

14th annual STATE OF AGILE™ REPORT



EXECUTIVE SUMMARY



Over 40,000 Agile executives, practitioners, and consultants have participated in the State of Agile survey since its inception. The 14th annual State of Agile survey provides insights into the application of Agile across different areas of the enterprise and about Value Stream Management. As you go through the results, you might find some familiar trends and discover some noteworthy changes from the previous year's survey. Read on and dive deep inside the numbers to uncover some interesting correlations.

WHAT'S TRENDING



CULTURE IS STILL A THING

The highest-ranked challenges to adopting and scaling Agile continue to be related to organizational culture. General organizational resistance to change, inadequate management support and sponsorship, and organizational culture at odds with Agile values remain in the top 5 challenges. A new choice this year, not enough leadership participation, also ranked in the top 5.



SCRUM AND SAFe® REIGN SUPREME

Scrum is the most widely-practiced Agile method/framework, with at least 75% of respondents practicing Scrum or a hybrid that includes Scrum. SAFe® is again the scaling framework of choice, leading with 35% of the respondents. This is up 5% from last year.



AGILE EMPOWERS ADAPTABILITY AND VISIBILITY

This year again, ability to manage changing priorities and project visibility are the top 2 capabilities reported as having improved as a result of Agile implementation. The other improved capabilities that continue to round out the top 5 are business/IT alignment, team morale, delivery speed/time to market, and team productivity.

AGILE IS ANOTHER YEAR OLDER

Three survey responses differed by 10% or more as compared to last year's survey:



COST REDUCTION

Reduce project cost is reported as an important reason for adopting Agile by 26% of the respondents this year. That's down from 41% in the 13th annual report, but is near the 24% response in the 12th annual report.



FOCUS ON TECHNICAL

Identification of measurement of technical risk prior to deployment was reported as very valuable by 34% of this year's respondents, versus 22% last year. One reason for this may be a greater awareness of the ability to do so via the appropriate practices and tooling.



COMPLIANCE IS ON THE RISE

Automated audit compliance and governance across control points was reported as very valuable by 28% of this year's respondents, up from 10% last year. This may be the result of wider Agile adoption by organizations with mandated compliance requirements, plus a greater awareness of tooling.

INSIDE THE NUMBERS

We filtered the results along demographic lines, looking for insights that may not be obvious in the general results. We analyzed the responses according to how long the respondent's company has been practicing Agile, the size of the respondent's company, and the respondent's self-reported role. Here's what we found:



LENGTH OF TIME PRACTICING AGILE

Greater length of time practicing Agile correlates with greater reported Agile maturity, improved time to market, and increased ability to manage changing priorities. It also correlates with a greater percentage of the organization practicing Agile.

Having practiced Agile for 5 or more years correlates with a greater reported percentage of DevOps initiatives underway, as well as more interest in Value Stream Management. These organizations are also more likely to use tooling.



COMPANY SIZE

Companies with more than 20,000 people are much more likely to have been practicing Agile for at least 5 years. They are also more likely to use tooling.

Reported company size of less than 1,000 people correlates with a higher percentage reporting that all of their teams are Agile. Companies of this size are also more likely to apply Agile to areas outside of development, IT, and operations.

THE FUTURE IS EVEN MORE AGILE

Over half of the respondents reported that their organizations are either currently implementing Value Stream Management (VSM) or are planning to do so. We expect a greater percentage of organizations to embrace VSM going forward, as understanding increases and tooling more capably enables the unification of the “concept to cash” value stream.

The survey results indicate that agility is still largely confined to development, IT, and operations. However, the notion that business agility requires effective alignment and coordination across all areas of an organization continues to gain momentum. So what does the future hold? Next year, we expect to see organizations report greater expansion of agility into areas beyond those typically associated with building, deploying, and maintaining software. When Agile is scaled across an organization, everyone experiences the benefits.

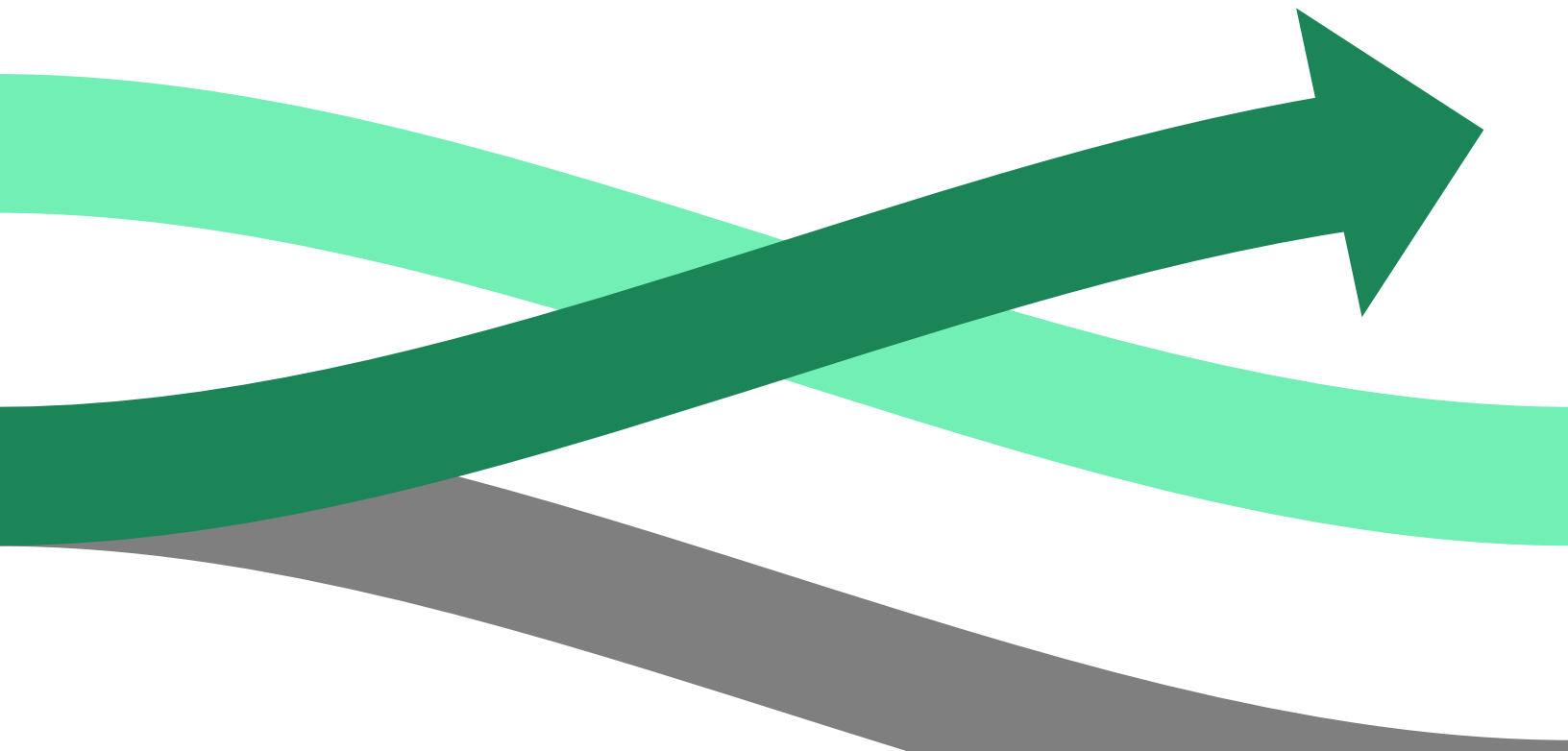


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ABOUT THE SURVEY

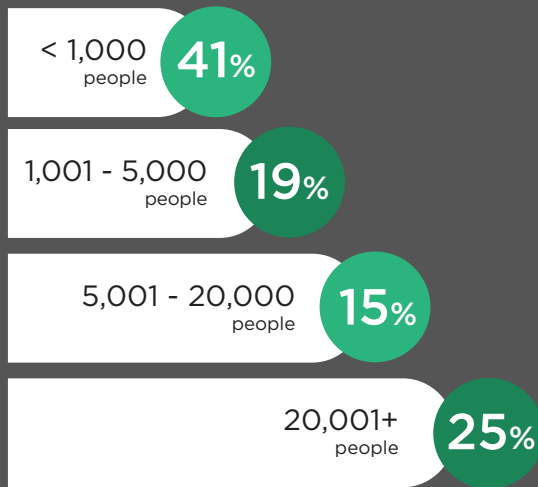
The 14th annual State of Agile survey was conducted between August and December 2019. Sponsored by Digital.ai (formerly CollabNet VersionOne), the survey invited individuals from a broad range of industries in the global software development community. 1,121 full survey responses were collected, analyzed, and prepared into a summary report by Analysis.Net Research, an independent survey consultancy. Only 14% of the respondents were CollabNet VersionOne customers, indicating the range and diversity of respondents.

RESPONDENT DEMOGRAPHICS

The 14th annual survey collected responses from a diverse set of organization sizes, geographic locations, roles, and industries. Global survey representation increased as 59% of respondents were from outside of North America this year compared to 53% last year. Compared to last year, the percentage of software organizations reported as having more than 1,000 people increased, while those with 1,000 people or fewer decreased.

SIZE OF ORGANIZATION

Respondents who worked for organizations with:



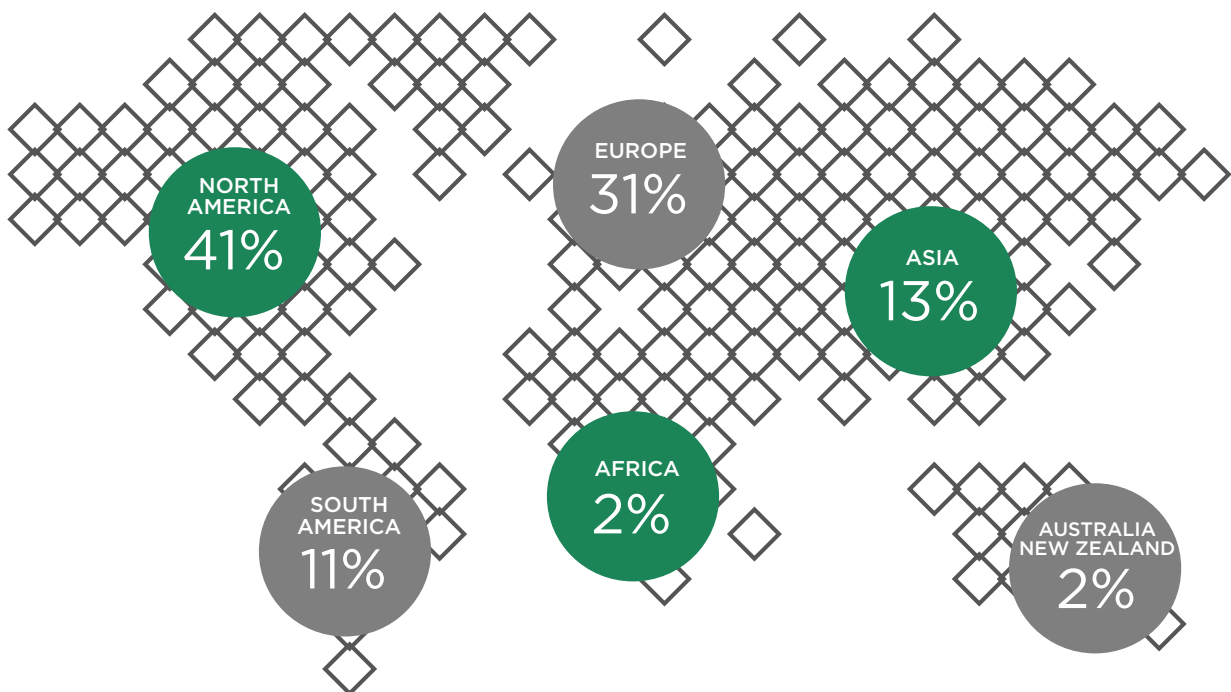
SIZE OF SOFTWARE ORGANIZATION

Respondents worked for organizations with teams responsible for planning, developing, testing, and delivering software with:



LOCATION OF ORGANIZATION

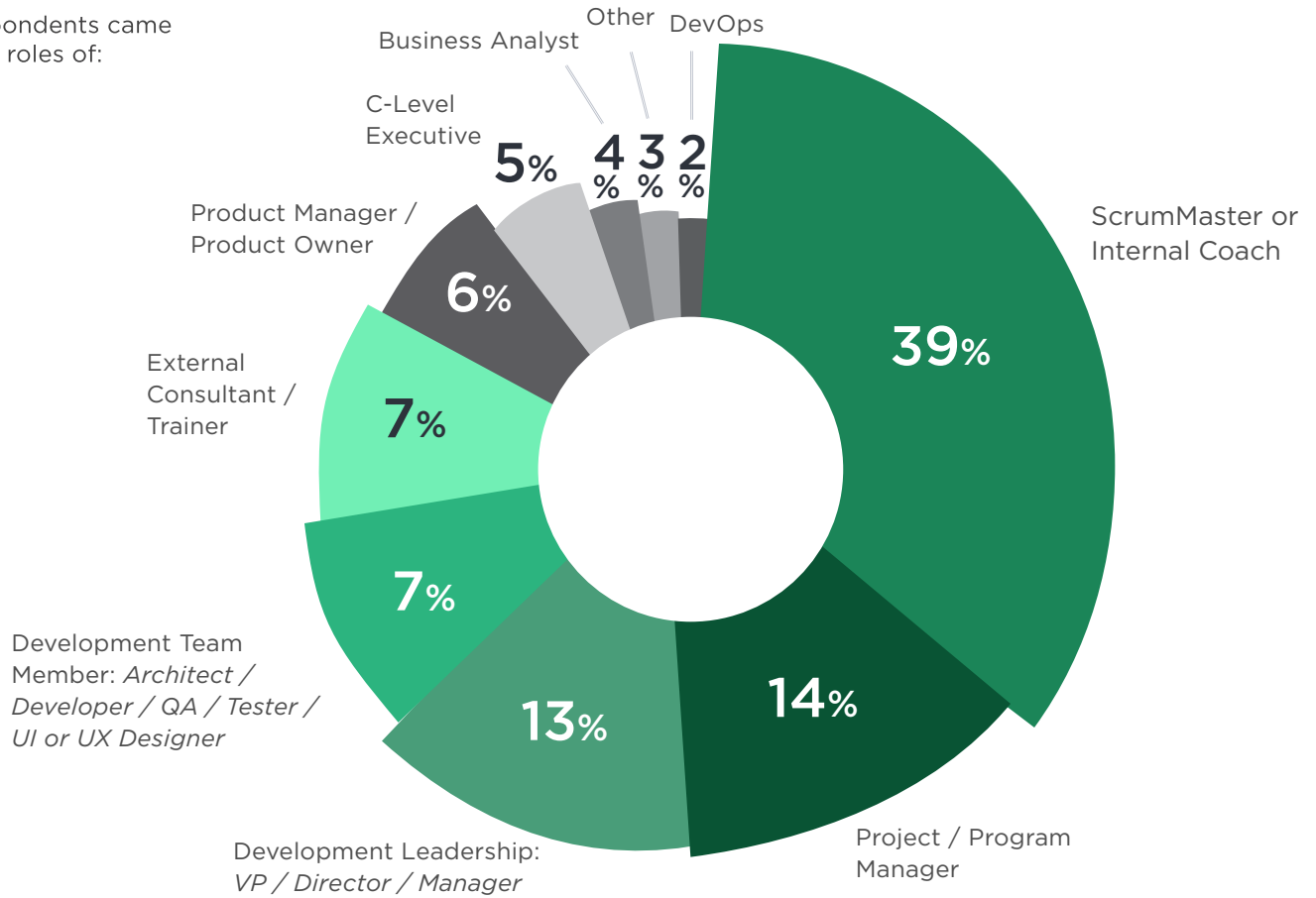
Respondents were from:



RESPONDENT DEMOGRAPHICS

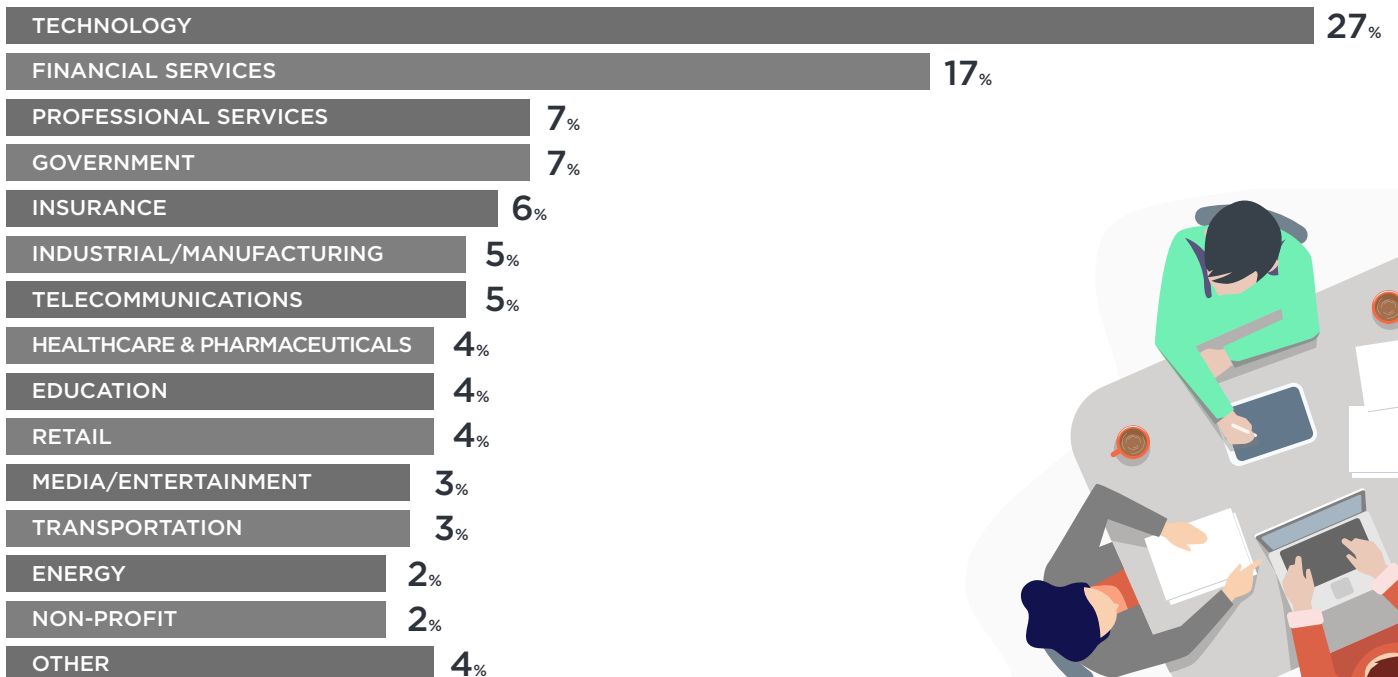
ROLE

Respondents came from roles of:



INDUSTRIES

Industries respondents worked in:



COMPANY EXPERIENCE AND ADOPTION

COMPANY EXPERIENCE

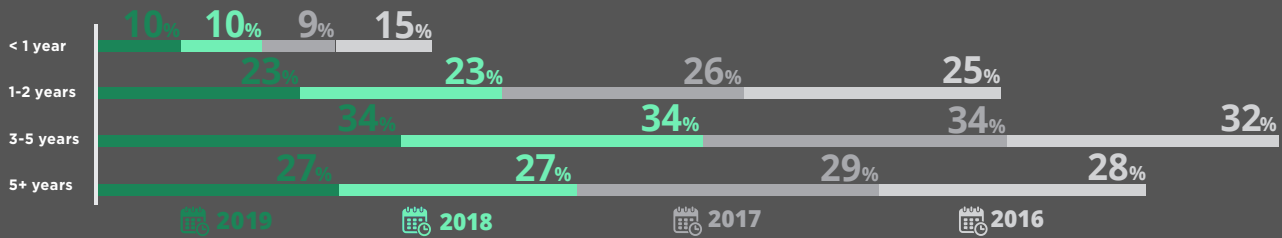
HOW MANY?

95% of respondents report their organizations practice Agile development methods.



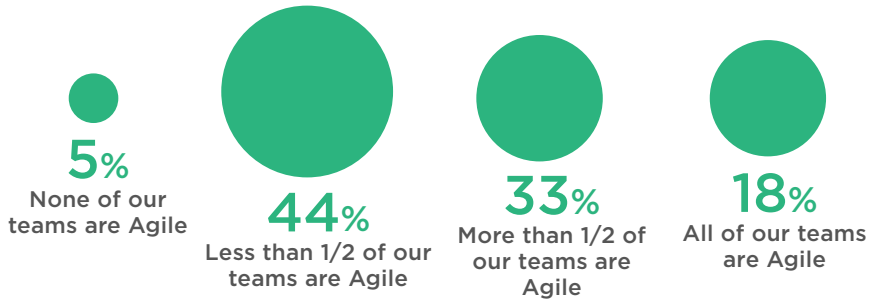
HOW LONG?

The length of time respondents' organizations have been practicing Agile development methods:



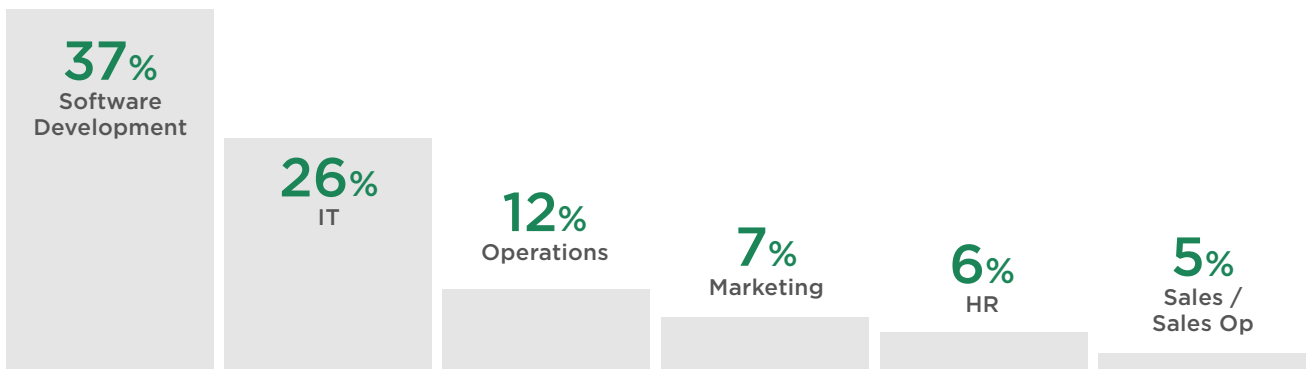
PERCENTAGE OF TEAMS USING AGILE

82% of respondents indicated that not all of their company's teams have adopted Agile practices signaling that there is still growth to come for enterprise Agile adoption.



AREAS OF ORGANIZATION PRACTICING AGILE

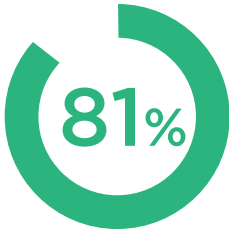
Agile practices are not limited to software organizations. A new question to the survey this year inquired about which areas of the organization have adopted Agile principles and practices.



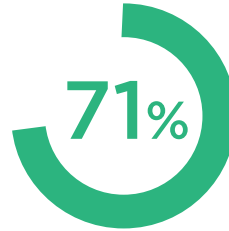
*Respondents were able to make multiple selections

DISTRIBUTED AGILE TEAMS

While working together face-to-face can be desirable for Agile practices, survey respondents indicated that organizations are supporting distributed teams and team members. There is no evidence of a trend toward increased co-location, as more respondents indicated their organizations continue to support and encourage team collaboration across geographic boundaries and timezones. The current worldwide health crisis may prove to be an inflection point that leads to an additional increase in distributed teams as a “new normal”.



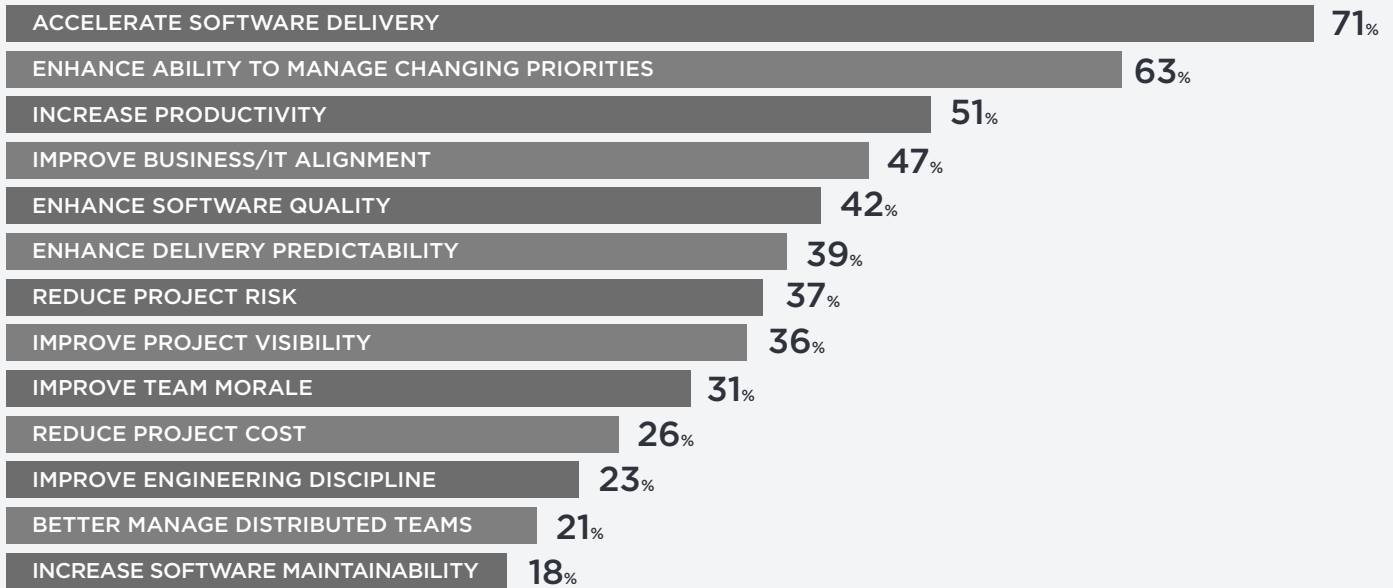
81% of respondents said their organization has Agile teams where the members of the same team do not all work in the same location (i.e. not co-located).



71% of respondents said their organization practices Agile with multiple co-located teams collaborating across geographic boundaries.

REASONS FOR ADOPTING AGILE

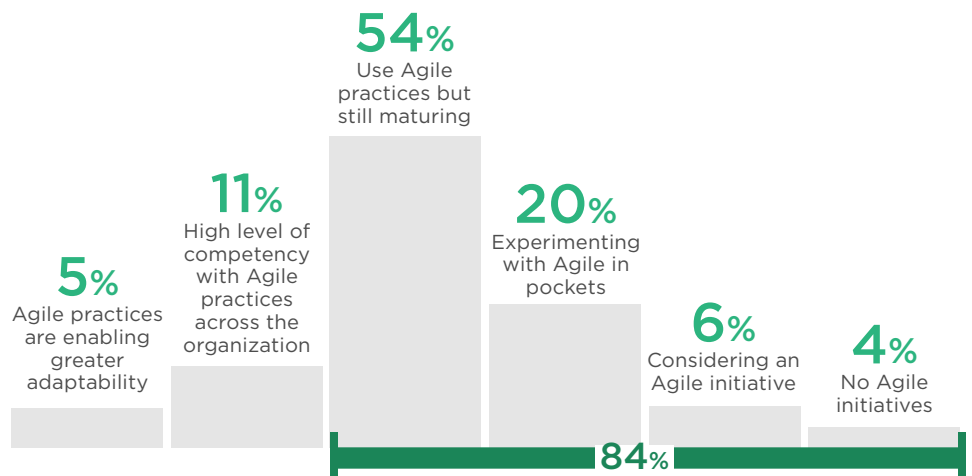
Accelerating software delivery and enhancing ability to manage changing priorities remain the top reasons stated for adopting Agile. Respondents indicated this year that reasons for adoption were less about reducing project cost (26% compared to 41% last year), and more about reducing project risk (37% compared to 28% last year).



*Respondents were able to make multiple selections

AGILE MATURITY

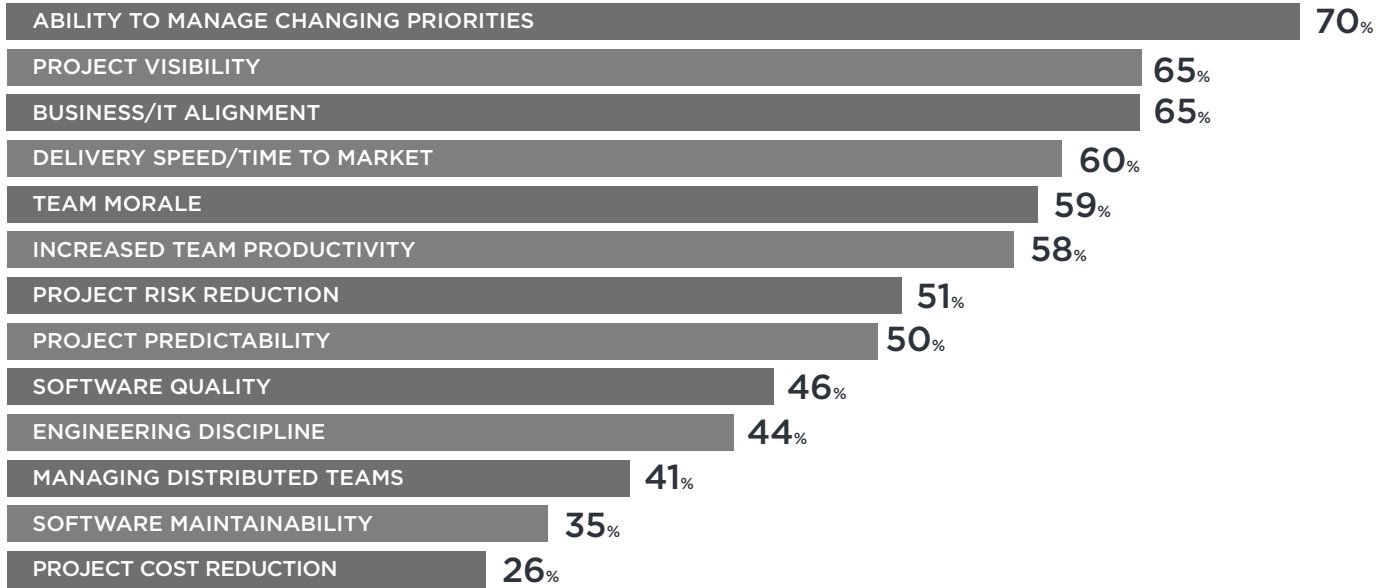
The vast majority of respondents (84%) said their organizations were below a high level of competency with Agile practices, signaling ongoing opportunities for improvement through supporting training and coaching.



BENEFITS OF AGILE

BENEFITS OF ADOPTING AGILE

We continue to see many benefits realized by companies adopting Agile. The theme of the top 5 reported benefits is speed and adaptability. This corresponds with the top reported reasons for adopting Agile.

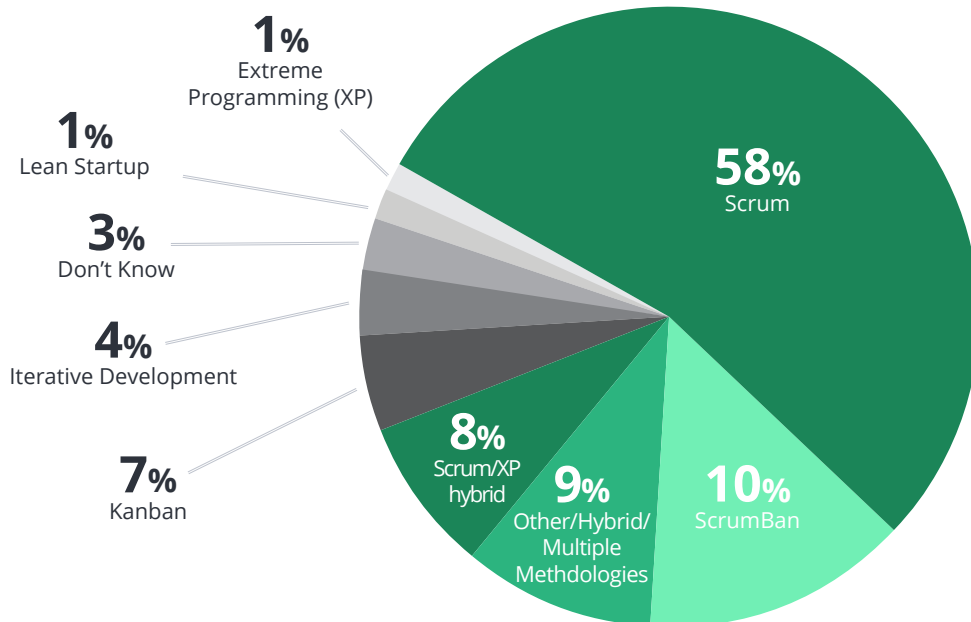


*Respondents were able to make multiple selections

AGILE METHODS AND PRACTICES

AGILE METHODOLOGIES USED

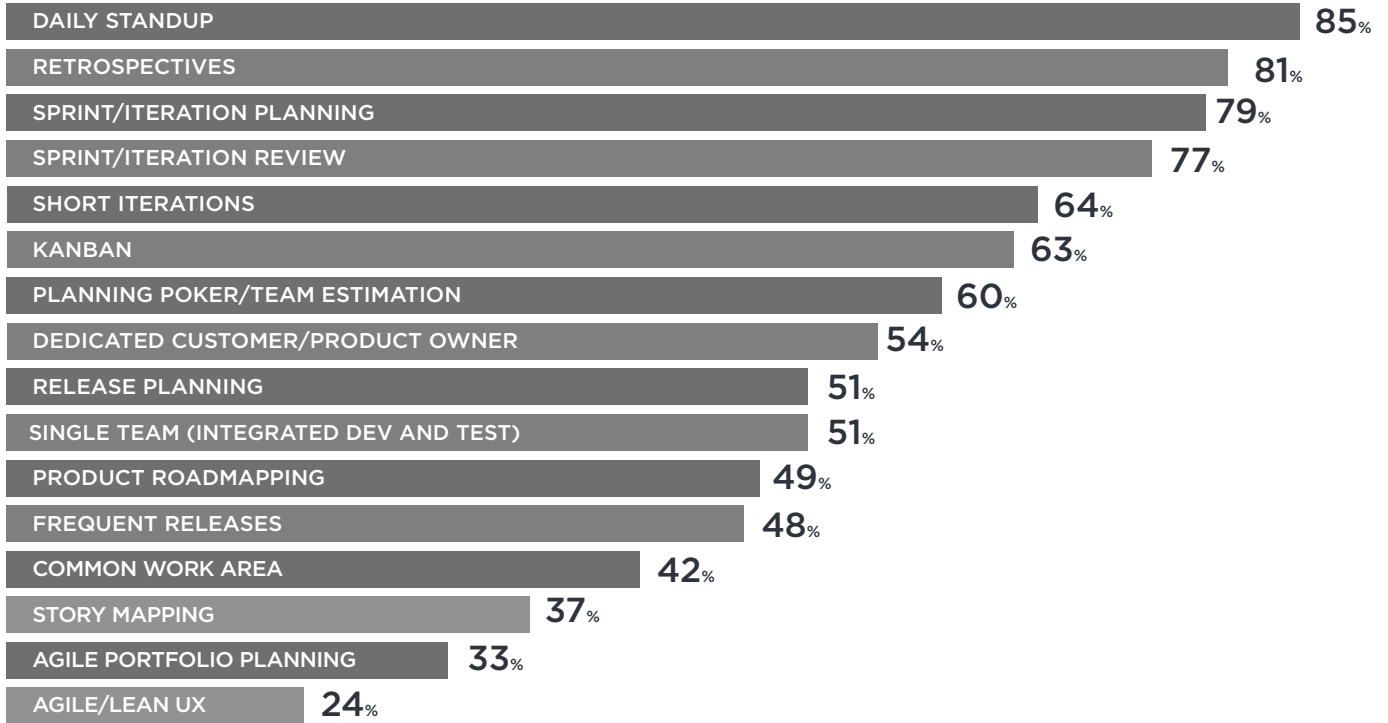
Scrum and related variants continue to be the most common Agile methodologies used by respondents' organizations.



Total exceeds 100% due to rounding.

AGILE TECHNIQUES EMPLOYED

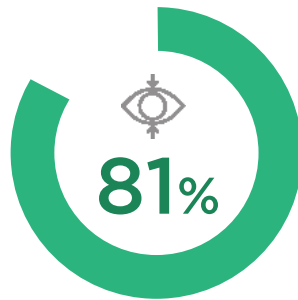
Notable changes in Agile techniques and practices that respondents said their organization uses were an increase in product roadmapping (49% this year compared to 45% last year) and a decrease in release planning (51% this year compared to 57% last year).



TOP 5 AGILE TECHNIQUES



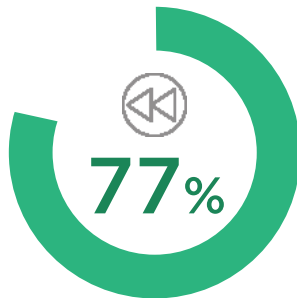
DAILY STANDUP



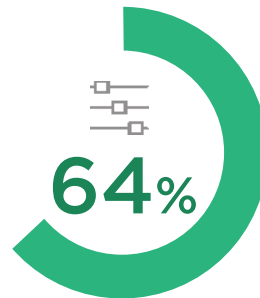
RETROSPECTIVES



SPRINT / ITERATION PLANNING



SPRINT / ITERATION REVIEW

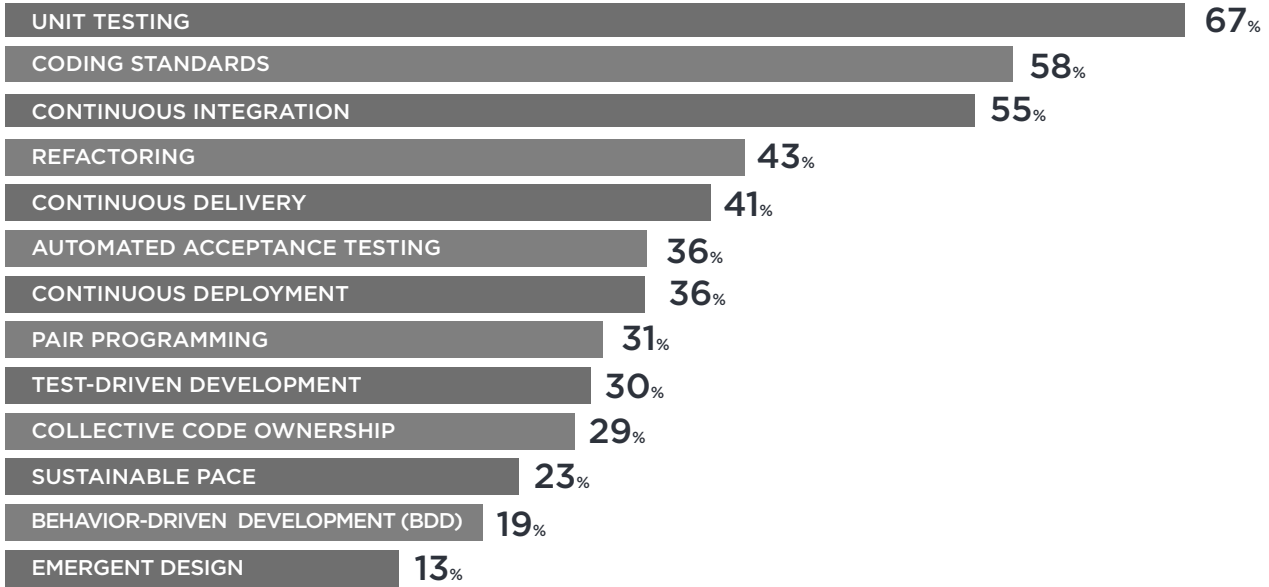


SHORT ITERATIONS

*Respondents were able to make multiple selections

ENGINEERING PRACTICES EMPLOYED

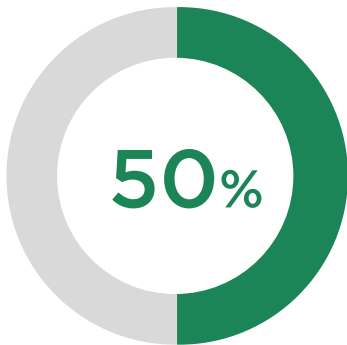
The overall rank order of engineering practices employed remained almost the same this year over last. Automated acceptance testing increased 3% while pair programming, test-driven development, and behavior-driven development each fell 3%.



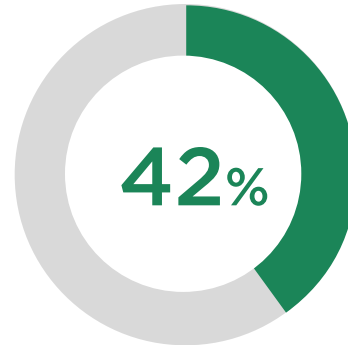
*Respondents were able to make multiple selections

AGILE IN OUTSOURCED DEV PROJECTS

50% of respondents are using Agile practices to manage outsourced development projects. 42% of respondents indicated they plan to increase the use of Agile in outsourced development projects in the next 24 months.



USE AGILE TO MANAGE OUTSOURCED PROJECTS



PLAN TO INCREASE USE OF AGILE IN OUTSOURCED PROJECTS



AGILE SUCCESS AND METRICS

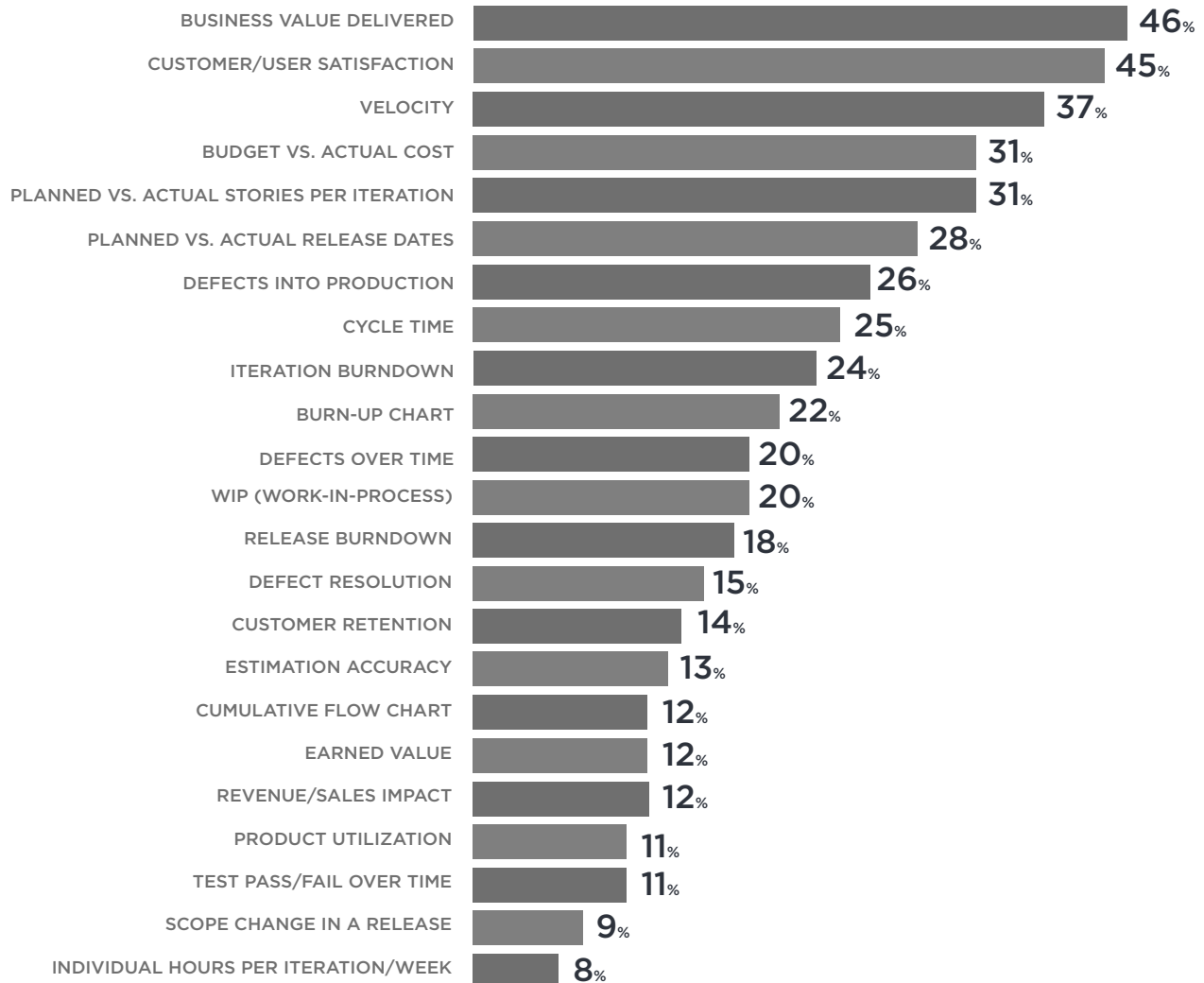
HOW SUCCESS IS MEASURED... WITH AGILE TRANSFORMATIONS

When asked how organizations measure success of Agile transformations, the top measures of success were consistent with those reported over the last few years. Outcomes -- customer satisfaction and business value -- rank higher than outputs like on-time delivery and productivity.



HOW SUCCESS IS MEASURED... WITH INDIVIDUAL AGILE PROJECTS

As with Agile transformations, business value delivered and customer/user satisfaction remained the top two cited measures of success for individual projects in this year's survey.

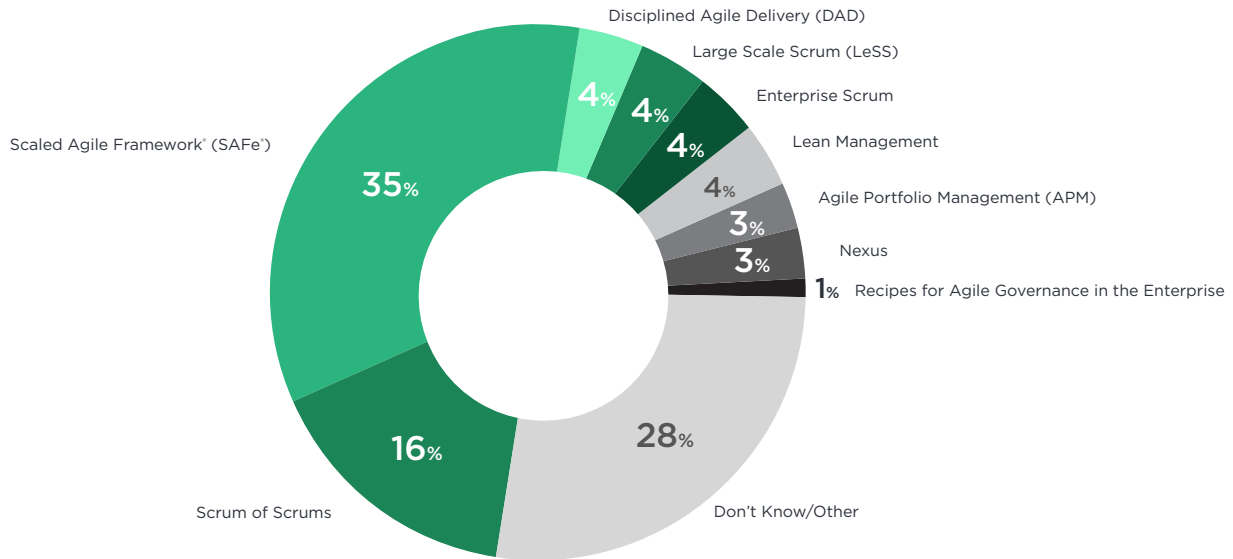


*Respondents were able to make multiple selections

SCALING AGILE

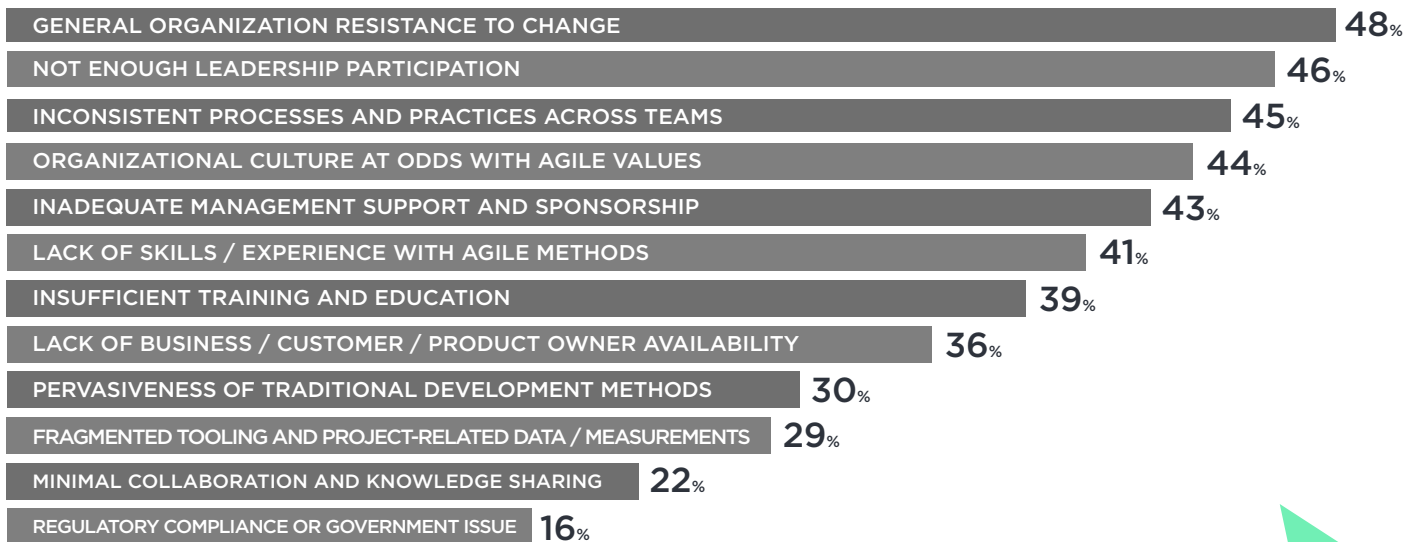
SCALING METHODS AND APPROACHES

The Scaled Agile Framework® continues to be the most popular scaling method cited by respondents (35% this year compared to 30% last year). As a percentage of all responses, SAFe® outdistances the next nearest response, Scrum of Scrums, by 19%.



CHALLENGES EXPERIENCED WHEN ADOPTING & SCALING AGILE

The top three responses cited as challenges/barriers to adopting and scaling Agile practices indicate that internal culture remains an obstacle for success in many organizations.



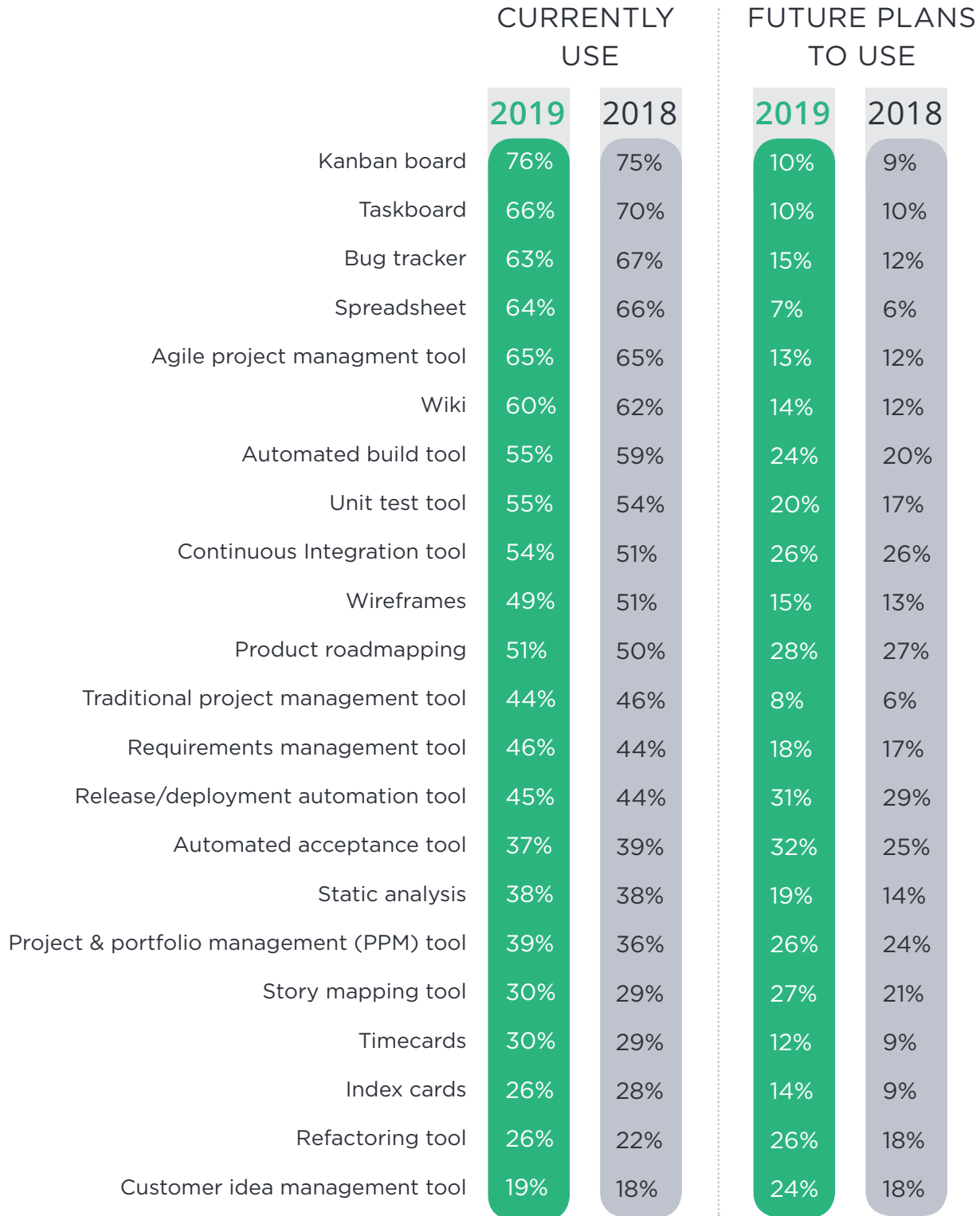
*Respondents were able to make multiple selections



AGILE PROJECT MANAGEMENT TOOLS

GENERAL TOOL USES AND PREFERENCES

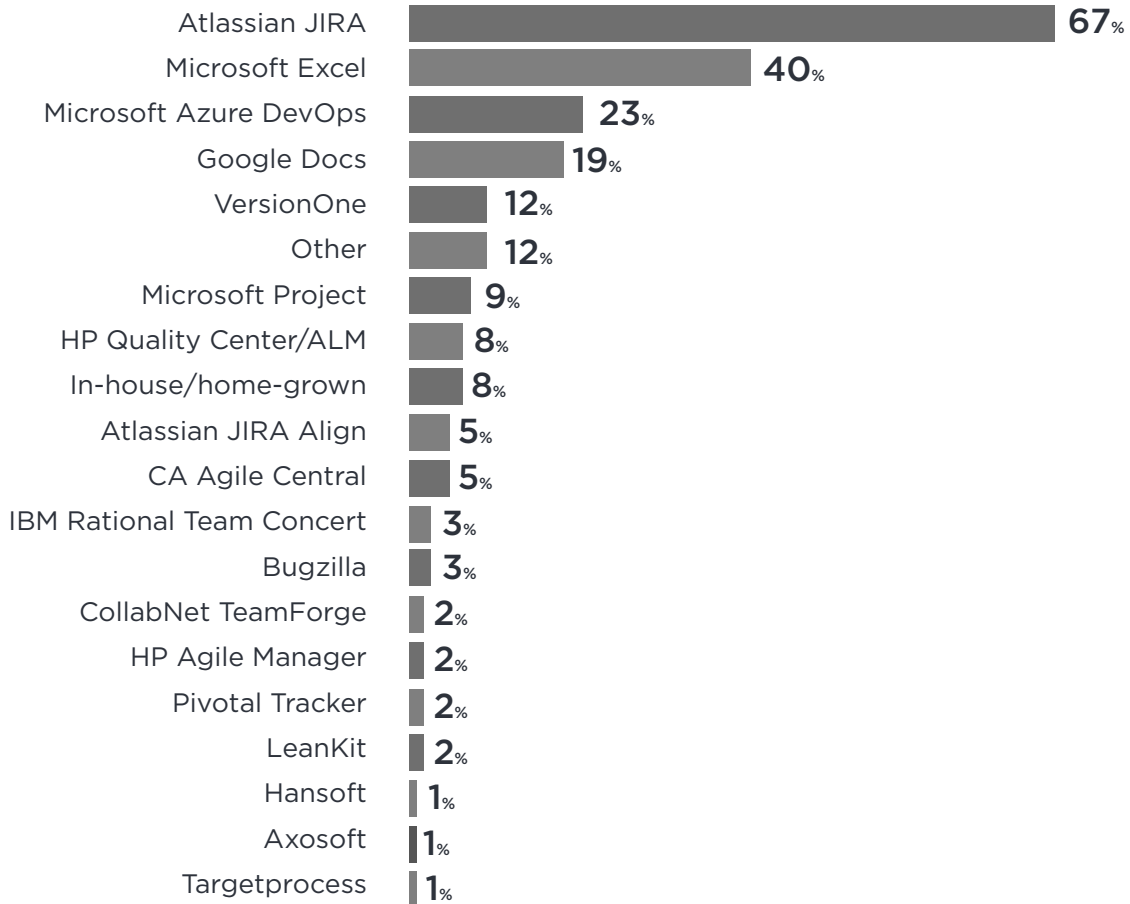
More respondents stated using automated acceptance tools (39% compared to 36% last year) and more respondents stated they plan to use Agile project management tools in the future (12% this year compared to 9% last year). There were also a few new options added to the survey this year (wireframes, product roadmapping, static analysis, and timecards).



*Respondents were able to make multiple selections

USE OF AGILE PROJECT MANAGEMENT TOOLS

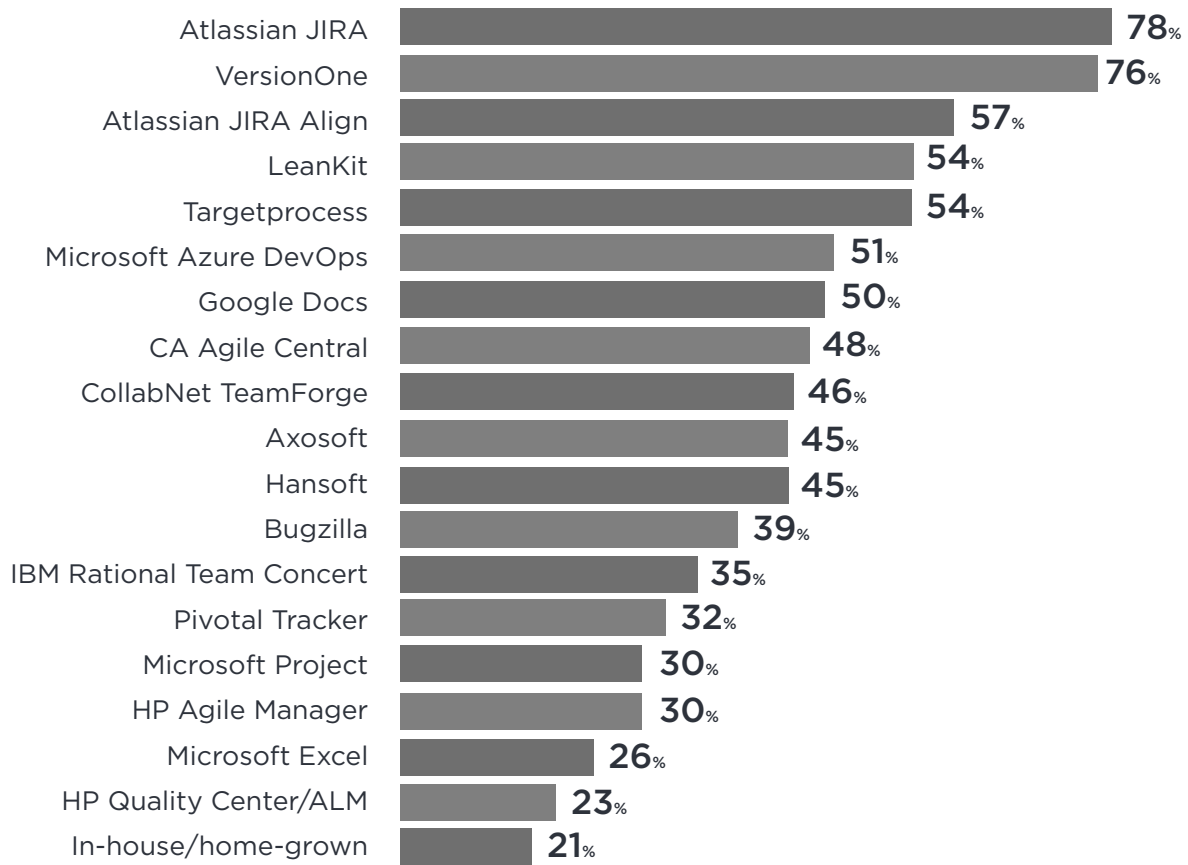
Respondents cited using a myriad of different tools to manage Agile projects.



*Respondents were able to make multiple selections

RECOMMENDED AGILE PROJECT MANAGEMENT TOOLS

Respondents were asked whether they would recommend the tool(s) they are using based on their experience.

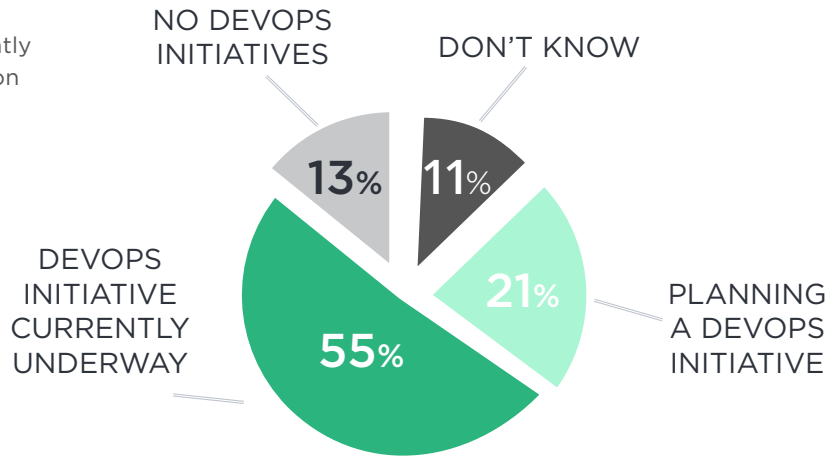


*Respondents were able to make multiple selections

DEVOPS & VALUE STREAM MANAGEMENT

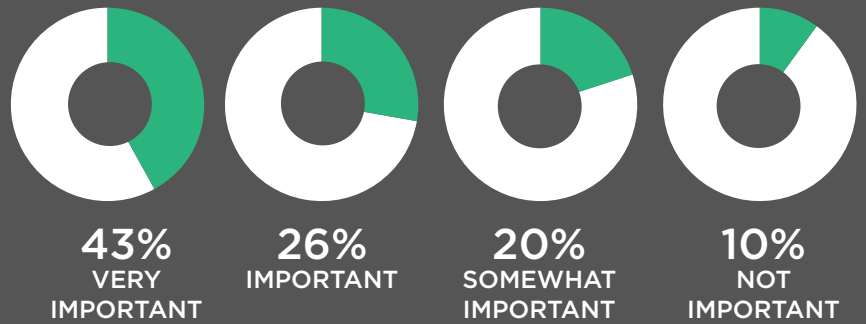
DEVOPS INITIATIVES

76% of respondents stated that they currently have a DevOps initiative in their organization or are planning one in the next 12 months (compared to 73% last year).



IMPORTANCE OF DEVOPS TRANSFORMATION

90% of respondents said DevOps transformation was important in their organization.



HOW SUCCESS IS MEASURED... WITH DEVOPS TRANSFORMATION INITIATIVES

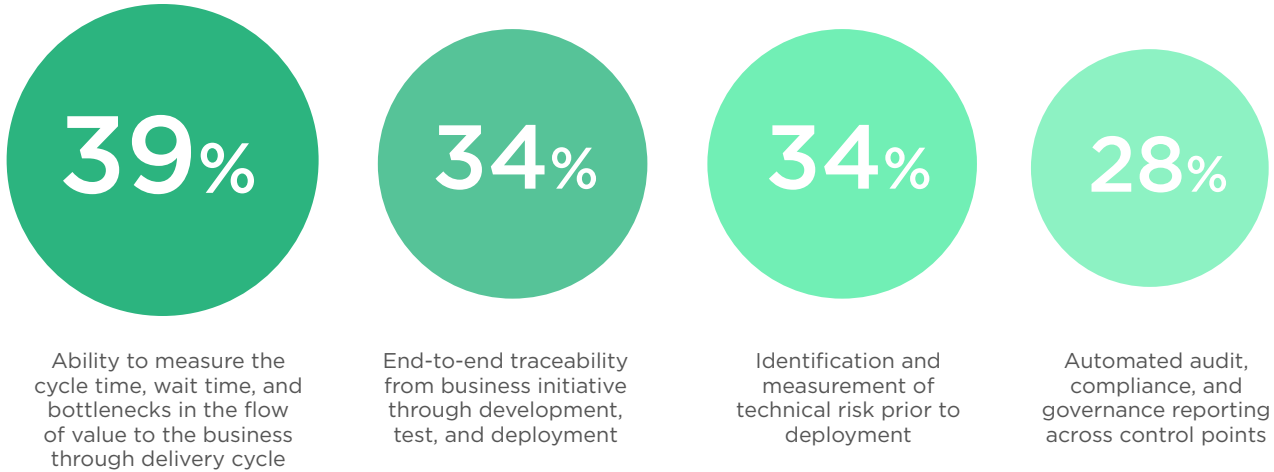
Respondents cited that the most critical measures of success with DevOps transformation initiatives continue to be improving quality and delivering software faster.



*Respondents were able to make multiple selections

IMPROVING DEVOPS PRACTICES

When asked about which capabilities would be most valuable for improving DevOps practices in their organization, 39% said having metrics that identify disruptions in the flow of business value, while 34% said that traceability from business initiative through deployment would be most valuable.



*Respondents were able to make multiple selections

VALUE STREAM MANAGEMENT ADOPTION

Value Stream Management (VSM) is a combination of people, process, and technology that maps, optimizes, visualizes, measures, and governs business value flow (in the form of epics, stories, work items) through heterogeneous enterprise software delivery pipelines from idea through development and into production. 78% of the respondents said that their organizations have interest in VSM, are planning to implement VSM, or are currently in some stage of VSM implementation.

Respondents said their organizations were:

