STATE OF SCRUM
2017-2018
SCALING AND AGILE TRANSFORMATION
Scrum Alliance®, a certifying body and unifying global community for Scrum professionals, sponsors the annual State of Scrum survey to support its membership with current data related to Scrum use, common practice, challenges, successes, and shifts.

The State of Scrum 2017-2018 report delves into Agile transformation and issues of scaling from both the practitioner and coach/trainer perspectives for the first time. In an effort to understand, compare and consider the efficacy of Agile methods across an array of industries, new metrics were added for organizations considering and implementing Agile.
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EXECUTIVE SUMMARY

SCRUM ALLIANCE SPONSORS THE STATE OF SCRUM REPORT. IT IS CONDUCTED ON AN ANNUAL BASIS, WITH THE LAST REPORT ISSUED IN 2016.

Research objectives
- Experience with Agile and/or Scrum
- What influences the adoption of Scrum
- How Scrum is practiced
- Priorities and challenges related to Scrum
- Organizational training opportunities
- Respondent demographics and organizational background
- Net promoter score (NPS)

New sections added
- Involvement in a broader Agile transformation
- Benchmark compensation levels and practices (reported separately)

The survey continues to be the best place to find comprehensive data about real-world applications of Scrum.

- Scrum continues to improve quality of work life: 85%
- Delivering value to the customer is the outcome most valued by executives: 71%
- Certification improves practice: 81%
- Will continue to use Scrum in the future: 97%
SCALING SCRUM

As the use of Scrum continues to grow, the top business priorities for projects are fulfilling customer needs, improving time to market, and reducing cycle time. By scaling Scrum, organizations can continue to further these goals outside of IT and for larger projects. Scaling certifications have increased in the past year, demonstrating a continued greater need for expertise in this sphere.

AGILE TRANSFORMATION

Agile transformation is firmly on the horizon. In this metric’s first year of inclusion, the majority of respondents anticipate a forthcoming Agile transformation in their organization, with process-oriented issues as the primary catalyst for change. Active senior management sponsorship and support is the number one motivator to undertake an Agile transformation, and enterprises look to executive leadership to spearhead Agile initiatives.

SIDEBAR STORIES

Scrum use in 2017 was much more than numbers and data. It was, and is, people implementing Agile frameworks to make better products, better workplaces, better services, and better experiences in their industries around the world. Next to the data, this year’s report includes sidebar stories that bring to life real-world applications of Scrum and Agile.

The stories, coming from education, health care, and tech industries, offer insight into the numbers that sometimes boost the data or, most interestingly, offer an alternative to the majority of respondents’ approaches, providing a more holistic image of the state of Scrum.

"Any organization that does not go through an Agile transformation will die. It is the same as a company refusing to use computers.

Agile is all about fast feedback and thus fast learning. In today’s complex world those organizations win that learn the fastest.”

Sohrab Salimi, CIO
CST, CSP, CSM, CSPO, REP
ABOUT THE SURVEY

State of Scrum 2017-2018 is based on a survey of more than 2,000 active Scrum and Agile practitioners from the Scrum Alliance membership base. Individuals who have obtained Scrum Alliance certifications of varying levels are eligible for Scrum Alliance membership. The survey data were collected and analyzed by an independent, third-party research organization.

For many questions, multiple answers were allowed, so the percentages may reflect totals greater than 100 percent. In those cases, the percentage will reference the portion of respondents who chose an individual answer.

This survey report presents the most topical findings for organizational leaders and practitioners wrestling with Agile transformations. The complete collection of survey questions and responses may be provided upon request.

STATE OF SCRUM 2017-2018 FAST FACTS

<table>
<thead>
<tr>
<th>When</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2017</td>
<td>2,000+ Scrum Alliance members</td>
</tr>
</tbody>
</table>

| Countries represented | 91 |

<table>
<thead>
<tr>
<th>Respondents’ primary functional area</th>
<th>Industries represented</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT - 39%</td>
<td>27</td>
</tr>
<tr>
<td>Software Development - 27%</td>
<td></td>
</tr>
<tr>
<td>Product Development - 11%</td>
<td></td>
</tr>
<tr>
<td>PMO - 6%</td>
<td></td>
</tr>
<tr>
<td>Consulting - 6%</td>
<td></td>
</tr>
<tr>
<td>C-Level - 2%</td>
<td></td>
</tr>
<tr>
<td>Operations - 2%</td>
<td></td>
</tr>
<tr>
<td>Sales and Marketing - 2%</td>
<td></td>
</tr>
<tr>
<td>Finance - 1%</td>
<td></td>
</tr>
<tr>
<td>Education - 1%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Departments other than IT using Scrum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations or Production - 42%</td>
</tr>
<tr>
<td>Research and Development - 31%</td>
</tr>
<tr>
<td>Sales and Marketing - 25%</td>
</tr>
<tr>
<td>Content Development, Management - 24%</td>
</tr>
<tr>
<td>Consulting - 22%</td>
</tr>
<tr>
<td>Human Resources - 19%</td>
</tr>
<tr>
<td>Financial or Accounting - 18%</td>
</tr>
</tbody>
</table>
LETTER FROM CEO
LISA HERSHEYMAN

Welcome to State of Scrum 2017-2018!

We are excited to bring you this report on what has been an eventful and impactful year at Scrum Alliance. We have worked hard to present the results of the State of Scrum survey in a way that is both grounded in the data and accessible to audiences with varying levels of familiarity with its concepts. We have also produced the report within the fastest timeframe to date, arming you with the most current information needed for your conversations with the broader world.

This space continues to be filled with the dynamism with which it first launched. In keeping with the findings of last year’s survey, we see continued growth in the use of Scrum outside of IT, along with a desire for lifelong learning across the many dimensions of Agile.

It remains clear that top-down, waterfall management has reached the end of its time. The world of work is changing quickly, with new demands from both employees and consumers. The true power of Scrum and Agile is that they offer business outcomes that directly improve the bottom line financially, and also boost work culture, customer satisfaction, client loyalty, and product delivery along the way. Fully 97 percent of current users say they will continue to use Scrum, and 85 percent say Scrum improved their quality of work life.

Thank you for your interest in Agile. I wish you the best in your journey to better business.

Lisa W. Hershman
INTERIM CEO AT SCRUM ALLIANCE
RESPONDENT PROFILE

As in past years, almost half of all survey respondents are from locations outside North America, with a quarter from Europe.

The regional profile of respondents closely mirrors that of the membership base with the exception of Asia, which makes up 18 percent of the Scrum Alliance membership base, but under-reports at only 10 percent of the survey sample.

COUNTRIES REPRESENTED

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>98</td>
<td>76</td>
<td>91</td>
</tr>
</tbody>
</table>

TOP FIVE COUNTRIES

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>US (48%)</td>
<td>US (48%)</td>
<td>US (48%)</td>
<td></td>
</tr>
<tr>
<td>India (9%)</td>
<td>India (8%)</td>
<td>India (7%)</td>
<td></td>
</tr>
<tr>
<td>UK (6%)</td>
<td>UK (7%)</td>
<td>Germany (6%)</td>
<td></td>
</tr>
<tr>
<td>Germany (4%)</td>
<td>Germany (5%)</td>
<td>UK (5%)</td>
<td></td>
</tr>
<tr>
<td>Canada, Brazil (3% each)</td>
<td>Canada, Australia (4% each)</td>
<td>Canada, Australia (4% each)</td>
<td></td>
</tr>
</tbody>
</table>
Base: 2015 n=3792, 2016 n=2113, 2017 n=2315
HOW SCRUM IS USED

94% Respondents using Scrum in their Agile practice

- 78% Use Scrum with other approaches
- 16% Use Scrum exclusively

7.4 Average Scrum team size

- 8% 1 - 4
- 78% 5 - 9
- 13% 10+

91% Organizations offering training or coaching

2.4 Average length of a Sprint, in weeks

- 2.4 weeks

5.0 Average number of Sprints per Scrum project

11.6 Average duration of a Scrum project

- 11.6 weeks
“Scrum is not difficult to implement. The discipline, commitment and capabilities required to be good at delivering real value, frequently and often, are hard to master. It takes a lot of work. Teams and organizations suffer from technical and cultural debt. The difficulty is not really Scrum. It’s the technical and cultural debt. In these cases, Scrum is doing one of the things it’s great at - making a team’s problems transparent.”

Tiago Garcez
SCRUM COACH AND TRAINER - CST, CSP, CSM, CSPO, REP
RED HAT

WHEN WATERFALL MEETS AGILE

When Red Hat’s increasingly complex product demands met with ineffective communication between diverse personnel, the multinational tech developer needed a new framework to engage its global cohort of teams and customers.
Though traditional Waterfall delivery methods were tying down product rollout and tying up project development, Red Hat remained wary of diving headfirst into Agile. Executives were apprehensive over an organizational paradigm they considered too fluid and forgiving for the extreme demands of their Fortune 500 clientele. They shared a common fear among managers in high-stakes corporations: that Agility flouts planning and promotes gaps between processes and outcomes.

Part of the solution to resolving the C-Suite’s hesitation involved taking an Agile approach to Agility itself. This meant integrating Agile methods within Red Hat’s already functional model. Tim Burke, vice president of cloud and operating system infrastructure engineering, reported that while two-thirds of product teams use Agile: “Not all teams are using it in exactly the same way. There’s variation, which is awesome, to evolve the practice and adapt per team.”

For example, as a global company, Red Hat’s major engineering centers span from Raleigh, North Carolina, to Bangalore, Beijing, and Brisbane. With so many remote headquarters and even more remote employees, the idea of a daily, in-person stand-up was incompatible with the practicalities of Red Hat’s geographic structure. Instead, they embraced new tools to improve the visibility of their work across teams and among consumers. By sharing more information with colleagues and clients, Red Hat was able to better engage with remote teams’ internal processes.

“We have advanced well beyond initial pilot projects to where [Agile] is truly mainstream,” said Burke.

The company is now advanced enough in its knowledge of Agility to provide services that help clients implement Agile within their own organizations. Having evolved from regarding Agile as a strictly internal methodology, Red Hat now shares its experience and provides expertise to clients who wish to replicate the company’s success.
WHY SCRUM

When it comes to choosing Scrum for a project, 71 percent of executives agree that delivering value to the customer is their highest priority. Flexibility and responsiveness are a significant second priority. While improving organizational design and culture comes in last at 25 percent, good Scrum implementation is also likely to achieve that aim.

Organizations choose Scrum primarily to deliver more value to the customer. In this year’s survey, 85 percent of respondents say Scrum continues to improve quality of work life.

The average project length has decreased to 11.6 weeks. For Agile organizations that means projects – from a new product launch to diagnosing and treating a mental health patient – are set against a standard completion timeframe of less than three months, start to finish. The average is on a downward trend, expected to continue to decrease in 2018.

97% will continue to use Scrum in the future

<table>
<thead>
<tr>
<th>Probability</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very likely</td>
<td>77%</td>
</tr>
<tr>
<td>Somewhat likely</td>
<td>20%</td>
</tr>
<tr>
<td>Somewhat unlikely</td>
<td>2%</td>
</tr>
<tr>
<td>Very unlikely</td>
<td>1%</td>
</tr>
</tbody>
</table>

78% are likely to recommend Scrum to colleagues, friends and other professionals

55% of projects within the organization are Scrum projects

Valued most by executives for Scrum-based projects

<table>
<thead>
<tr>
<th>Value</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delivering value to the customer</td>
<td>71%</td>
</tr>
<tr>
<td>Flexibility, responsiveness</td>
<td>56%</td>
</tr>
<tr>
<td>Quality</td>
<td>44%</td>
</tr>
<tr>
<td>Transparency</td>
<td>42%</td>
</tr>
<tr>
<td>Schedule deadlines</td>
<td>40%</td>
</tr>
<tr>
<td>Visibility</td>
<td>39%</td>
</tr>
<tr>
<td>Team engagement and satisfaction</td>
<td>38%</td>
</tr>
<tr>
<td>Cost</td>
<td>27%</td>
</tr>
<tr>
<td>Innovation</td>
<td>27%</td>
</tr>
<tr>
<td>Improving organizational design and culture</td>
<td>25%</td>
</tr>
</tbody>
</table>
Scrum is a framework for implementing the Agile mindset that helps teams move and learn faster. In layman’s terms, Scrum is one Agile approach to getting work done. As the data show, Scrum is most often used with other Agile frameworks rather than alone.

**AGILE VS. SCRUM**

Scrum is a framework for implementing the Agile mindset that helps teams move and learn faster. In layman’s terms, Scrum is one Agile approach to getting work done. As the data show, Scrum is most often used with other Agile frameworks rather than alone.
AGILE PSYCHOLOGICAL MEDICINE CENTER

AGILITY SAVES LIVES

Psychological care is not a traditionally Agile industry, but considering Australia’s increasing emergency admissions and surging suicide rates, doctors at Monash Health’s mental health clinics in Melbourne saw an urgent need to reform a system plagued by misdiagnoses, over- or improper medication, wait times rivaling treatment duration and few – if any – changes to show for it.

Dr. Melissa Casey
Since adopting Agile practices, the mental health center transformation has been dramatic. With up to 46 percent improvement in post-care measures, along with decreased handover rates, higher provider job satisfaction, and minimal rates of sick leave, Agile clinics are saving patients’ lives and improving workplace culture.

One particular case stirred doctors to action. A man who had attempted suicide arrived at a clinic in crisis and was subsequently shuffled between 13 case managers, subjected to 70 record updates across five different IT systems, and made to endure 18 provider handoffs. Yet in a span of a few months, the patient only sat down with a clinician three times.

Even with the critical need for a new approach, there were unique challenges to implementing Agile in mental health. Agile doctors and psychologists had to honor the complexities of human needs, as well as those of the health care system. They also had to provide faster, more efficient services without compromising individualized quality.

New patients at Agile clinics are now seen within 72 hours and immediately become active participants in their treatment – from diagnosis to discharge – as they strategize with doctors to improve their safety and resilience in future crises. They also have the opportunity to rate doctors and psychologists after each session. And while most providers would balk at the idea, Agile practitioners use the real-time feedback as an opportunity to learn, improve, and tailor services to each client.

At these Agile clinics, interactions are valued over processes. Equal exchange between clients and doctors and psychologists is at the core of treatment, and both doctors and patients adapt to change rather than adhering to rigid protocols. By embracing a collaborative, individualized, and feedback-oriented path to mental health and recovery, Agility helps patients break free of the revolving door of mainstream mental health services.

“Patients are actually getting better. We can see a marked improvement from their point of view, because we ask them. We work with them right from the start in terms of their understanding of the problem.”

Dr. Melissa Casey
DIRECTOR OF PSYCHOLOGY AT MONASH HEALTH
CERTIFICATION AND TRAINING

81 percent agree that certification improves practice, and 91 percent of organizations offer some form of training. ScrumMaster is the most popular certification, selected by 84 percent of respondents.

More companies now offer Scrum certification and training across a variety of platforms, with online training seeing a surge in popularity compared to in-house training.

ScrumMaster remains the most popular certification, and one that comes with significant financial benefits.

In 2017, several media outlets, including Business Insider and USA Today, listed ScrumMaster as one of the highest-paying jobs in America.

ScrumMaster has made those lists perhaps most prevalently due to increasing demand for professionals who understand Scrum and Agile at an organizational, and not just team-based, level. When organizations with thousands of employees undergo an Agile transformation, it takes dozens to tens of dozens of trained practitioners to lead Scrum teams, cut unnecessary protocol, stimulate feedback, and ultimately usher in a new way of working.

CERTIFICATION HAS IMPROVED PRACTICE OF SCRUM

Respondents continue to agree that certification improves practice

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>29%</td>
<td>29%</td>
</tr>
<tr>
<td>Partially agree</td>
<td>53%</td>
<td>52%</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>13%</td>
<td>15%</td>
</tr>
</tbody>
</table>

TRAINING AND COACHING OPTIONS

Online certification options are on the rise

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-house</td>
<td>63%</td>
<td>64%</td>
</tr>
<tr>
<td>External</td>
<td>62%</td>
<td>59%</td>
</tr>
<tr>
<td>Online</td>
<td>32%</td>
<td>40%</td>
</tr>
<tr>
<td>None</td>
<td>7%</td>
<td>9%</td>
</tr>
</tbody>
</table>
### State of Scrum 2017–2018

**Scrumbanum**

<table>
<thead>
<tr>
<th>Any Scrum (Net)</th>
<th>98%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Certified ScrumMaster® (CSM: Scrum Alliance)</td>
<td>84%</td>
</tr>
<tr>
<td>2. Certified Scrum Product Owner® (CSPO: Scrum Alliance)</td>
<td>33%</td>
</tr>
<tr>
<td>3. Certified Scrum Professional® (CSP: Scrum Alliance)</td>
<td>17%</td>
</tr>
<tr>
<td>4. SAFe® Agilist (SA)</td>
<td>8%</td>
</tr>
<tr>
<td>5. SAFe® Program Consultant (SPC4)</td>
<td>5%</td>
</tr>
<tr>
<td>6. Professional Scrum Master™ (PSM: Scrum.org)</td>
<td>4%</td>
</tr>
<tr>
<td>7. Leading SAFe® 4.0</td>
<td>4%</td>
</tr>
<tr>
<td>8. Certified Scrum Developer® (CSD: Scrum Alliance)</td>
<td>3%</td>
</tr>
<tr>
<td>9. LeSS (Large Scale Scrum)</td>
<td>3%</td>
</tr>
<tr>
<td>10. Scrum Master Certified (SMC™)</td>
<td>2%</td>
</tr>
<tr>
<td>11. Certified Agile Leader (CAL: Scrum Alliance)</td>
<td>2%</td>
</tr>
<tr>
<td>12. SAFe® 4.0 Advanced Scrum Master</td>
<td>2%</td>
</tr>
<tr>
<td>13. SAFe® 4.0 for Teams</td>
<td>2%</td>
</tr>
<tr>
<td>14. Professional Scrum Product Owner™ (PSPO: Scrum.org)</td>
<td>2%</td>
</tr>
<tr>
<td>15. SAFe® 4.0 Product Manager/Product Owner</td>
<td>2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other</th>
<th>9%</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Any Agile (Net)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1. ICAgile Certified Agile Coach</td>
<td>4%</td>
</tr>
<tr>
<td>2. ICAgile Certified Professional</td>
<td>2%</td>
</tr>
<tr>
<td>3. PMI® Agile Certified Practitioner (PMI-ACP)</td>
<td>1%</td>
</tr>
</tbody>
</table>

| No certifications | 2% |

### NEW CERTIFICATIONS

Scrum Alliance is always growing and looking for ways to better serve its community. Responding to needs and demands of our members, trainers, and coaches, Scrum Alliance this year rolled out advanced certification options for ScrumMaster (A-CSM™) and Product Owner (A-CSPO™) certifications. A-CSM and A-CSPO are part of a new path to the CSP program, one that addresses real work challenges and offers practical solutions to practitioners with clear, measurable and, meaningful Scrum role-specific development paths that embrace and encourage advanced and continuing education in the effective application of Scrum and Agile.

Prior to introducing the new Path to CSP program, Scrum Alliance launched two new certification options – Certified Agile Leadership (CAL) and Certified Team Coach (CTC).

The CAL, CTC, and new Advanced certifications assist in preparing certificants to interact with leadership, take on larger roles within the organization, and better implement Agile and Scrum in areas of the organization less likely to intuitively understand Agile frameworks.
BCBSAZ

BETTER WORKERS KNOW SCRUM

With the goal of investing in an Agile future, HR directors are placing greater emphasis on hiring new employees with certification in Scrum. At Blue Cross Blue Shield of Arizona (BCBSAZ), applications that include Scrum certification can quickly move to the top of the pile.

“When an applicant has a Scrum certification, we know that applicant will be collaborative and a strong communicator, while being eager to improve processes or bring new ideas,” said HR director for BCBSAZ, Torrie Michaud.
Scrum certification and Agile training are powerful indicators of success within the company, according to Michaud. HR directors see certified applicants as team players who can cheerfully and creatively navigate changes in a rapidly shifting health care landscape. Candidates applying for work frequently get a second look if they can include a Scrum certification on their résumé.

Like other companies that share Agile values, BCBSAZ is also attempting to strengthen Agile expertise among current employees. Workers across all BCBSAZ departments are continually provided with opportunities to receive different modes and levels of Agile training and Scrum certification. These opportunities are regarded as equally important for brand new staff as they are for top-level executives.

Both Agile training and Scrum certification align with BCBSAZ core priorities: organizational efficiency, collaboration, and goal-orientedness with an eagerness to embrace—and pioneer—change. A team-centered and goal-focused approach is both a hallmark of Agility and a critical component of success in any corporate model.

For this reason, BCBSAZ is investing in the next generation of Agile-workers by hosting yearly Scrum workshops for HOPE High School, a charter school for underprivileged youth in Phoenix, AZ.

The Scrum team plans and leads the workshop to train young students in Agile principles. Noting that Agile empowers individuals to set clear goals and benchmarks for success, the staff is eager to inspire the next generation of entrepreneurs to lead as well as learn from others.

“When an applicant has a Scrum certification, we know that applicant will be collaborative and a strong communicator, while being eager to improve processes or bring new ideas.”

Torrie Michaud
HR DIRECTOR FOR BCBSAZ

“At BCBSAZ we see future workplaces benefiting from Agile principles,” said Michaud. “For our business, it makes sense to come together to solve problems quickly while remaining nimble in the evolving environment.”

Corporations today place a premium on workers who can “fail fast and recover quickly,” and BCBSAZ understands that cultivating both compassion and tenacity simultaneously is the only way to ensure workers have the courage to embrace change, try new things, and suggest bold strategies.
SUCCESSFULLY USING SCRUM

Support from senior management is pivotal to successful Scrum use. Support from senior management can make or break Scrum practice. This metric is reported as the most likely point of tension for Scrum teams, and the most important consideration for organizations adopting Scrum. The good news, however, is that support from senior management is the least likely to be a challenge for Scrum implementation.

Important considerations when adopting Scrum

<table>
<thead>
<tr>
<th>Consideration</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active senior management and support</td>
<td>51%</td>
</tr>
<tr>
<td>Alignment with strategic and financial goals of the company</td>
<td>52%</td>
</tr>
<tr>
<td>Participation of experienced trainers and coaches</td>
<td>44%</td>
</tr>
<tr>
<td>Clear set of business goals to be achieved</td>
<td>43%</td>
</tr>
</tbody>
</table>

Challenges with implementing Scrum

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational design and culture made it difficult to adopt and scale</td>
<td>51%</td>
</tr>
<tr>
<td>Difficult to transition from traditional Waterfall</td>
<td>44%</td>
</tr>
<tr>
<td>No clearly defined metrics to identify and measure success</td>
<td>41%</td>
</tr>
<tr>
<td>Alignment with other projects in portfolio</td>
<td>40%</td>
</tr>
<tr>
<td>Lack of trust</td>
<td>38%</td>
</tr>
<tr>
<td>Desire for perceived predictability</td>
<td>35%</td>
</tr>
<tr>
<td>Product owners/teams not willing/enthusiastic</td>
<td>34%</td>
</tr>
<tr>
<td>Fear of transparency</td>
<td>34%</td>
</tr>
<tr>
<td>Had to convince clients</td>
<td>28%</td>
</tr>
<tr>
<td>No support from senior management</td>
<td>24%</td>
</tr>
</tbody>
</table>

“All over the world people say ‘we’re different from the rest of the world.’ But I’ve found it’s the same everywhere. People are dealing with the same challenges implementing Scrum and Agile all over the world: the challenges are with organizational culture.”

Michael Sahota
CERTIFIED ENTERPRISE COACH AND CERTIFIED AGILE LEADERSHIP EDUCATOR - CSP, CSM
SCALING SCRUM

Scrum was developed to work best within a team size of 5 to 10 members, in line with the respondent average team size of 7. However, as the success of Scrum has shown its effectiveness (63 percent of Scrum projects were reported successful) and widespread applicability (15 percent of Scrum projects were outside of IT), the desire to implement Scrum on a larger scale – taking on bigger projects with bigger teams – has increased.

When translating Scrum to other parts of the organization (or to larger projects), organizational design and culture are reported as the greatest challenge. However, tension caused by adherence to top-down, command-and-control approaches to management decreased from the previous year and, as shown in later data, executive management is most likely to lead an Agile transformation – demonstrating overall a greater organization-wide acceptance of Scrum practices and principals.

Respondents listed fulfilling customer needs, improving time to market and reducing cycle time as the top business priorities for Scrum – all goals that can be achieved with smart Scrum scaling. This desire was further demonstrated by a slight uptick in reported attainment of scaling certifications, including LeSS and SAFe.

**Highest business priority for Scrum**

- **Fulfilling customer needs**: 29%
- **Adding new features and functionality**: 13%
- **Completing projects that will drive innovation and market share**: 14%
- **Meeting budget, time and scope constraints**: 24%
- **Improving quality**: 6%
- **Improving time to market, reducing cycle time**: 24%

**Causing tension between Scrum teams and organization**

- **Adherence to top-down, command-and-control management approaches**: 64%
- **Resistance to change**: 63%
- **Lack of understanding or support**: 61%
- **Inability to scale Scrum throughout the organization**: 43%
- **Changing reporting lines between team members**: 30%
- **Flattening organizational structure**: 22%
- **Other**: 5%

“A decade ago Agile initiatives were started from the bottom or middle, within teams or a department. Today we see holistic Agile transformations with real senior management engagement and support.

‘There is no digital transformation without an Agile transformation, and leadership realizes that to survive and compete in this new economy companies must perfect agility.’

**Xavier Quesada Allue**

AGILE COACH AND TRAINER - CST, CEC, CSP, CSM, CSPO, REP
GOVTECH

AGILITY FOR THE DIGITAL NATION

The frontiers of Agile leadership extend beyond the C-Suite into society and government – and around the world.

GovTech, Singapore’s Government Technology Agency, uses Agility to develop technological solutions to help government and business agencies gather information, share data, and deliver services more efficiently. Partnering with Agile experts, GovTech is changing, improving, and saving lives.

Among their many innovations are a medical emergency smartphone app to dial emergency services, provide automatic GPS data to the operator, alert nearby medical personnel, and inform heart attack victims of the nearest defibrillator; a prebooking app for private bus rides and shorter commutes; an automatic call router – complete with photo attachments and geo-tagging capabilities – for citizens to provide real-time municipal feedback to local agencies; and a streamlined business grants portal that has cut the average grant discovery time in half.

These enterprises and other market-boosting initiatives are the result of GovTech’s collaboration with Agile providers. Government and industry are partnering to create apps and software that simplify access to information and services. GovTech co-sources between the private and public sectors, bringing individuals across nearly 100 government agencies together with key players in the science, technological, and medical industries.

GovTech’s Agile philosophy and partnerships have helped employees to navigate the notoriously slow pace of Waterfall-wedded bureaucracy. In fact, GovTech now hosts Agile “brown bag” sessions where agencies are provided with Agile consulting tools. These sessions are booked past capacity every month. Across both government and industry, workers are showing up eager to learn how to help their colleagues, companies and country become smarter, safer, better, and faster.
“The only way we can help as many government agencies as possible is to partner with our Agile community and to influence and grow the Agile mindset within the tech industry and government.”

Steven Koh
ASSISTANT DIRECTOR OF PRODUCT DESIGN AND DEVELOPMENT, GOVTECH GOVERNMENT DIGITAL SERVICES DIVISION
LAUNCHING AGILE

As with successful Scrum use, support from senior management is pivotal to successful Agile transformation. Active senior management sponsorship and support is the number one motivator to undertake an Agile transformation, and enterprises look to their leadership at the executive level to drive the charge.

Motivators to undertake an Agile transformation

- Active senior management sponsorship and support: 56%
- Alignment with strategic and financial goals of organization: 47%
- Clear set of business goals to be achieved: 42%
- Clearly identified metrics to measure success: 41%
- Ensure a smooth and conflict-free transition: 31%
- Participation of experienced trainers and coaches: 30%

Achievements through Agile transformation

- Improved satisfaction with what gets delivered: 54%
- Better time to market: 51%
- Better quality: 49%
- Improved staff morale: 45%
- Improved return on investment in IT: 31%
- Too early in the process to measure: 25%

Leaders of Agile transformation

- Executive management: 61%
- ScrumMaster: 48%
- IT manager: 27%
- Product owner: 22%
- Software developer, engineer, architect: 21%
- Project manager: 21%
- Program manager: 21%
- Agile coaches: 4%

Many respondents also indicated that alignment with the strategic goals of the organization as a whole was a significant motivating factor to undergo an Agile transformation. Organizations seeking improved satisfaction, more efficient delivery, better time to market, and higher quality were most likely to initiate an Agile transformation.

Scaling frameworks used

- Not using specific framework: 34%
- Scrum of Scrum: 33%
- SAFe: 33%
- LeSS: 10%
- Scrum@Scale: 8%
- DAD: 5%
- Nexus: 2%
**AGILE TRANSFORMATION**

Massive opportunities lie on the horizon: **56 percent** of respondents anticipate an upcoming Agile transformation. Key factors catalyzing Agile transformation are issues related to process followed by personnel issues.

**Involvement in broader Agile transformation**
- No: 47%
- Yes: 53%

* Already completed <1%

**Plans for an Agile transformation**
- No: 44%
- Yes: 56%

**Factors holding back transformation**
- Organizational design and culture make it difficult: 57%
- No sponsorship/support from senior management: 29%
- Support for teams transitioning to Agile thinking: 29%
- Alignment with other projects in portfolio: 29%
- No clearly defined metrics to measure success: 27%
- Lack of trust: 26%
- Desire for perceived predictability: 22%
- Fear of transparency: 19%
- Had to convince clients: 17%

**Factors prompting transformation**
- Process-oriented issues: 77%
- Tooling issues: 19%
- People-oriented issues: 54%
- Other: 7%

“Depending on the work environment, a lot of the smaller companies are usually already doing some Agile stuff. They’re Agile without knowing it. When I explain basic Scrum and focus on value, that’s when they go ‘oh, that’s what we do’ -- they just didn’t know what to call it.”

**Tiago Garcez**  
SCRUM COACH AND TRAINER - CST, CSP, CSM, CSPO, REP
IBM

AGILITY BEGETS AGILITY

The 21st-century business landscape evolves at a pace only an Agile organization can match. That’s where IBM’s newest mission has unfolded: bringing Agility to those businesses determined to thrive.

IBM credits its fully integrated Agile model, which spans all sectors and tiers of the corporation, for its ability to deliver the smartest products at the lowest cost with the quickest precision to the widest array of consumers. The company’s evolution towards Agility began several years ago when Scrum spurred company growth into a multi-billion-dollar industry with millions of clients and hundreds of thousands of employees in 170 countries.

IBM is known for reinventing itself many times over. Today, the company continues to embody innovation and empower its clients, as more businesses approach the tech giant for guidance on their Agile journey.

“We believe Agile is ready for the enterprise, and this has really only started in the last one or two years,” says Singapore-based Marcel Greutmann, who is leading Agile transformation at IBM. “The maturity of some of our clients has reached its tipping point where [Agile] got attention at the C-Level and many clients really figured out this is going to be making a real difference in their ability to respond to the market and to deliver value much faster.”

Following its own initial Agile transformation in 2012, IBM reported saving over $300 million by streamlining process with Agile and seeing a 15 percent improvement in revenue per developer.
“The maturity of some of our clients has reached its tipping point where [Agile] got attention at the C-level and many clients really figured out this is going to be making a real difference in their ability to respond to the market, to deliver value much faster.”

Marcel Greutmann
LEADER OF AGILE TRANSFORMATION AT IBM
The data indicate that Agility itself is becoming more flexible and existent. Even while companies strengthen Scrum practices, they now seek to incorporate further Agile methods external to Scrum. With Hybrid methods on the rise, more corporations also seem to be opting for a slower and subtler approach towards integrating Agility within their practices.

On average, respondents incorporated between three and four methods such as Kanban, Lean, or Hybrid simultaneously in their Agile practice. Additionally, the majority of respondents undergoing Agile transformation report not using a specific framework to scale Agile to the organization.

**Traditional Waterfall in place**

> “The key is the word ‘Agile’. As long as your approach to how you organize yourself around work is ‘Agile’, you could quite easily combine [frameworks] successfully.”

**Tiago Garcez**
SCRUM COACH AND TRAINER - CST, CSP, CSM, CSPO, REP
“We are educated that consistency is a good thing. It’s not. Diversity is needed for high performance - the right solution for each challenge.”

Michael Sahota
CERTIFIED ENTERPRISE COACH AND CERTIFIED AGILE LEADERSHIP EDUCATOR - CSP, CSM

AGILE APPROACHES

Other frameworks used
The average respondent reported using 3.5 frameworks

- Kanban: 60%
- Hybrid (Waterfall and Agile): 29%
- Traditional Waterfall: 27%
- Bimodal (Agile and Waterfall): 26%
- Lean: 22%
TARGET

AGILE HUBS TRANSFORM NATIONAL BUSINESSES

Both within and beyond the organization, the Target Dojo is an engine of corporate change. Target’s Agility is also inspiring other industries to bring their proven, process-based strategies on board.

With locations in Minneapolis, USA, and Bangalore, India, the Target Dojo hosts teams across every division of the company as they undergo an intensive, six-week Agile training. Employees and managers work on discrete product elements for biweekly demos, learning to eliminate backlogs, create better systems and technology, and troubleshoot real-world obstacles on the fly.

Increased speed and improved efficiency are two inevitable side effects of Agile training at the Dojo. The real point of the practice, however, is individual and team-wide skill-building. Dojo “intensives” accelerate team members’ acquisition of new expertise across multiple fields, from engineering to IT to HR and Marketing. Even for a retail giant like Target, Agility makes corporate scaling both feasible and manageable.

True to Agile principles, the Dojo does not believe in drills. To heighten stakes and encourage team-wide dedication, groups enter the Dojo with backlogs in tow and quickly map out strategies to satisfy real-life project objectives and measure success. Target also uses the Dojo to head off one of the most common challenges to organizational Agility: lack of executive buy-in. Managers may remain on-site for the duration of training, participate in biweekly demos and attend the completion celebration.

Today, other corporations tour the Dojo intending to implement the practice in their own organizations. With Agile principles and a dedicated team throughout all levels and departments of the company, Target has become a corporate and communal leader in retail.
“Not only does the Dojo help teams to build engineering acumen and deliver technology solutions, it also has served to accelerate the cultural transformation of the organization.”

Brent Nelson
OPERATIONS ANALYST
ABOUT SCRUM ALLIANCE

Founded in 2001, Scrum Alliance® is the largest, most established and influential professional membership and certification organization in the Agile community. We are a nonprofit association with more than 500,000 certified practitioners worldwide.

Our vision is to “Transform the World of Work” with a mission to guide and inspire individuals, leaders, and organizations with practices, principles, and values that create workplaces that are joyful, prosperous, and sustainable.

INSPIRE: We inspire individuals, leaders, and organizations to adopt Agile mindsets. We support their transformations with training and shared stories of change and innovation in companies around the world.

ENABLE: We enable the work of our certificants and members through a global network of Agile peers, trainers, and coaches. We develop content and learning opportunities, including webinars, global and regional events, local user groups, and more.

GUIDE: We guide the application of Agile practices, principles, and values through our career-long certification path. Our community of coaches and trainers is focused on providing knowledge, skills, and experience that support Agile transformations for both individuals and organizations.
Scrum Alliance thanks Michael Sahota, Xavier Quesada Allue, Tiago Garcez and Sohrab Salimi for their insight contribution to this report.