

# STATE OF AGILE SURVEY

“THE STATE OF AGILE DEVELOPMENT”

# 2011

**6TH ANNUAL**

# EXECUTIVE SUMMARY

This year we saw further evidence that agile is not a fad. More than half of our respondents said they've personally practiced agile for over 2 years, and one-third has carried agile with them to another company. Almost two-thirds of respondents said that up to half of their company's projects were run using agile, and that their company has adopted agile practices across 3 or more teams.

While there were slightly elevated concerns over agile scaling, regulatory compliance and a lack of documentation, there was less pushback from management this year in considering deploying agile. Furthermore, 64% of initial agile champions are in the management layer. Accelerating time to market is again the number-one reason for agile adoption (22%).

Despite the uptick in management support for agile, survey results suggest that the greatest barrier to increased adoption of agile appears not to be awareness of the methodology, but internal company cultures. Only 13% of respondents in larger organizations (more than 500 employees) said that nearly all their projects used agile. In these larger companies, respondents said that lack of management support (27%) and "general resistance to change" (26%) were major barriers to agile adoption. Conversely, among smaller companies, the vast majority (nearly 75%) of projects used agile and only 10% of respondents cited lack of management support or "general resistance to change" as an issue or barrier to adoption.

We saw a continued practice of daily standup meetings (78%), iteration planning (74%) and unit testing (70%). The most notable trend this year was the increased use of Kanban principles (24% versus 18% in 2010). By far, Scrum/Scrum XP continues to lead the pack as the most used agile methodology (76%).

This year there was a shift in the benefits companies gleaned from agile. In 2010, respondents said it was all about productivity (74%); but this year productivity improved for only 55% of the respondents. In 2011, respondents saw the greatest results in **project visibility** (77% realized some degree of improvement) and the **ability to manage changing customer priorities** (84% saw some degree of improvement). Cost reduction and the ability to manage distributed teams proved the least beneficial. Overall, three-quarters of respondents said that at least half their agile projects had been successful.

The 2011 survey also showed an uptick in the number of companies who do not currently practice agile but plan to in the future (17% this year versus 13% last year). Of those already practicing agile, one-third will continue to do so, and only 3% said they do not plan to continue.

The most common types of tools currently being used (or planned) include: Automated Acceptance Tools (20%), Release Management Tools (16%) and Continuous Integration Tools (16%). Interestingly, the agile tool being used the **least** today is also the **most desired** tool of tomorrow - Ideas Management Tool.

In terms of specific agile software tools, most are using standard office productivity tools such as Excel, followed by specialized tools like VersionOne. The use of bug trackers has also come on strong this year (14%).

# ABOUT THE SURVEY



The sixth annual “State of Agile Development” survey was conducted between July 22nd and November 1st, 2011. Sponsored by VersionOne, the survey polled individuals from a variety of channels within the software development industry. The data was analyzed and prepared into a summary report by Analysis.Net Research. A total of 6,042 responses were received.



# RESPONDENT DEMOGRAPHICS

## COMPANY SIZE

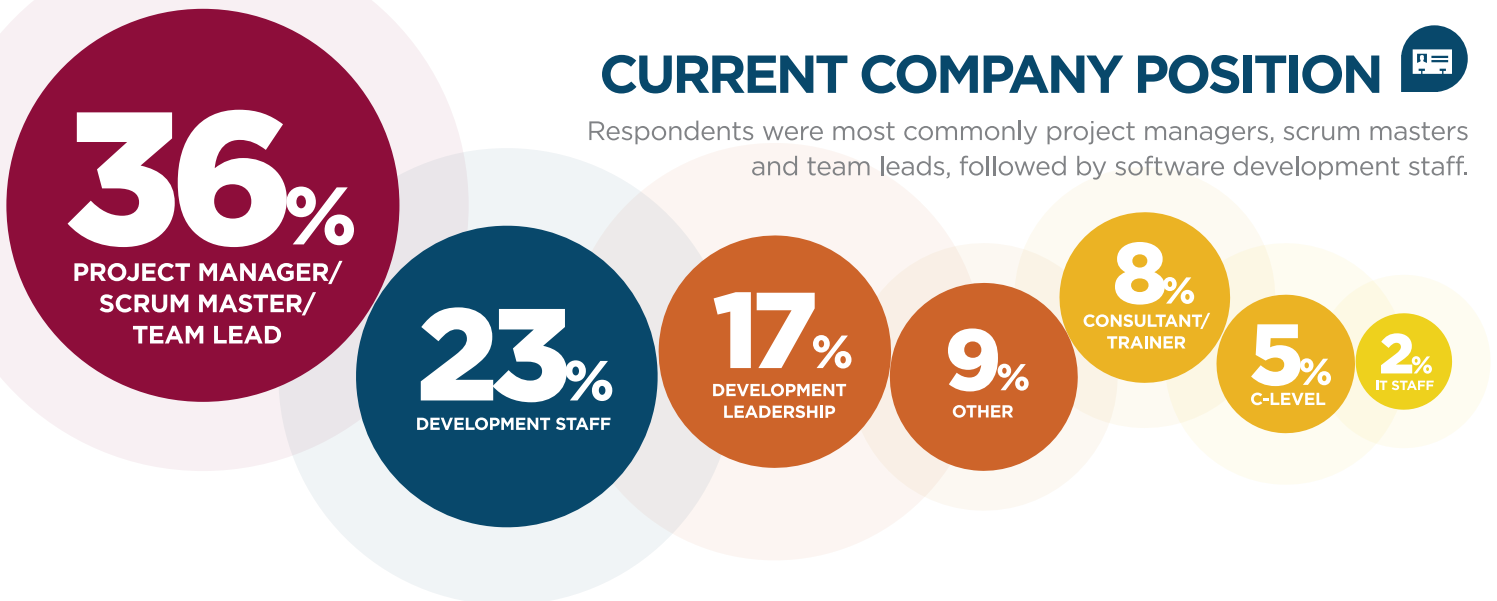
**25%** & **5 YEARS AGO**

The median size of respondents' software organizations was 100, with a quarter of respondents coming from organizations of more than 500.

the biggest agile adopters were those companies with 0-20 employees





## CURRENT COMPANY POSITION

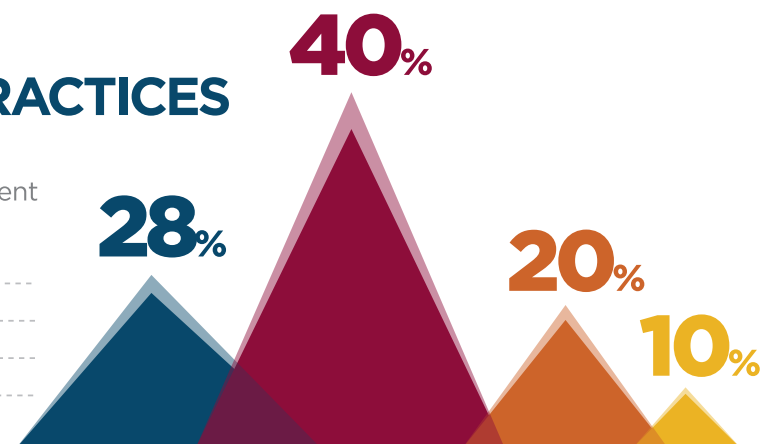
Respondents were most commonly project managers, scrum masters and team leads, followed by software development staff.



## EXPERIENCE WITH AGILE DEVELOPMENT PRACTICES

About 90% of respondents say they are at least "knowledgeable" about agile software development techniques.

-  EXTREMELY KNOWLEDGEABLE
-  MODERATELY KNOWLEDGEABLE
-  KNOWLEDGEABLE
-  VERY LITTLE KNOWLEDGE





# EXPERIENCE WITH AGILE DEVELOPMENT



## PERSONAL EXPERIENCE

**Agile is not just a fad.** Eighteen percent of respondents have personally practiced agile for more than 5 years, and about one-third have taken agile with them to another employer. The number of respondents who have practiced agile for more than 2 years continues to grow - from less than half of the 2010 respondents to 55% in 2011.



## COMPANY EXPERIENCE

### HOW MANY?

More than 80% of respondents said their organizations have adopted agile development practices within their software organizations.



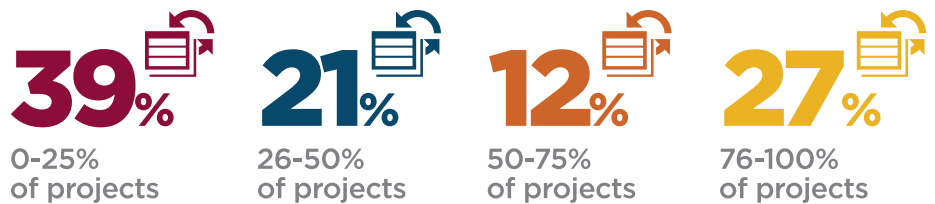
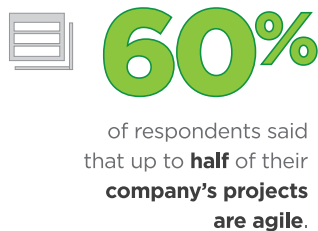
### HOW LONG?

Nearly half of the respondents work at companies that have been practicing agile for over 2 years, compared to 40% in 2010.

&



## NUMBER OF PROJECTS USING AGILE





# AGILE ADOPTION IN THE ENTERPRISE

## AGILE ADOPTION

The median size of development organizations was 100, with 1/4 of respondents coming from organizations of more than 500.

### ? WHO DECIDES?



Initial champions of agile methods are found in the **management layer** 77% of the time.



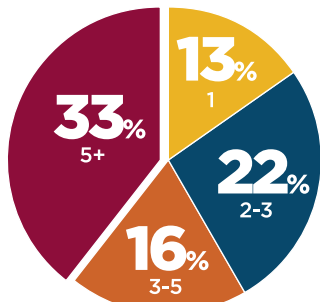
of respondents said their **software organizations** had adopted agile development practices, and 80% worked in their company's software development or IT departments.



of respondents worked in companies with **distributed development teams**. Most had fewer than **5 distributed teams using agile**, with the majority having 2 or 3.

### HOW MANY TEAMS ADOPTED AGILE?

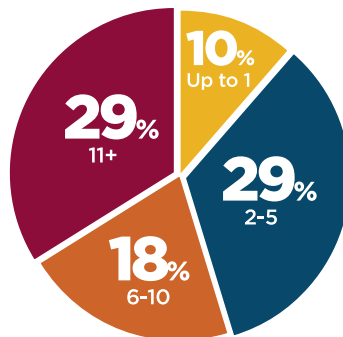
Two-thirds of respondents work at companies that **have adopted agile across 3 or more teams**.



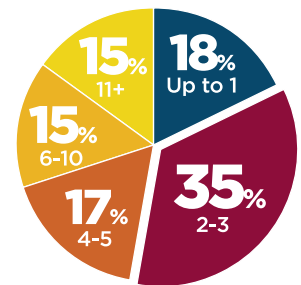
Team(s)

### NUMBER OF COMPANY PROJECTS USING AGILE

Nearly half of respondents had between **2-5 agile projects**, and one-third said their organization is running **11 or more**.



Project (s)



Distributed Team(s)

### NUMBER OF DISTRIBUTED TEAMS USING AGILE



Fully two-thirds (65%) said they had **distributed team members working on agile projects**.

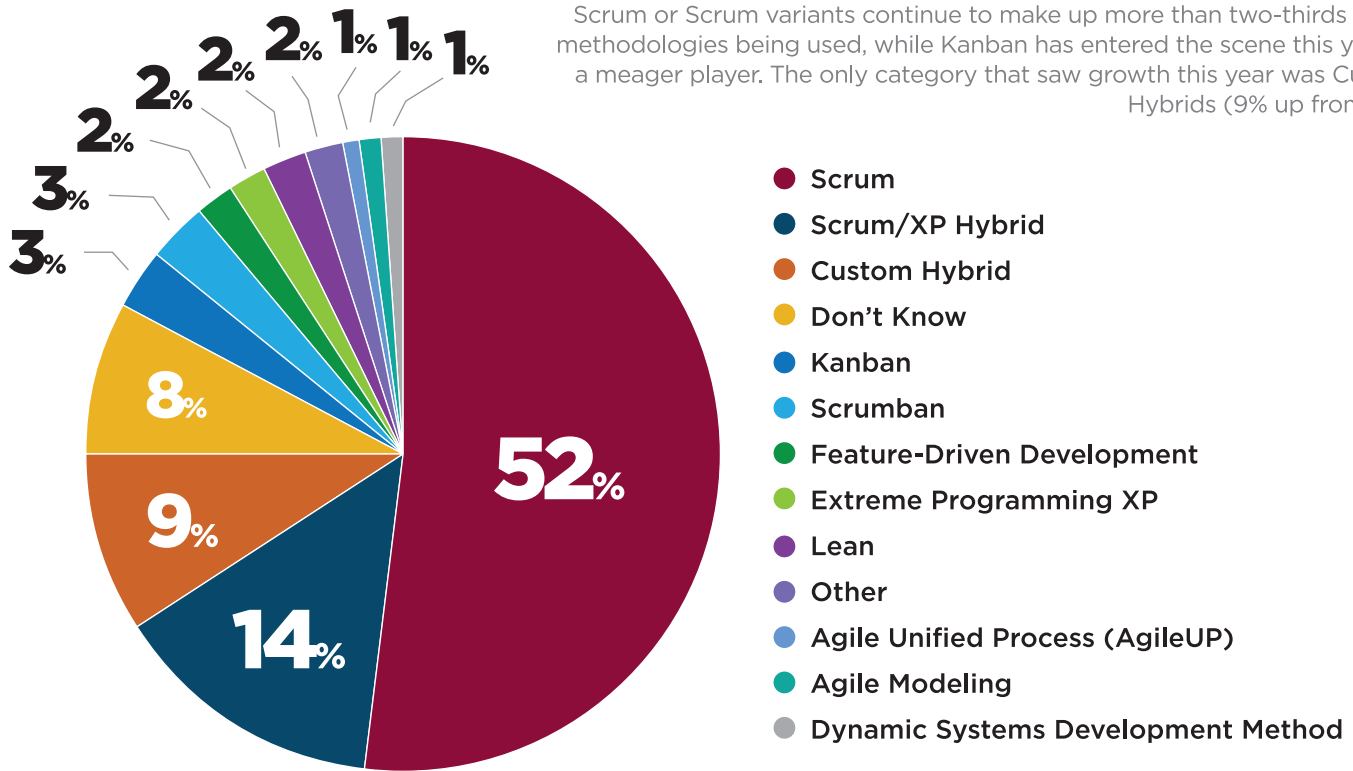


About 70% had **fewer than 5 distributed teams using agile**.

# AGILE METHODS & PRACTICES

## AGILE METHODOLOGY USED

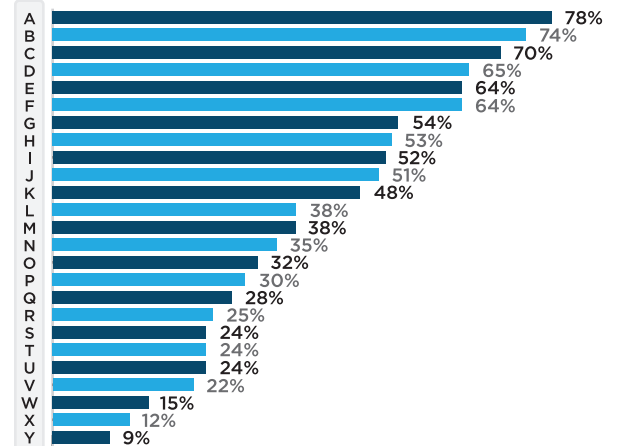
Scrum or Scrum variants continue to make up more than two-thirds of the methodologies being used, while Kanban has entered the scene this year as a meager player. The only category that saw growth this year was Custom Hybrids (9% up from 5%).



## AGILE TECHNIQUES EMPLOYED

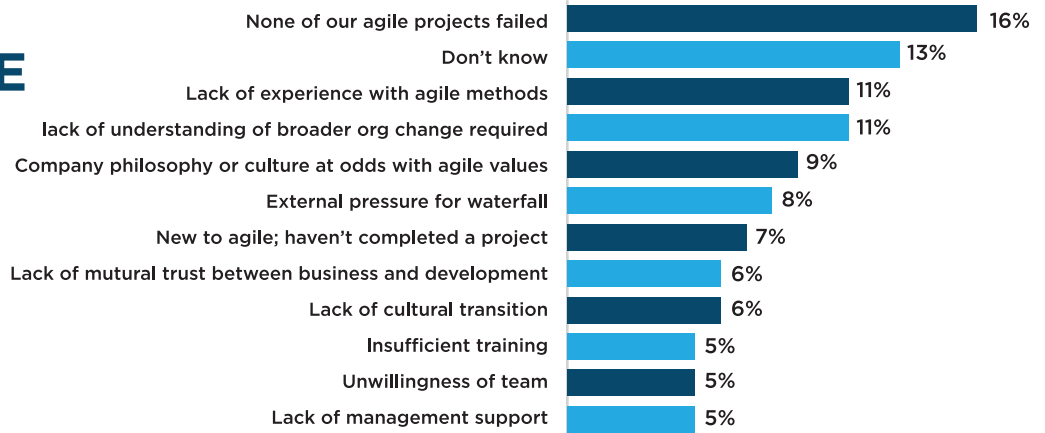
Core agile tenets currently in use are\* Daily Standup, Iteration Planning and Unit Testing. Most notable is the increasing use of Kanban (24%). \*Respondents were able to select multiple options.

- |                               |                                   |
|-------------------------------|-----------------------------------|
| A Daily Standup               | N Story Mapping                   |
| B Iteration Planning          | O Digital Taskboard               |
| C Unit Testing                | P Pair Programming                |
| D Release Planning            | Q Collective Code Ownership       |
| E Burndown                    | R Automated Acceptance Testing    |
| F Retrospectives              | S Kanban                          |
| G Continuous Integration      | T Onsite Customer                 |
| H Automated Builds            | U Continuous Deployment           |
| I Velocity                    | V Analog Taskboard                |
| J Coding Standards            | W Agile Games                     |
| K Refactoring                 | X Cycle Time                      |
| L Test-Driven Development TDD | Y Behavior-Driven Development BDD |
| M Open workarea               |                                   |



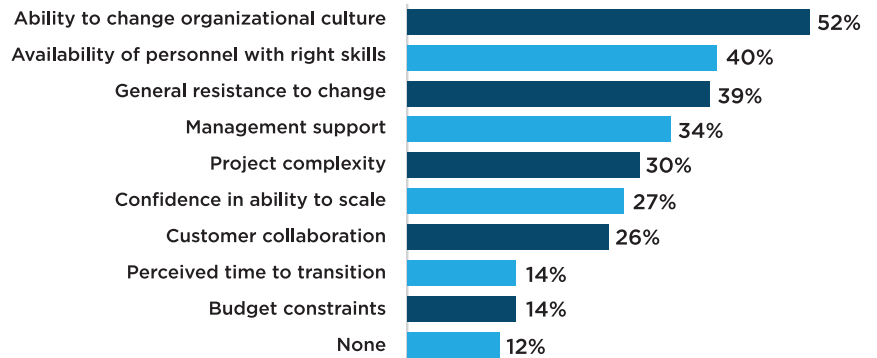
## LEADING CAUSES OF FAILED AGILE PROJECTS

Most respondents said none of their agile projects would be considered unsuccessful (16%). Of those with failed agile projects, most said it was due to either a lack of experience with agile methods (11%) or not understanding the broader organizational change required (11%).



## BARRIERS TO FURTHER AGILE ADOPTION

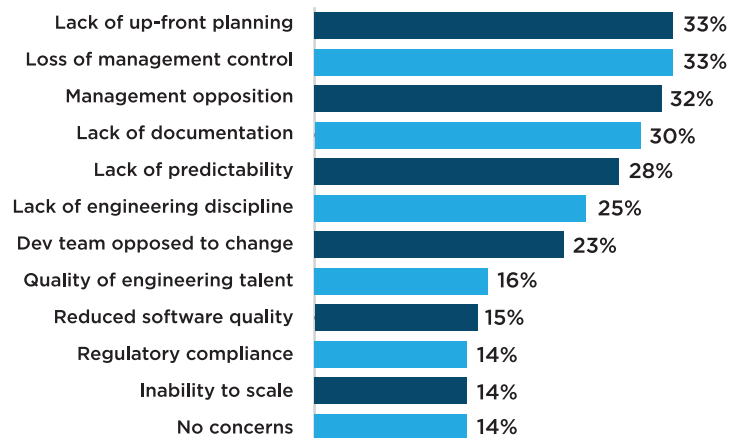
For over half of respondents, the inability to change their organization's culture was the biggest problem. Budget constraints had the lowest impact on further adoption (14%).



## GREATEST CONCERNS ABOUT ADOPTING AGILE

The most common concerns listed by respondents when they were considering deploying agile were a loss of management control (33%), lack of upfront planning (33%) or management opposition (32%).

\*Respondents were able to select multiple options.



## FUTURE AGILE IMPLEMENTATIONS

Only 8% said they do not plan to implement agile methods on future projects.





# REASONS FOR ADOPTING AGILE

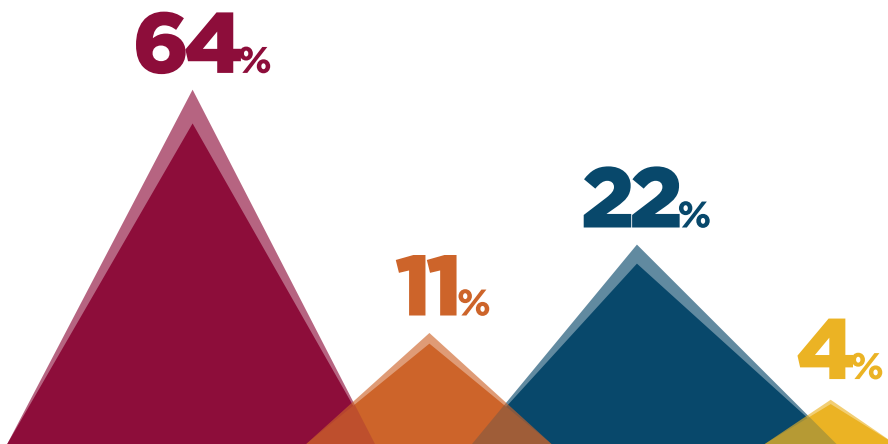
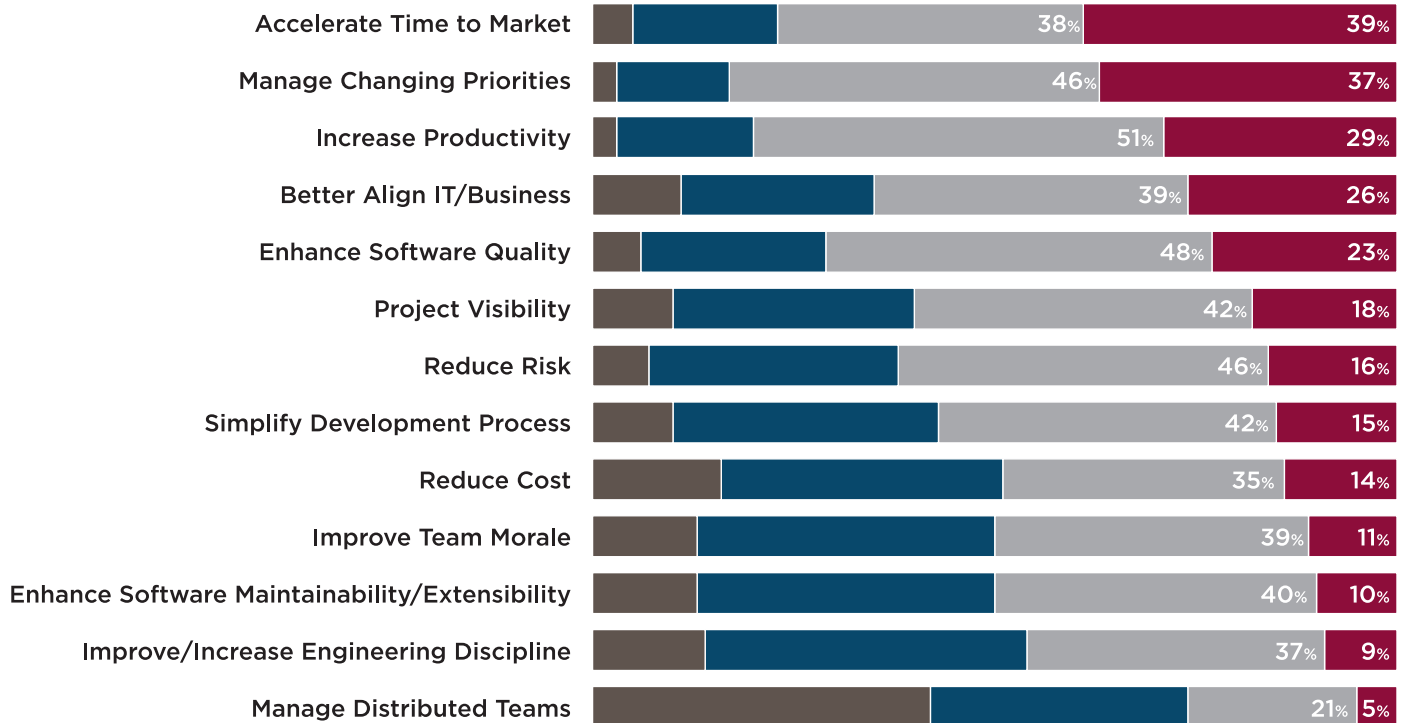
The top 3 reasons\* respondents cited for adopting agile were to **accelerate time to market**, **increase productivity**, and to more easily **manage changing priorities**:

\*Respondents were able to select multiple options.

**5%**

Additionally, an increasing focus on customer requirements and market needs were common factors leading to agile adoption.

● Not Important at All ● Somewhat Important ● Very Important ● Highest Important



## REASONS FOR ADOPTING AGILE

75% of respondents felt that agile projects were the same or faster to completion than previous non-agile ones. More of this year's respondents said they haven't yet completed a project. Fewer respondents this year said agile projects were 'slower' to completion.

**▲ FASTER**  
TIME TO COMPLETION

**▲ SAME**  
TIME TO COMPLETION

**▲ NOT YET**  
COMPLETED AN AGILE PROJECT

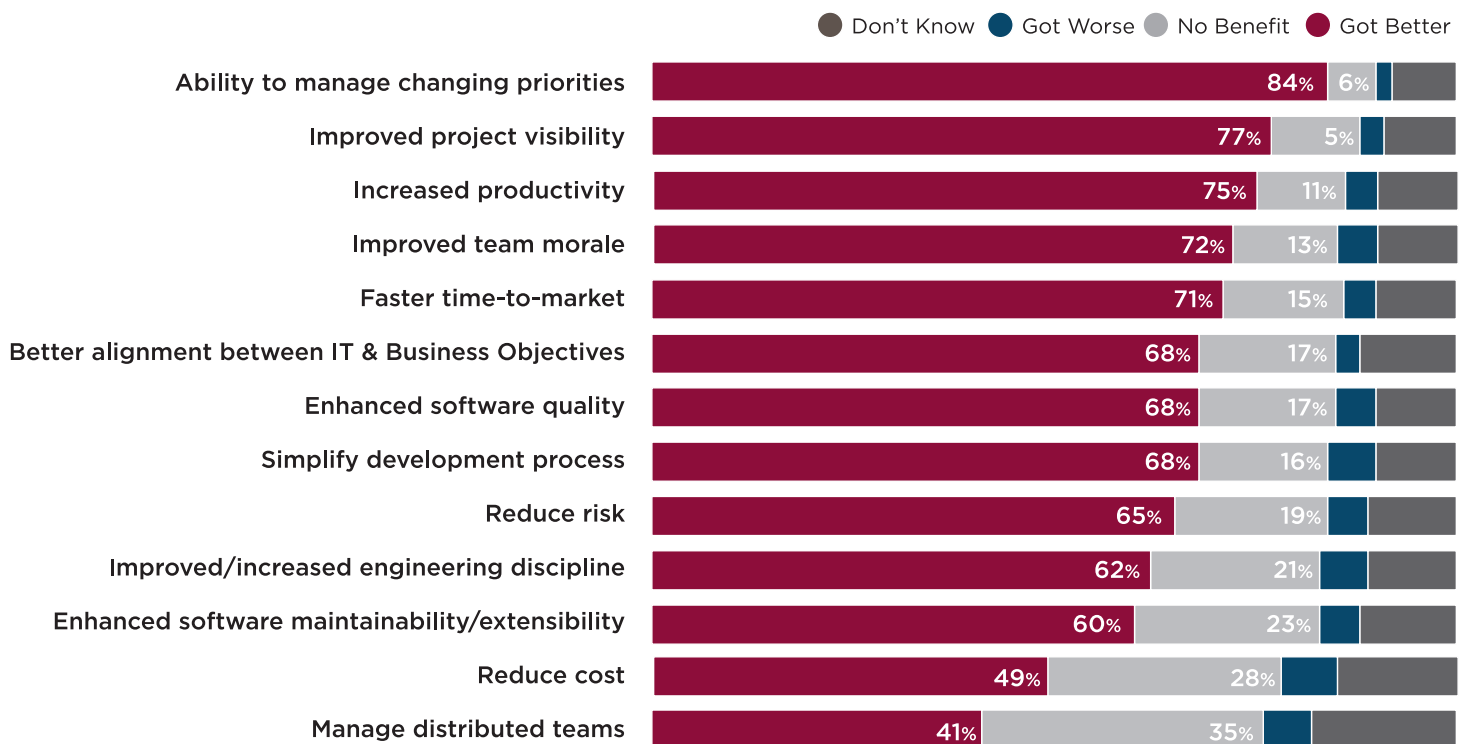
**▲ SLOWER**  
TIME TO COMPLETION

## **BENEFITS OBTAINED FROM IMPLEMENTING AGILE**

Prior to adoption, respondents said **productivity** and **time to market** ranked as their top reasons to adopt agile. But experienced agile users said actual benefits were primarily **project visibility** (31%) and the ability to **manage changing priorities** (39%). [ see Reasons for Adopting Agile on prior page ]

There continues to be an increasing percentage of respondents who do not know the benefits of agile, or have not realized substantial benefits, especially in the areas of managing distributed teams and cost reduction.

Overall, the “Improved” category saw the greatest decline across the benefit areas, especially productivity (from 50% in 2010 to 29%). Cost reduction continues to be an area where few organizations realize benefits from their agile implementations.



 **84%**

of respondents said implementing agile improved their ability to manage changing priorities.

 **77%**

said agile improved their project visibility to some degree.

 **3/4**

of respondents said that at least half their agile projects were successful.

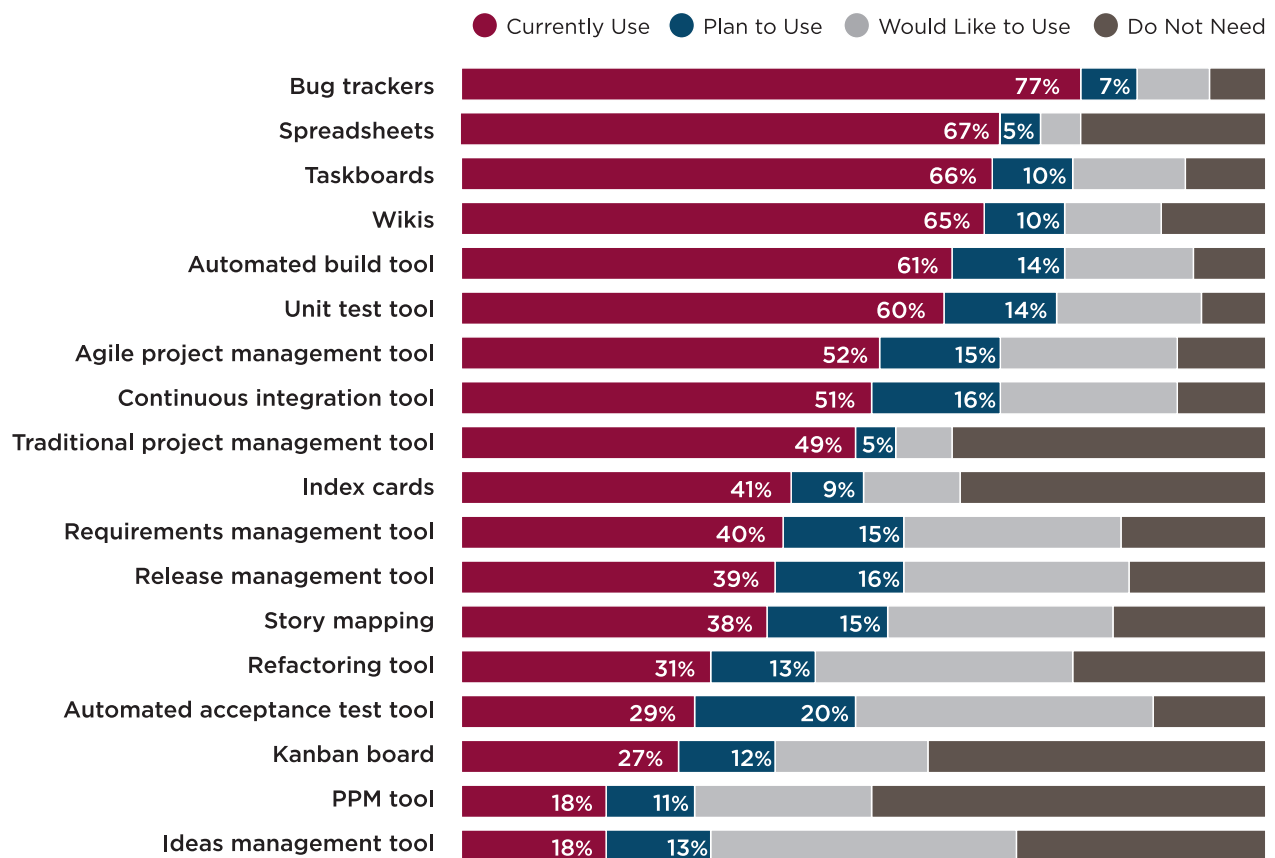
## **OUTSOURCED DEVELOPMENT PROJECTS**

The number of projects being outsourced has risen slightly. When we look at those who do outsource, 77% are currently using agile methods on those projects (or plan to in the future). Thirty-one percent said they do now and will continue to do so, while 17% of those not doing it say they plan to in the future.

# TOOLS

## AGILE TOOL USES & PREFERENCES

Respondents currently use a variety of agile tools; the most common were bug trackers (77%), spreadsheets (67%), taskboards (66%) and wikis (65%). Interestingly, the tool **least** used today (17%) is also the **most desired** (38%) tool of the future - Ideas Management Tool. Realistically, however, respondents plan to implement Automated Acceptance (20%), Release Management (16%), and Continuous Integration (16%) tools.



## ITERATION LENGTH

**33%**  
of most respondents had iterations of two weeks or less.

**6%**  
1-7 Days

**27%**  
8-14 Days

**17%**  
15-21 Days

**9%**  
22-30 Days

## **SPECIFIC AGILE TOOLS USED**

The most common software tools used\* continue to be standard office productivity tools such as Excel (61%), followed by specialized tools like VersionOne (37%), Microsoft Project (36%) and JIRA (35%).

\*PREVIOUSLY VENDORS "X" AND "Y" REQUESTED NOT TO BE IDENTIFIED IN STATE OF AGILE SURVEYS.

\*Respondents were able to select multiple options.

