thought leadership
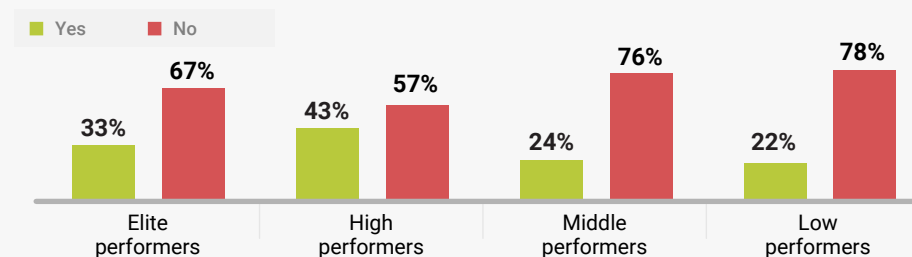
Visualizing the Entire Organization as a Value Stream Network is Key

One-third of our respondents have visually documented their organization as a set of interconnected value streams as either value chains or value networks (For more on how we differentiate between value networks and value chains, see the table below). We have recently begun investigating the concepts and practices around value stream networks at the VSMC and produced a blog post, **'What is a Value Stream Network'** in collaboration with our members, which explores different viewpoints around the purpose and approaches to visualizing an organization this way. This partly came about because of the work our Huddles are undertaking to produce a series of workshops and associated materials for our practitioner members addressing each step of the VSM Implementation Roadmap.
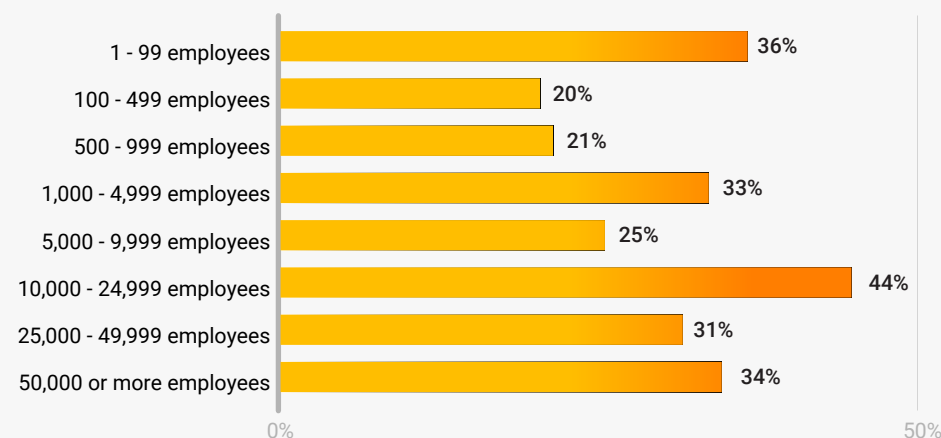
As we were developing the materials for our Identifying Value Streams workshop, the question came up about whether implementations should begin by addressing a single or a handful of value streams (a pilot), or whether addressing the whole organization at the start would provide a better approach. Given our roots in agile methodologies, the majority of contributors lean towards an experimental and incremental approach i.e. starting small and building out across an organization as learning happens and capabilities improve. However, it's also clear that the further organizations are on their VSM journey, the more fruitful their holistic understanding of the entire organizational landscape becomes.

We observed that higher performing organizations are more likely to be looking at their organization as a value stream network, and that the bigger the organization, the more common this practice—with a clear spike in the smallest of organizations where it's easiest to do simply because of the low number of value streams.

Have you visually documented your organization as value networks? (by performance)

Legend: ■ Yes ■ No

- Elite performers: Yes 33%, No 67%
- High performers: Yes 43%, No 57%
- Middle performers: Yes 24%, No 76%
- Low performers: Yes 22%, No 78%

Yes - we have visualized our organization as a value stream network (by company size)

- 1 - 99 employees: 36%
- 100 - 499 employees: 20%
- 500 - 999 employees: 21%
- 1,000 - 4,999 employees: 33%
- 5,000 - 9,999 employees: 25%
- 10,000 - 24,999 employees: 44%
- 25,000 - 49,999 employees: 31%
- 50,000 or more employees: 34%

(scale 0% to 50%)

Value Stream	Value Chain	Value Network
A value stream represents the end-to-end series of activities and processes that are required to deliver a specific product, service, or outcome to a customer. It focuses on the flow of value and includes both the steps that directly add value to the customer and those that support and enable the value-adding steps. Value stream mapping is a common technique used to visualize and analyze these processes.	A value chain is a broader concept that encompasses the entire set of activities and processes involved in creating a product or service, from the initial raw materials and suppliers to the final distribution and customer support. It includes not only the processes directly related to the product or service but also the supporting functions such as procurement, human resources, and technology infrastructure.	The value network is the dynamic, social network of interactions, handoffs, and dependencies between teams and individuals in the organization. It's the context within which an organization identifies and responds to customers' needs, procures inputs, and reacts to competitors which identifies a nested system of product architectures in addition to internal and external actors.

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VSM Practices Drive Organizational Performance

VSM adoption is increasing because it drives organizational performance. Here's how:

- **Aligning teams and organizations** makes it possible to cascade strategy and OKRs while allowing teams to have autonomy over how they do the work. Connecting people from idea to value realization keeps the focus on the goals and feedback that will positively influence customer experience. Dependencies are surfaced and risks can be managed.
- **Making work visible** is essential if you want to improve it. It's particularly hard to see work in digital value streams where code is largely invisible. It's also very difficult in large and complex environments where multiple teams and handoffs are needed. Most organizations have the data available—even if it's currently hidden— that makes it possible to see what's happening where and when.
- **Generating insights** from both flow and value realization data means teams can actively target improvements around both efficiency and effectiveness. This combines the removal of waste, delays, and dependencies with the ability to respond to real-time feedback on customer experience. Tools that collate this data can analyze it and find actionable insights teams can use to adapt their work in real time in response to customer behavior.

- **Measuring progress and journeys** is central to understanding how investments are paying off and creates and satisfies the need for organizational, team, and individual purpose. Knowing when to pivot or persevere—and when to celebrate and share success—drives organizational momentum for change.
- **Having joy at its heart** VSM captures total experience. It starts with customer-centricity and connects employee experience from product management to software engineering. Customer joy is the foundation of organizational performance—if the people we are serving get what they want, when they want it, they will remain customers, buy more, and recommend our products and services.

The VSM renaissance is underway—the question is, when will it be mainstream?

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Advice for Change Agents

Learn to see: You can use physical value stream mapping with teams as you drive VSM evolution in your organization, but combine this with data-driven insights that power data-driven conversations. Prioritize time to value over time to market

Identification and mapping matters: But acting on the data you have matters more. Identifying your products and services (value streams) and the people that deliver them are first steps. Visually collaborating with them on a value stream map yields many benefits but none of them enact change. For that, you need teams to be able to act on the actionable insights that your data can reveal.

Value realization is as important as flow: Know why teams are working before they start work—define value hypotheses as early as possible and keep revalidating them. Your customers do want to see the new features they desire quickly—but they have to be what they wanted. Don't wait for your sales figures to say you did good, use real-time customer insights to validate your hypotheses.

Advice for Product Creators and Software Engineering

You're part of the same team: You all belong to value streams—product creators likely have the ideas, and software engineering may be primarily responsible for delivering them in the digital world, but forget about organizational boundaries. See the stream—work as a team to remove dependencies, collaborate on your value hypotheses and analyze customer feedback before you start working on the next thing—together.

Use VSM as a framework: Product creation is complicated—using VSM as a framework guides you to define value upfront, detect and manage all the steps through to value realization and improve the flow of your work. It will help you connect and align people around your product and its goals and boost your chances of creating customer joy.

Have a value stream lead: This could be a Value Stream Manager, Owner, Architect etc. This person owns the implementation of value stream management in your product or service. They are responsible for helping all of the value stream actors understand how VSM works, how to define and measure the value being created and at what speed it's delivered.

Advice for the CXO

Align your teams and visualize your Value Stream Network: Understand that your organization isn't a hierarchy but a collection of value streams delivering value to your all important customers. These value streams crossover and interconnect and adapt and evolve. Knowing where your dependencies are means you can control your risk. Seeing the value streams gives you unparalleled visibility into how work is being done.

Connect product management and software engineering: Focus on the flow of work across your organization from idea to value realization. Stop seeing your technology teams as a separate silo and start treating them as part of the whole—strategic enablers guaranteeing your organization's place in the digital economy.

Be data, insight and event driven: Transformational leaders remove impediments for their teams—be this sort of leader and train your leadership teams to be the same. Focus them on empowering teams to self-discover improvements and make sure there's nothing in their way to getting your vision to your customers as soon as they can.

> "The core role of the CxO is to develop strategies on how they work with the teams on the left and the right to get them engaged in the value stream. For a CPO or a CTO, prioritizing the connectivity between product management and engineering will elevate the collaboration between these organizations by shifting the conversation from output/productivity of the parts to outcomes to the customer and performance of the whole. This then leads to much more impactful conversations on strategy, outcome metrics, team performance, interaction models, etc. The connectivity between these organizations is the first step of many on the journey to build a complete value stream that connects functions beyond product management and engineers."
>
> **Sejal Amin**, VSMC Board Member, CTO at Shutterstock (a VSMC Leader Member)

Final Thought

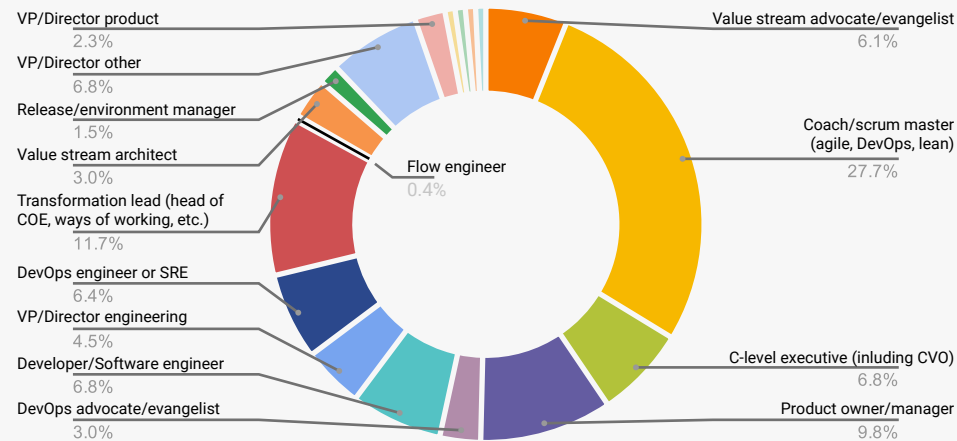# VSM is happening—don't get left behind

Thank you for taking the time to read
The State of Value Stream Management Report 2023.

If you have any questions about
our research or membership of
the Value Stream Management Consortium,
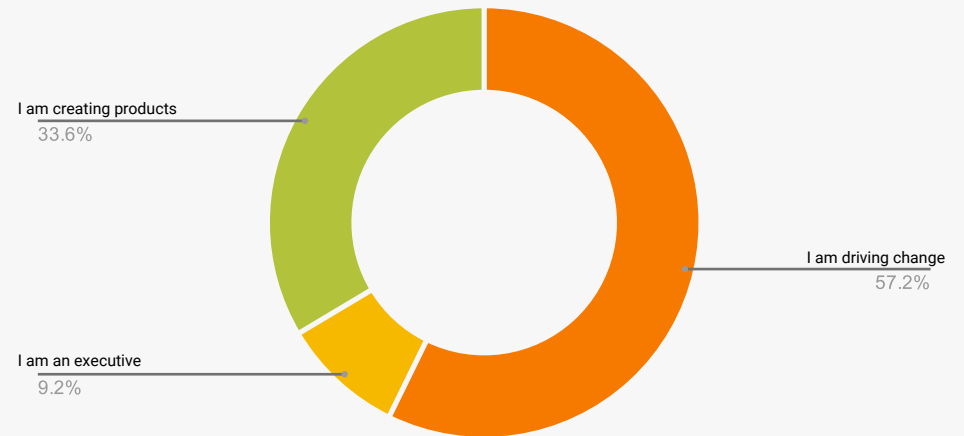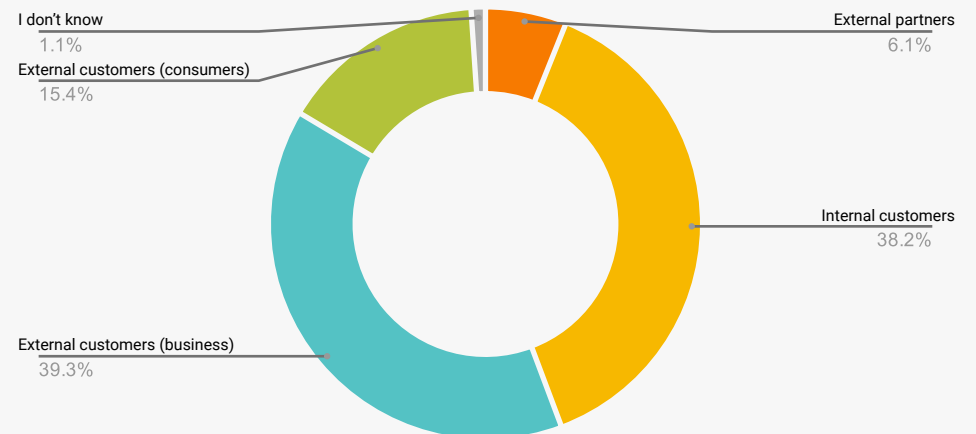please email us at **hello@vsmconsortium.org**

Report Demographics
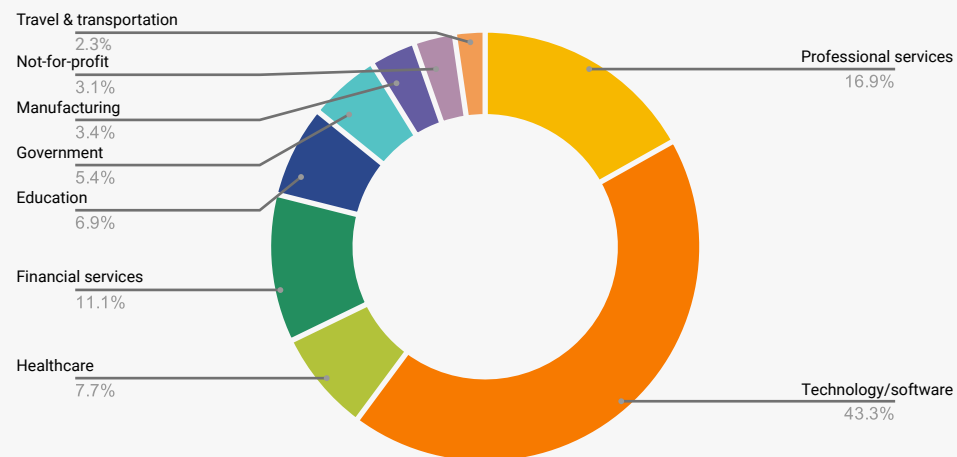
Which of the following is closest to your job title?

- VP/Director product — 2.3%
- VP/Director other — 6.8%
- Release/environment manager — 1.5%
- Value stream architect — 3.0%
- Transformation lead (head of COE, ways of working, etc.) — 11.7%
- DevOps engineer or SRE — 6.4%
- VP/Director engineering — 4.5%
- Developer/Software engineer — 6.8%
- DevOps advocate/evangelist — 3.0%
- Flow engineer — 0.4%
- Value stream advocate/evangelist — 6.1%
- Coach/scrum master (agile, DevOps, lean) — 27.7%
- C-level executive (inluding CVO) — 6.8%
- Product owner/manager — 9.8%

Which of the following BEST describes your primary role in your organization?

- I am creating products — 33.6%
- I am driving change — 57.2%
- I am an executive — 9.2%

For whom do you PRIMARILY create value on a daily basis as part of your job?

- I don't know — 1.1%
- External customers (consumers) — 15.4%
- External partners — 6.1%
- Internal customers — 38.2%
- External customers (business) — 39.3%

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In what industry does your organization operate?

Travel & transportation
2.3%

Not-for-profit
3.1%

Manufacturing
3.4%

Government
5.4%

Education
6.9%

Financial services
11.1%

Healthcare
7.7%

Professional services
16.9%

Technology/software
43.3%

What's your best estimate for the number of employees in your organization?

Not applicable
1.4%

5,000 - 9,999 employees
8.5%

Don't know
2.1%

100 - 499 employees
8.8%

500 - 999 employees
6.7%

50,000 or more employees
21.9%

1 - 99 employees
15.5%

25,000 - 49,999 employees
5.7%

1,000 - 4,999 employees
17.3%

10,000 - 24,999 employees
12.0%

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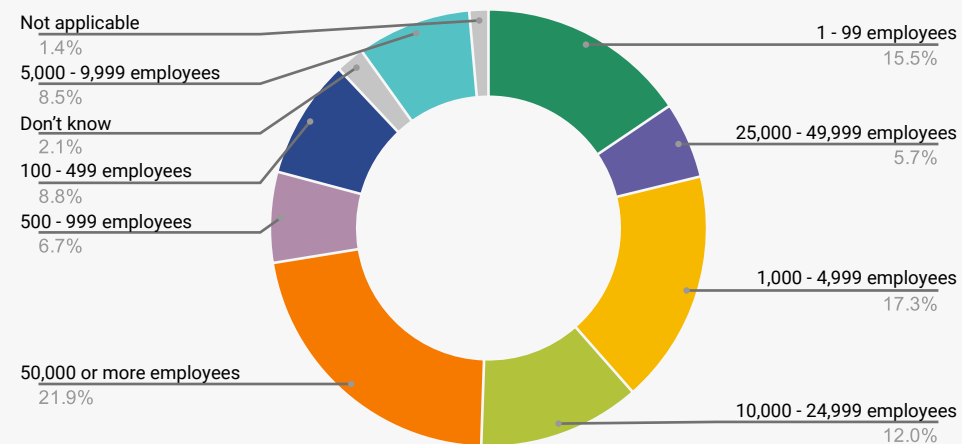
The Value Stream Management Consortium is a member association for enterprises and individuals working with value stream management practices and platforms. Our purpose is to advance value stream-centric ways of working in technology teams to lead to higher-performing organizations. Our mission is to cultivate and nurture the emerging market for value stream management and to help the community learn, devise practices and standards, and grow through their use.

Become a member at vsmconsortium.org