

STATE OF TESTING

2015



| | |
|-----------------------------------|-----------|
| Introduction | 1 |
| Respondent Demographics | 2 |
| Salary Information | 3 |
| Tester's Professional Profile | 4 |
| How Testers Work | 6 |
| Skills | 8 |
| Testing Process | 11 |
| Testing Challenges | 13 |
| Your Predictions about the Future | 15 |
| Final Note | 16 |
| Collaborators | 17 |

INTRODUCTION

“If you are not learning something new each day, you are not testing”, that’s what Jerry Weinberg said when we discussed State of Testing survey 2013 with him last year.

We believe that the State of Testing 2013 was a great success. We got great feedback and comments from the people who took the survey and from those who downloaded the report, as well as from the webinar session we had with Jerry Weinberg and Fiona Charles.

And so, with the objective of continually learn new facts and trends about our testing field, here we have the State of Testing Report for 2015.

We’d like to start by giving special thanks to the members of our review panel (Leah Stockley, Michael Larsen, Keith Klain, Jerry Weinberg and Trish Khoo) who helped us to make the State of Testing 2015 Survey a better product for the testing community.

We also want to thank our collaborators (for helping us spread the word), and of course all the respondents for providing us with the data to generate this survey!

Looking at the results we gathered this year and comparing them with those from the previous survey, we are glad to see progress in certain areas, while we believe there are still some other aspects of our testing profession that will unfold with time.

Though it will be too early to say for sure where exactly the testing community is heading (in terms of practices, methods, models etc.) we can say with confidence that demand for the “Thinking Tester” is on the rise, as it appears that today’s Industry needs people who are more than just “a tester”. We won’t spill more beans here, but we recommend you take a look at the results that talk about the most sought testing skills, about the adoption of Agile in the industry, the activities beyond testing that testers are (expected to) undertake, and more.

There are also many challenges that testers, managers and organizations are still facing, and we can see some pointers to these issues. But we are sure that with time we will be able to see a clearer picture of how these challenges are affecting and molding our professional endeavour.

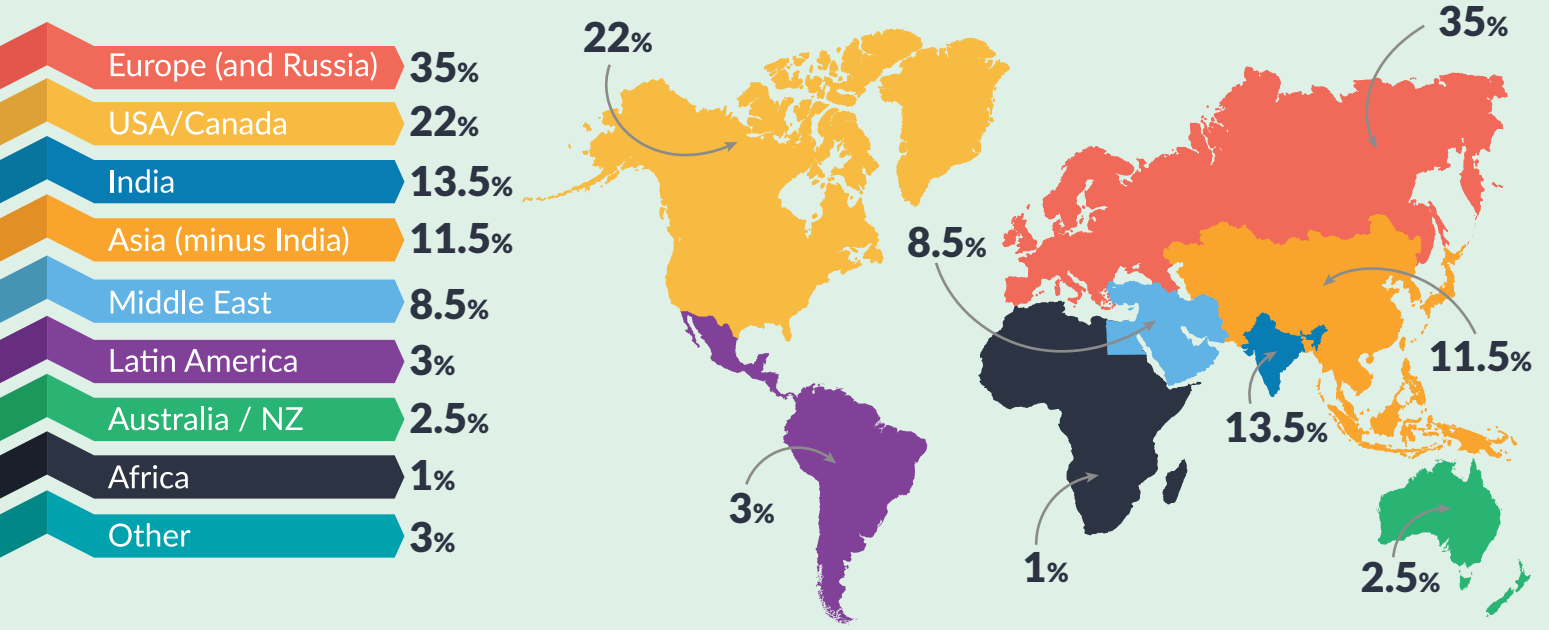
All in all, we are happy with what we could achieve with State of Testing this year especially because of the participation that has been almost doubled from last year, and we also hope that in years to come we will get even more testers to participate.

We hope this State of Testing report for 2015 will help you find information you needed and to get prepared for what’s in store for testing this year. Enjoy!

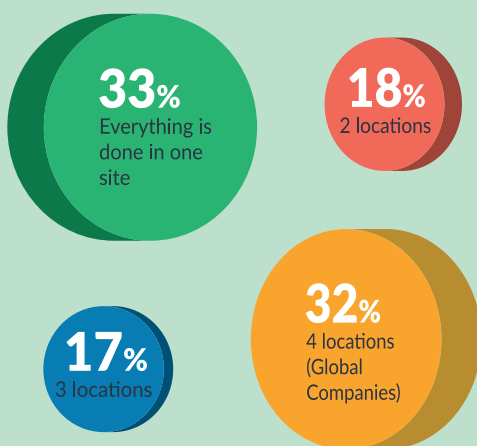
Lalit and Joel

RESPONDENT DEMOGRAPHICS

GEOGRAPHICAL LOCATION

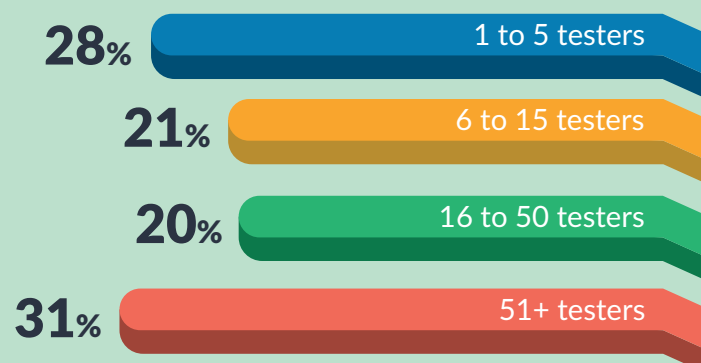


COMPANIES WORK GLOBALLY



When asked in how many locations does your company work, about a third of the respondents answered that their company works in only one location, and another third on companies that have more than 4 locations (we may refer to them as global companies). The remaining third of the respondents work in companies with 2 or 3 locations.

TESTING TEAMS OF ALL SIZES



We see that testers are spread nicely along different sizes of teams, with concentrations on the extremes of smaller and larger teams, but not something that is too pronounced. Still, when we look at the numbers but based on the geography of the respondents, we can see that teams in North America, Western Europe and Australia tend to be smaller, in contrast with teams in India, Asia, Eastern Europe and the Middle East that tend to be larger.

SALARY INFORMATION



Not surprisingly, the most significant rise in payment happens after working for 1 year- as we can see globally.



Another significant rise happens when testers have been working for more than 10 years, and they are considered as experts.



Something strange is that In Asia and Latin America there were no significant differences for testers working between 2-10 years, this was very different compared to the other geographical locations.

Data is in USD

| Experience / Location | 0-1 years | 1-2 years | 2-5 years | 5-10 years | 10+ years |
|-------------------------|-----------|-----------|-----------|------------|-----------|
| Africa | 5 | 13 | 20 | 30 | 42 |
| Latin America | 5 | NA* | 26 | 27 | 37 |
| India | 11 | 18 | 18 | 24 | 51 |
| Eastern Europe / Russia | NA* | 13 | 20 | 30 | 44 |
| Asia | 18 | 24 | 26 | 28 | 63 |
| Middle East | 8 | 18 | 33 | 55 | 65 |
| Western Europe / APAC | 14 | 39 | 48 | 65 | 93 |
| USA / Canada | 28 | NA* | 63 | 93 | 107 |

NA* - not enough data to provide meaningful information

TESTER'S PROFESSIONAL PROFILE

MOST RESPONDENTS HAVE 5+ YEARS EXPERIENCE

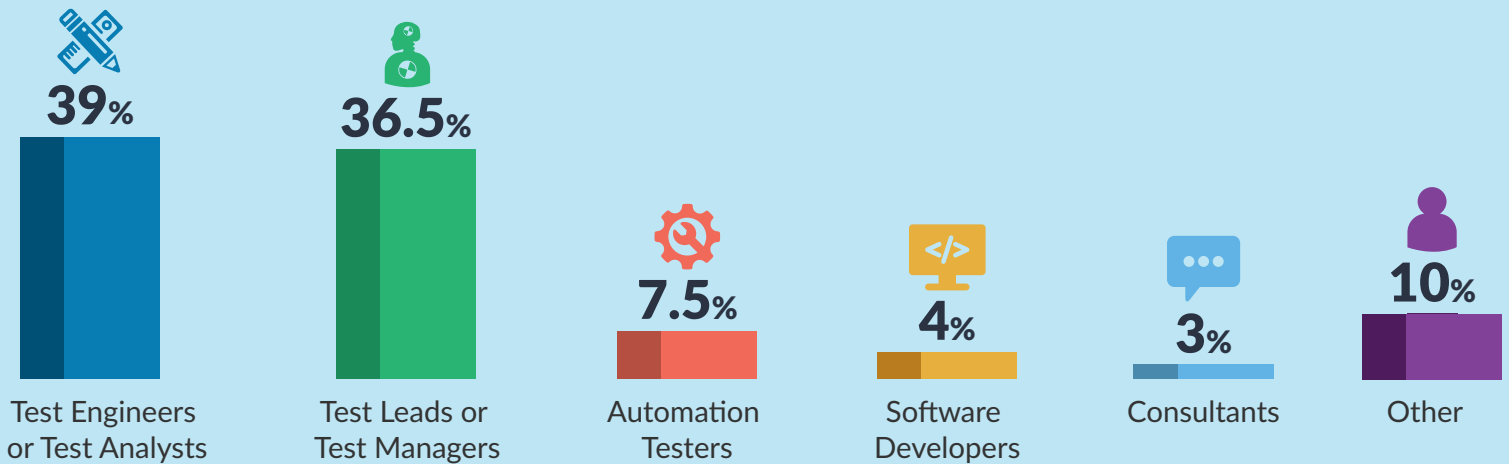


- Less than a year
- 1 to 2 years
- 2 to 5 years
- 5 to 10 years
- 10+ years

Most people answering the survey (61.5%) have over 5 years of experience in testing, this is a trend that is getting more pronounced from the results of last year's survey (55%).

Interesting! Survey data also revealed that small companies (with up to 10 employees) are ten times more likely to hire a tester with no experience than larger companies with 100+ employees. And so, if you are looking to start working in the field of testing, it will be easier to go to a new company that may be willing to "take a risk" and hire you for your personal attitude even if you don't have proven testing experience.

ALMOST AS MANY TESTERS AS TEST LEADS

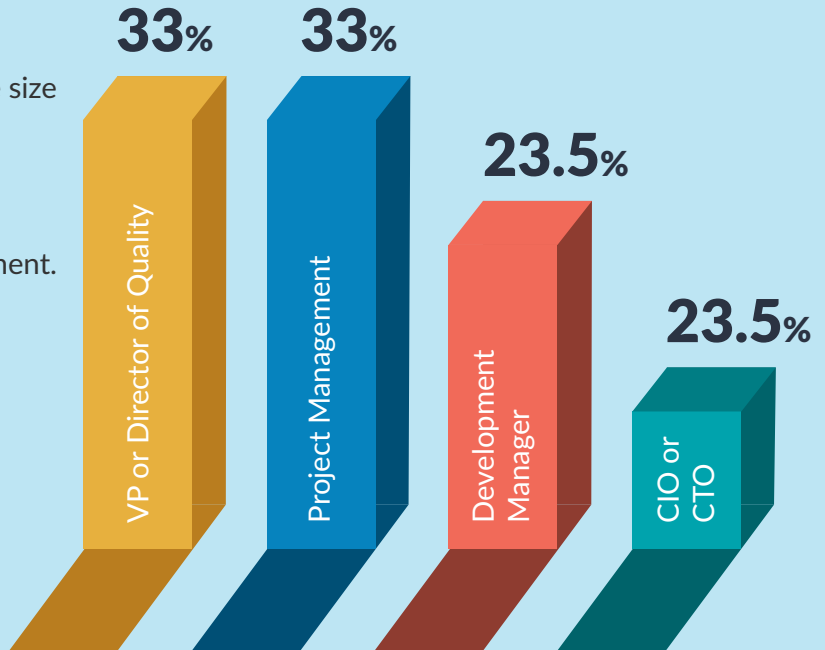


Most of the people answering the survey are Testers, Test Managers or Automation Testers. Interestingly enough, there were almost as many Test Leads and Managers, as there were Engineers and Analysts... Among the "other" replies worth mentioning we had: Test jumper (making you wonder where to where does he jump to??), Productivity Engineer, Lonely Tester, and our team favorite "I am a popsicle"!

Interesting! Looking more closely at these numbers there was an interesting finding for Automation Engineers. Companies with between 31 to 50 employees had the largest percentage of automation testers (11.8%) from any other "size" of company in the survey, and what was more surprising was that companies with 500+ employees had the smallest representation of automation engineers with only 4.2%. This means that if you want to be an automation engineer it is better go to a mid-size company, than a small or larger one.

TESTING CAN REPORT TO A NUMBER OF DEPARTMENTS IN THE ORGANIZATION

When asked to whom does the testing function report to in your organization, we got some interesting answers. Looking at the data based on the size of the company, it is interesting to see that in smaller companies more testers tend to report to Project Managers, and then as the companies become larger they employ Directors or VPs to be in charge of the Quality function as a whole and independent department.



ROLES OF TESTERS (OTHER THAN TESTING, OF COURSE!)

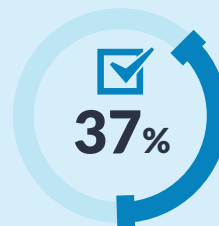
We see more and more testers in charge of the Testing and Development environments than the previous year (63% this year vs 45.5% last year). We also added a new category that shows that more than half the testers are part of the documentation process of their product.



Manage the testing & development environments



Handle documentation



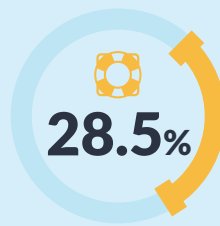
Requirements gathering



Develop internal tools



Integrations & deployments



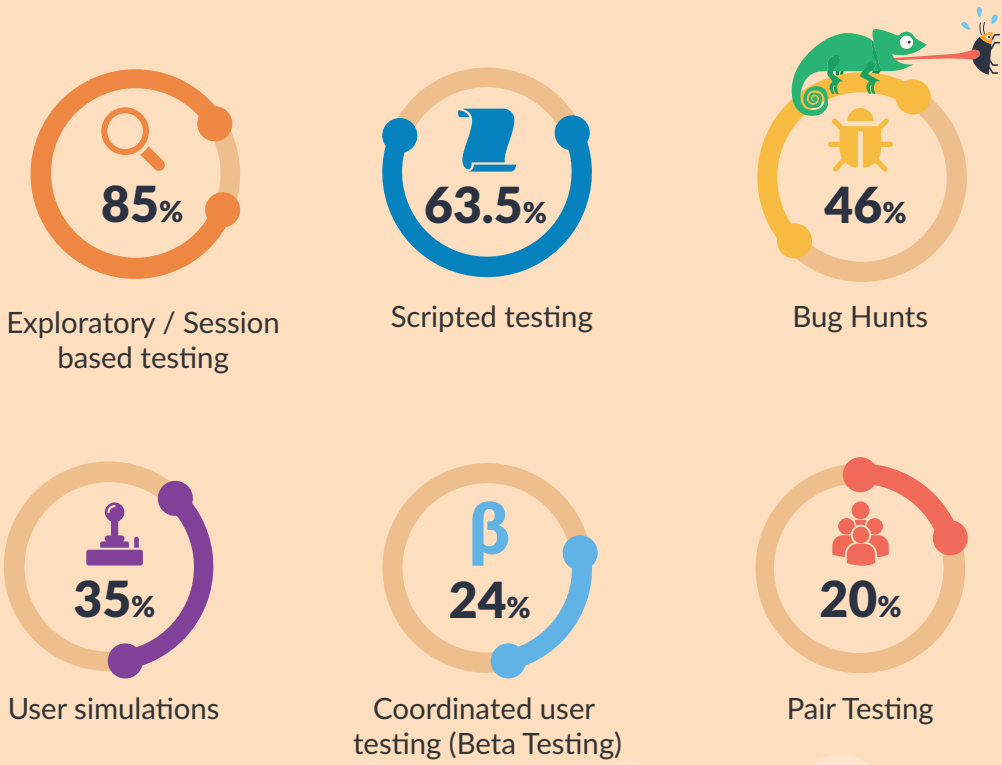
Customer Support & training



Professional Services & Sales support

HOW TESTERS WORK

TESTERS BLEND DIFFERENT TESTING APPROACHES TO DO THEIR WORK



These numbers remained more or less unchanged from last year's survey, and they show that in order to perform their work most testers will blend different testing approaches and techniques.

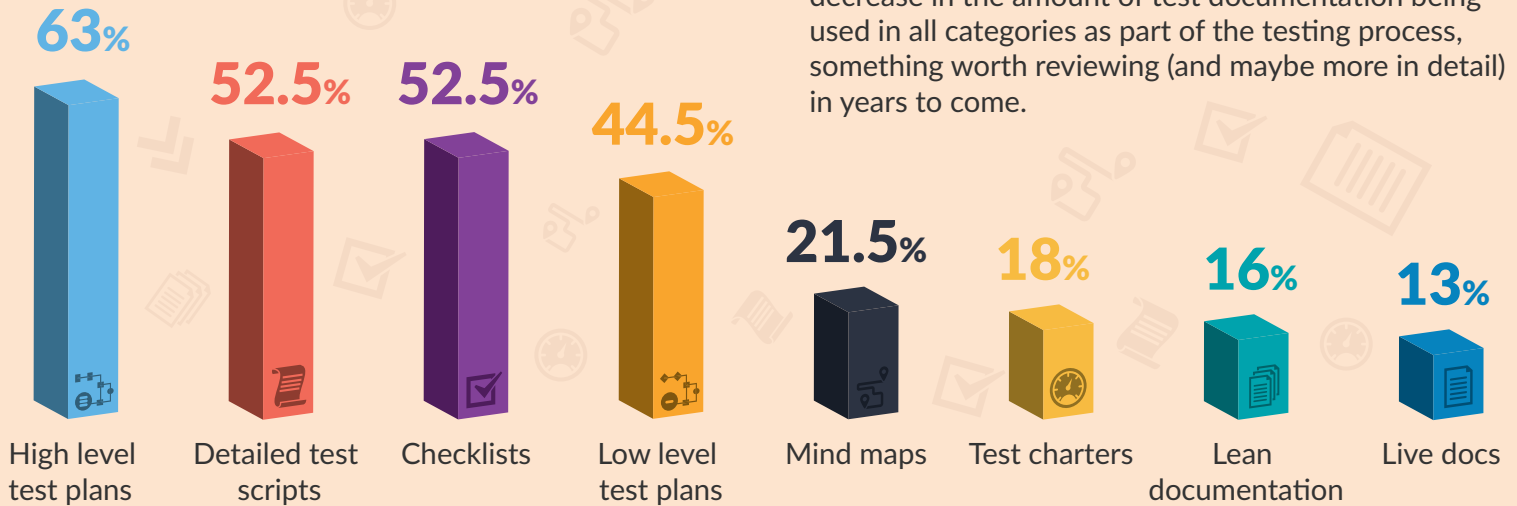


PLENTY OF TESTING TASKS TO DO OUTSIDE OF THE ACTUAL TESTING



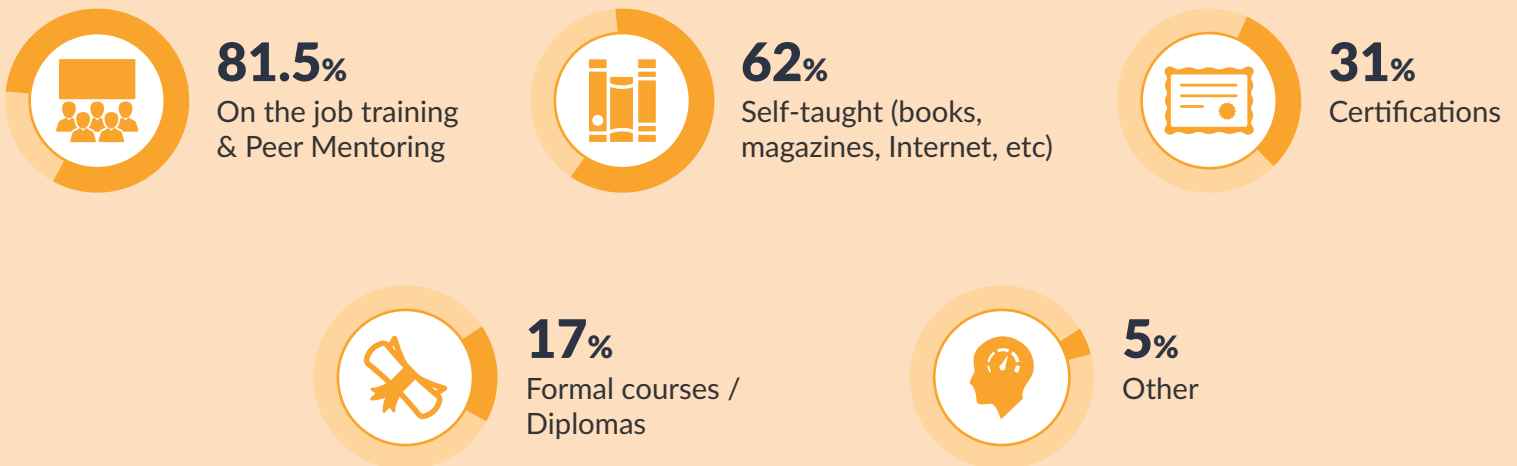
Among the "other" activities testers do outside of their regular testing we saw: Daily scrum meetings, "informal chats" with peers to review stuff and gather information, code reviews, and more.

TESTERS ARE DOCUMENTING LESS THAN IN PREVIOUS YEARS



Even if the distribution between the categories is not very surprising, what was interesting to us was a decrease in the amount of test documentation being used in all categories as part of the testing process, something worth reviewing (and maybe more in detail) in years to come.

TESTERS LEARN ON THEIR OWN

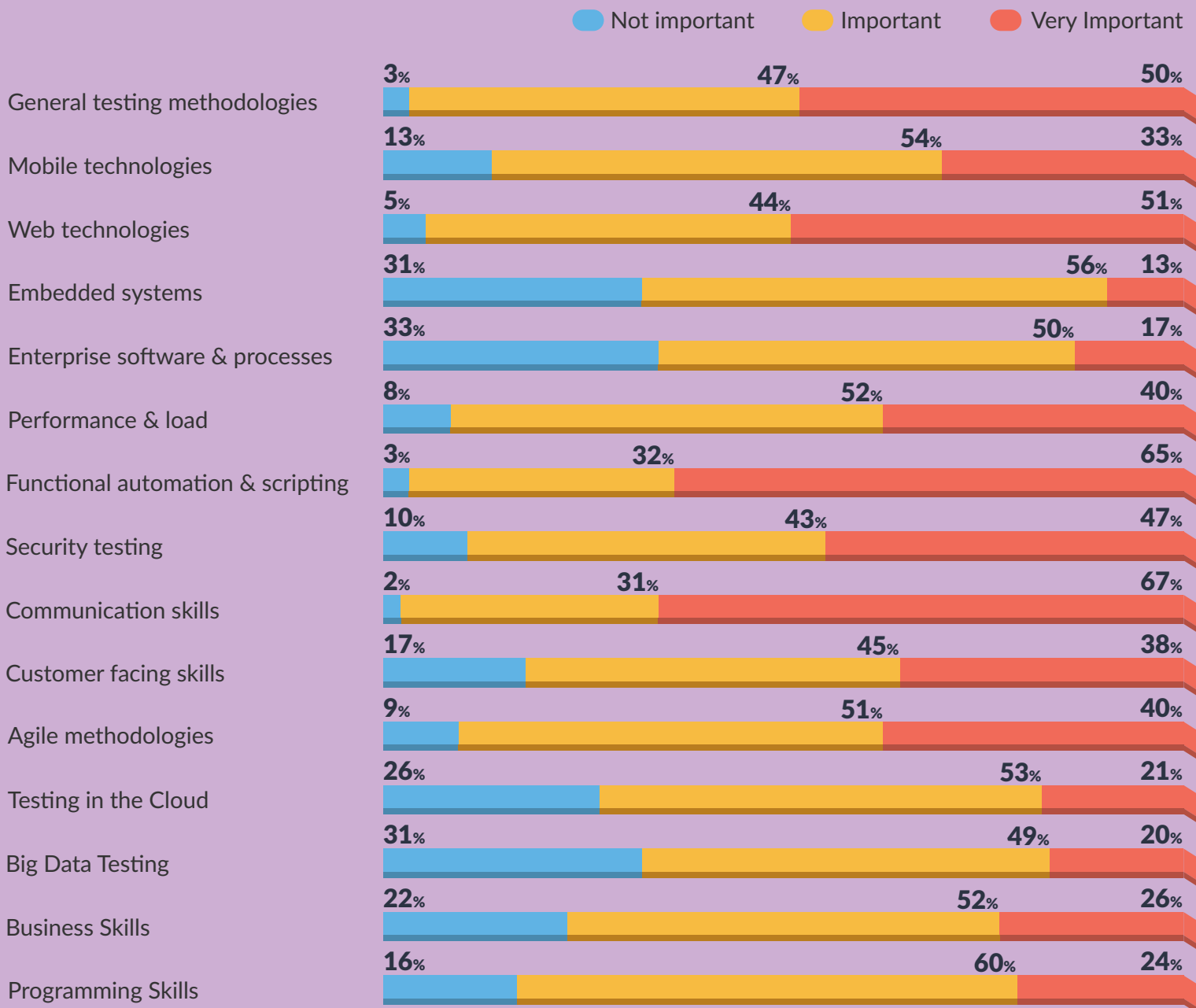


Not surprising is the fact that, just like last year, most testers learned their trade on their own or as they were doing their work. This makes perfect sense and it reinforces the comment by Jerry Weinberg during the State of Testing Analysis webinar last year, where he put it so boldly: "I would have thought that "On the job training" would be 100%, because I can't imagine doing a job as a tester and not learning something new everyday..."

We can also see that certifications are on the rise when compared to the results of the previous survey. And looking closer into this data we can also see that these certifications are more popular in Western Europe (45.5% of respondents), and very unpopular in North America (10% of respondents).

SKILLS

HOW NECESSARY ARE THESE TESTING SKILLS TO BE A GOOD TESTER?



We also asked for additional important skills and here are some of the comments left by respondents: Imagination, adaptability, passion, skepticism, the ability to listen, critical thinking, the ability to ask useful questions, initiative.

And this one that caught our eye: "Not sure if this is really a "skill" but testers must be passionate about continuing their educations. Technology changes rapidly and if we don't keep up with the learning, we'll be left behind."

TESTERS ARE SOCIAL BEINGS :-)

We asked testers how do they keep up with the changes in the testing world



57.5%

Twitter, Facebook, LinkedIn & Blogs



54.5%

Testing Books



54%

Online Communities and Forums



44.5%

Testing conferences, meetups & seminars



43%

Testing Magazines



24.5%

Formal training



24.5%

From other fields that help to improve testing (e.g. psychology, writing, etc)



7.5%

Testing competitions



7%

Weekend testing



7%

Other



This is the first time we asked about social media as a separate category, and it straight up took the first place with 57.5% of respondents. Another new category from last year's survey was the one where we asked if you keep up to date and improve your testing by studying from other fields (e.g. psychology, writing, etc). This category proved to be an interesting one, with $\frac{1}{4}$ of respondents selecting it as one of their sources of knowledge and improvement.

We also asked if you had "other" ways of keeping up to do date and some of the answers worth mentioning were: writing code regularly, uTest, listening to people talk about their testing challenges, helping in open source projects.

THERE ARE PLENTY OF GOOD TESTING CONFERENCES OUT THERE, YOU JUST NEED TO LOOK FOR ONE TO ATTEND

This year we asked as an “open question” what formal or informal conferences had respondents attended during the last 3 years, and we got a large number of answers, here are the main ones:



TestBash



QA Summit



Scrum master certification/s



Mobile Testing Conference



Selenium Conference



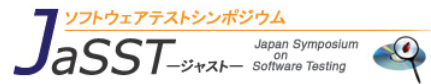
Tabara de Testare (Rumania)



Star Conference/s



Rapid Software Testing courses



JaSST (Japan Symposium on Software Testing)



CAST



Testing meetups



STPCon



MS TechEd



Let's Test



Weekend Testing



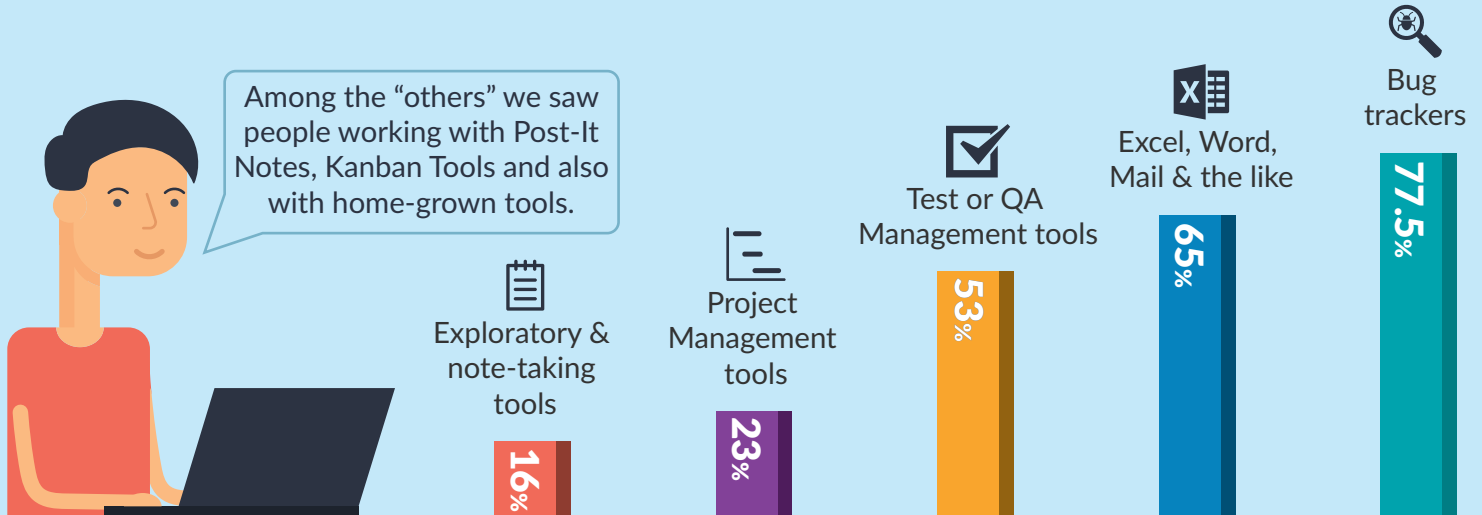
ISTQB conference



Agile Testing Days

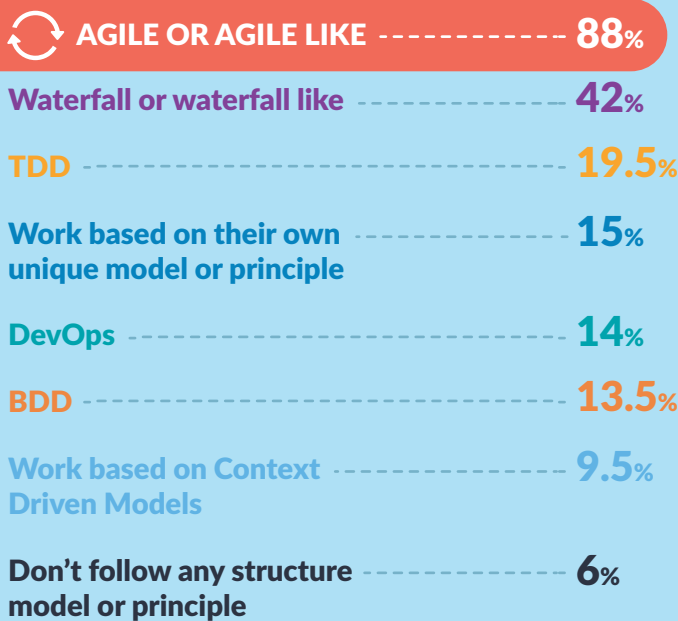
TESTING PROCESS

HOW DO ORGANIZATIONS MANAGE THEIR TESTING PROCESS AND DATA?



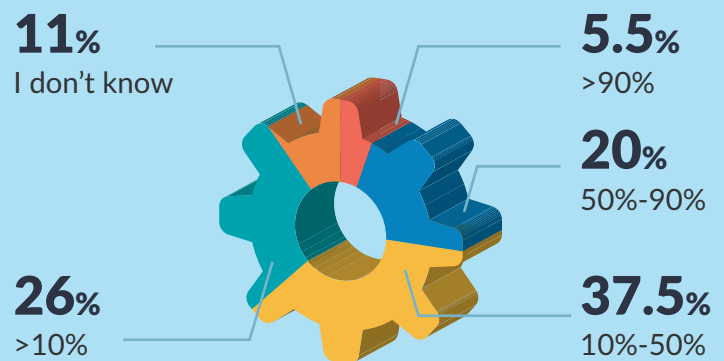
STRONGER AGILE ADOPTION WORLDWIDE

We asked what development methodology does your Organization follow



We continue to see companies working based on blends of multiple methodologies, with an increase in the percentage of respondents working with Agile methods (from 78% last year to 88% this year).

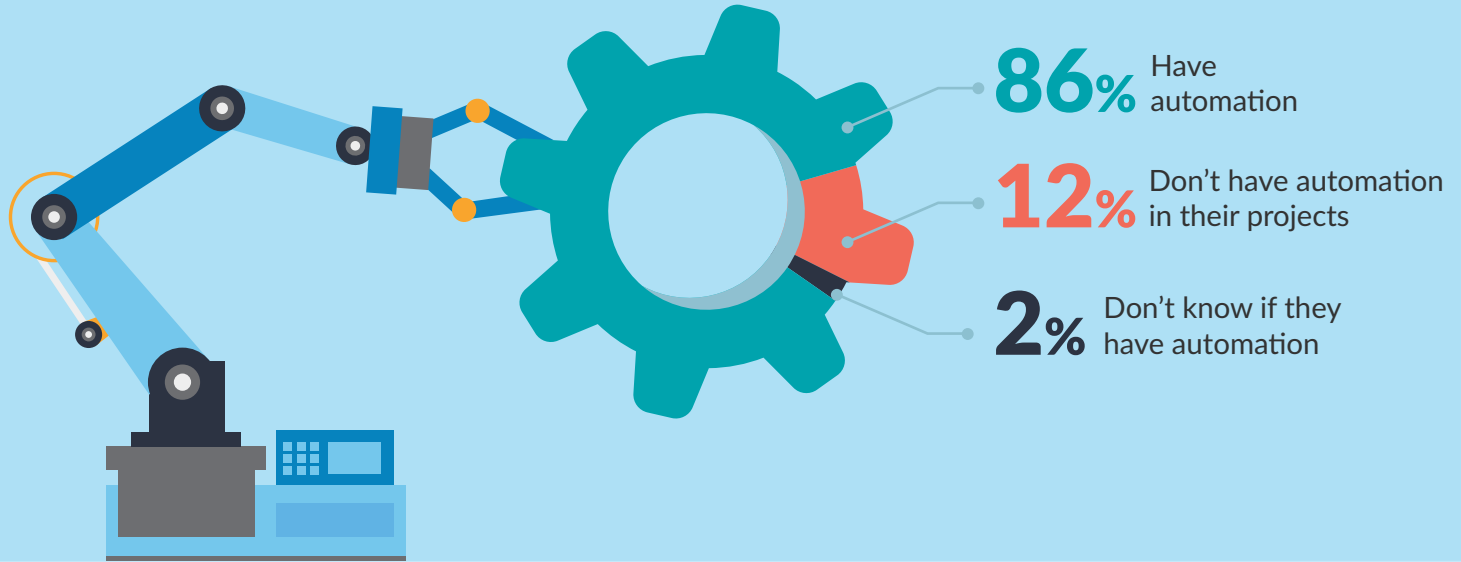
ORGANIZATIONS ARE AUTOMATING BIGGER PARTS OF THEIR TESTS



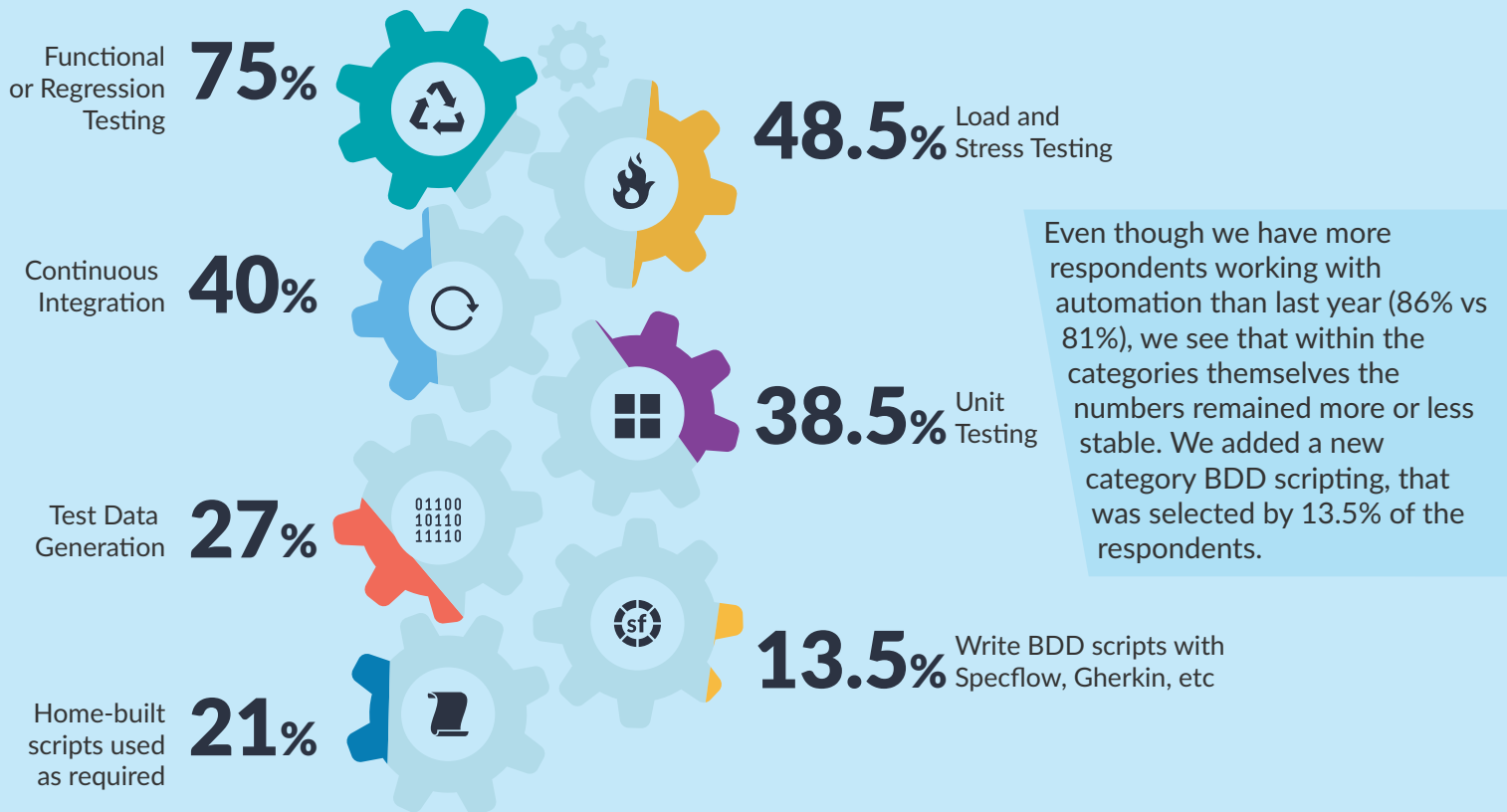
We see a trend of increasing percentages of automation coverage in the work of the testing teams.

Interesting! It is interesting to see that, out of the people who have automation in their teams, 11% of respondents don't even know what percentage of their testing is automated, maybe this points at a lack at measuring their work in general? Another interesting point is that looking inside the data, we see that most of the testers answering they have above 90% automation coverage come from small companies.

MORE TESTERS REPORT AUTOMATION IN THEIR COMPANIES

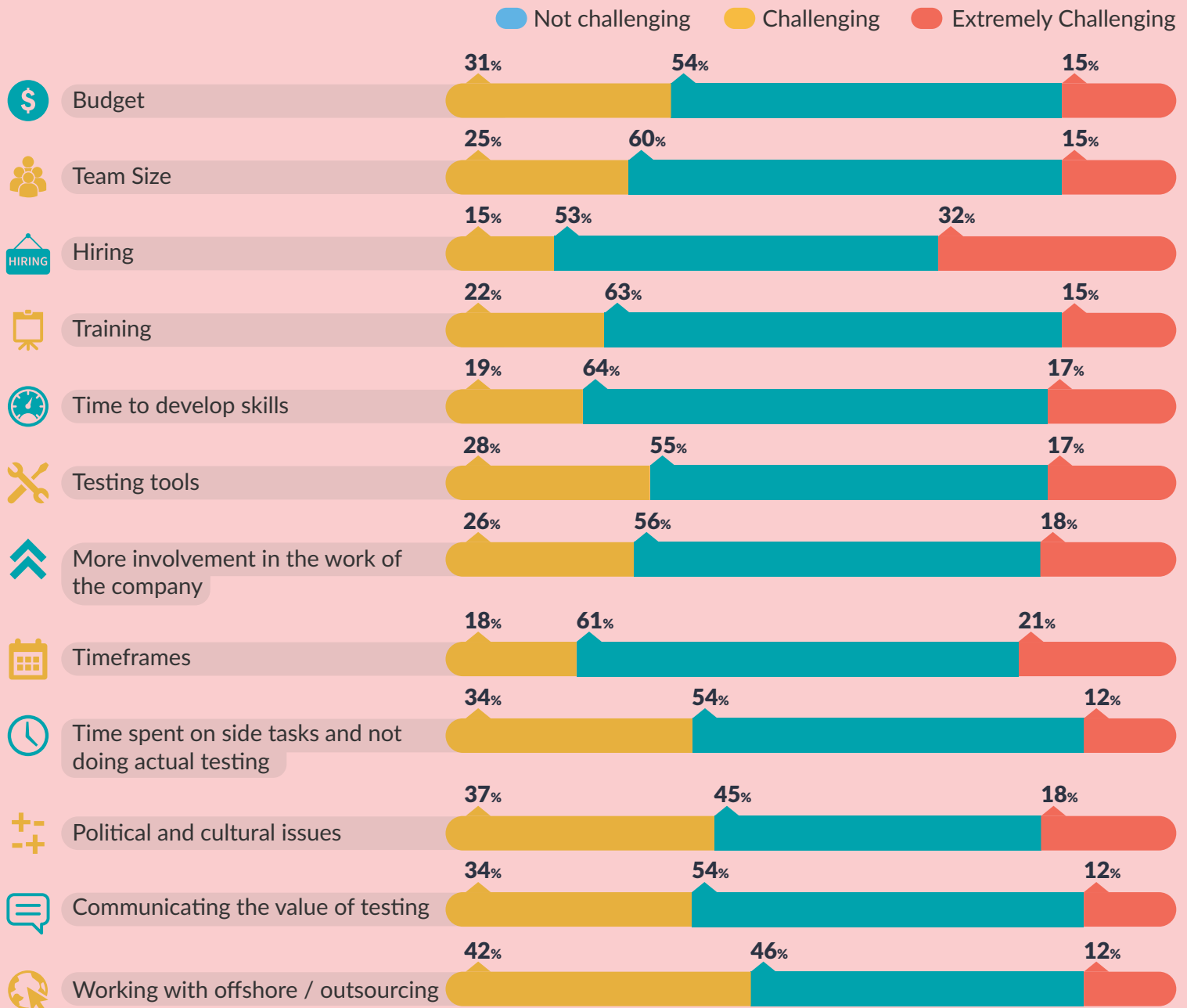


AREAS OF AUTOMATION



TESTING CHALLENGES

TEST TEAM CHALLENGES



Among the “other” challenges the testing team has people suggested: Creating good metrics, constant change, instilling a learning culture to the testing team, assessing the risks of the product, creating the testing function from scratch, communication with developers, adapting to agile testing, and many many others!



WHAT HAVE YOU CHANGED DURING THE LAST YEAR IN TESTING?

We asked an open question about the changes testers did during the last year to the way they work and why did they do them. We got lots of interesting answers and here are some of the most interesting ones to help you to get some ideas of what you can change and improve your own testing:

“ We modified the automation approach, focusing on simpler cases and on scale, rather than complex cases. This allowed us to save on our execution efforts and focus on static analysis.

“ Moved to Kanban (we got many people who made this change in the last year).

“ We have changed the way of working to include risk based analysis, since we were focusing too much attention on tests affecting non-critical parts of our software.

“ Moving to a continuous delivery ATDD process from a waterfall strictly manual test environment.

“ We started generating our reports based on the management decisions.

“ The QA Manager role was dissolved and the QA members were assigned to SCRUM teams... now each SCRUM team is responsible for quality, not

“ Moved from an ‘automate everything’ approach, to more exploratory testing techniques with test charters.

“ Introduced a new customer verification test cycle where our customer come on-board to decide whether the software is fit for purpose before starting their formal UAT.

“ Usage of mindmaps to communicate test coverage for each functional domain - to visually depict the test coverage and hence get better

“ More involvement in the dev tests.

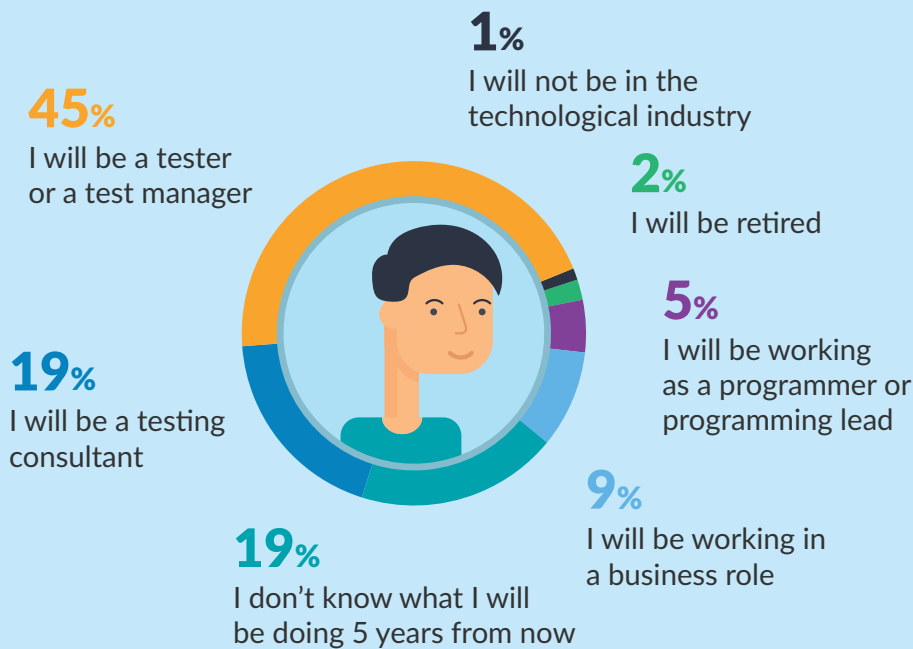
WHAT DO MANAGERS LOOK FOR WHEN HIRING A TESTER?

We asked hiring managers what are they looking for today in their testers when hiring new positions, and among the things managers are looking for we found the following:

-  Team players
-  Technical & basic programming skills
-  Business oriented, open mind set
-  Self learner
-  Knowledge of mobile technology
-  Critical thinking
-  Results oriented soft & communication skills
-  Curiosity
-  Passion and enthusiasm towards testing
-  Diverse and atypical mindset
-  Clarity & crispness in answering

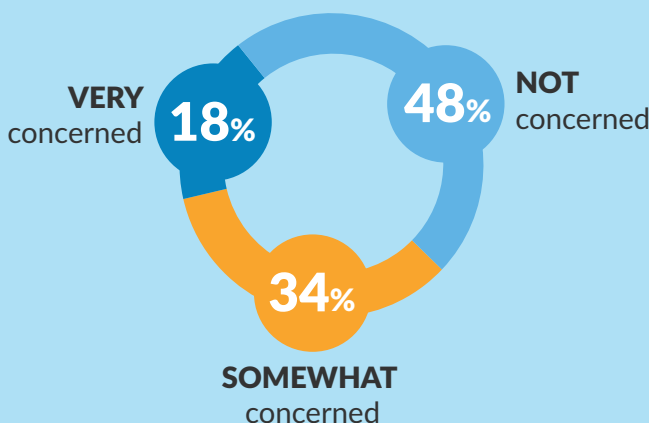
YOUR PREDICTIONS ABOUT THE FUTURE

WHERE DO YOU SEE YOURSELF IN 5 YEARS FROM NOW?



Compared to last year less people believe they will continue working as testers in 5 years from now, down to 45% from 55%. Maybe a big part of this came from the 19% who think they will be doing testing consulting (a new category introduced this year). The percentage of people who don't know what they will do stays exactly the same, at 19%. We see a slight increase in the number of people who wish to be in a programming role.

HOW CONCERNED ARE YOU ABOUT YOUR JOB STABILITY?



There seems to be a stabilization of the testing job environment, and so people are less concerned in general that last year (48% this year vs. 42% last year).

HOW WOULD WE WANT TO SEE THE TESTING WORLD CHANGED FOR THE BEST?

We asked testers what would they like to see change in the testing world to make it better for all of us, and here are some of the most interesting answers we got:

- “I wish that the industry would get away from the notion that testers have to be certified to perform their jobs.
- “Having one day with a real customer of our product, to improve our business understanding and perspective.
- “More “skill sharing” between managers, testers, and developers.
- “Learning should be promoted.
- “A better understanding from the business of how important testing is, rather than it being seen as a 'necessary evil'.

FINAL NOTE

We believe we can be proud of being testers in today's professional environment!

Looking at the results of this survey it is reassuring to see how the answers point towards testing work that is carried out with more professional tools (actual and virtual), using more varied testing and development approaches, and overall by professionals working and specializing in different disciplines within the testing and quality assurance spectrum of responsibilities.

Testers are thirsty for knowledge, and we are striving to get it from multiple sources while logically focusing on the virtual social networks such as Twitter, Facebook, LinkedIn, and web-based Testing Communities.

The challenges of teams and managers around the world seem to be focused more or less on the same things: Hiring good testers, having time to develop their skills, and getting more time to test more and better.

As for the future of testing...?

Testers feel today more stable in their works than a year ago, but they still wish to be better understood by the rest of the team (and specially by their business peers), and they also wish to have more direct contact with their end-users to understand them better and improve their testing.

We are sure that next year's report will provide us with more insights and better data to get a deeper understanding of the reality of our work, and the future of the testing profession.

*Until next year!
Lalit and Joel*

ABOUT TEA-TIME WITH TESTERS

Tea-time with Testers, is the largest-circulated software testing monthly in the world. As the wave of change sweeps business, testing field and community of testers like never before, Tea-time with Testers has ensured that its readers have all the necessary upgrades to challenge tomorrow. It takes its readers deeper to give a complete understanding of the world of software testing.

Ever since its inception in 2011, it has set one benchmark after another in testing publication circle. It was the first to do serious reporting on software testing theories and thoughts. And then again, it is the first to bring a whole new genre of technical/corporate journalism more up close and more incisive. It is the only monthly magazine in global testing community known for quality of its content, authors and unique way of presenting the information. Today, Tea-time with Testers commands the highest circulation and readership among all English language testing magazines in the world.

To learn more visit site:

<http://www.teatimewithtesters.com/>

ABOUT PRACTITEST

PractiTest is an end-to-end QA and Test management solution, designed to help you control your testing and development process, focusing on how to manage your project and its information, and how to communicate the outcomes of your testing to everyone in the organization.

The software allows you to organize your requirements, create and run tests, tracks bugs etc. Integrations are available with top bug management tools including: JIRA, Bugzilla, RedMine and Pivotal Tracker as well as automation tools such as Selenium, JUnit, SoapUI, QTP, Jenkins and many more

To learn more visit our site:

<http://www.practitest.com/>

COLLABORATORS

trishkhoo.com

www.trishkhoo.com

Quality Remarks

www.qualityremarks.com

U Test

www.blog.utest.com

ADVENTURES IN QA

www.adventuresinqa.com

TeamQualityPro

www.teamqualitypro.com

Software Testing

www.testingeduindia.blogspot.in

A Lifelong Software Tester's Blog

www.a-lifelong-tester.cocolog-nifty.com/blog/

The Testers Edge

www.thetestersedge.com

InfoQ

www.infoq.com

Inspired Tester

www.inspireddtester.com

All Things Quality

www.allthingsquality.com

test talk

www.te52.com/testtalk/

Hiccups

www.qahiccups.blogspot.co.uk

Stephen Janaway

www.stephenjanaway.co.uk

ENJOY TESTING

www.enjoytesting.blogspot.in

Abode QA
A Hub For Testing Minds...

www.abodeqa.com

Test in peace

www.testinpeace.wordpress.com

QUALITY TESTING

www.qualitytesting.info

TESTHEAD

www.mkltesthead.com

The Social Tester

www.thesocialtester.co.uk

52 tellurium

www.te52.com

Testing Curator Blog

www.blog.testingcurator.com

Qxf2 SERVICES

Qxf2 Services

www.qxf2.com

prtc
Romanian Testing Professionals

www.andrei.contan.ro

My testing journey

www.howgotintotesting.blogspot.co.uk

TESTING DIARIES
A Quest to Test Better Than the Rest

www.testingdiaries.com

If you have helped us promote this survey and don't see your name listed here, please let us know