State of Agile Report

Table of Contents

State of Agile

01
Executive Summary

Welcome to the 16th annual State of Agile report, the longest continuous annual series of reviews of Agile techniques and practices. 2022 is the year we not only started to get back together in person, but it was also a year we all began to embrace a true hybrid model (e.g. hybrid work environments, hybrid events, etc.). With this transition to hybrid, there was a lot to discuss regarding people's experiences over the past two years in a mostly virtual Agile world and how to manage the new hybrid world while sometimes in the office and sometimes remote. As a result, we had a lot of dialogue about what adaptations we had made across our teams, processes, and technology that we use to codify our Agile practices.

Accordingly, this report will look at the State of Agile through the lens of the three key components of Agile – the people, the processes, and the tools, to provide a snapshot of the year. Some of the notions we had about how to do Agile were changed by the pandemic, and we got to try some things out as expedients that may turn into the new standard way that we do things. One thing is certain, we are in a time of transition.

This report lets us see how year over year trends, what is working well, where change occurred and where some of the same challenges and opportunities continue to present themselves. You may find yourself having comparable results to survey respondents, learn a couple of ways to think about some things differently, and compare notes.

02
What's Trending

Agile continues to be top of mind for many enterprises, and with good reason.

According to 89% of respondents, high-performing Agile teams have:

People-centric values, clear culture, tools, and leadership empowerment.

That means, that if Agile is done successfully, benefit accrues not just to the individuals involved, but to the entire organization. That is a powerful reason to invest, and organizations continue to do so. Process was at the forefront of many of the changes in Agile. Traditionally, companies think about achieving one of three things: raising revenue, lowering costs, or reducing risk.

When we asked how they prioritize implementing Agile practices, over half of the respondents said it's to accelerate time to market. The ability to move quickly yet be predictable is a key benefit that stands out from a host of others, including the aforementioned revenue and cost drivers
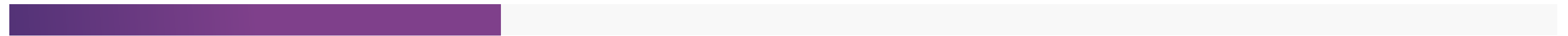
52% said it's to Accelerate Time to Market

**44% said it's for Delivery Predictability**
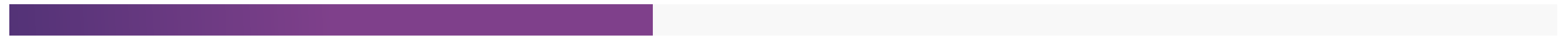
31% said it's to Lower Risk

What is Driving Agile Penetration in the Organization

Respondents are not just interested in Agile for software development. 49% – almost half – apply Agile practices to the entire application delivery lifecycle.

We gave respondents a choice – we asked – were they adopting Agile for the original reason so many companies started Agile – to improve process and deliver efficiencies – or were they adopting Agile practices company-wide for Digital Transformation?
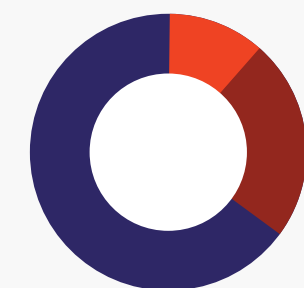
13%
Agile practices for IT and Software development teams

26%
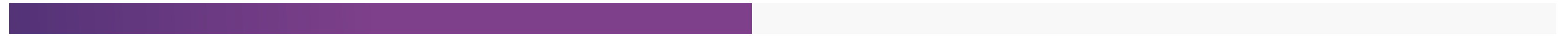Agile practices for company-wide Digital Transformation

Both
61%

The benefits accrued to the application delivery lifecycle are still being realized, but the advantages of an Agile approach are clear, so it is being implemented across a larger part of the organization. In line with these responses, we will see that business value and the ability to measure it come up frequently in this year's results.
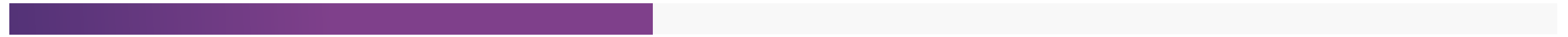
Our questions on measurement further supported this trend:

**47% of Agile teams are measured by On-time Delivery**

44% of Agile teams are measured by Business Objectives Achieved

On-time Delivery is a key goal where Agile practices focus on IT and Software development teams, and Business Objectives are closely tied to Digital Transformation.

In addition to asking how they are measured, we asked them how they prioritize their work on application development and delivery (multiple answers were allowed), and again we saw comparable results.
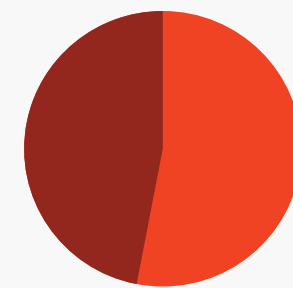
54%
Prioritize by
Company Goals
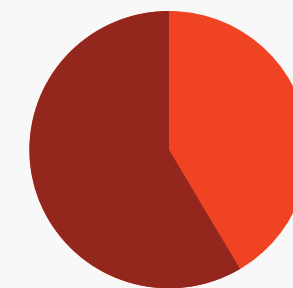
43%
Prioritize by End
Customer Satisfaction
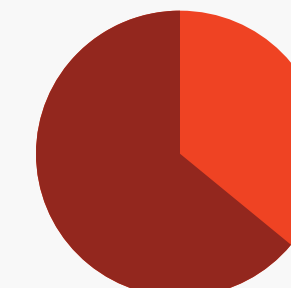
35%
Prioritize by
Time to Deliver

Work is being prioritized to meet company and end customer goals ahead of delivery time, indicating a growing awareness of the need to align to company objectives and be able to demonstrate this to stakeholders.

03

Company Experience with Agile

Agile continues to extend beyond the original software development or IT team to cross-functional teams along the lifecycle, or into other business units such as HR and marketing. This year, we asked about adoption of Agile practices for product or application owners (36%), as well as engineering or R&D (32%), and we found those had significant adoption rates within organizations. We'll continue to watch this trend over time.

Company Experience with Agile

State of Agile

4 out of **5** respondents

say their organization has Agile teams distributed geographically.

This number has dipped slightly from last year, but it remains in the 80th percentile. We'll continue to watch the trend for this.

We pull our respondents from the Agile community, so it's not surprising that 80% of them are using Agile as their predominant approach. What is interesting is that half are using Agile in combination with other approaches, such as waterfall or iterative.

4 in 5 respondents are using Agile and half are using a combination of Agile, waterfall and/or iterative

80%	Agile
24%	Waterfall
24%	Iterative
50%	Hybrid (combination of Agile, waterfall or iterative)
35%	Various Agile frameworks
0%	None of these
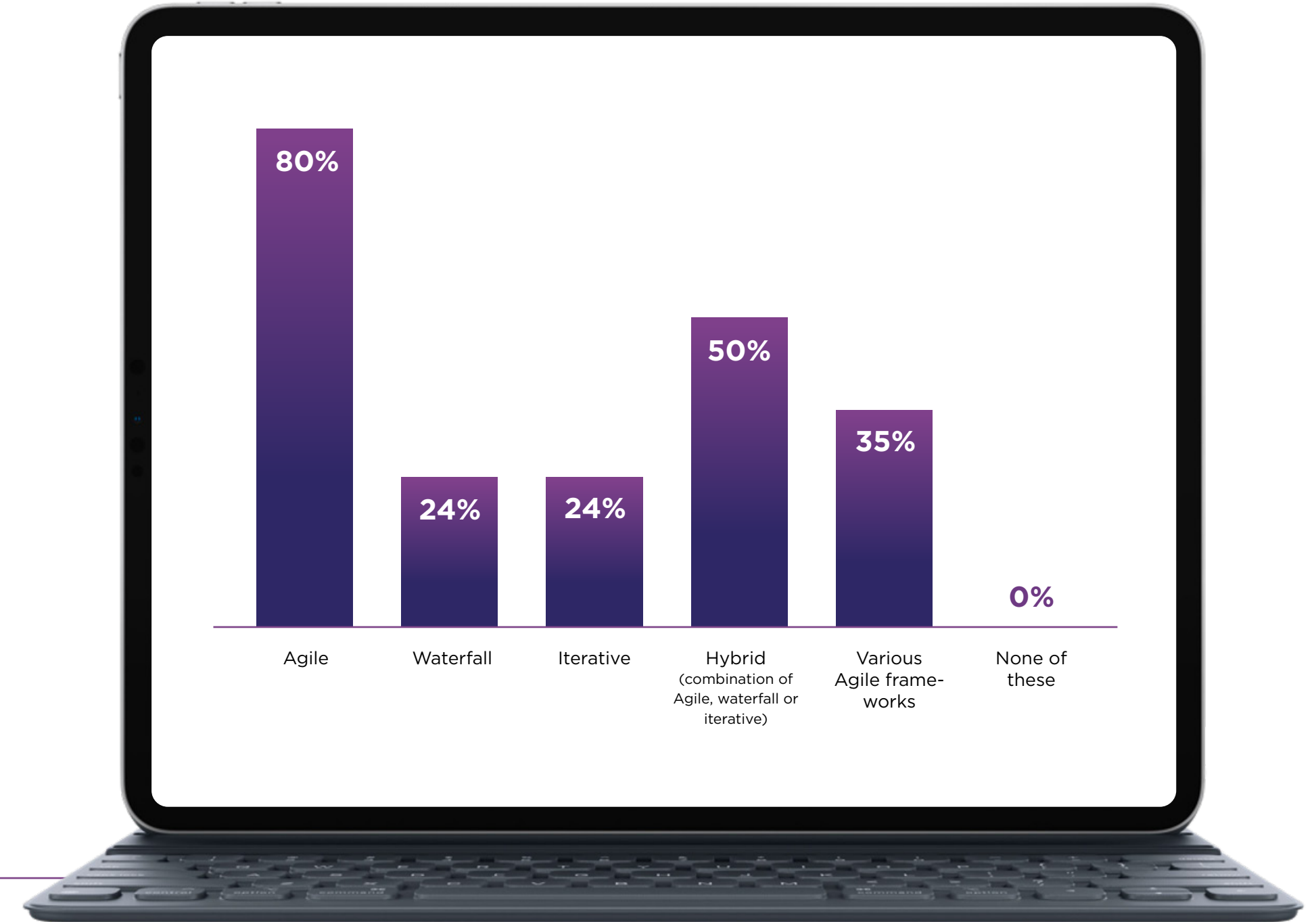
25%
say this combination of frameworks works well for them

48%
say this combination of frameworks works somewhat well for them
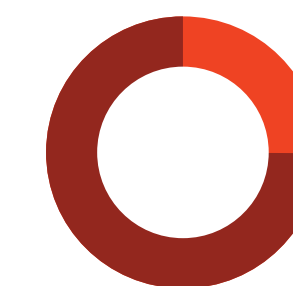
27%
say this combination of frameworks doesn't work for them.

There is room for improvement, which is also supported by the evidence that not all businesses are fully satisfied with their Agile practices.

03

Company Experience
with Agile

04

What is Working
Well Across Agile
Practices, People
and Technology

What's trending from a people perspective?

Respondents told us that when they are satisfied with Agile practices in their organization, certain things are going well. The most common result satisfied people see is increased collaboration (69%). It's easier to do their jobs with others. The second most common result that slightly more than half experienced is better alignment to business needs (54%). After that, the next two most common results that make them satisfied are a better work environment (39%) and an increased visibility in the application development lifecycle.

This resonates with the increased use of business objectives as metrics mentioned above, as well as the increase in aligning work priorities to business goals. These results validate the statement that more organizations are scaling Agile across the enterprise to achieve digital transformation. It is also worth noting that the increase in visibility to the application development lifecycle is a clear benefit of a continued focus on Agile tools and methodologies for software development itself.

72%

51%

20%

28%

22%

6%

Very satisfied | Somewhat satisfied | Not that satisfied | Not at all satisfied

© State of Agile 2022

04

What is Working Well Across Agile Practices, People and Technology

If we look to our opening statement, that high-performing Agile teams have people-centric values, clear culture, tools and leadership empowerment, then these are the results – it's a better place to work, people work together more, they have increased visibility into their work and it leads to better alignment to the business needs.

Among those who are satisfied with Agile practices at their company, seven in ten say they are satisfied because of increase collaboration and over half because of a better alignment to business needs

What are the best practices of high-performance Agile teams?

55% of respondents listed high levels of cross-collaboration and communication as a best practice

51% of respondents listed continuous improvement techniques as a best practice

Increase collaboration	69%
Better alignment to business needs	54%
Better work environment	39%
Increase visibility in the application development lifecycle	37%
Faster response for competitive threats	20%
Increased user experience	16%
Better customer service	14%
Increased time for innovation	13%
Increased product adoption	10%
Increased revenue	5%
Something else	5%

04
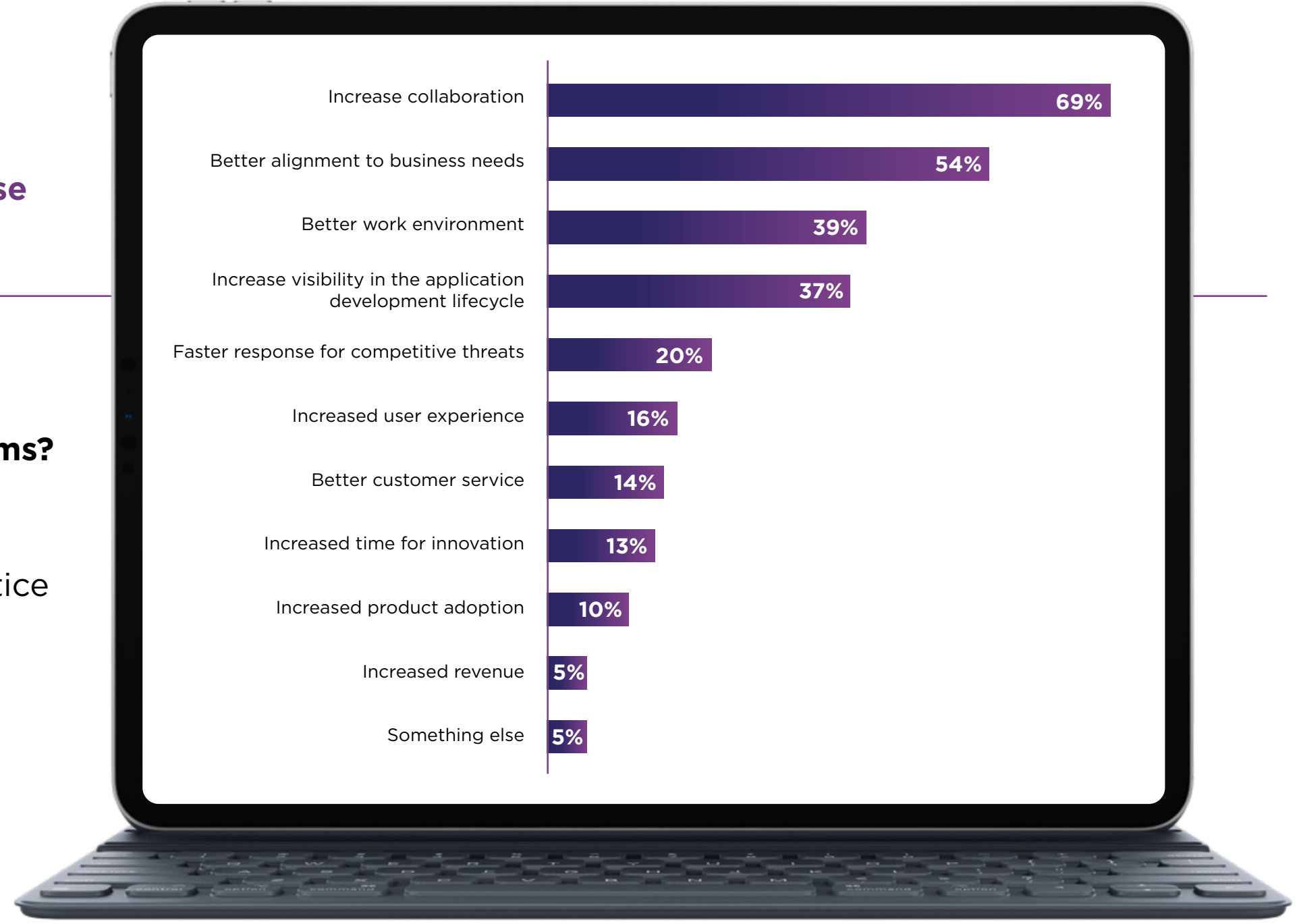
What is Working Well Across Agile Practices, People and Technology

As outlined in the executive summary section, a major focus is aligning Agile to business objectives. Since most teams are being measured by alignment to business needs, we asked a couple of deeper questions about what exactly they are doing to measure alignment to business needs. The results can be grouped in tiers:

The first tier of answers are overall business metrics, surveys or metrics tied to an individual project.

39% - business metrics

30% - end-user or customer surveys

30% - individual project metrics

The next tier of answers aligns to metrics that align more closely to OKRs, NPS scores or value stream KPIs.

27% - OKRs tied to Epics

25% - NPS scores

25% - value stream KPIs

The third set of metrics, which fewer are using are more fundamental IT metrics, flow metrics or DORA. These metrics may be used to measure the software lifecycle, but they are not being found to be helpful in aligning team work to business value.

20% - IT metrics

17% - Flow metrics

4% - DORA metrics

Finally, it should be noted that **19% - roughly 1 in 5** still are not sure what is being used to measure business value.

04

What is Working Well Across Agile Practices, People and Technology

State of Agile

2 out of 3 respondents are using **Atlassian Jira** to manage Agile projects.

That number dropped from 72% in year 15 but Jira Align usage grew, so Atlassian is holding fairly constant. Microsoft Excel dropped from 45% in year 15 to 34% this year, and the combined Microsoft TFS/Azure DevOps/Visual Studio combo dropped from 42% in year 15 to 23% this year.

Two-thirds of respondents use Atlassian Jira to manage Agile projects while over 2 in 5 use Mural/Miro and one-third use Microsoft Excel

Tool	Percentage
Atlassian Jira	66%
Mural/Miro	42%
Microsoft Excel	34%
MS TFS/MS Azure DevOps/MS Visual Studio	23%
Microsoft Project	15%
Atlassian Jira Align	14%
Rally (formerly CA Agile Central)	6%
In-house/Home Grown	6%
Digital.ai Agility (formerly Version One)	4%
IBM Rational Team Concert	3%
iObeya	2%
Micro Focus Quality Center or ALM	2%
Plainview LeanKit	2%
Target Process	2%
Micro Focus Agile Manager	1%
Aptio	1%
Trello	1%
Thoughtworks/Mingle	1%
Other	9%
None/No tools	1%

04

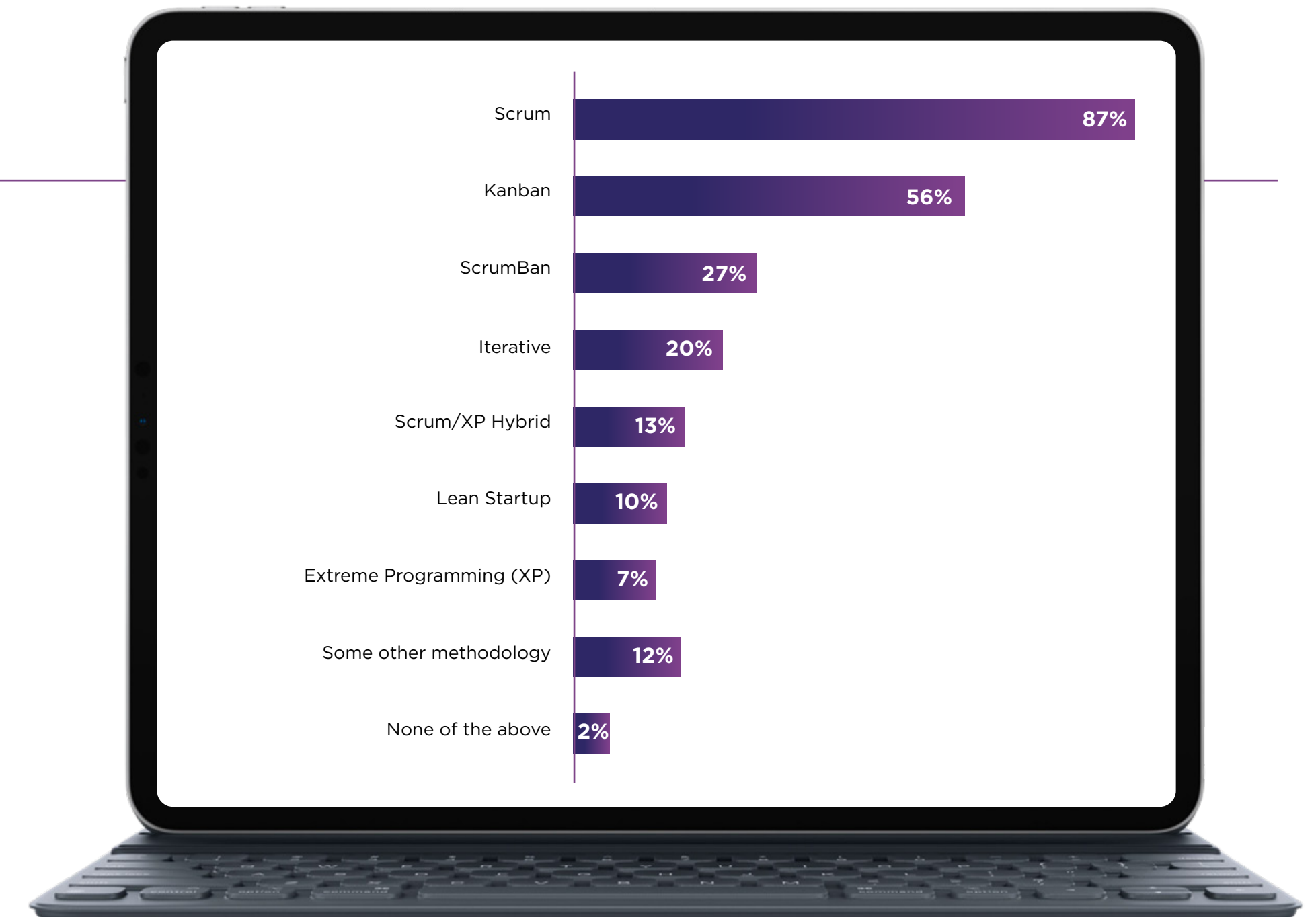## What is Working Well Across Agile Practices, People and Technology

We saw the rise of a new tool in this space, virtual digital whiteboards, as exemplified by Mural or Miro. This may be in part a response to the geographic disbursement of teams and the maintaining popularity of remote and hybrid workforces. We'll continue to track this trend to see what other tools may arise to join this space.

For methodologies, just under nine in ten respondents are leveraging Scrum, and over half are leveraging Kanban.

> **Almost 9 in 10 respondents say they are currently leveraging Scrum while over half are currently leveraging Kanban**

If we look at how that has changed over the last 3 years of the survey, Scrum continues to lead, increasing from 58% in the 14th survey to 87% in the current survey. Kanban use has exploded from 7% in the 14th survey to 56% in the current survey. Scrumban has grown modestly from 10% in the 14th survey to 27% in the current survey. Iterative has also grown from 4% in the 14th survey to 20% in this year's survey.

The most popular framework continues to be the Scaled Agile Framework (SAFe). Compared to previous years, SAFe has gone from 37% in year 15 to 53% this year. Scrum@Scale/Scrum of Scrums also saw a rise after years of decline, from 9% in year 15 back to 28% this year. Lean Management likewise grew after falling for several years from 2% in year 15 to 8% this year.

Methodology	%
Scrum	87%
Kanban	56%
ScrumBan	27%
Iterative	20%
Scrum/XP Hybrid	13%
Lean Startup	10%
Extreme Programming (XP)	7%
Some other methodology	12%
None of the above	2%

04

What is Working Well Across Agile Practices, People and Technology

Over half of respondents say the Enterprise Agile framework they are currently leveraging is SAFe while over one-quarter are leveraging Scrum@Scale/Scrum of Scrums

Framework	Percentage
Scaled Agile Framework (SAFe)	53%
Scrum@Scale/Scrum of Scrums	28%
Lean Management	8%
Agile Portfolio Management (APM)	7%
Spotify Model	7%
Enterprise Scrum	6%
Large Scale Scrum (LeSS)	6%
Disciplined Agile (DA)	3%
Nexus	3%
Recipes for Agile Governance in the Enterprise (RAGE)	1%
Some other framework	8%
Not at all sure	15%
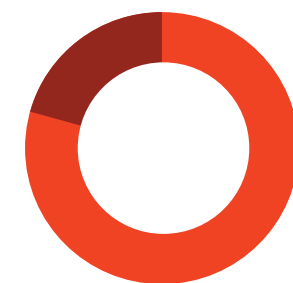
78% of respondents indicated that their Agile teams have visibility into the pipeline.

69% Believe that at least 50% of applications are delivered on time

On-time delivery is a key metric as well as a way of prioritizing work, this number has room for improvement but indicates tools and processes are helping them get the job done.

05

What is Not Working Well Across Agile Practices, People and Technology

What's challenging from a people perspective

The other side of the Agile story is where organizations see challenges, or better yet, opportunity. The survey shows that culture, leadership and consistency are three key challenges to successful Agile adoption in an organization.

39% - Leadership not understanding or putting up roadblocks

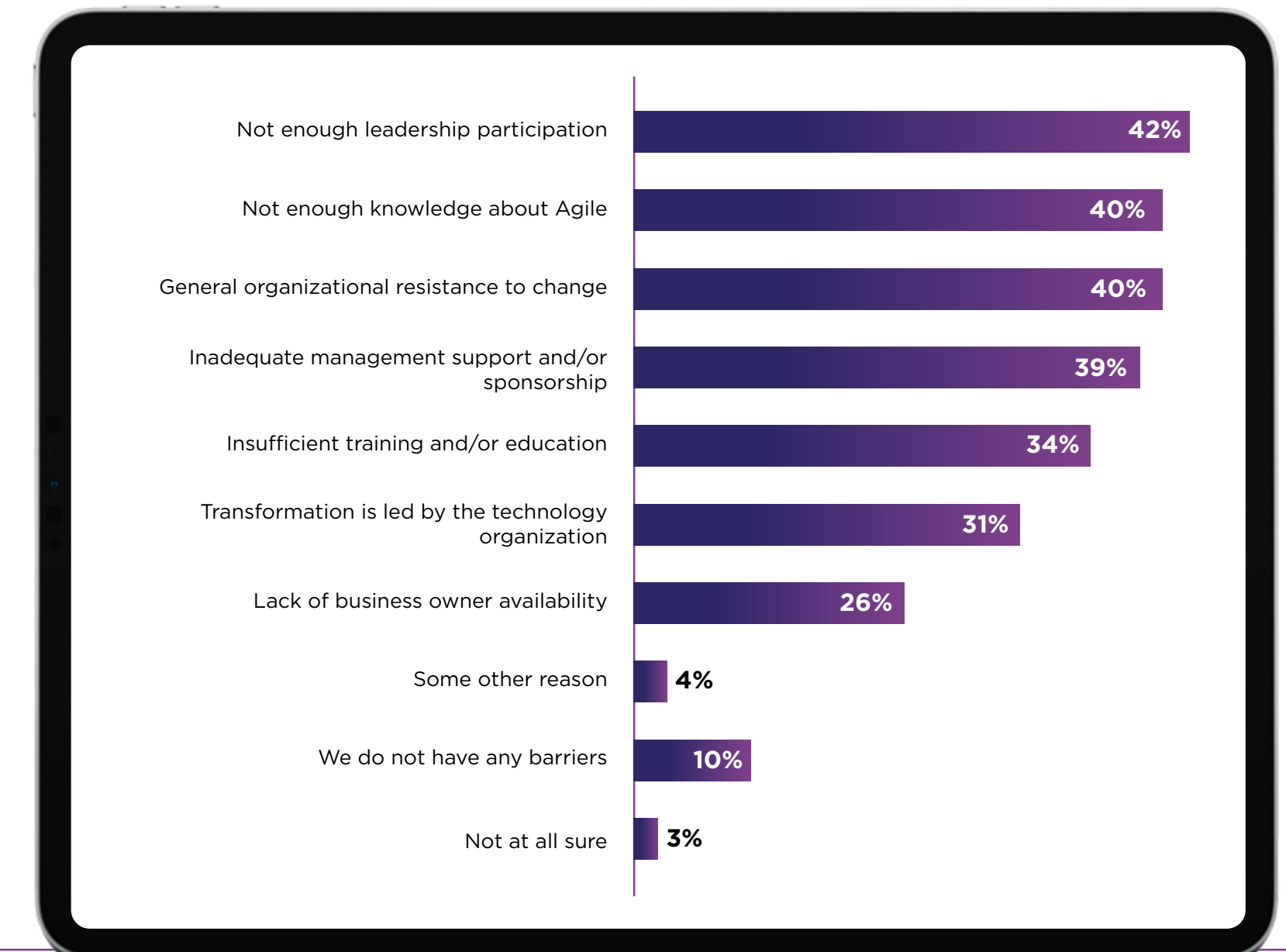**31%** - Lack of clear priorities and/or clear directions

31% - Business teams not understanding what Agile does

Agile is not something that the business intuitively grasps. Agile coaches and consultants who are working on expanding Agile adoption need to continue their focus on making sure leadership – and cross-functional colleagues – understand what Agile is and how it will affect their work as the yearly statistic shows the need to improve business understanding of agile. In this section we explore people, technology and processes that are challenges and opportunities to successful Agile adoption.

There are also challenges as organizations scale Agile practices to other parts of the business such as Engineering, Business Operations, HR or Marketing. When we asked specifically about barriers to adopting Agile on the business side of the organization, the biggest concerns were not enough leadership participation (42%), not enough knowledge about Agile (40%), general organizational resistance to change (40%) and inadequate management support and/or sponsorship (39%).

Over 2 in 5 respondents say not enough leadership participation is a barrier for adopting Agile practices on the business side of the organization.

While 2 in 5 say a barrier is inadequate management support and/or sponsorship

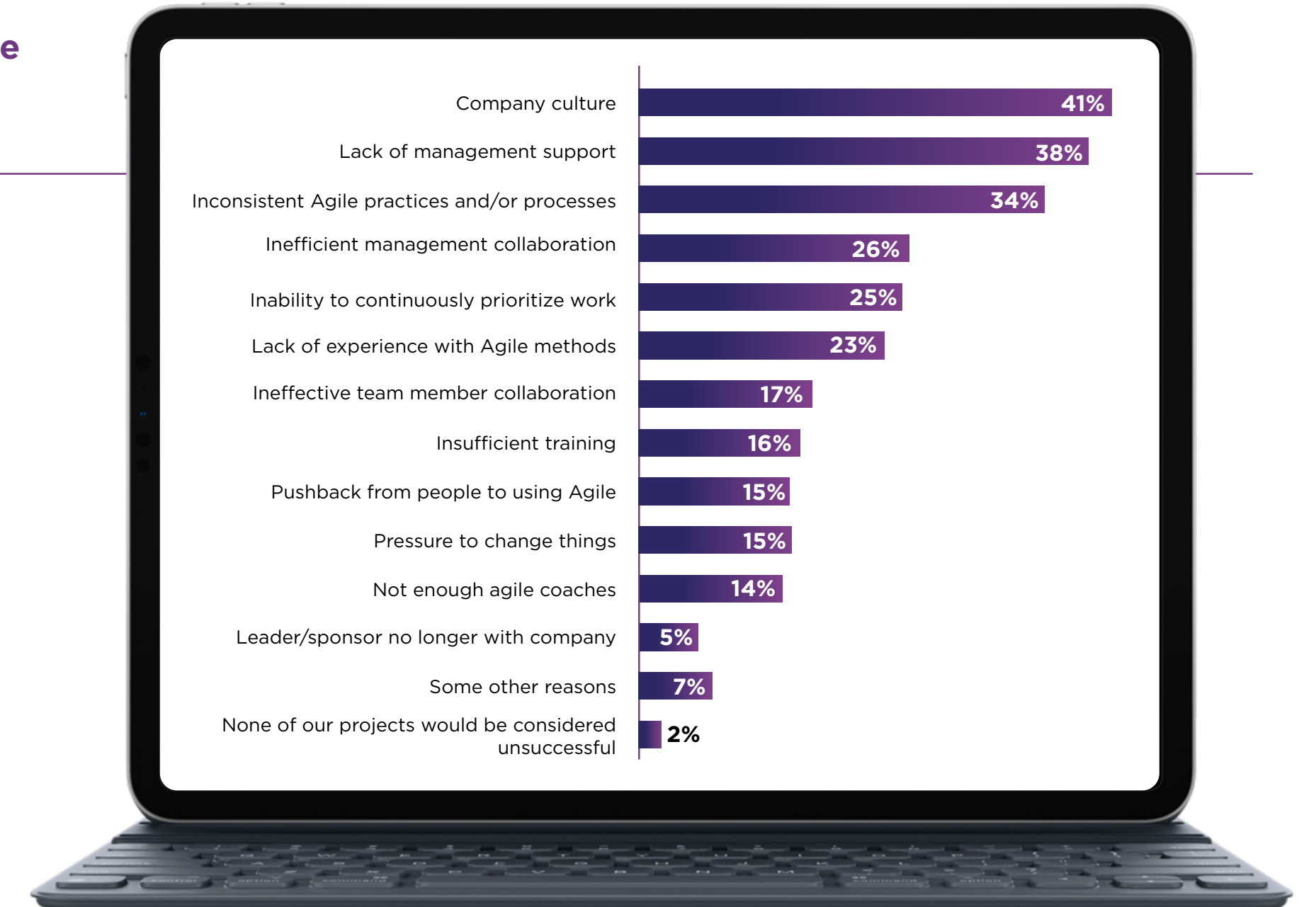| Barrier	%
Not enough leadership participation	42%
Not enough knowledge about Agile	40%
General organizational resistance to change	40%
Inadequate management support and/or sponsorship	39%
Insufficient training and/or education	34%
Transformation is led by the technology organization	31%
Lack of business owner availability	26%
Some other reason	4%
We do not have any barriers	10%
Not at all sure	3%

05

What is Not Working Well Across Agile Practices, People and Technology

This would seem to indicate that having corporate champions for Agile and senior leadership that understand and buy in to the process are leading indicators of success, even if Agile does well at a grass roots level.

Along with limited Agile leadership, company culture is another challenge that came up. 40% are dissatisfied with Agile at their organization as statistics show that Agile practices frequently clash with company culture. In fact, company culture is listed as the leading "cause of unsuccessful delivery with Agile".

Company culture and a lack of management support are the leading causes of unsuccessful delivery with Agile

The people and culture responses highlight areas of opportunity. We saw earlier that nearly 1 in 5 respondents (19%) had no idea how to measure alignment to business needs. Education and alignment are key areas of opportunity for leadership to understand what Agile is, and how to help Agile teams align to business goals, and measure success. Executive support is a common challenge. 38% report a "Lack of management support" as a leading cause of unsuccessful delivery with Agile, while two in five respondents say not enough leadership participation is a barrier for adopting Agile.
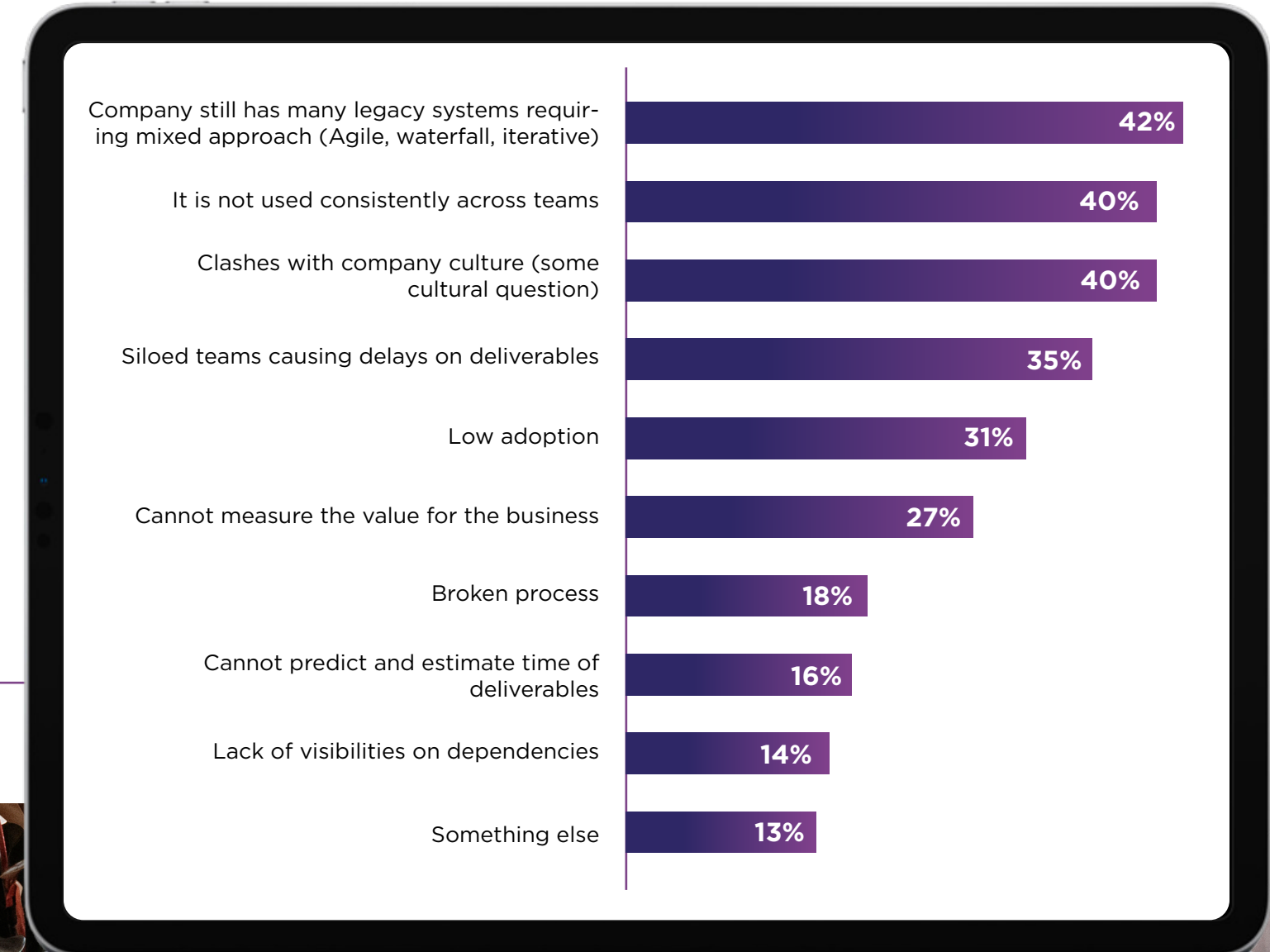
Company culture	41%
Lack of management support	38%
Inconsistent Agile practices and/or processes	34%
Inefficient management collaboration	26%
Inability to continuously prioritize work	25%
Lack of experience with Agile methods	23%
Ineffective team member collaboration	17%
Insufficient training	16%
Pushback from people to using Agile	15%
Pressure to change things	15%
Not enough agile coaches	14%
Leader/sponsor no longer with company	5%
Some other reasons	7%
None of our projects would be considered unsuccessful	2%

State of Agile

05

What is Not Working Well Across Agile Practices, People and Technology

What's challenging from a tools and process perspective

Many organizations have tools that historically support waterfall or an iterative approach, which makes it challenging in shifting to a completely Agile world. Although 80% of respondents are using Agile, half are using hybrid – a combination of Agile, waterfall or iterative methods - in addition to Agile. Another third states that their Agile is a combination of various Agile frameworks.

42% said that the company has many legacy systems that require a mixed approach. This was followed up by what seems a closely related response of Agile practices not being used consistently across teams (40%). Applying a combination of methodologies to manage heterogeneous technologies can exacerbate inconsistency.

> **Among those not satisfied with Agile practices at their company, the top reason is because their company still has many legacy systems requiring a mixed approach**

Company still has many legacy systems requiring mixed approach (Agile, waterfall, iterative)	42%
It is not used consistently across teams	40%
Clashes with company culture (some cultural question)	40%
Siloed teams causing delays on deliverables	35%
Low adoption	31%
Cannot measure the value for the business	27%
Broken process	18%
Cannot predict and estimate time of deliverables	16%
Lack of visibilities on dependencies	14%
Something else	13%

06

What's Next?

While the State of Agile gives us a nice snapshot of where we are currently, it's also good to tease out some of the areas that point to where we are headed.

What's next from a people perspective

The future of work is a hot topic in most workplaces, and Agile folks are weighing in on that topic. As a result of the pandemic, we went almost completely remote, and results show that we're working our way back to a mostly hybrid approach.

|		
Only **2%** of respondents are fully in the office	**17%** of respondents are fully remote	**51%** are mostly remote, but in the office occasionally

In last year's survey, only 3% indicated they planned to return to the office full time, 25% said they were going to remain fully remote, and 56% favored a hybrid approach. There are fewer who are completely remote than planned, but still about half of respondents are mostly remote. It will likely continue to adjust over the next few years as organizations and leaders try different approaches.

What's next from a process perspective

The goal continues to be an organization that responds quickly and appropriately to its dynamic environment. The tumult of the last few years – from the pandemic, to supply chains, from economic recessions to government changes and the environment – all suggest that an agile business is one better suited to thrive in volatile times. The need for business agility is the likely driver of the growing focus on business value and alignment of Agile work to business value. The research shows us that enterprise agility methods are something organizations are exploring, but there is a lot of opportunity to refine and mature these processes.
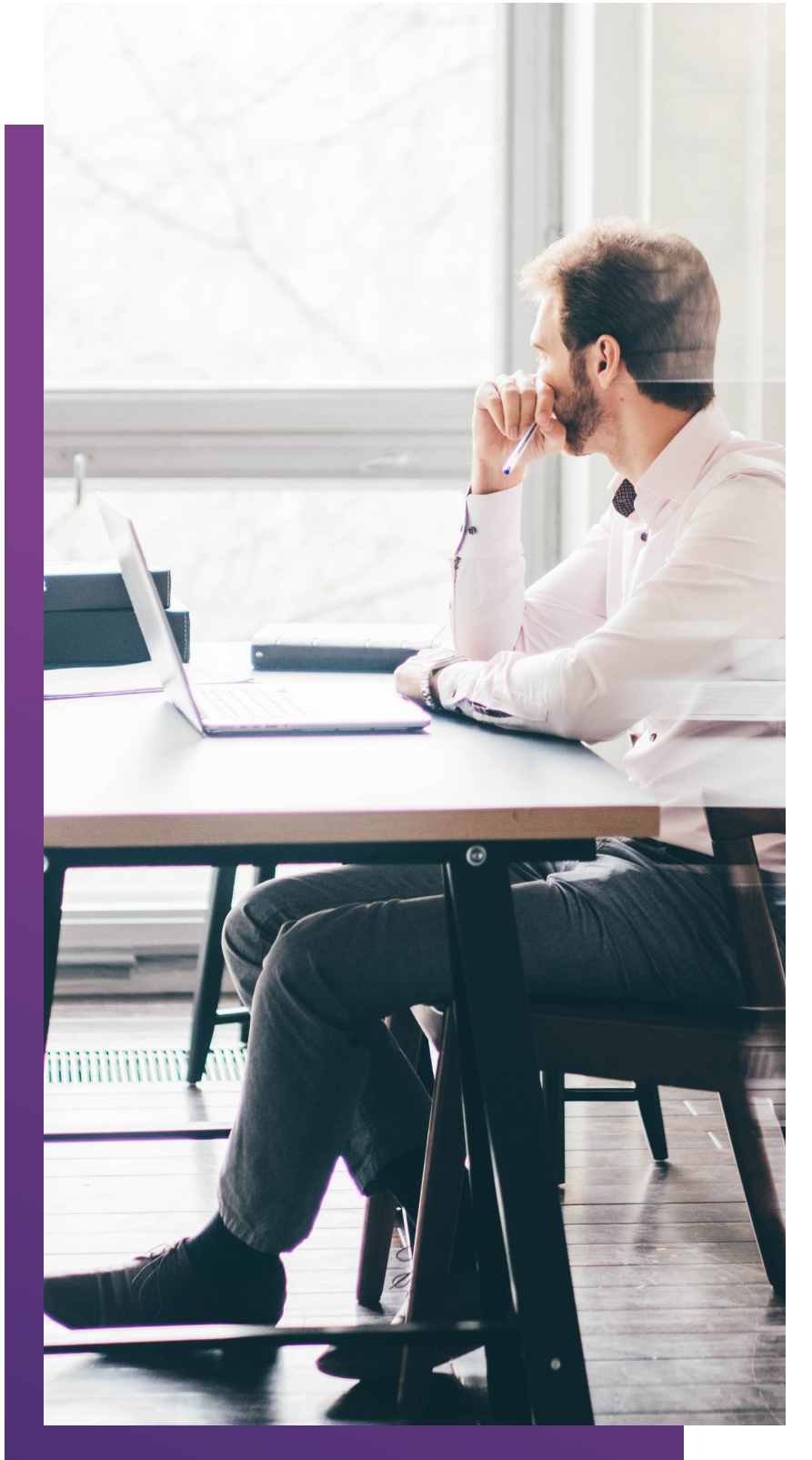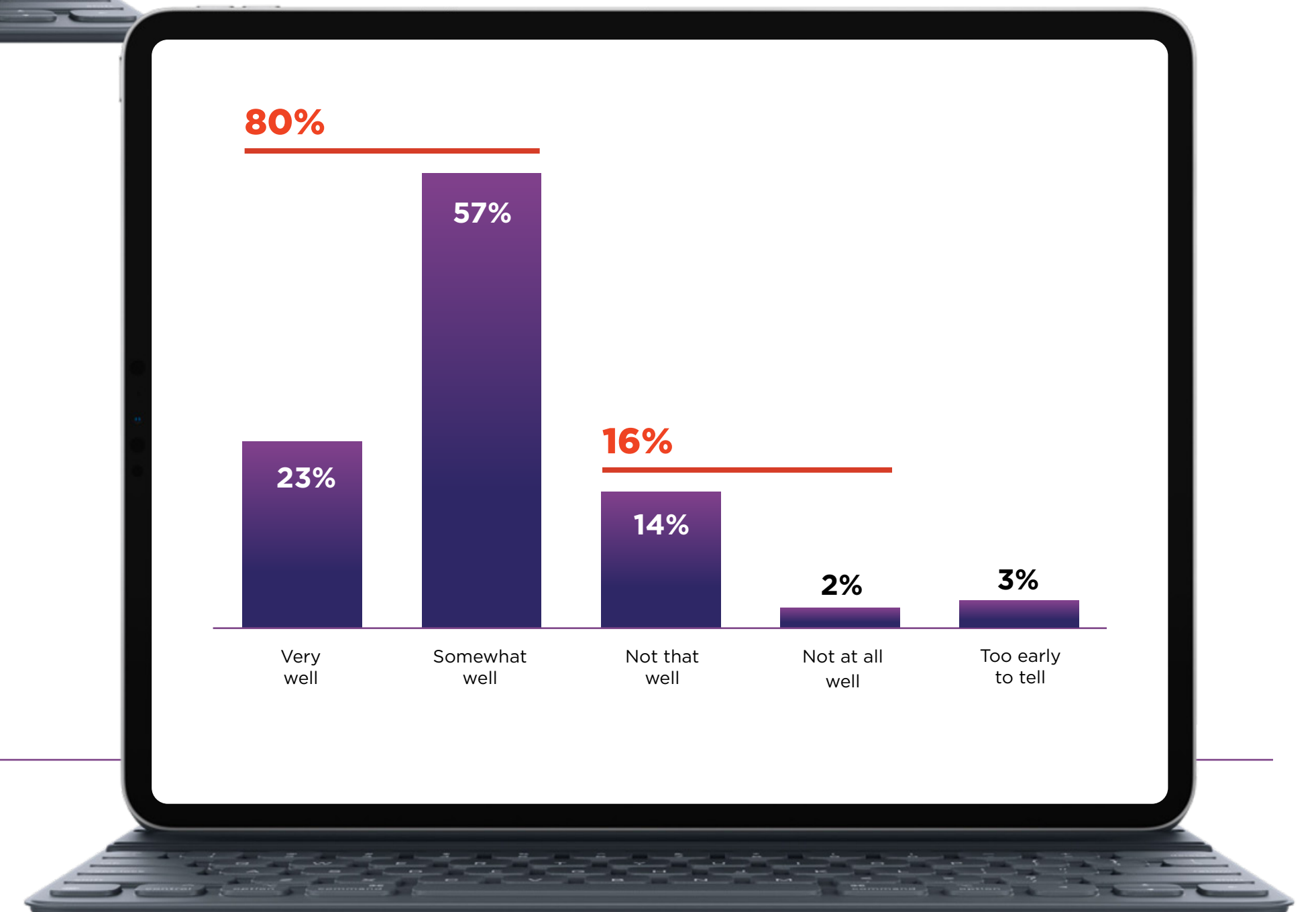
06

What's Next?
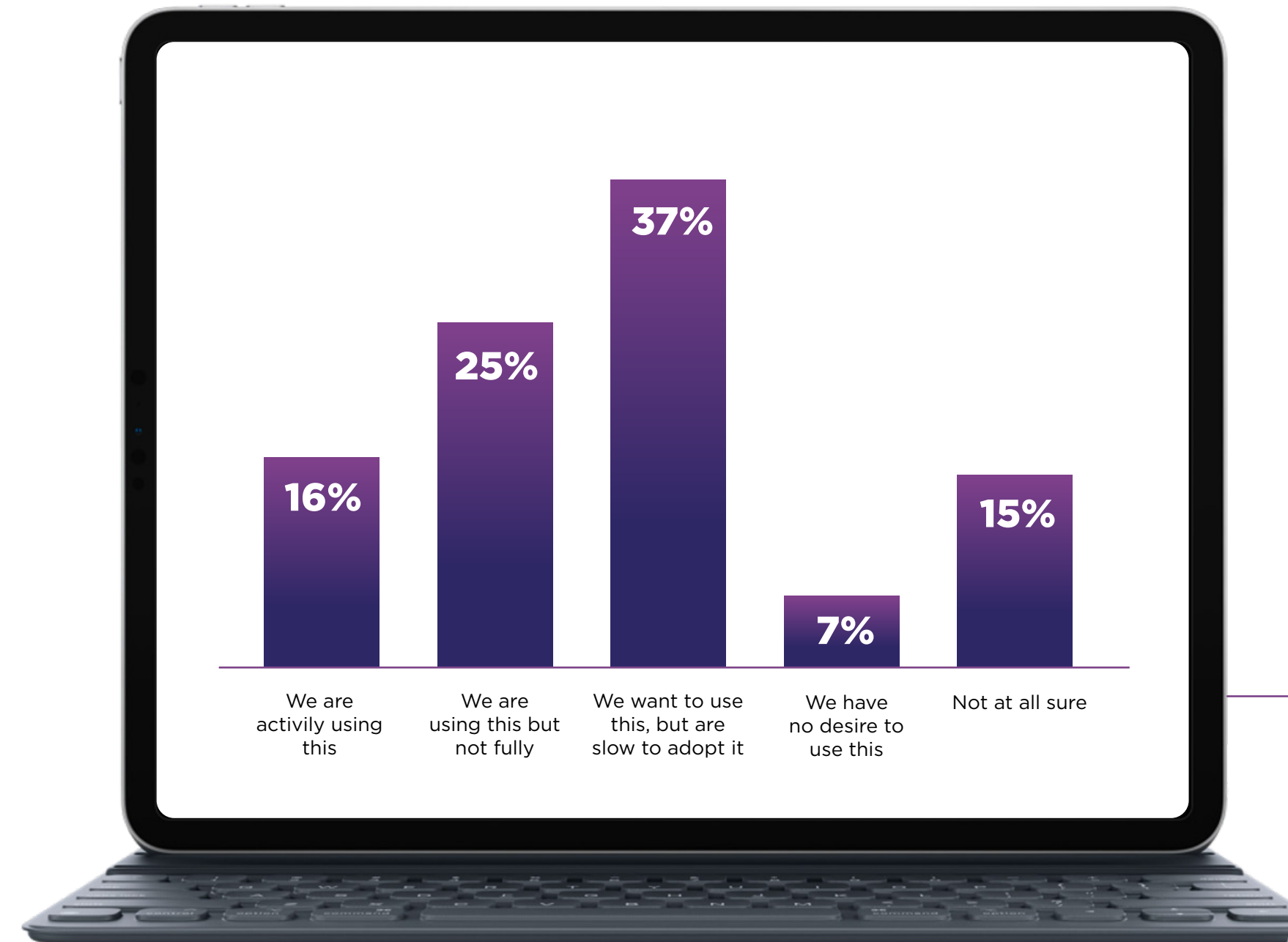
Only 15% of respondents were unsure of where their organization stands, but most organizations are still struggling to achieve enterprise agility.

When it comes to enterprise agility, over one-third say they want to use it but are slow in adopting it and less than one in five are actively using it in their organization

16% — We are activily using this

25% — We are using this but not fully

37% — We want to use this, but are slow to adopt it

7% — We have no desire to use this

15% — Not at all sure

For those who are actually using an enterprise agility approach, the majority say it is working somewhat well, but there is certainly room for improvement, as about one in six say it isn't working well to some degree. The leadership challenges discussed above will be key in getting enterprise agility to scale across organizations.

Among those who are using enterprise agility, 4 in 5 say it is working well but over half say it is working somewhat well and less than one-quarter say it is working very well.


80%

23% — Very well

57% — Somewhat well

16%

14% — Not that well

2% — Not at all well

3% — Too early to tell

State of Agile

06

What's Next?

What's next from a tooling perspective

We know that Agile teams are being asked to measure business value, but we were curious to get their perspective on the relationship to DevOps teams. We asked some questions to dig deeper into the relationship between Agile teams and the DevOps teams who typically manage the end-to-end application lifecycle development. We think moving forward, there will continue to be efforts to tie the work of the DevOps teams to business objectives through better understanding of the end-to-end application lifecycle.
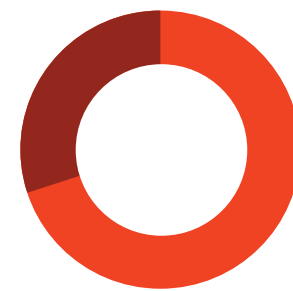
68% agree that enterprise Agile tools help Agile and DevOps teams work together
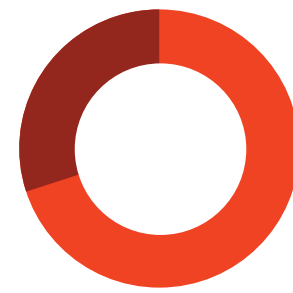
69% say that DevOps teams have visibility into application development

However, there is room for better collaboration and integration, especially as business objectives become more important to Agile teams.

51% agreed "Our DevOps teams are not incorporating business feedback regularly."

06

What's Next?

What would be the most valuable improvements to DevOps teams?

58% say end-to-end visibility and traceability from business initiative through development, test and deployment to end users.

55% say the ability to measure cycle time, wait time and bottlenecks, optimizing the flow of value to the business through the delivery cycle would be an important improvement.

Almost 3 in 5 respondents say improvements in end-to-end visibility and traceability would be most valuable for their DevOps practice

End-to-end visibility and traceability from business initiative through development, test and deployment to end users — 58%

Ability to measure cycle time, wait time and bottlenecks optimizing the flow of value to the business through delivery cycle — 55%

Identification and measurement of technical risk, knowledge of unmet dependencies and blocking issues prior to deployment — 37%

Automated audit compliance and governance reporting across control points — 22%

Increased predictive intelligence for products performance — 14%

More secure application management — 8%

07

About the Survey

The 16th annual survey was conducted both online and in person, starting with the Agile22 conference in July 2022 and wrapping up with SAFe Summit in late August 2022. We had 3,220 respondents and were able to reach out to so many thanks to help from the Agile community. The complete survey responses were collected, analyzed and prepared into a summary report by Regina Corso Consulting, an independent survey consultancy.

Our co-sponsor Scaled Agile provided input on the survey and broadcast the survey widely at their conference and to their members. Organizations such as Scrum.org also helped share the survey with their membership so that we were able to have many Agile voices be heard. It takes an Agile village to field this survey.

We're thankful for everyone who participated, as well as all the feedback, stories, ideas, and inputs that shaped this year's survey and already have us thinking about next year and number 17.
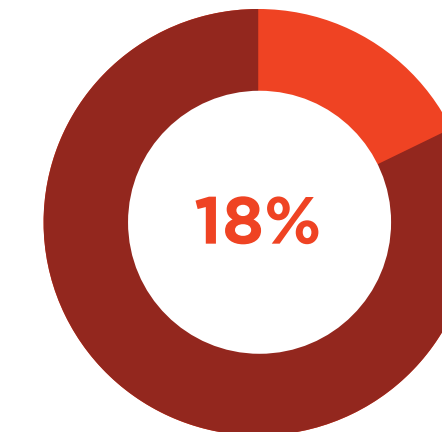
08
Demographics

This year shifting back to in-person and on-line, we had fewer small companies, and slightly more large companies, with the midsized also increasing slightly.
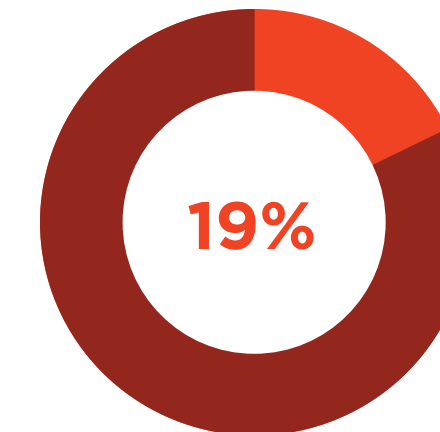
One-third of respondents come from companies with over 20,000 employees and three in ten from companies with 1,000 or fewer employees
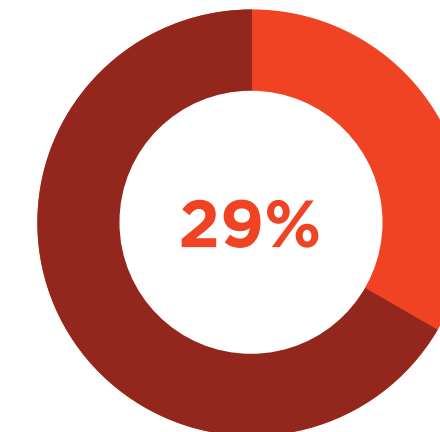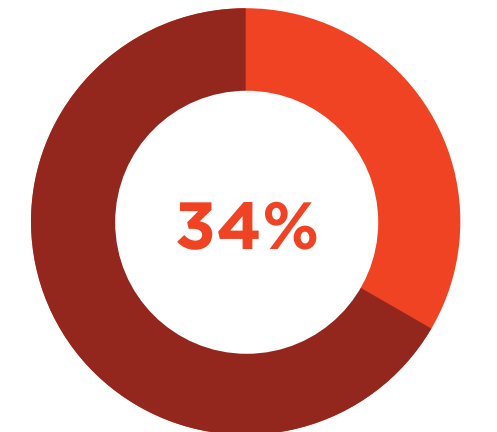
| 29%	18%	19%	34%
1-1,000	1,001-5,000	5,001-20,000	Over 20,000

Within those companies, there is also distribution in the number of people responsible for software delivery, with teams generally growing larger. These numbers also changed with fewer small teams, and growth in the larger teams.
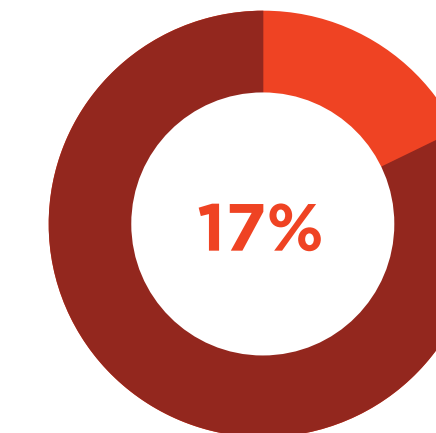
Over one-third of respondents say the software organization in their company is between 101 and 1,000 people and one-quarter say it's less than 100 people
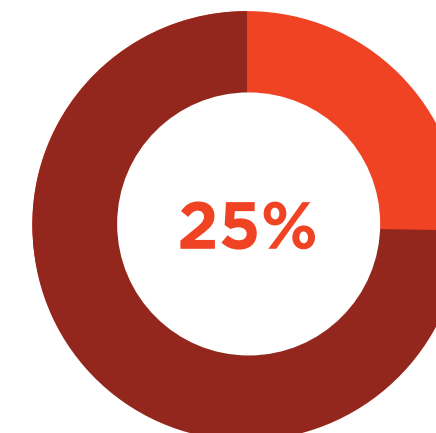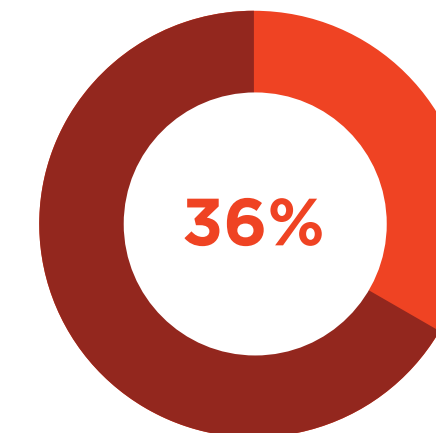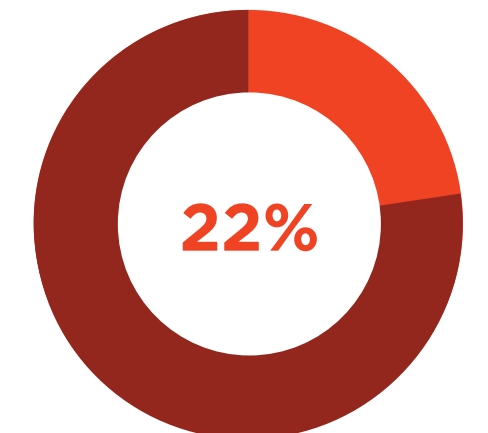
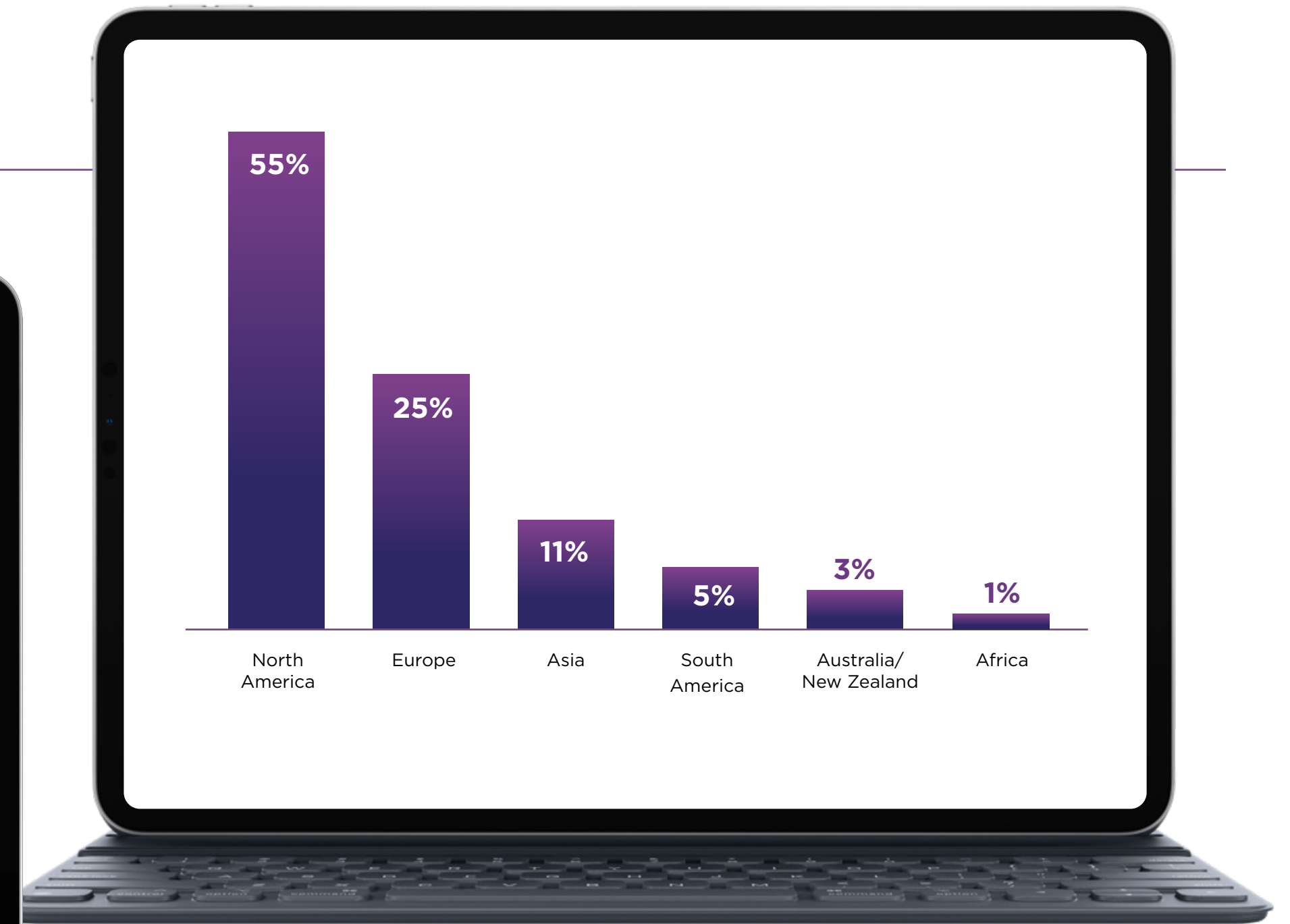| 25%	36%	17%	22%
Less than 100	101-1,000	1,001-5,000	Over 5,000

08
Demographics

Role	Percentage
Scrum Master or Internal Coach	34%
Development Leadership	14%
Project/Program Manager	11%
External Consultant/Trainer	9%
Product Manager/Product Owner	8%
C Level Exec	5%
Development Team Member	4%
Business Analyst	3%
Portfolio Manager	3%
DevOps	1%
Other	7%

Region bar chart:
- North America: 55%
- Europe: 25%
- Asia: 11%
- South America: 5%
- Australia/New Zealand: 3%
- Africa: 1%

One-third of respondents are Scrum Masters or Internal Coaches. This breakdown has remained fairly consistent over the last 5 years of the survey.

One-third of respondents are Scrum Masters or Internal Coaches while over one in ten are in Development Leadership and one in ten a Project/Program Manager or External Consultant

08
Demographics

Over one-quarter of respondents are in the technology industry while almost one in five are in financial services and almost one in ten are from professional services and healthcare/pharma

Technology and financial services are the two industries most represented in this year's survey. This industry breakdown has held fairly consistent over the last 8 years of the survey.

Industry	%
Technology	27%
Financial Services	18%
Professional Services	8%
Healthcare/Pharma	8%
Government	7%
Industrial Manufacturing	5%
Insurance	5%
Telecommunications	4%
Transportation	3%
Energy	3%
Retail	2%
Education	2%
Media and Entertainment	1%
Non-profit	1%
Some other industry	5%