



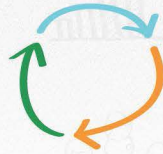
# 7<sup>th</sup> ANNUAL STATE *of* **AGILE** DEVELOPMENT SURVEY



# Executive Summary

## Agile Adoption & Use

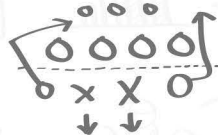
Organizations are continuing to scale agile beyond single teams and single projects. This year we saw a 15% jump in the number of respondents who work where there are at least 5 agile teams, and a 9% increase in those working with up to 5 agile projects. In addition, in agile momentum is up; those who plan to implement agile development in future projects has increased from 59% last year to 83% this year.



Most are using Scrum or Scrum variants (72%), as in past years. Kanban and Kanban variants nearly doubled this year, mostly due to an uptick in Scrumban use. This year we wanted to know how people are using Kanban. For most, Kanban methodologies including Scrumban were being applied to processes inside the software organization only (61%).

## Knowledge & Execution

Software professionals are becoming more experienced with agile. The number of respondents who have practiced agile for 5 or more years grew from 18% in 2011 to 25% in 2012. There was also tremendous growth in the 2-5 years of experience group, which increased from 37% to 64%.



When asked who knows agile the most and the least about agile within their organizations, not surprisingly respondents believed that those closest to the work were most agile-savvy – 57% said ScrumMasters and Project Managers are the most knowledgeable. The least agile-savvy groups were Product Owners (3%) and Executives (2%). The topic of Agile Portfolio Management (APM) was relatively new or unfamiliar for most. Only one-quarter were practicing, learning about, or planning to practice APM.

This year we dug a bit deeper into why agile initiatives fail and found that in two-thirds of the cases, it was either a failure to integrate the right people or to teach a team-based culture. Other reasons included a communication problem between the development team and other areas of the business, or a ScrumMaster problem, such as having responsibilities outside of the role. In terms of lessons learned when scaling agile beyond a single team, respondents said the most important success factor is to ensure the effort has sufficient executive sponsorship. Having a training program, internal support groups, and common tools were also cited as important lessons learned.

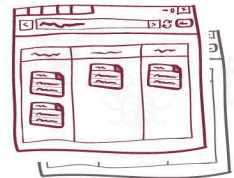
## Benefits

Ninety percent of respondents said that implementing agile improved their ability to manage changing priorities. More people are also seeing value in terms of project visibility when implementing agile (84% compared to 77% in 2011). In addition, the general perception of agile is up. When asked, "If you could say one thing to your company president about agile, what would you say?" respondents were very positive. Common responses were around cultural change, hiring a knowledgeable ScrumMaster, investing in training, adoption from the top-down, and giving agile enough time to succeed.



## Agile Tools

When looking at the general types of tools currently in use, the biggest jump over the last year was Taskboards (+11%), followed by Kanban boards (+10%), Agile Project Management Tools (+8%), and Release Management (+8%).



On average, respondents used between 3 and 4 different tools, with a handful having used as many as 15. Specific tools most commonly used continue to be standard office productivity tools such as Excel, followed by specialized tools like Microsoft Project, VersionOne and Atlassian/JIRA.


The survey also asked respondents whether they would recommend the tool(s) they are using based on their past or present use. Of the tools evaluated, VersionOne was the number one recommended out of any other tool (93% of users would recommend it), followed by LeanKit (92%), and Atlassian/JIRA (92%). Interestingly, while Excel was the most commonly used tool (69%), nearly 40% of these users said they would NOT recommend Excel as an effective agile management tool.


When those using a tool were asked how they decided it was time for a tool, the most commonly cited reasons were (1) more collaboration, (2) visualization of workflow, (3) co-located/offshore teams unable to see physical boards, and (4) roll-up metrics across projects/groups.




# About The Survey

The seventh annual "State of Agile Development" survey was conducted between August 9th and November 1, 2012. Sponsored by VersionOne, the survey polled 4,048 individuals from various channels in the software development communities. The data was analyzed and prepared into a summary report by Analysis.Net Research, an independent survey consultancy.


 Respondent Demographics


 Experience with Agile Development

 Agile Adoption in the Enterprise

 Agile Methods & Practices

 Reasons for Adopting Agile

 Benefits Obtained from Implementing Agile

 Scaling Agile

 Tools



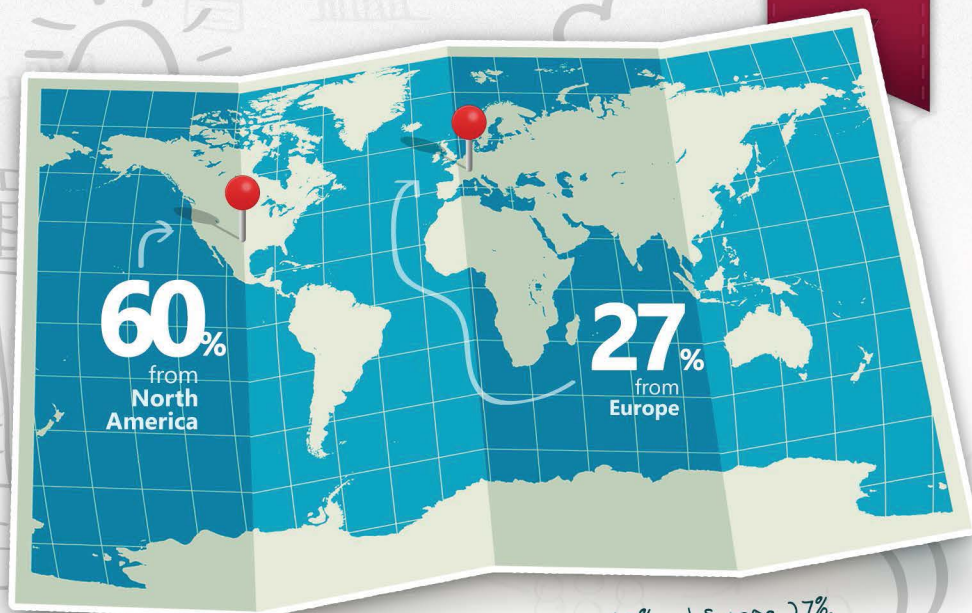


# Respondent Demographics

## SIZE OF ORGANIZATION

# 100

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



The majority were from North America 60% and Europe 27%.

# 61%

agile practitioners

# 19%

agile coaches/consultants/trainers

# 20%

other

## AGILE PRACTITIONERS

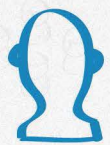
About three-fifths (61 percent) were agile practitioners, with the rest being agile coaches/consultants/trainers (19 percent) and "Other" (20 percent). Other departments represented were often Product Management, Operations, Management/Business and Marketing. Industries represented included IT Services, Financial, Insurance, Consulting, Education and Government.

## CURRENT COMPANY POSITION

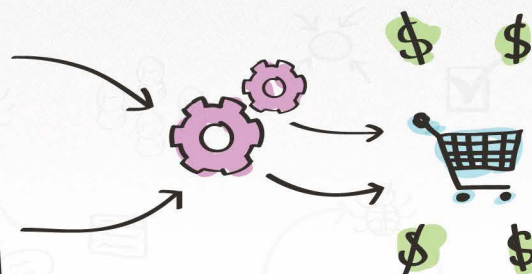
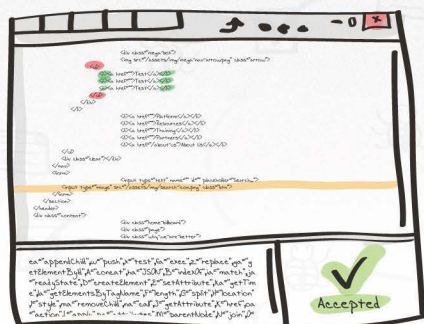
More than 80 percent worked in Software Development or the IT departments of their employers. Respondents were most commonly project managers, scrum masters and team leads, followed by software development team members.







# Respondent Demographics



## WHY THEY BUILD

When asked what the main activity of their software organization, most respondents said they build and sell software products.

44%

Build & sell  
a product

33%

Build for  
internal use

23%

Sell IT  
services

## PERSONAL EXPERIENCE WITH AGILE DEVELOPMENT PRACTICES

About

81%  
of respondents

26%

1-2 years

30%

3-4 years

25%

5+ years

19%

<1 year

say they are at least "Knowledgeable" about agile software development techniques with more than a quarter saying they were "extremely knowledgeable."

Extremely knowledgeable



Moderately knowledgeable



Knowledgeable



Very Little/No Knowledge







## COMPANY EXPERIENCE

### How Many?

More than 84% of respondents said their organizations were practicing agile development, up from 80% in 2011.



### How Long?

One-half of respondents worked at companies that have been practicing agile for 2 years or less, with over one-third having practiced in the 2 to 5 year range.



## PERCENTAGE OF PROJECTS USING AGILE

**31%**

0-25%  
of Projects

**19%**

26-50%  
of Projects

**13%**

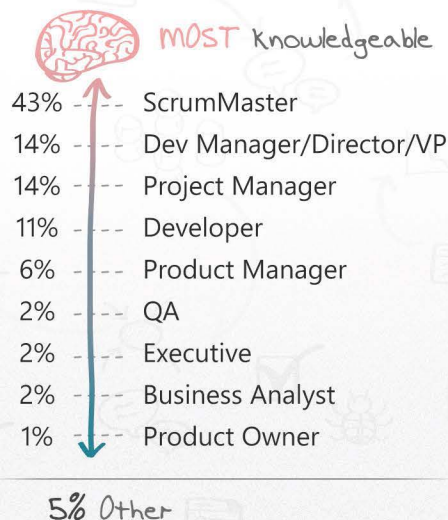
51-75%  
of Projects

**37%**

76-100%  
of Projects

## WHO KNOWS AGILE?

Not surprisingly, respondents said that in general, roles which are closer to the team are more knowledgeable than those on the business side.







# Agile Adoption in the Enterprise

Median Organization Size: 100 people; 25% came from organizations of >500 people.



## WHO CHAMPIONS?

Initial champions of agile methods were mostly in the management layer (63%):

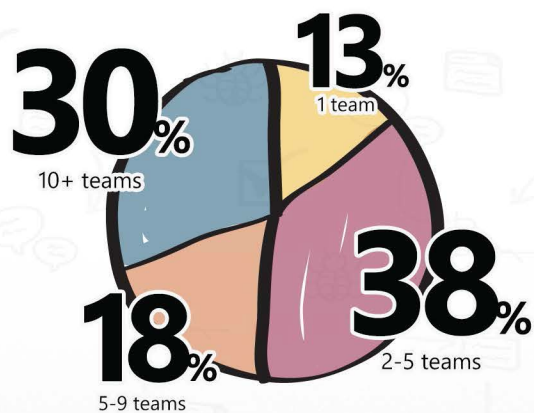


**84%**

of respondents projects are agile, up from 80% in 2011.

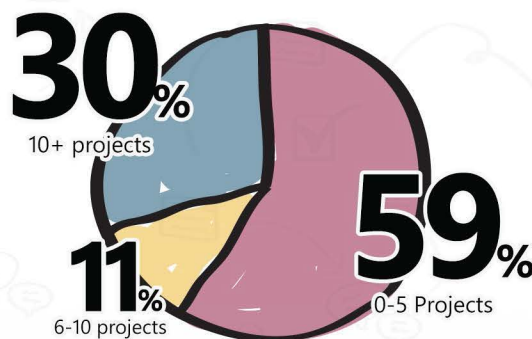
## HOW MANY TEAMS ADOPTED AGILE?

This year we've seen growth in the number of teams practicing agile at each organization surveyed. Nearly half of respondents worked at companies that had adopted agile practices across 5 or more teams (48%), up from 33% in 2011, and 30% said they had 10 or more agile teams.



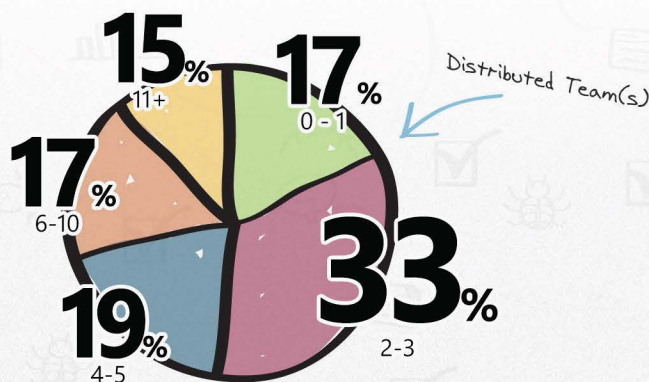
## NUMBER OF COMPANY PROJECTS USING AGILE

The majority of respondents had up to 5 agile projects (59%), compared to 50% in 2011. About one-third said their organizations have 10 or more agile projects.



## NUMBER OF DISTRIBUTED TEAMS USING AGILE

Only 35% of respondents worked in a company that had distributed software teams. However, those who answered yes had, on average, 9 distributed teams.

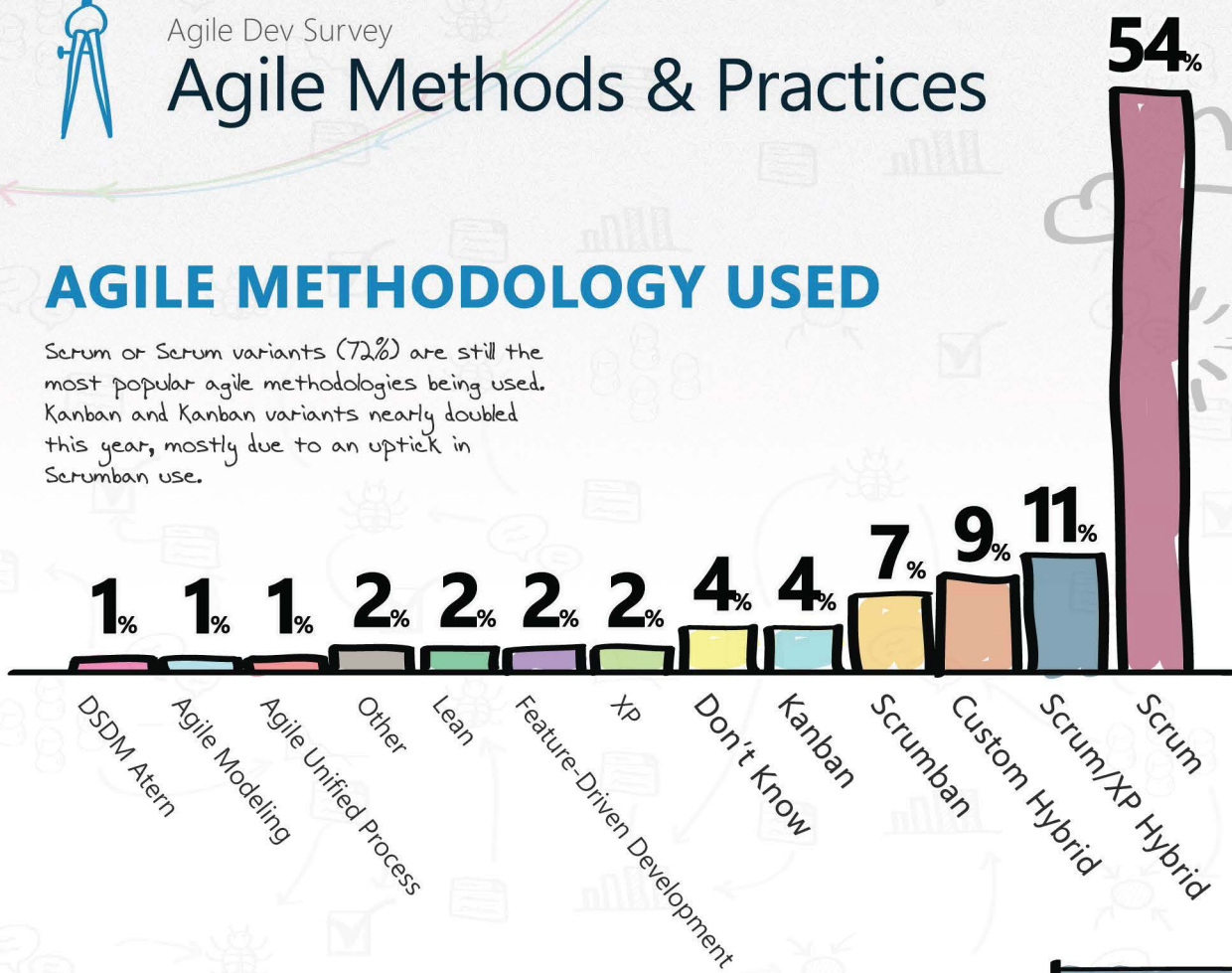






## AGILE METHODOLOGY USED

Scrum or Scrum variants (72%) are still the most popular agile methodologies being used. Kanban and Kanban variants nearly doubled this year, mostly due to an uptick in Scrumban use.

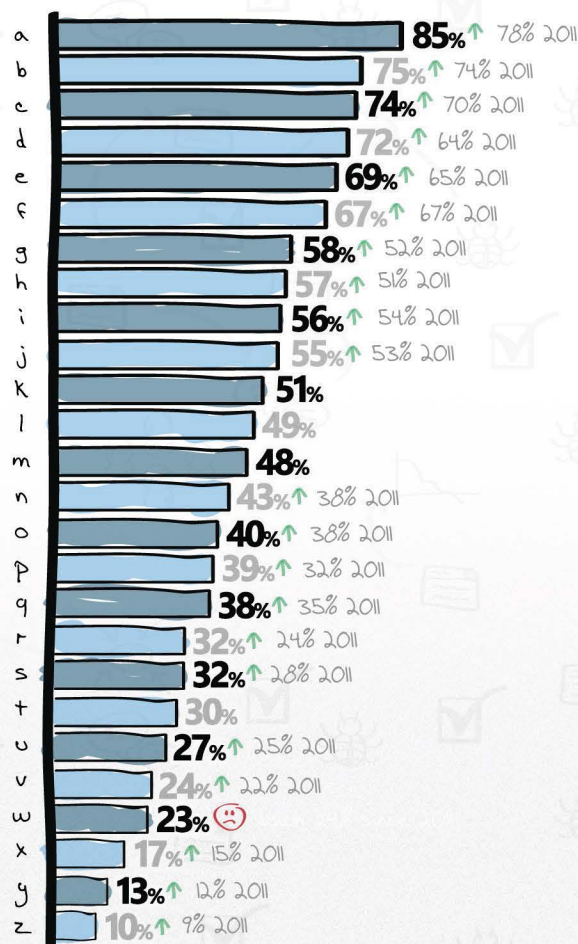


## AGILE TECHNIQUES EMPLOYED

Again this year, core agile tenets currently in use are\* Daily Standup, Iteration Planning and Unit Testing. The two techniques that grew the most in usage from this year to last year were Kanban and Retrospectives; yet, agile techniques increased in every area but one (Continuous Deployment).

\*Respondents were able to select multiple options.

- |                                   |                                |
|-----------------------------------|--------------------------------|
| a Daily Standup                   | n Open Workarea                |
| b Iteration Planning              | o TDD                          |
| c Unit Testing                    | p Digital Taskboard            |
| d Retrospectives                  | q Story Mapping                |
| e Release Planning                | r Kanban                       |
| f Burndown/ Team-Based Estimation | s Collective Code Ownership    |
| g Velocity                        | t Pair Programming             |
| h Coding Standards                | u Automated Acceptance Testing |
| i Continuous Integration          | v Analog Taskboard             |
| j Automated Builds                | w Continuous Deployment        |
| k Dedicated Product Owner         | x Agile Games                  |
| l Integrated Dev/QA               | y Cycle Time                   |
| m Refactoring                     | z BDD                          |

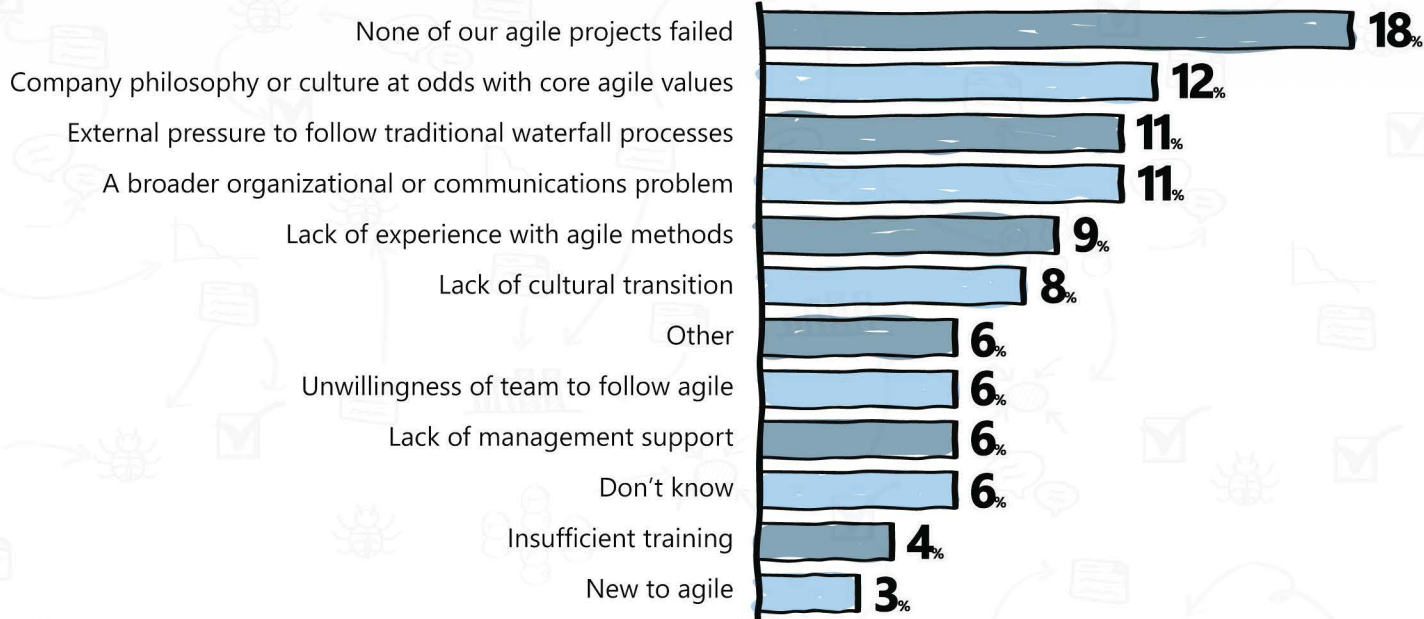






## LEADING CAUSES OF FAILED AGILE PROJECTS

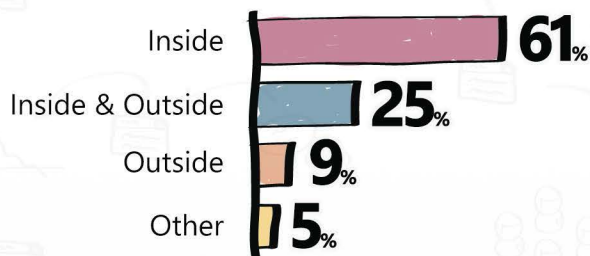
Most respondents said none of their agile projects would be considered unsuccessful (18%). Of those with failed agile projects, most said it was due to either a company philosophy or culture at odds with core agile values (12%), external pressure to follow waterfall processes (11%), or a broader organizational or communications problem (11%).



## KANBAN USES

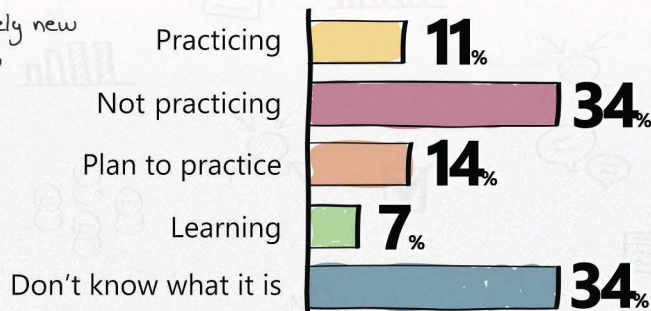
How is Kanban Applied?

Those using Kanban or Scrumban were primarily using these methods for business processes inside the software organization only.



## AGILE PORTFOLIO MANAGEMENT (APM)

For many of the respondents, APM is relatively new or unfamiliar. Only one-quarter are practicing, learning about, or planning to practice APM.

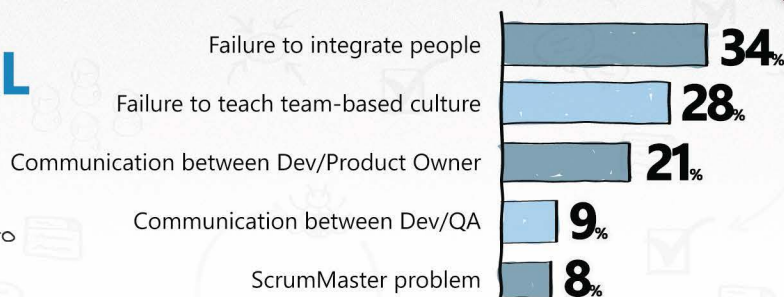






## SPECIFIC ORGANIZATIONAL ISSUES CITED

When asked what were the organizational problems behind any agile project failures, respondents most frequently cited a failure to integrate the right people, or to teach a team-based culture:



## ROLE OF THE SCRUMMASTER

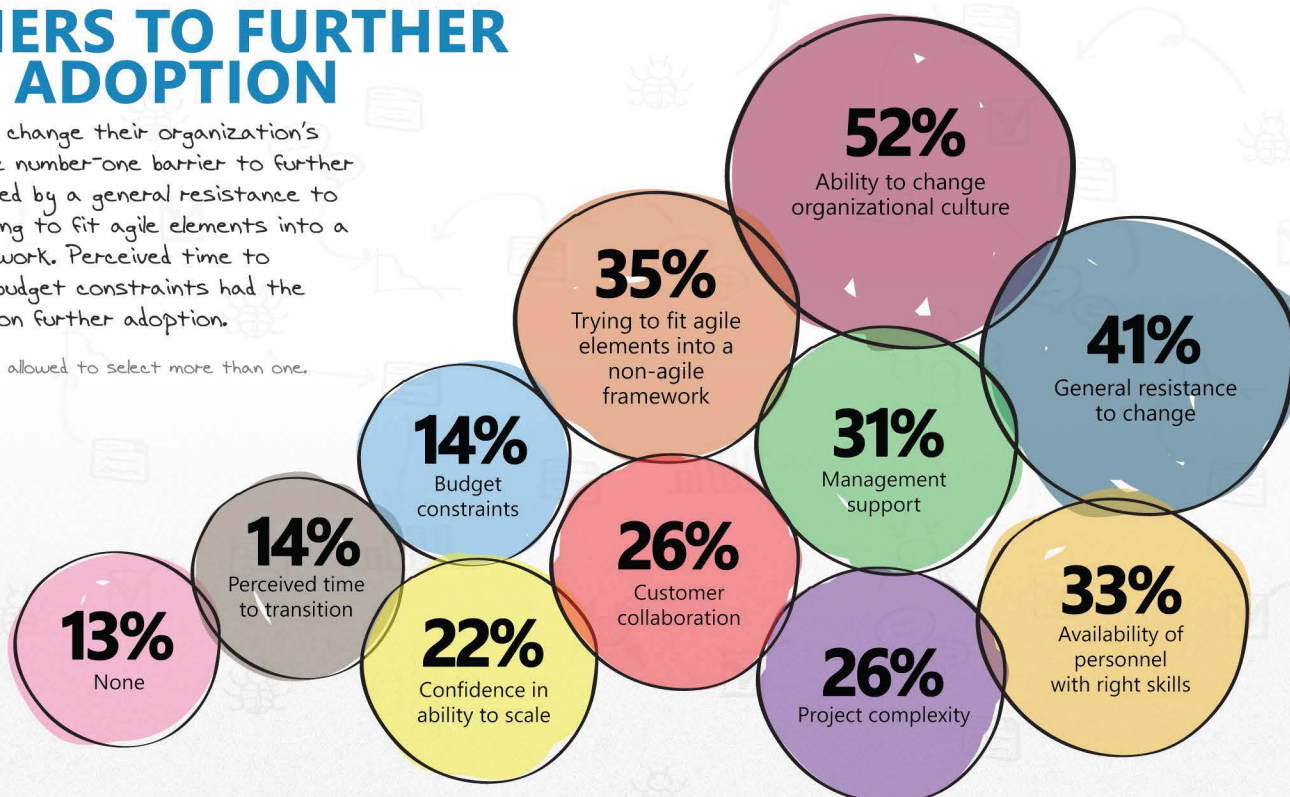
Respondents said they worked at companies where the ScrumMaster is focused mainly on facilitating projects and less on other duties.



## BARRIERS TO FURTHER AGILE ADOPTION

The inability to change their organization's culture was the number-one barrier to further adoption, followed by a general resistance to change and trying to fit agile elements into a non-agile framework. Perceived time to transition and budget constraints had the lowest impact on further adoption.

\*Respondents were allowed to select more than one.



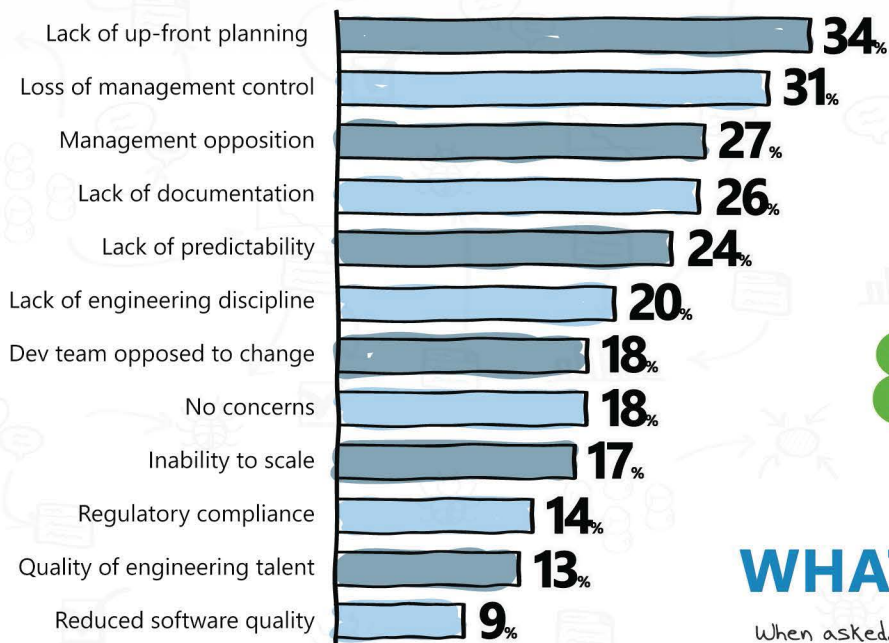




## GREATEST CONCERNS ABOUT ADOPTING AGILE

The most common concerns listed by respondents when they were considering deploying agile were a lack of upfront planning (34%), loss of management control (31%), or management opposition (27%).

\*Respondents were able to select multiple options.



grew to  
**59% 83%**

Agile momentum is up; future plans to implement agile have increased from 59% to 83%

## FUTURE AGILE IMPLEMENTATION

Only 3% said they do not plan to implement agile methods on future projects.



## WHAT WOULD THEY SAY?

When asked, "If you could say one thing to your company president about agile, what would you say?" respondents were very positive. Common responses were around cultural change, hiring a knowledgeable ScrumMaster, investing in training, and adoption from the top-down:

Agile comes with a cultural change, or don't do it at all.

Managers should be willing to listen and learn about agile. They should not look at it as an uncontrolled process.

Give it time to prove itself. After <1 year of management being 'OK' with teams using agile, it's too early to call success or failure. Teams are gradually catching on to the new mindsets and practices.

Provide more funding for agile training.

Agile works only if you follow the methodology at all times and not only when it's convenient.

Every one of our teams should be doing this. Agile doesn't need risk mitigation; it is risk mitigation.

Agile transformation needs investment in skills and a real cultural change with regard to requirements documentation. Neither of these is going to happen without your proactive support.





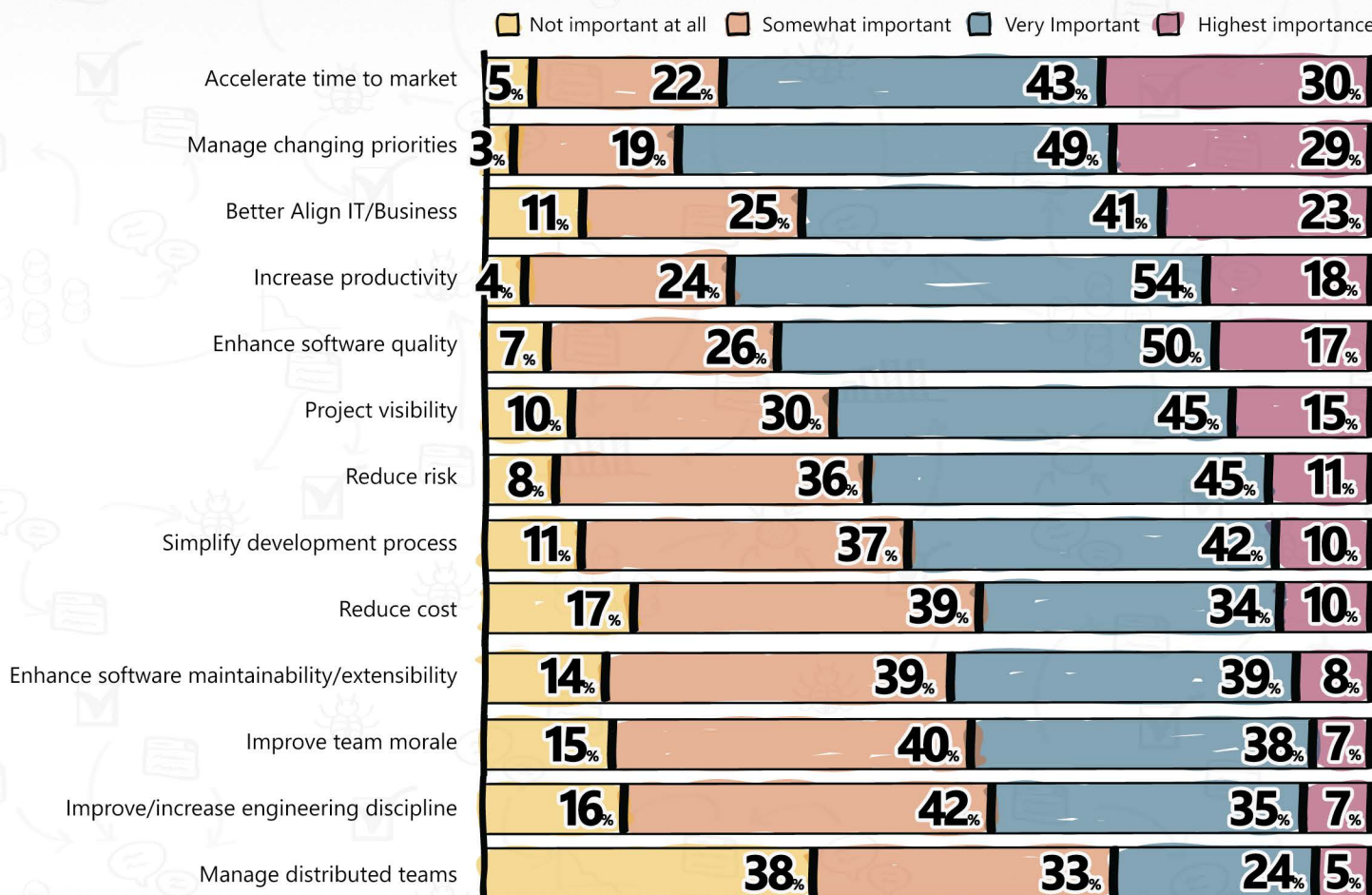
# Reasons for Adopting Agile

## WHY AGILE?

Once again, top 3 reasons\* respondents cited for adopting agile were to accelerate time to market, more easily manage changing priorities, and to better align IT and business objectives:

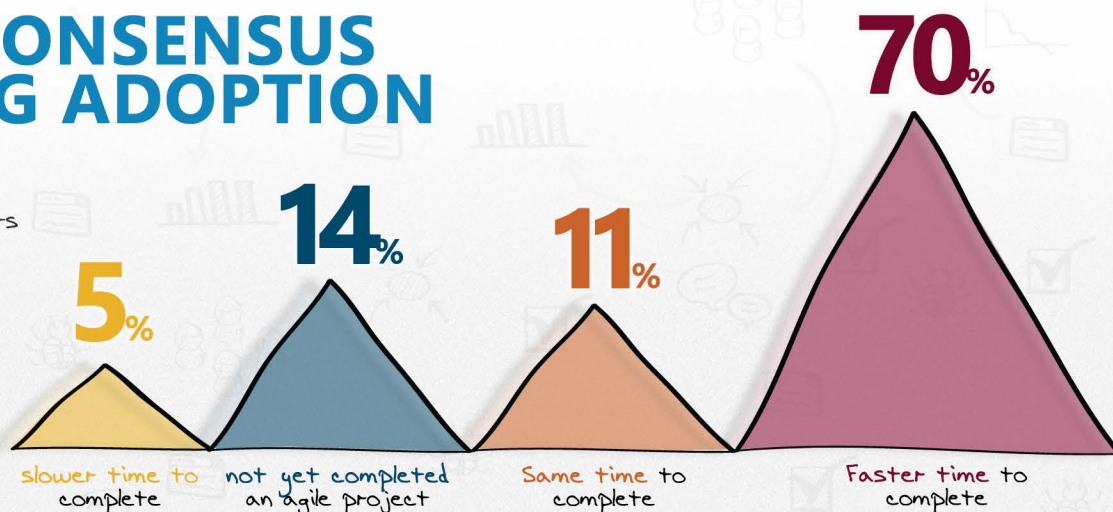
\*Respondents were able to select multiple options.

Most responses centered on better customer focus and increased predictability.



## OVERALL CONSENSUS REGARDING ADOPTION OF AGILE

The vast majority of respondents felt that agile projects have a faster time to completion.





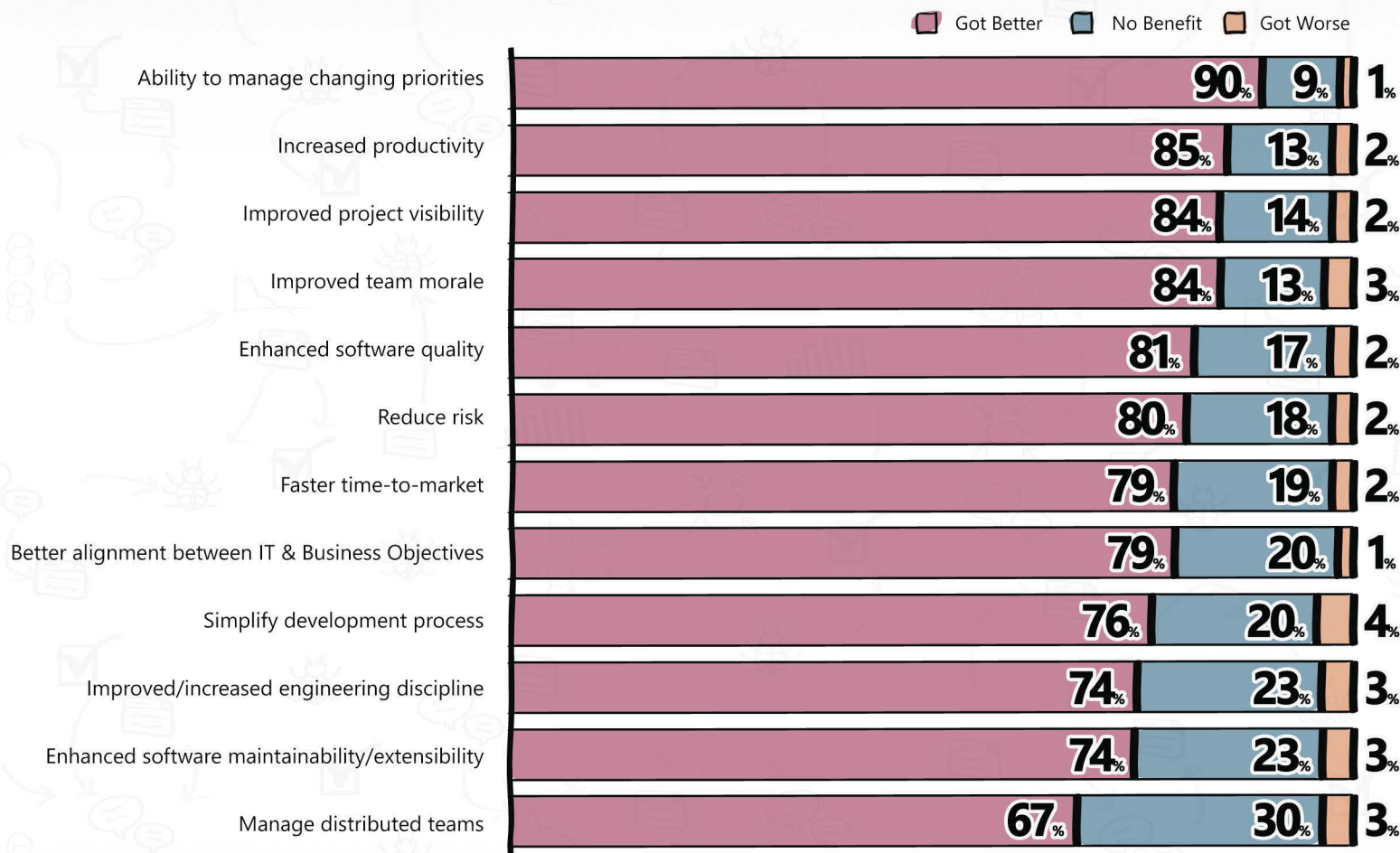


# Benefits Obtained from Implementing Agile

## EXPERIENCED AGILE USERS SAID THE TOP 3 BENEFITS

of agile were the ability to manage changing priorities, productivity, and project visibility.

Overall, the "project visibility" category saw the greatest increase in benefit, from 77% in 2011 to 84% in 2012.



# 90%

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

# 84%

said agile improved their project visibility.

# 3/4

of respondents said their agile projects were successful.

# 1/4

had success with 100% of their projects.

## OUTSOURCED DEVELOPMENT PROJECTS

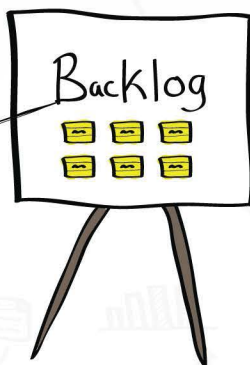
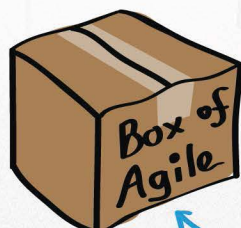
Fewer people are using, or plan to use, agile methods on projects that are being outsourced (49% versus 77% last year). Thirty-five percent said they do now and will continue to do so, while 12% of those not doing it say they plan to in the future.





## BEST 'LESSONS LEARNED'

Respondents said the most important thing to know when trying to scale agile beyond a single team is ensuring the effort has sufficient executive sponsorship. Having a training program, internal support groups, and common tools were also seen as being important.

**23%**Executive  
sponsorship**18%**Training program  
/ workshops**13%**Implementation of a  
common tool**12%**Internal agile  
support group**10%**Full-time  
agile coach**8%**Contracted  
consultant**6%**Not yet  
scaled**6%**

Reference books

**4%**

elearning

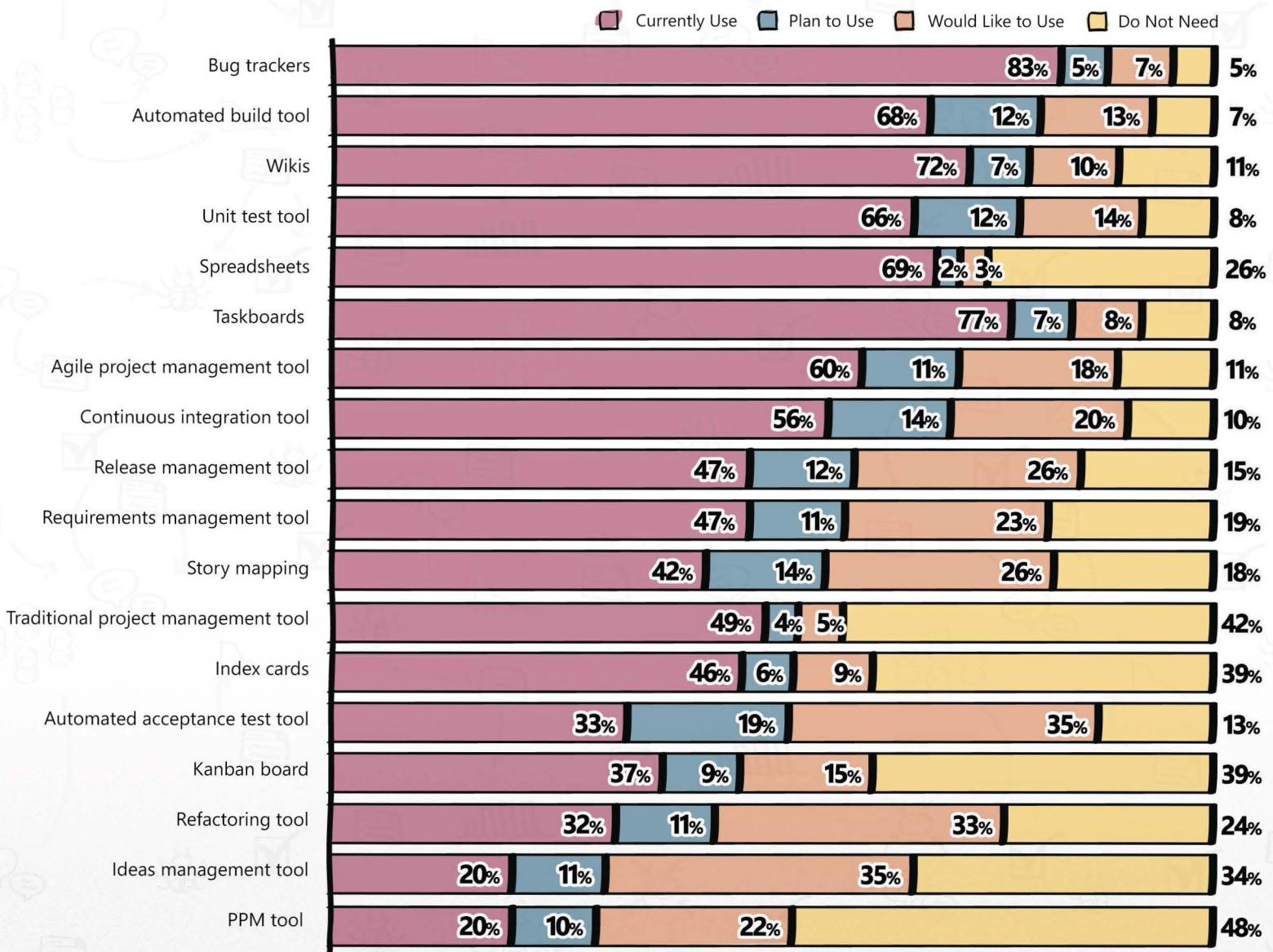




## AGILE TOOL USES & PREFERENCES

Respondents currently use a wide variety of agile tools; the most commonly ones being used (or planned to use) were Bug Trackers, Automated Build Tools and Wikis. The most desired tool were Ideas Management, followed by Automated Acceptance Test, and Refactoring Tools. Respondents indicated the least need for PPM tools, followed by Traditional PM tools and Index cards.

The biggest jump in tools currently used from 2011 to 2012 was Taskboards (+11%), followed by Kanban boards (+10%), Agile Project Management Tools (+8%), and Release Management (+8%).



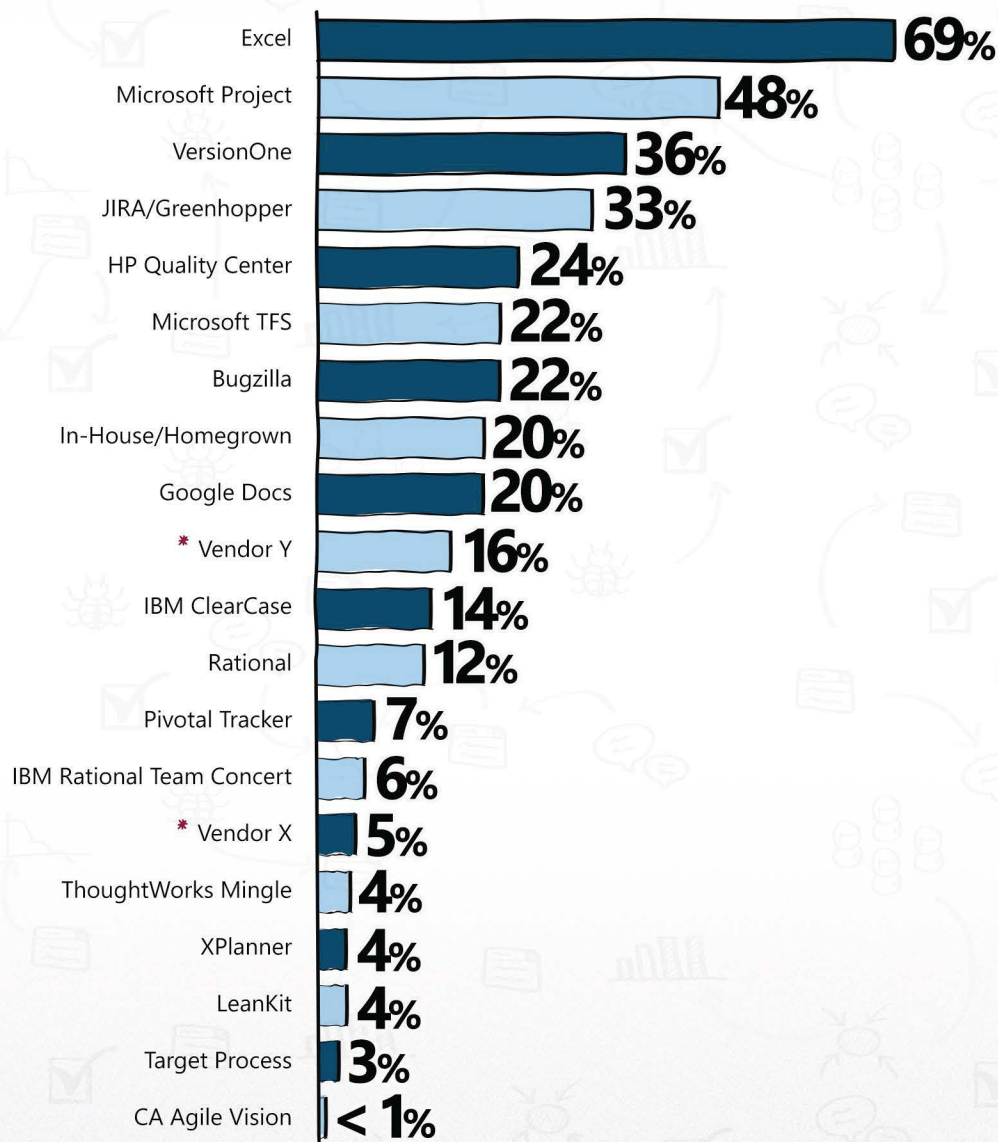




## SPECIFIC AGILE TOOLS USED

On average, respondents used\* between 3-4 different tools. A handful said they used as many as 15. The most commonly used tools used continue to be standard office productivity tools such as Excel, followed by specialized tools like Microsoft Project, VersionOne and Atlassian/JIRA.

\*Respondents were able to select multiple options.



\* Note: Previously vendors "X" and "Y" requested not to be identified in the State of Agile Dev Survey.





## SATISFACTION WITH TOOL CHOICE

In addition to tool use, respondents were asked whether they would recommend the tool(s) they are using based on their past or present use. Of the tools evaluated in the survey, VersionOne had the highest satisfaction rate of any other tool evaluated (93% of respondents using VersionOne would recommend it), followed by LeanKit (92%), Atlassian/JIRA/Greenhopper (92%) and Vendor Y (87%). The least recommended tools were Microsoft Project (50%), In-house/Homegrown (51%) and XPlanner (51%).

## TIMING FOR TOOL ADOPTION

When respondents using a tool were asked how they decided it was time for a tool, the most commonly cited reasons were:

More collaboration & visualization of workflow

Co-located/offshore teams unable to see physical boards

Consistency & roll-up metrics across projects/groups

## Percent of Users Who Would Recommend

Note: Previously vendors "X" and "Y" requested not to be identified in the State of Agile Dev Survey.

