INTRODUCTION

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.
CURRENT COMPANY POSITION

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

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.

HOW MANY YEARS HAS YOUR COMPANY BEEN PRACTICING AGILE?

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

HOW MANY YEARS HAVE YOU BEEN PRACTICING AGILE?

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

The median size of development organizations was 80.

<table>
<thead>
<tr>
<th>Company Size</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>0-20</td>
<td>24%</td>
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<tr>
<td>20-50</td>
<td>18%</td>
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<tr>
<td>50-250</td>
<td>26%</td>
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<td>250+</td>
<td>32%</td>
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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%

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.

NUMBER OF SEPARATE SITES/LOCATIONS USING AGILE
Most companies had only 1 to 2 sites using agile.

PERCENTAGE OF COMPANY’S PROJECTS USING AGILE
About half of projects in respondents’ companies use agile.
AGILE METHODS & PRACTICES

AGILE METHODOLOGY MOST CLOSELY FOLLOWED

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

- SCRUM: 58%
- SCRAM/XP HYBRID: 17%
- CUSTOM HYBRID: 4%
- OTHER: 4%
- EXTREME PROGRAMMING (XP): 4%
- DON'T KNOW: 3%
- SCRUMBAN: 2%
- LEAN: 2%
- FEATURE DRIVEN DEVELOPMENT (FDD): 2%
- AGILEUP: 3%

AGILE TECHNIQUES EMPLOYED

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

- 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%
LEADING CAUSES OF FAILED AGILE PROJECTS

- 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%

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.

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

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.

- 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.

- **Accelerate Time to Market**: 41% Not Important at All, 37% Highest Importance
- **Enhance Ability to Manage Changing Priorities**: 46% Somewhat Important, 36% Very Important
- **Increase Productivity**: 53% Not Important at All, 27% Very Important
- **Enhance Software Quality**: 49% Not Important at All, 24% Highest Importance
- **Improve Alignment Between IT & Business Objectives**: 39% Not Important at All, 24% Highest Importance
- **Improve Project Visibility**: 41% Not Important at All, 17% Very Important
- **Reduce Risk**: 46% Not Important at All, 15% Highest Importance
- **Simplify Development Process**: 41% Not Important at All, 13% Highest Importance
- **Enhance Software Maintainability/Extensibility**: 41% Not Important at All, 11% Highest Importance
- **Improved Team Morale**: 37% Not Important at All, 10% Highest Importance
- **Reduce Cost**: 34% Not Important at All, 10% Highest Importance
- **Improve/Increase Engineering Discipline**: 37% Not Important at All, 8% Highest Importance
- **Manage Distributed Teams**: 17% Not Important at All, 5% Highest Importance

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**
- **17% Same**
- **12% Not Yet Completed an Agile Project**
- **5% Slower**
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.

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.

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

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
SPECIFIC TOOLS CURRENTLY USED

- 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