STATE OF
AGILE
SURVEY

2010

"THE STATE OF AGILE DEVELOPMENT"

5TH ANNUAL

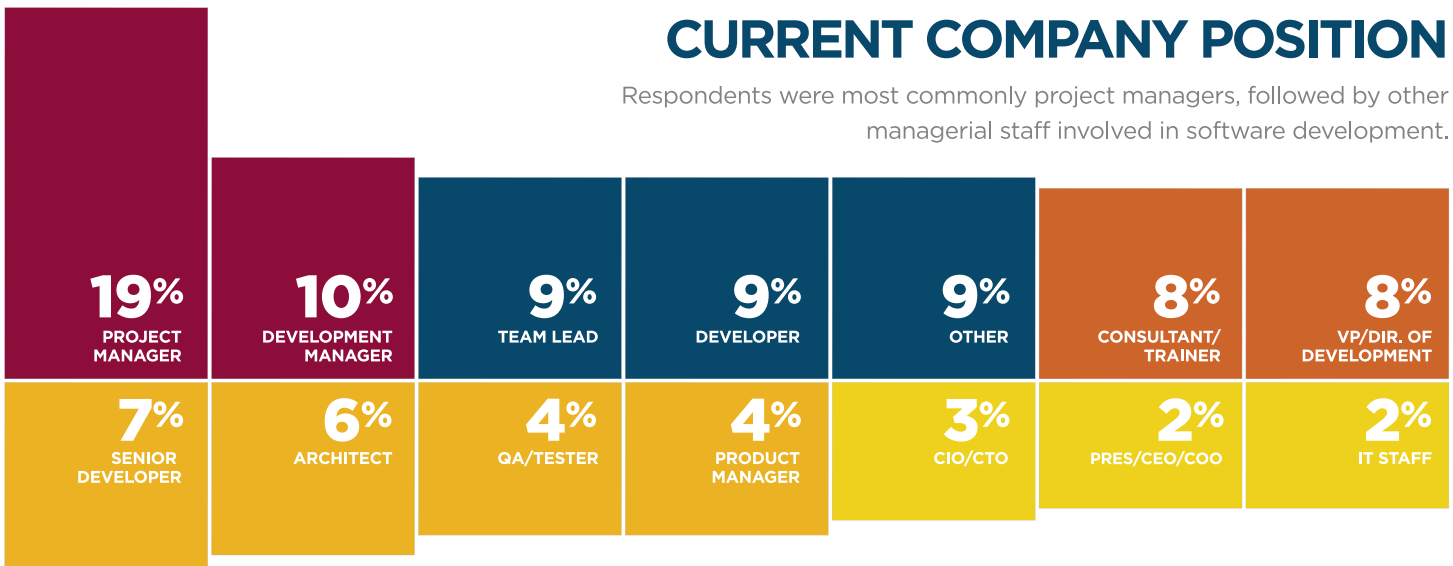# INTRODUCTION

HELLO, I'M

Agile

The fifth annual "State of Agile Development" survey was conducted between August 11th and October 31, 2010. Sponsored by VersionOne, respondents were recruited from mailing lists, websites and other software development industry fora. The survey data includes information from 4,770 participants from 91 countries. The data was analyzed and prepared into a summary report by Analysis.Net Research, an independent survey consultancy.

RESPONDENT DEMOGRAPHICS

CURRENT COMPANY POSITION

Respondents were most commonly project managers, followed by other managerial staff involved in software development.

19% PROJECT MANAGER	10% DEVELOPMENT MANAGER	9% TEAM LEAD	9% DEVELOPER	9% OTHER	8% CONSULTANT/ TRAINER	8% VP/DIR. OF DEVELOPMENT
7% SENIOR DEVELOPER	6% ARCHITECT	4% QA/TESTER	4% PRODUCT MANAGER	3% CIO/CTO	2% PRES/CEO/COO	2% IT STAFF

## EXPERIENCE WITH AGILE DEVELOPMENT PRACTICES

Respondents were quite knowledgeable about Agile Development, with 68% saying that they were "moderately to extremely knowledgeable" about agile practices.

- 25%
- 43%
- 24%
- 8%
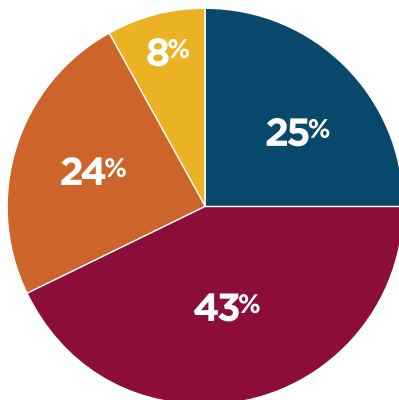
- ● EXTREMELY KNOWLEDGEABLE
- ● MODERATELY KNOWLEDGEABLE
- ● KNOWLEDGEABLE
- ● VERY LITTLE KNOWLEDGE

HOW MANY YEARS HAS YOUR COMPANY BEEN PRACTICING AGILE?

40% of respondents work at companies that have been practicing agile for over 2 years.

- 14%
- 46%
- 32%
- 8%
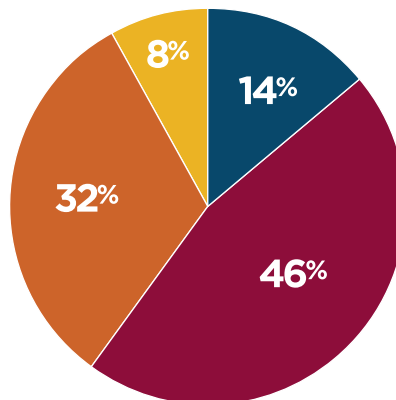
- ● LESS THAN 1 YEAR
- ● 1-2 YEARS
- ● 2-5 YEARS
- ● 5+ YEARS

HOW MANY YEARS HAVE YOU BEEN PRACTICING AGILE?

Nearly half of respondents have more than 2 years of agile experience.

- 14%
- 37%
- 25%
- 24%
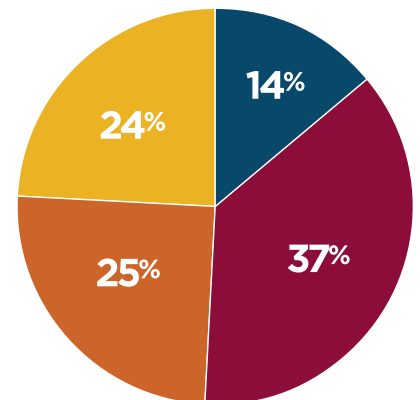
- ● LESS THAN 1 YEAR
- ● 1-2 YEARS
- ● 2-5 YEARS
- ● 5+ YEARS

AGILE IN THE ENTERPRISE

AGILE ADOPTION

The median size of development organizations was 80.

COMPANY SIZE	0-20	20-50	50-250	250+
	24%	18%	26%	32%
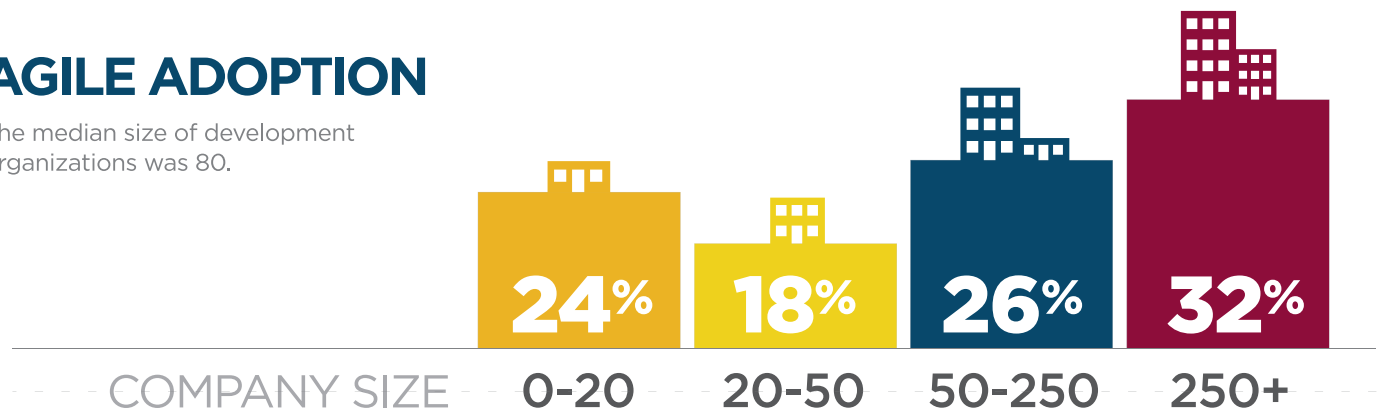
WHO DECIDES?

Initial champions of agile methods are found in the management layer 80% of the time.

VP/Dir. Of Development	22%
Development Manager	15%
Project Manager	13%
CIO/CTO	11%
Team Lead	8%
Developer	7%
President/CEO/COO	7%
Architect	4%
Product Manager	4%
Consultant/Trainer	3%
Other	3%
IT Staff	2%
QA/Tester	1%

0% 5% 10% 15% 20%
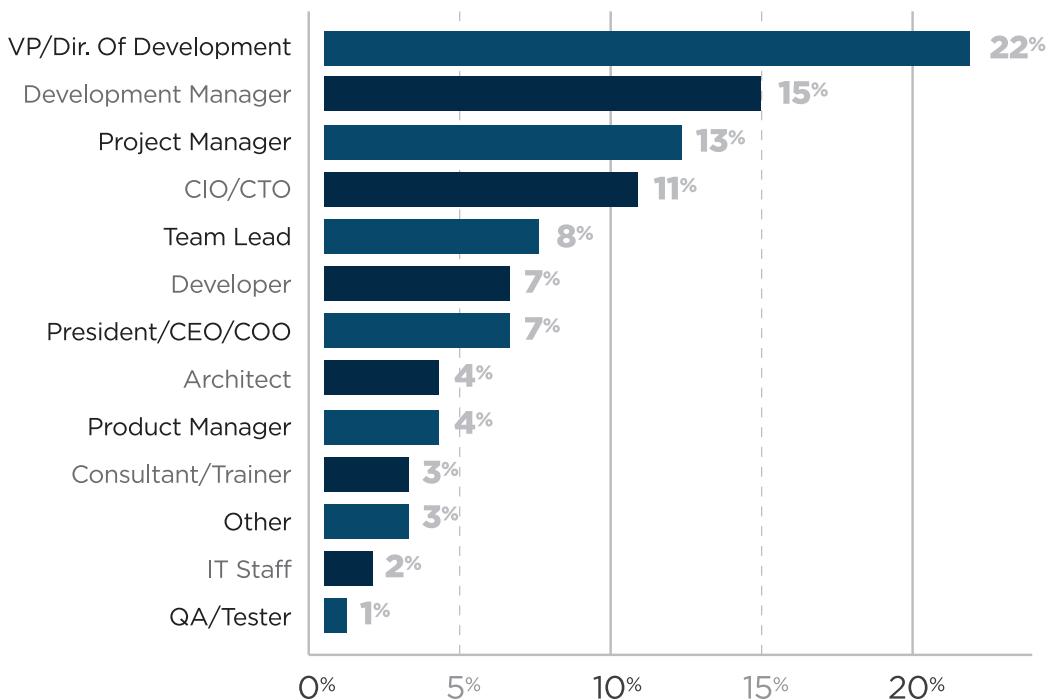
90% of respondents worked in organizations that used **Agile Development practices** to some degree

65% of respondents worked in companies with **distributed development teams**

HOW MANY TEAMS ADOPTED AGILE?

Companies are scaling their agile initiatives – 29% of respondents work at companies with 10+ agile teams.

- ● 0 - 5 TEAMS
- ● 5 - 10 TEAMS
- ● 10 - 25 TEAMS
- ● 25+ TEAMS

54%
17%
14%
15%
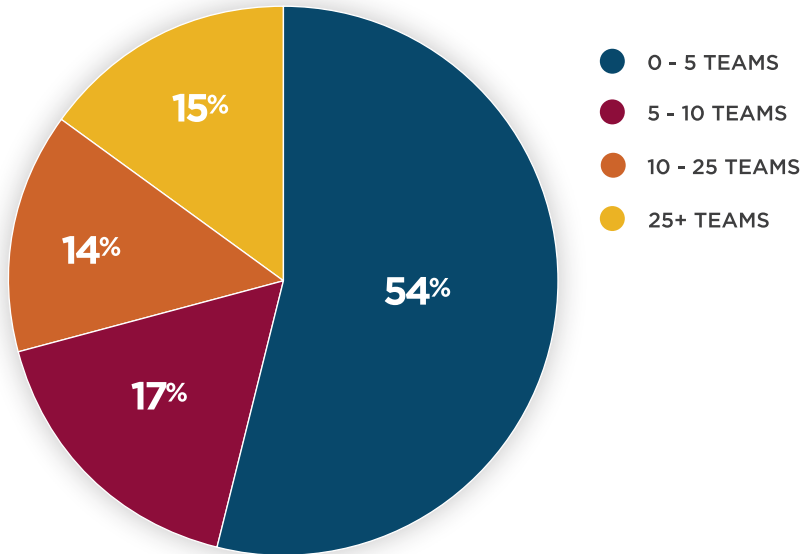
NUMBER OF SEPARATE SITES/LOCATIONS USING AGILE

Most companies had only 1 to 2 sites using agile.

- 0 - 2 ●
- 2 - 5 ●
- 5 - 10 ●
- 10+ ●

63%
27%
7%
3%
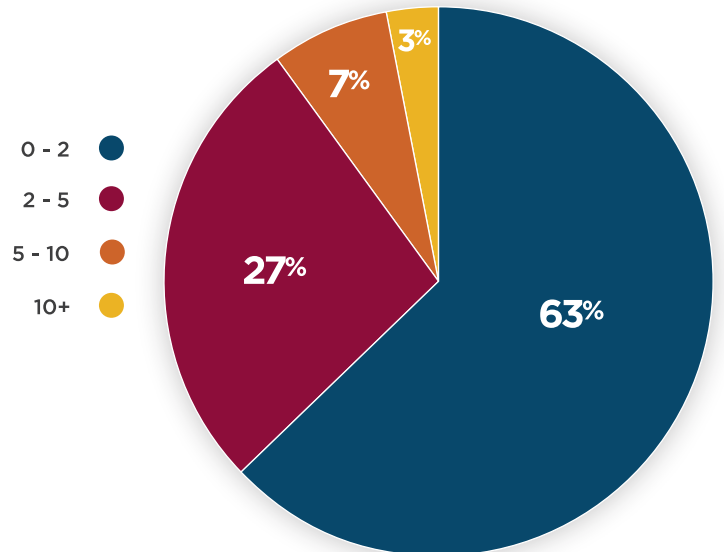
PERCENTAGE OF COMPANY'S PROJECTS USING AGILE

About half of projects in respondents' companies use agile.

- ● 0-20%
- ● 20-50%
- ● 50-95%
- ● 95-100%

31%
22%
25%
22%
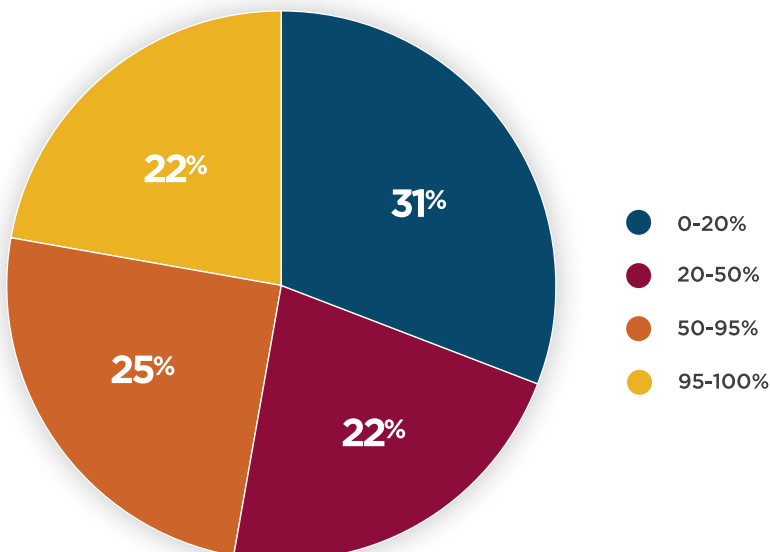
AGILE METHODS & PRACTICES
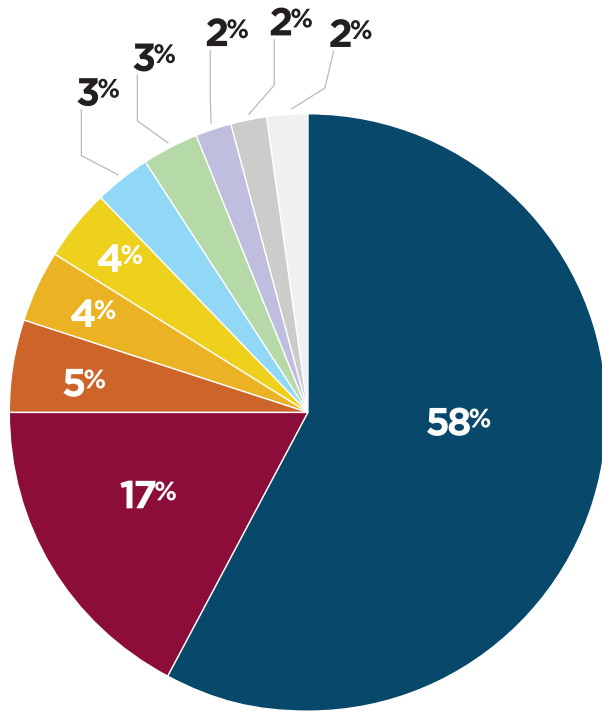
AGILE METHODOLOGY MOST CLOSELY FOLLOWED

Scrum or Scrum variants were by far the most common agile methodologies employed.

2%
2%
2%
3%
3%
4%
4%
5%
17%
58%

- ● SCRUM
- ● SCRUM/XP HYBRID
- ● CUSTOM HYBRID
- ● OTHER
- ● EXTREME PROGRAMMING (XP)
- ● DON'T KNOW
- ● SCRUMBAN
- ● LEAN
- ● FEATURE DRIVEN DEVELOPMENT (FDD)
- ● AGILEUP

AGILE TECHNIQUES EMPLOYED

Core agile tenets iteration planning, daily standup and unit testing were used by the vast majority of respondents.

Technique	Percent
Iteration Planning	83%
Daily Standup	82%
Unit Testing	77%
Release Planning	72%
Retrospectives	68%
Burndown	67%
Continuous Integration	65%
Automated Builds	60%
Velocity	57%
Refactoring	57%
Coding Standards	56%
Test Driven Development (TDD)	46%
Open Workareas	43%
Digital Taskboard	37%
Collective Code Ownership	36%
Pair Programming	33%
Automated Acceptance Testing	31%
On-site Customer	29%
Continuous Deployment	25%
Kanban	18%
Cycle Time	12%
Behavior Driven Development	9%

80% 70% 60% 50% 40% 30% 20% 10% 0%

⚠ LEADING CAUSES OF FAILED AGILE PROJECTS

Category	%
Lack of experience with agile methods	14%
Company philosophy/culture at odds with core agile values	11%
Don't know	11%
External pressure to follow traditional waterfall practices	10%
Lack of cultural transition	8%
Lack of management support	7%
Unwillingness of the team	6%
New to agile/haven't completed an agile project	6%
Insufficient training	5%

0%   5%   10%   15%
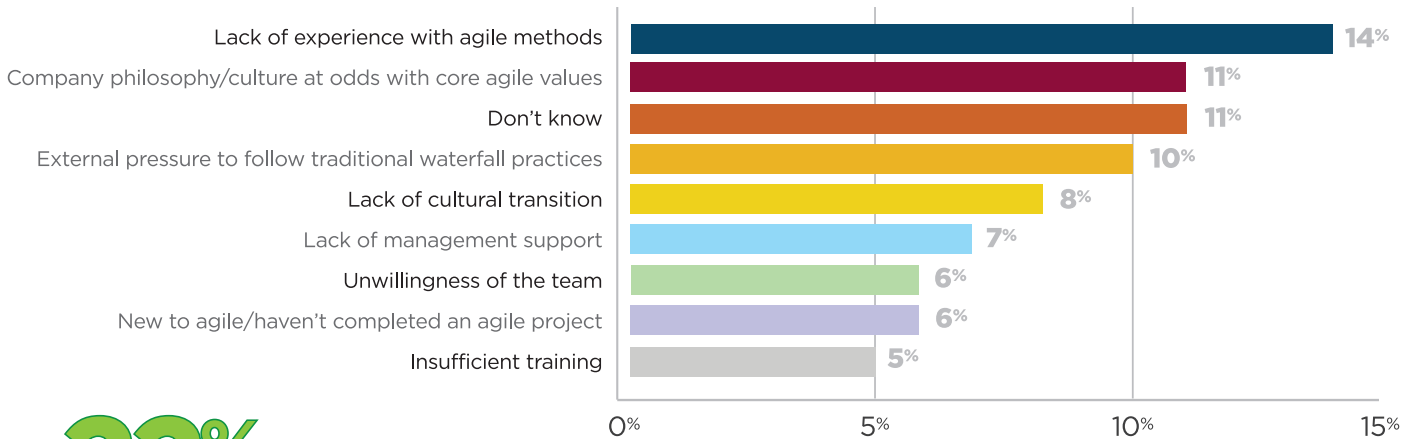
22%

of respondents reported they had not experienced a failed agile project

BARRIERS TO FURTHER AGILE ADOPTION

As with any significant process change, the biggest barrier seen to the adoption of Agile Development was the ability to change organizational culture followed by general resistance to change.

%	Category
51%	Ability to change organizational culture
40%	General resistance to change
40%	Availability of personnel with necessary skills
34%	Management support
31%	Project complexity or size
29%	Customer collaboration
25%	Confidence in ability to scale agile
16%	Perceived time to transition
13%	Budget constraints
12%	None
6%	Other

GREATEST CONCERNS ABOUT ADOPTING AGILE

The most common concerns listed by respondents when they were considering deploying agile practices was a loss of management control, management opposed to change or concerns regarding lack of upfront planning.

Category	%
Loss of management control	36%
Lack of upfront planning	33%
Management opposed to change	32%
Lack of documentation	28%
Lack of predictability	27%
Lack of engineering discipline	25%
Development team opposed to change	21%
Quality of engineering talent	16%
Other	15%
Inability to scale	12%
Regulatory compliance	12%
Reduced software quality	11%
No concerns	11%

REASONS FOR ADOPTING AGILE

The most common reasons for adopting agile revolved around increased productivity and accelerating time to market.

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

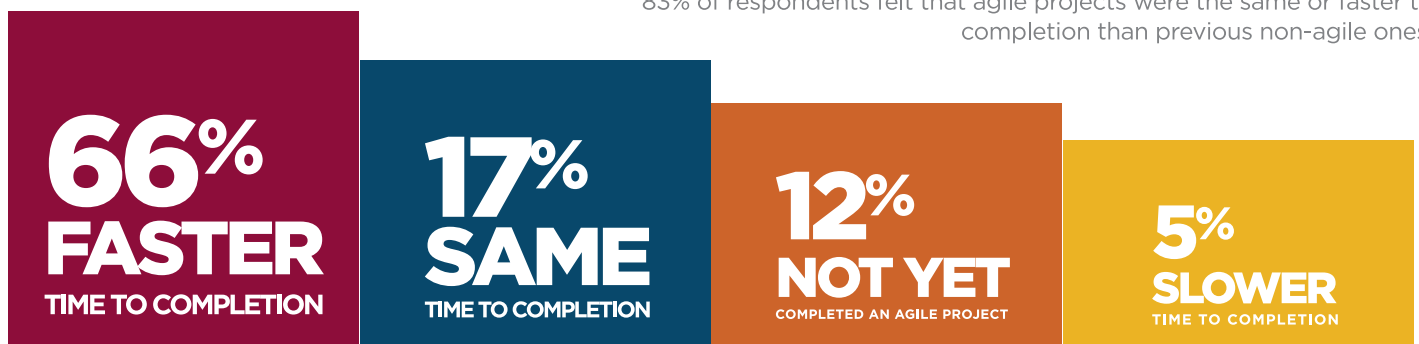| Reason	Very Important	Highest Importance
Accelerate Time to Market	41%	37%
Enhance Ability to Manage Changing Priorities	46%	36%
Increase Productivity	53%	27%
Enhance Software Quality	49%	24%
Improve Alignment Between IT & Business Objectives	39%	24%
Improve Project Visibility	41%	17%
Reduce Risk	46%	15%
Simplify Development Process	41%	13%
Enhance Software Maintainability/Extensibility	41%	11%
Improved Team Morale	37%	10%
Reduce Cost	34%	10%
Improve/Increase Engineering Discipline	37%	8%
Manage Distributed Teams	17%	5%

OVERALL CONSENSUS
REGARDING ADOPTION OF AGILE

83% of respondents felt that agile projects were the same or faster to completion than previous non-agile ones.

66%
FASTER
TIME TO COMPLETION

17%
SAME
TIME TO COMPLETION

12%
NOT YET
COMPLETED AN AGILE PROJECT
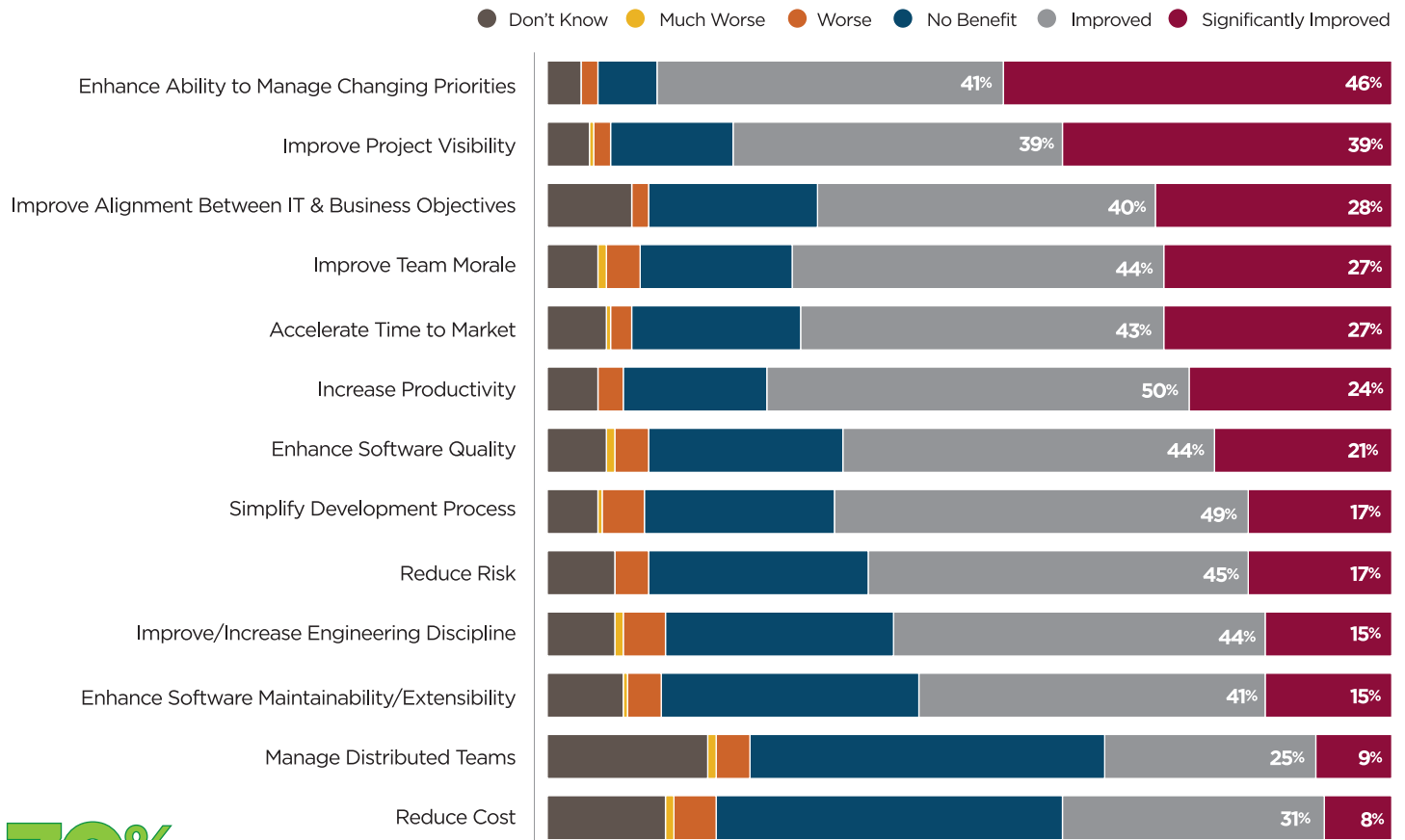
5%
SLOWER
TIME TO COMPLETION

BENEFITS OBTAINED FROM IMPLEMENTING AGILE

While the most common reason for adopting agile was improved productivity and time to market, respondents cited that they actually experienced improved managerial abilities as the biggest benefit of implementing agile.

87%
of respondents said implementing agile either improved or significantly improved their ability to manage changing priorities

Legend: ● Don't Know ● Much Worse ● Worse ● No Benefit ● Improved ● Significantly Improved

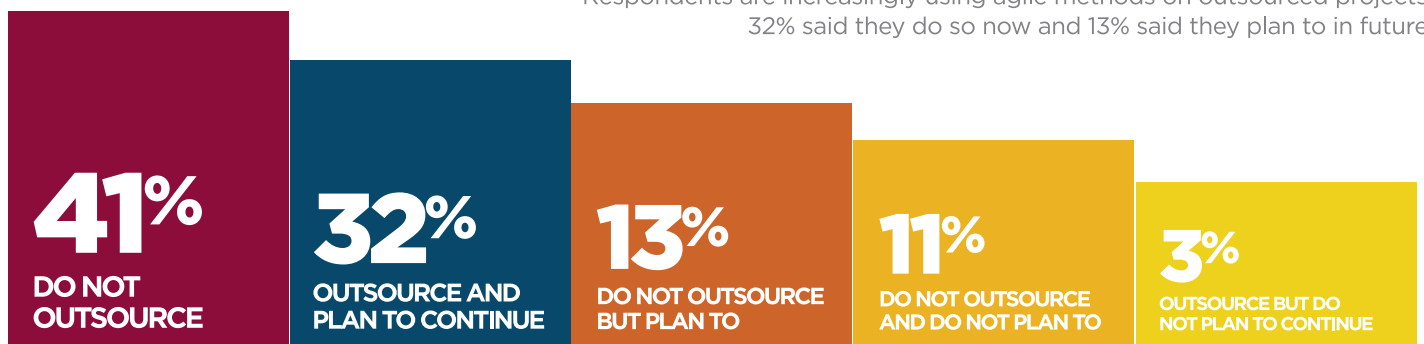| Benefit	Improved	Significantly Improved
Enhance Ability to Manage Changing Priorities	41%	46%
Improve Project Visibility	39%	39%
Improve Alignment Between IT & Business Objectives	40%	28%
Improve Team Morale	44%	27%
Accelerate Time to Market	43%	27%
Increase Productivity	50%	24%
Enhance Software Quality	44%	21%
Simplify Development Process	49%	17%
Reduce Risk	45%	17%
Improve/Increase Engineering Discipline	44%	15%
Enhance Software Maintainability/Extensibility	41%	15%
Manage Distributed Teams	25%	9%
Reduce Cost	31%	8%

70%
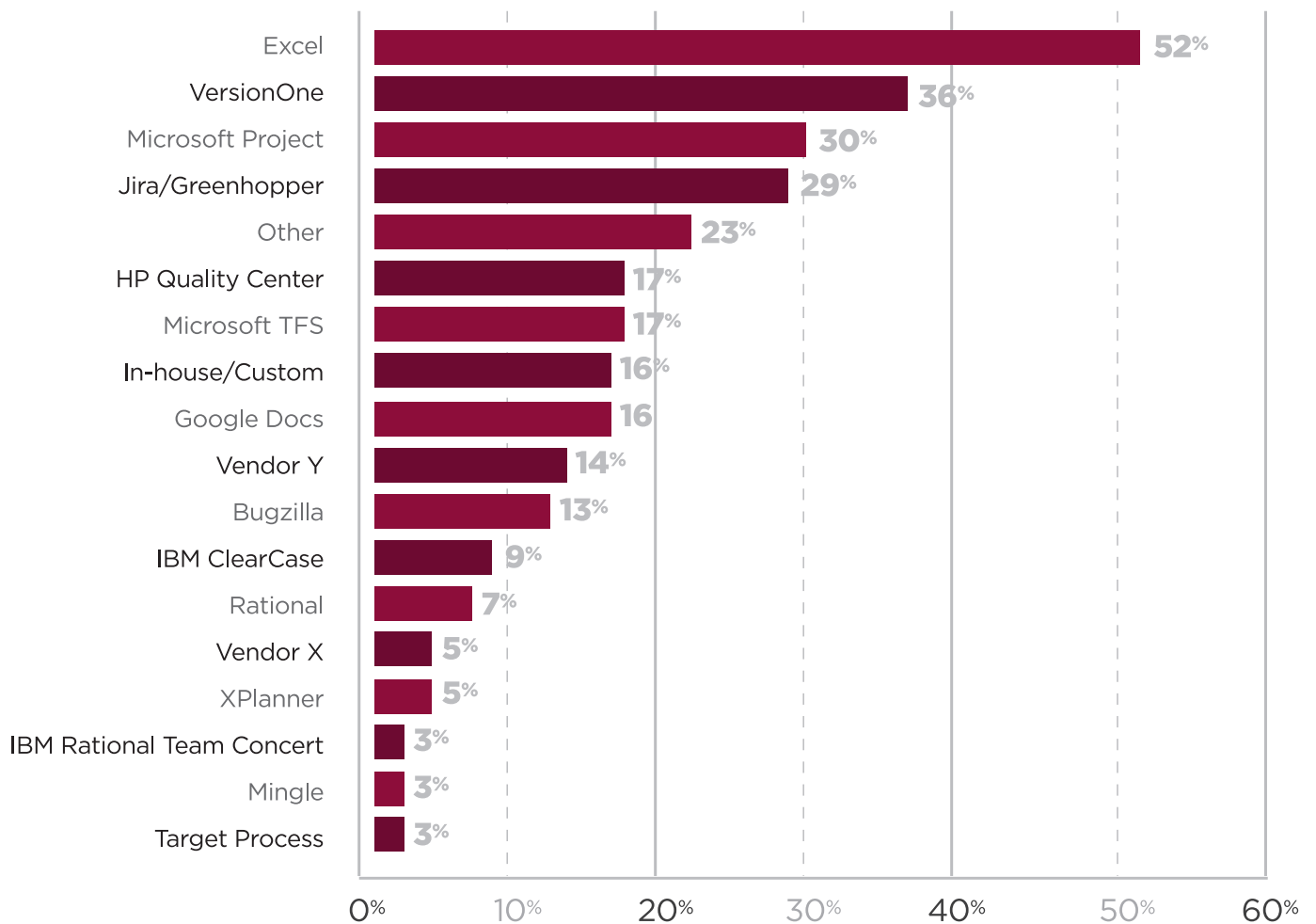of respondents showed either improved or significantly improved time to market

OUTSOURCED DEVELOPMENT PROJECTS

Respondents are increasingly using agile methods on outsourced projects; 32% said they do so now and 13% said they plan to in future.

41% DO NOT OUTSOURCE

32% OUTSOURCE AND PLAN TO CONTINUE

13% DO NOT OUTSOURCE BUT PLAN TO

11% DO NOT OUTSOURCE AND DO NOT PLAN TO

3% OUTSOURCE BUT DO NOT PLAN TO CONTINUE

TOOLS

SPECIFIC TOOLS CURRENTLY USED

Tool	Percentage
Excel	52%
VersionOne	36%
Microsoft Project	30%
Jira/Greenhopper	29%
Other	23%
HP Quality Center	17%
Microsoft TFS	17%
In-house/Custom	16%
Google Docs	16
Vendor Y	14%
Bugzilla	13%
IBM ClearCase	9%
Rational	7%
Vendor X	5%
XPlanner	5%
IBM Rational Team Concert	3%
Mingle	3%
Target Process	3%

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

*RESPONDENTS WERE ALLOWED TO ANSWER FOR MULTIPLE TOOLS