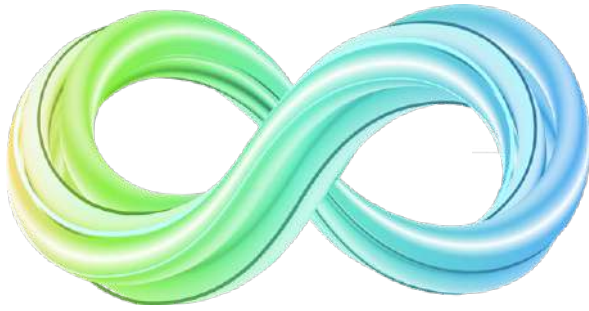


TURKEY SOFTWARE QUALITY REPORT 2021-2022

DEVOPS: EMPOWERED BY
SOFTWARE TESTING & AUTOMATION





TESTISTANBUL
COMPANY

Testistanbul Co.

Re-Energize Your Test
Test Engineer X3: A Bright Career Opportunity

April 1st, 2018
Testistanbul Istanbul Office

Test Report

CONTENT

Foreword	3
Executive Summary	5
Survey Questions and Analysis	6
Contributors	28
About	29
Turkish Testing Board	30



FOREWORD

As Turkish Testing Board, we are pleased to bring you the 2021-22 edition of the Turkey Software Quality Report [TSQR] which focuses on “DevOps: Empowered By Software Testing & Automation”. Coronavirus outbreak has put a lot of pressure on development and operation teams in terms of software delivery time and software quality which cannot be achieved without the help of good DevOps, software testing, and test automation practices. In this report, you will find the trends, tips and obstacles regarding these very hot topics.

The report is also designed to help organizations and especially decision makers to make paradigm shifts in their mindsets. It not only draws a clear picture of the current situation in the Turkish software development and software testing industry, but also sets the de-facto standards and trends for future information technology (IT) projects. We hope this report will be a reference point for all decision makers.

With the help of TSQR, we are trying to lay down the foundations of a healthy discussion platform for improvements in the Turkish software testing market. As a conventional practice, TSQR will be presented at the opening ceremony speech of TestIstanbul 2021 [testistanbul.org], which will be held virtually during two consecutive days this year, initiating a series of keynotes, presentations and discussions.

Regards,

TestIstanbul Strategy Committee



EXECUTIVE SUMMARY

The ultimate goal of IT organizations is to deliver their software to their end customers in a fast, reliable, and customized manner. In order to achieve this goal, automation, continuous improvement, and operating models are all focused on creating the excellent delivery model. DevOps practices, and software testing and test automation go hand in hand while creating this excellent delivery model. In this report, we analyzed the collaboration and the synergy between DevOps and software testing practices, and tried to put a roadmap for their better collaboration.

According to the survey results, the maturity of DevOps practices in Turkish IT market has passed 'Why' and 'What' stages and entered into 'How' stage:

- Why Stage: Why does our organization have to adopt DevOps practices?
- What Stage: What steps and topics are needed in order to successfully implement DevOps practices in our organization?

'Why' stage has been achieved with the realization of the following top three achievements:

- Higher System Availability
- Increased Maintainability
- Less Production Defects

'What' stage has been achieved with the realization of the following top three most difficult topics:

- Test automation
- Cultural transformation
- Automated Release and Configuration Management

Although there are still improvement areas in the 'Why' and 'What' stages, according to the survey results there is a big improvement opportunity in the 'How' stage. For example, the respondents' expectations from test automation tools for their DevOps teams are very high. The following expectations are all received more than 40% rating from the survey respondents:

- Test automation tool's functionality and features
- Test automation tool's level of integration capabilities
- Test automation tool's reporting capabilities
- Test automation tool's programming capabilities
- Test automation tool's training documentation and tutorial
- Test automation tool's licensing cost and support

This result shows us that many criteria are considered when choosing a test automation tool. In parallel with all of the above expectations, many tools and tool vendors have popped up making the Periodic Table of DevOps Tools generated by Digital.ai, which grows more and more in every quarter. It is predicted that this tremendous growth will slow down with mergers and acquisitions among tools and tool vendors.

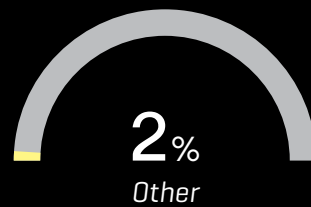
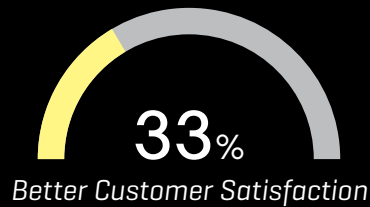
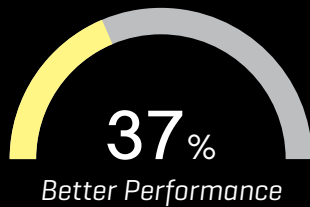
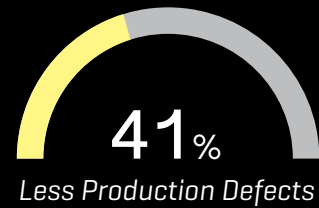
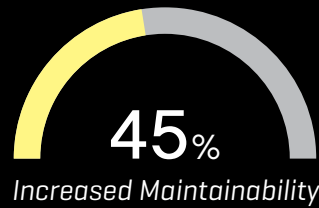
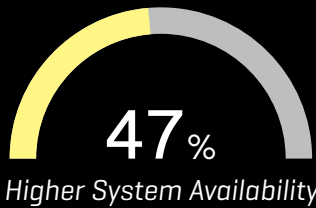
QUESTIONS

- 1** What changes has the DevOps transformation brought to your software development process?
- 2** Which factors are most important to successful DevOps transformation?
- 3** Which teams are responsible for the DevOps process in your organization?
- 4** What types of automated tests do you have in your projects?
- 5** What are the topics you find most difficult to implement during DevOps transformation?
- 6** Which types and levels of testing are performed by your DevOps teams?
- 7** What are the expected core competencies from Test Engineers who will take part in DevOps teams?
- 8** Which criteria do you consider important while selecting test automation tools for your DevOps team?
- 9** How has the DevOps transformation in your organization impacted the career paths?
- 10** What DevOps tools are most commonly used in your software development projects?

1

What changes has the DevOps transformation brought to your software development process?

** multiple selection was allowed*



ANALYSIS OF THE CURRENT SITUATION

According to the survey results, companies have already started realizing the benefits of DevOps in their Software Development Lifecycle (SDLC) processes.

Meanwhile, a minority of the respondents state that they do not observe any benefits. It is totally normal that some practitioners experience effects of transformation with delay.

In addition, as stated in the State Of DevOps Report by DORA, the transformation process has its own stages. Even companies that had gains before, may not experience any benefit in the current state of the transformation. It takes time and effort to reach higher maturity levels.

FUTURE PREDICTIONS

In the future, we may observe an increase in all attributes, as a cause of the total improvement effect of DevOps Transformation. Also, each is expected to converge at some degree in the long run.

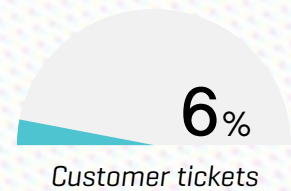
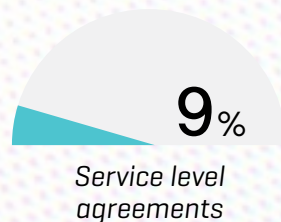
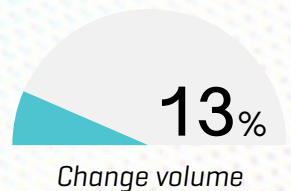
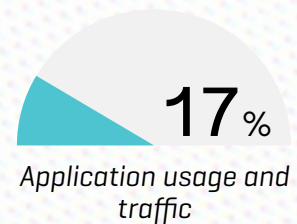
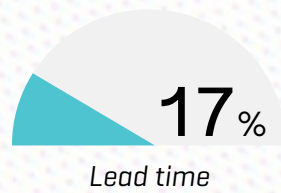
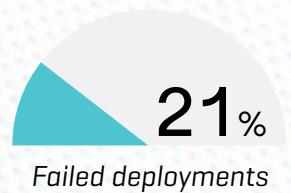
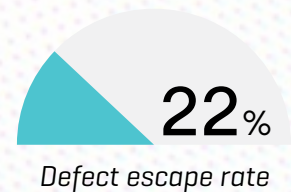
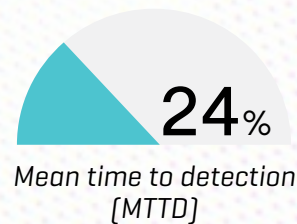
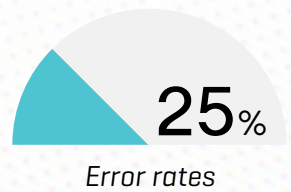
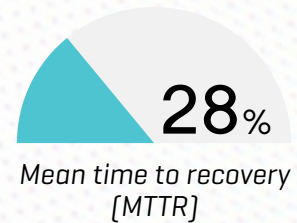
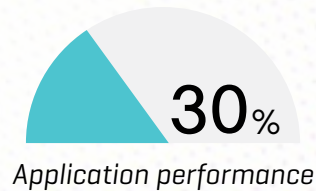
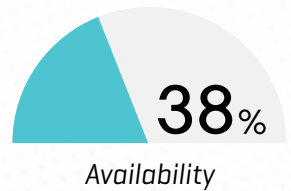
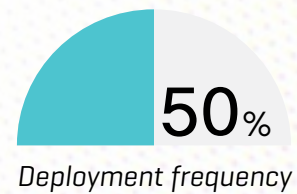
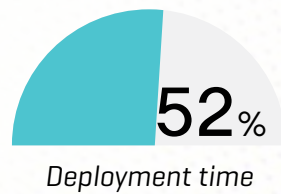
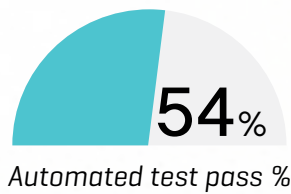
It is also anticipated that higher clarity of gains will encourage other departments or companies to embrace DevOps Principles and after practices creating a snowball effect.

Nevertheless, companies that do not observe benefits might consider not to move further and continue as is. This is a common pitfall that information technology (IT) professionals should be aware of. No other transformation is able to affect SDLC efficiency and effectiveness other than DevOps.

2

Which factors are most important to successful DevOps transformation?

* multiple selection was allowed



ANALYSIS OF THE CURRENT SITUATION

It is good to see our future prediction in the DevOps State Report from 2020 - 2021 take its place.

We said that:

“Especially ‘Availability’, ‘Deployment Frequency’ and ‘Automated Tests Pass Percentage’ will again be the answers with the highest ranks.”

Automated Tests Pass Percentage got the highest rank, which indicates organisations consider their DevOps process as a whole as it matured. If you want to be sure that apps are built, worked, behaved and your environments are configured, created, operated as they should be you have to test it. And the most elite way to do that in terms of DevOps is when it is automated.

That correlated with maturity because organisations now intensively care that their pipelines are doing the right thing instead of just focusing on their throughput.

There is no surprise that the 2nd and 3rd ranks belong to Deployment related attributes which no one thinks in the IT world that DevOps and Deployment are separate topics. These are considered as one of the main achievements of DevOps.

FUTURE PREDICTIONS

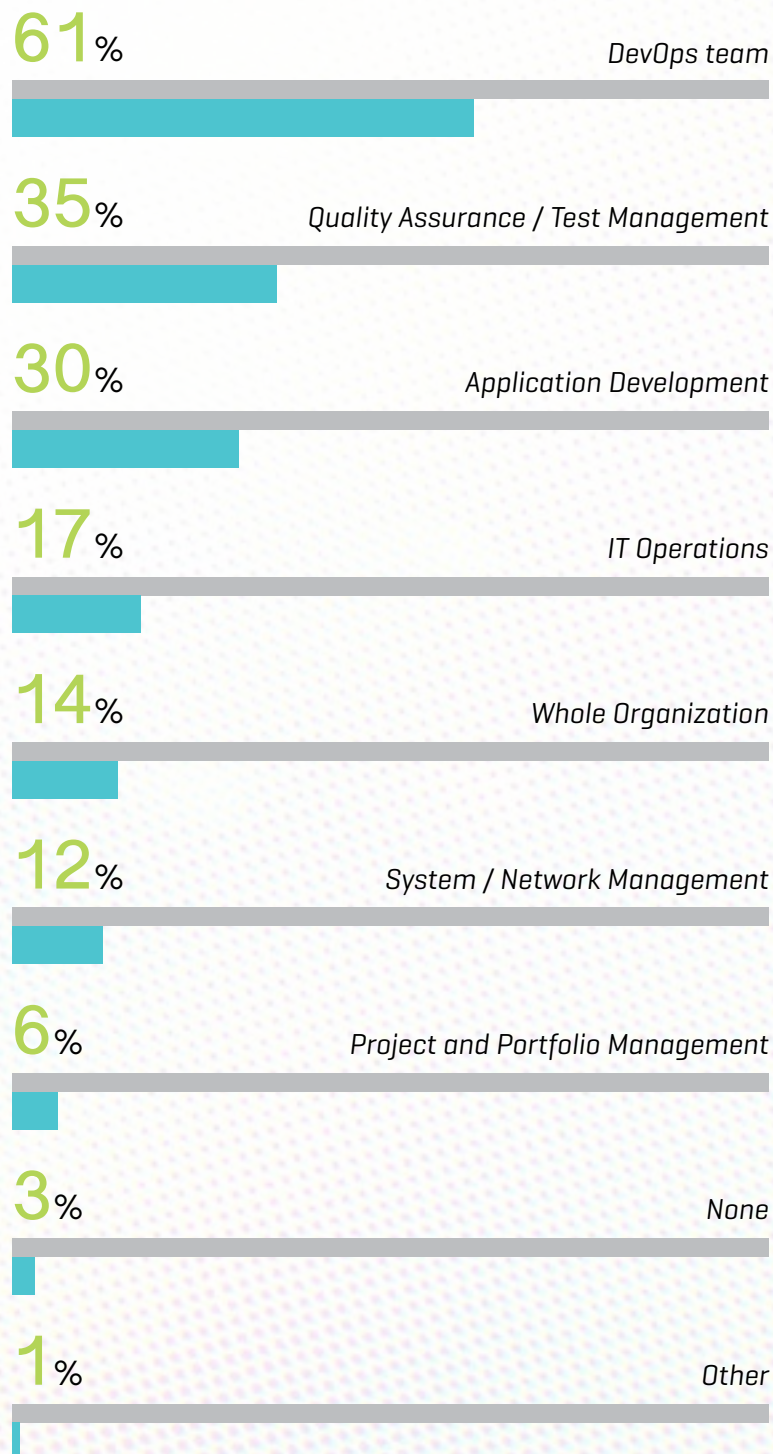
According to the respondents, availability has received the 4th rank. In the coming years, if organisations become more mature and make progress regarding what they are doing currently, then availability will be able to conserve its ranking. Also the topics related to availability such as MTTR and MTTD will receive higher rankings.

As it is obviously seen in the responses, availability will be the next challenge for companies after all is done properly in terms of DevOps practices.

3

Which teams are responsible for the DevOps process in your organization?

** multiple selection was allowed*



ANALYSIS OF THE CURRENT SITUATION

Building the DevOps process in the organization is as much about culture and people as it is about tools and technology. Teams are key to having the power to drive culture and give people responsibility in DevOps. Organizations try to find the most effective way to manage teams' cognitive load at scale and they can have different types of teams in the DevOps ecosystem whose role and responsibilities are clearly understood by their contiguous teams.

In the survey, which teams are responsible for the DevOps process in their organization is asked. The results are showing that DevOps is empowered by organizational structure by highlighting the DevOps related roles. Among the respondents, 61% state that DevOps teams are responsible for the DevOps process in their organization, on the other hand 35% of respondents state that Quality Assurance/Test Management teams are responsible for the process. Software testing and test automation, which are the important tasks of test teams, are indispensable in the DevOps process and play a critical role in the process without changing the team title.

On the other hand, a significant amount of respondents indicate that 30% of the organizations give DevOps responsibility to Application Development teams. Other teams such as IT Operations, System/Network Management, Project and Portfolio Management have a ratio less than 20% while 14% of respondents claim that the whole organization is responsible for DevOps process. This result shows that success requires more than just having the right teams, it also requires focusing and structuring on how information is shared and interacted with one another within and between teams.

FUTURE PREDICTIONS

The industry is adopting "DevOps" in job descriptions and team titles in all organizational levels. Since many organizations believed renaming a team's title was a short term solution, there has been resistance to DevOps team title at first, but the crucial point is to change the way they work. Despite this approach, organizations discovering new job titles aligned with DevOps terminology shows that an organization follows and adapts the trends in the industry, at least they intend. This transformation will reflect positively on employees such an increase in salaries for those with DevOps names in their job title.

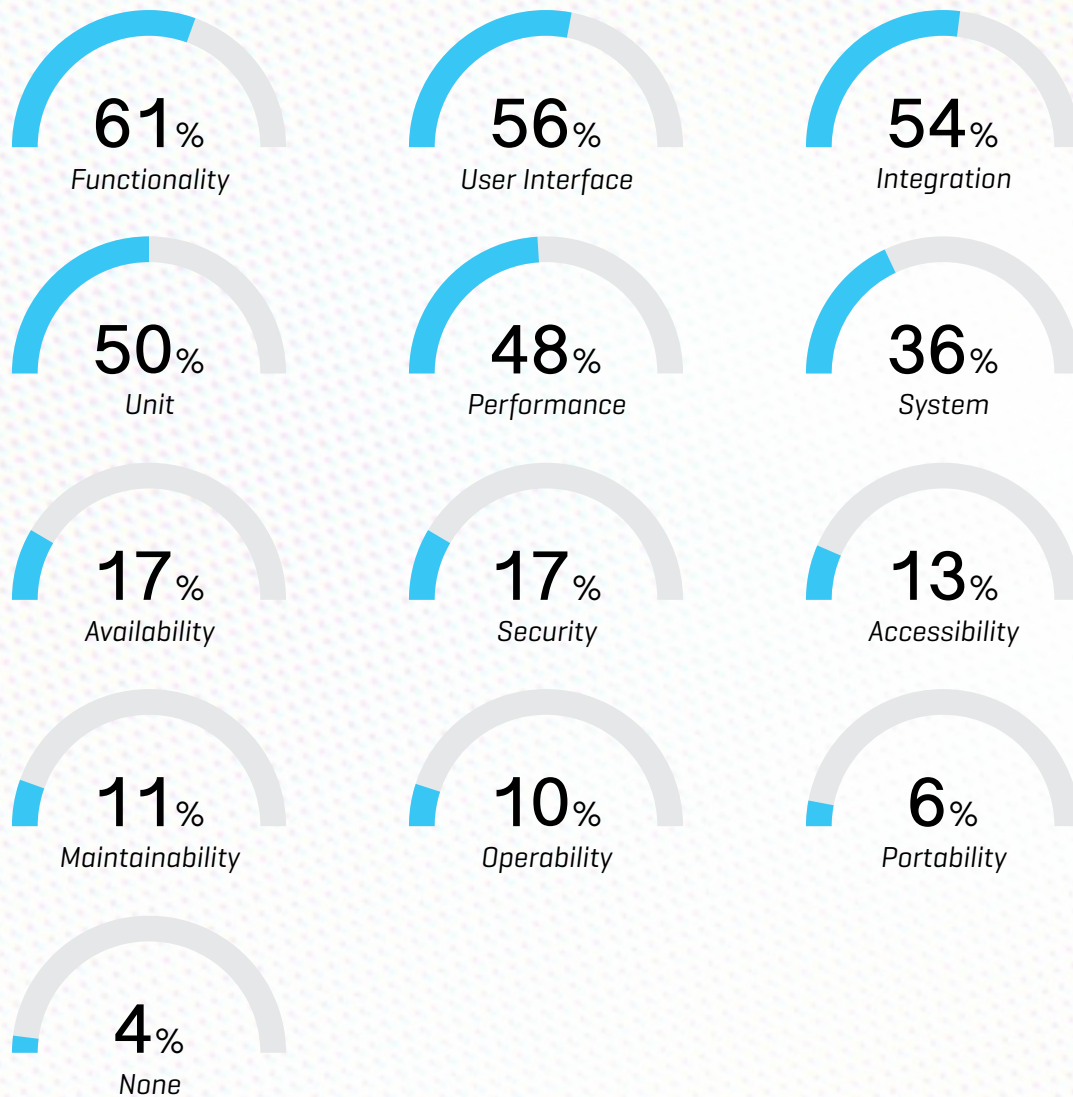
Further, organizations realize that DevOps means something larger than centered teams around purpose. Trend shows that highly evolved organizations have discovered the patterns that work well with the combination of a variety of teams throughout the entire organization. Technical expertise in all stages of DevOps process is gaining more importance. The fact that some of the job title shifts simply indicate changes in popularity, while the roles themselves will stay much the same.

In the near future, we are expecting to see the organizations discover that success of DevOps process needs more than having the right kinds of teams, it also requires focus and structure on how information is shared and interacted within and between teams. Restructuring teams with concentrating on how they work together will lead to success with the help of meaningful leadership support. When organizations are planning to implement DevOps infrastructure and process, they should include Quality Assurance experts to ensure that quality assurance is a top priority.

4

What types of automated tests do you have in your projects?

** multiple selection was allowed*



ANALYSIS OF THE CURRENT SITUATION

When we divide the automated tests in the survey into functional and non-functional categories, we see that the majority of the automated tests are functional. In the previous years' surveys it was observed that most of the tests and automatic tests were at the GUI level and this trend continues in the same way. In this year's survey, it was also seen that integration/service, unit and performance tests have gained visibility. According to the good test automation practices, most of the test automation should be done in the lower layers of the test automation pyramid. This is important if IT teams want fast feedback about the impact of changes they have made. GUI level tests will increase the maintenance, duration, fragility and cost of the automated tests.

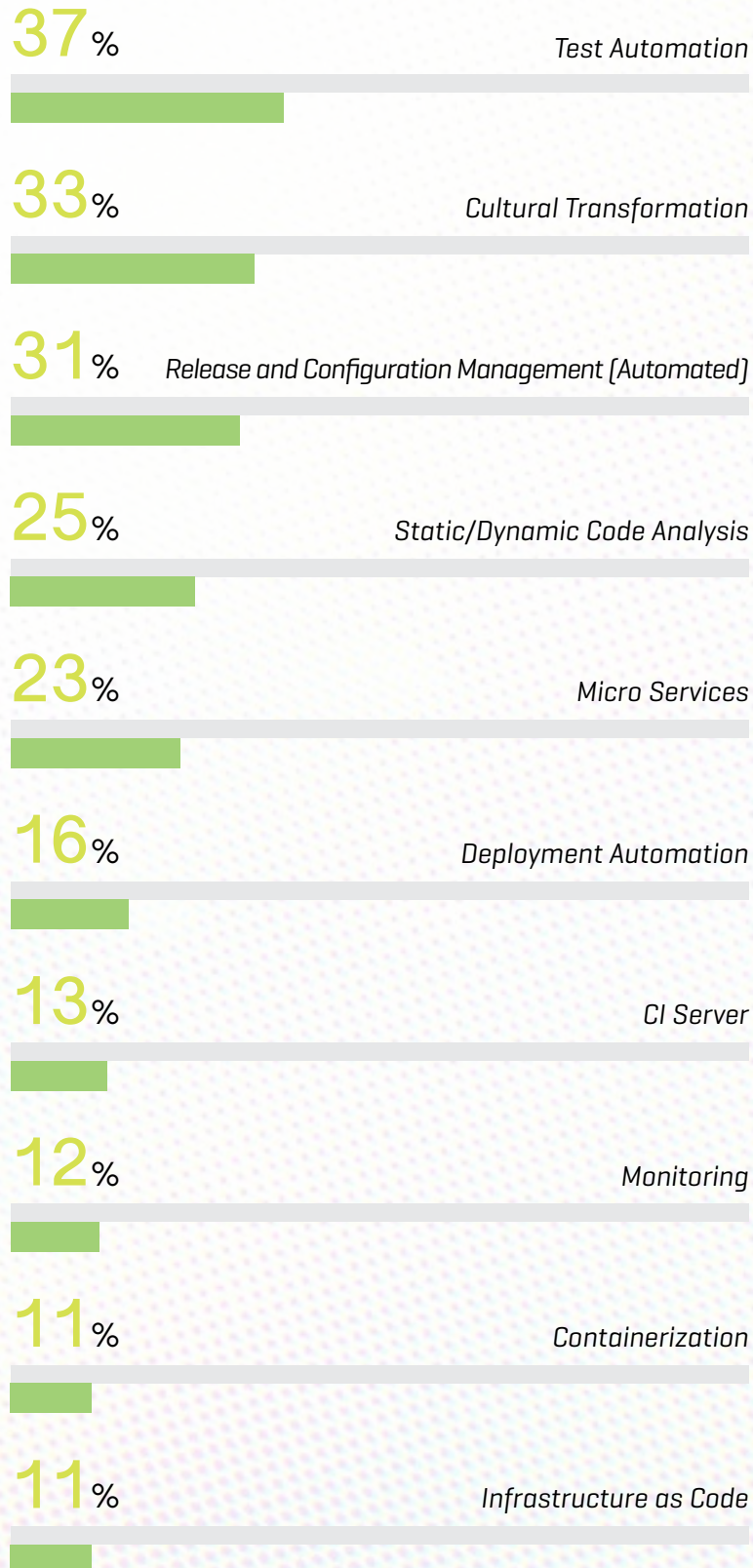
FUTURE PREDICTIONS

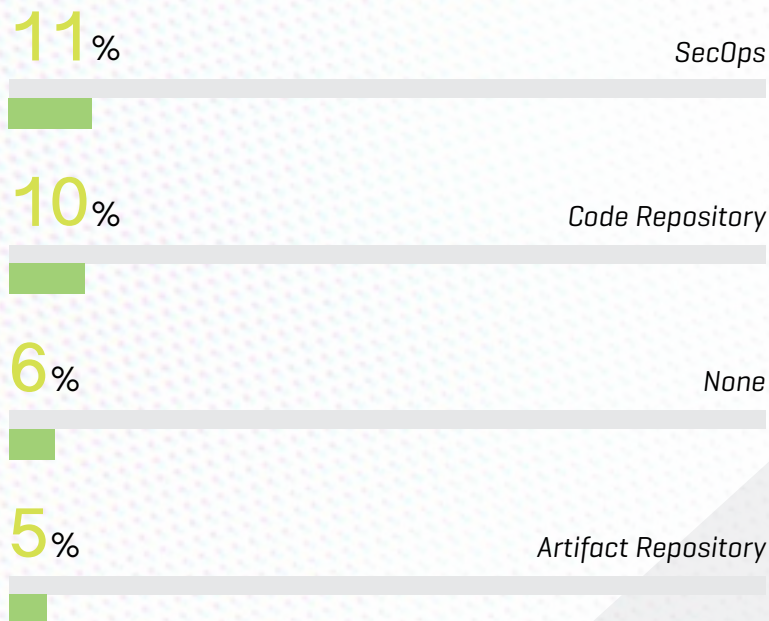
It is likely that in the coming years, the proportion of automated tests performed on the lower layers will increase. Functional tests will remain at the top, especially at the screen level. We think that within a decade the number of automated tests at the lower layers [integration/service, unit] will exceed the GUI level, as it is advised in the test automation pyramid. Also performance tests, which are non-functional tests, will gain more popularity. If faster and more accurate feedback from automated tests is desired, test automation should be done mainly at the unit level followed by integration/service levels.

5

What are the topics you find most difficult to implement during DevOps transformation?

** multiple selection was allowed*





ANALYSIS OF THE CURRENT SITUATION

Introduced at the Agile 2008 conference, DevOps is a collaborative culture of software development and systems management that includes both the development of operation and operation of development.

One of the most basic requirements of stable and frequent release is automating testing at different levels and integrating them into the CI/CD process. The survey results show that the integration of test automation into the CI/CD process is the most difficult part of the job.

This is followed by cultural transformation with 33%. The difficulty of institutions in cultural transformation reminds us of Peter Drucker's quote "Culture eats strategy for breakfast." The institutions that are willing to transform should consider this process as an approach that they will turn into a corporate culture rather than a task that needs to be completed. The transformation should be in a top-down manner for structuring and a bottom-up manner for participation and support. This requires determined managers and autonomous teams.

FUTURE PREDICTIONS

In the case of implementing DevOps principles into software development lifecycle [SDLC], many researches show that this initiative leads to:

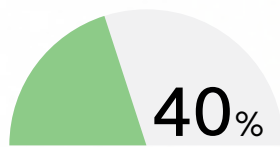
- 33% more successful configuration management,
- 27% more successful tests,
- 30% more successful release,
- 27% more innovative development,
- 440 times reduction in application delivery times,
- 96 times faster bug fixing,
- 46 times increase in the number of application deliveries.

These results show us that the keys to speed up time-to-market and deliver quality applications are automating infrastructure, testing and deployment processes. In the future, it will be impossible to compete for the institutions that do not include DevOps and agile principles in their company cultures and automate their testing processes.

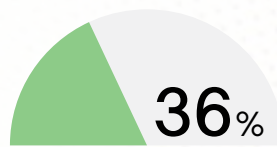
6

Which types and levels of testing are performed by your DevOps teams?

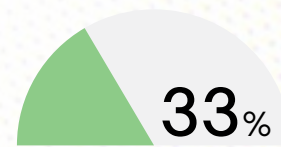
** multiple selection was allowed*



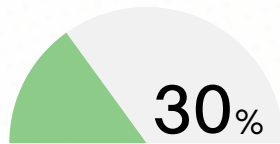
Integration



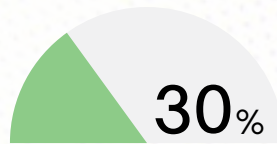
System



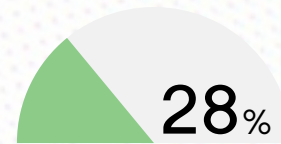
Unit



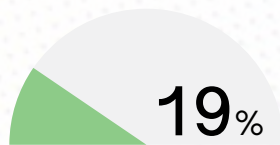
Functionality



Performance



User Interface



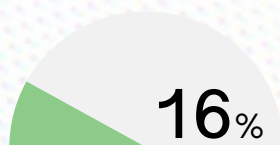
Availability



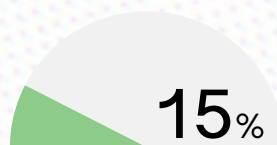
Maintainability



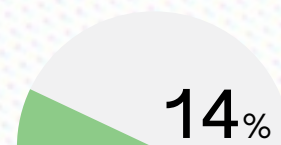
Operability



Security



Accessibility



None



Portability



Other

ANALYSIS OF THE CURRENT SITUATION

The purpose of DevOps is to bring the Development and Operations processes together to create better, faster and more responsive software. To achieve this, it is necessary to be able to release the code version faster and to be sure that the published version is correct. This is exactly the point where testing is needed. The more robust and continuous testing we can do, the more successful our DevOps pipeline will be. In other words, continuous testing should be a key element of your testing strategy if you want to successfully implement the DevOps pipeline. Especially, at the points where the code is built and deployed, using the right testing strategies is of great importance in controlling the integrity and accuracy of the code.

In this respect, when we evaluate the results of the survey; It is seen that DevOps teams mostly perform Integration, System and Unit tests. Less costly and less fragile from a cost and stability perspective, running these tests correctly accelerates the detection of missed errors during code deployment or code build. However, User Interface Tests, which ranked 6th in the survey results, have a high rate of 27.8%, although they are the tests that will slow down the speed of DevOps in terms of cost and stability.

FUTURE PREDICTIONS

The most important feature DevOps gives us is to release fast, frequent and error-free versions. In order to achieve this, the SDLC process must be analyzed very well and it is necessary to make sure that stable, short and repeatable tests are integrated into the DevOps pipeline at the right points.

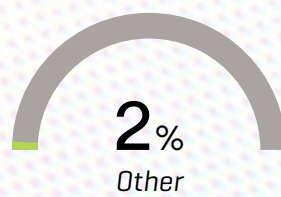
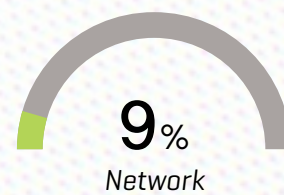
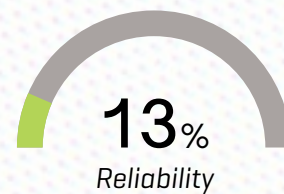
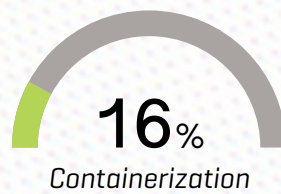
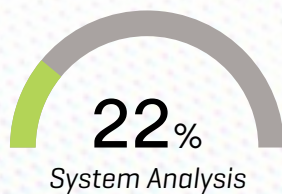
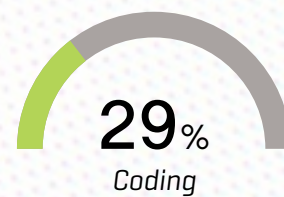
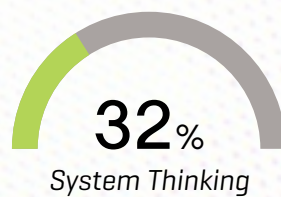
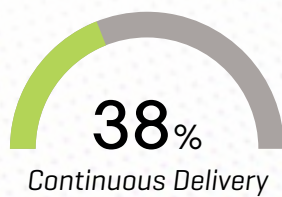
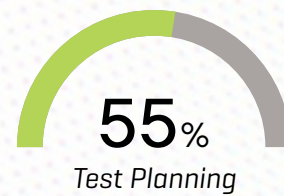
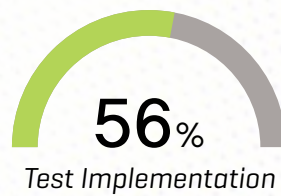
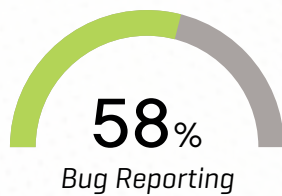
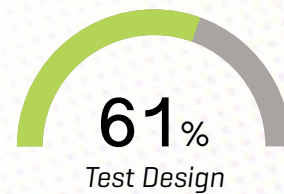
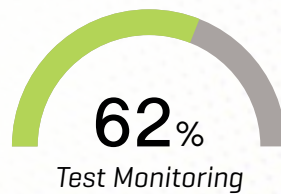
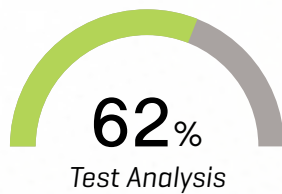
Especially with the combination of remote working and sedentary lifestyle brought by the pandemic, we have all been using online services more than usual in our daily life. While using online service, we care about getting a fast and error-free service at every stage. This shows that a DevOps structure that is not fed with the right testing strategies is very unlikely to be successful.

From this perspective, as DevOps teams and DevOps culture spread in companies, the importance and criticality of Continuous Testing will become much more evident. We hope that we will move towards a more stable IT world where the number of unit tests will increase and System and Integration Tests will be integrated into the DevOps pipeline, as well as Smoke and Sanity tests day by day.

7

What are the expected core competencies from Test Engineers who will take part in DevOps teams?

** multiple selection was allowed*



ANALYSIS OF THE CURRENT SITUATION

Two goals of the DevOps approach/culture is to ensure the quality of the software and to help release the product to market faster. The people should work together to make the project successful. To achieve this success, IT teams are expected to have the necessary competencies in their fields. According to the results of the survey, it is expected that test engineers will have developed DevOps competencies such as CI/CD and Containerization, as well as basic testing competencies.

FUTURE PREDICTIONS

In the new economy, applications need real-time changes and updates to provide the increasing demands of the consumer. This approach requires continuous testing, continuous development, and continuous deployment. It is expected that professionals in testing roles will take on more tasks in addition to their current technical responsibilities in the short and medium term. In this direction, it may be a good action for testing and quality experts to develop themselves in terms of DevOps skills, obtain certifications and receive training as a self-investment in the coming years.

8

Which criteria do you consider important while selecting test automation tools for your DevOps team?

* multiple selection was allowed

68% Test Automation Tool's Functionality and Features



55% Test Automation Tool's Level of Integration Capabilities



53% Test Automation Tool's Reports



49% Test Automation Tool's Programming Capabilities



48% Test Automation Tool's Training Documentation & Tutorial



46% Test Automation Tool's Licensing Cost & Support



40% DevOps Team's Skills & Experience



2% Other



ANALYSIS OF THE CURRENT SITUATION

When we examine the data obtained as a result of the survey, we encounter one of the most interesting results of this study. All options received over 40% of votes. This result shows us that, we pay attention to a lot of points when choosing a test automation tool. We want to use the tools that offer us the most. We deal with this issue with a general perspective, not adhering to a single point.

When we look at the results in more detail, 'Test Automation Tool's Functions and Features' comes first with a big difference. In other words, the competencies and capabilities of the tool, what it will offer us and how much it will make our job easier are the most important factors. From this point of view, we understand that DevOps teams prioritize functionality and competencies. In the next 3 options, features that complement the capabilities of the test automation tool stand out. Easy integration of a tool into the system, usefulness of the reporting system, and programming capabilities stand out as complementary elements to the first option.

After these items, the concerns about choosing a tool are gathered under the main topic of how to use the tool. Here, the most attention is paid to the ease of use of the tool and whether the Devops team has the ability to use this tool. At the same time, tools are examined at a significant rate in terms of technical support and financial costs. All of these rates are relatively high.

At this point, we can divide the criteria into two parts. In the first part, the capabilities and features of the automation tool come to the fore, while in the second part, ease of use and cost issues stand out. The difference between the first part and the second part is not much. Therefore, our devops teams generally keep their criteria very broad when choosing an automation tool and try to choose the tools that can meet the most criteria well.

FUTURE PREDICTIONS

We do not expect survey results to show much change in the future. We anticipate that DevOps teams will examine in detail when choosing a tool.

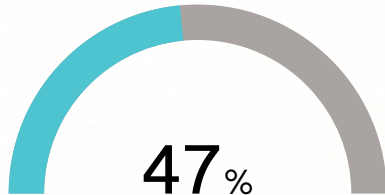
With the tools improving themselves to work more stably, less attention may be paid to the technical support capabilities of test automation tools in the future. At the same time, the capabilities of the Devops team may be a more negligible option, as the ease of tool usage is increasing day by day.

In parallel with all these, the capabilities and competencies of automation tools and integration options can come to the fore much more. This will force test automation tools to find more innovative features and integrate them into their systems in the best way possible.

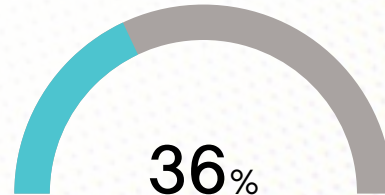


How has the DevOps transformation in your organization impacted the career paths?

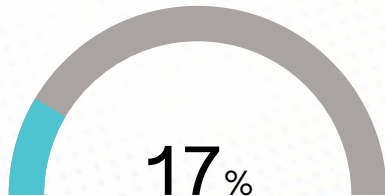
** multiple selection was allowed*



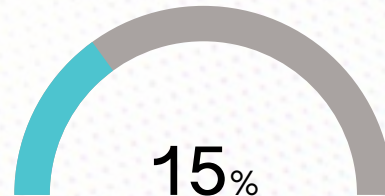
47%
It has created the need for key employees to gain DevOps competencies in each team.



36%
Made it mandatory for all team members to gain DevOps competencies.



17%
It did not impact the teams much as DevOps needs were met by a central team.



15%
None



6%
The DevOps transformation did not affect the teams as it was carried out by the consulting firm.



1%
Other

ANALYSIS OF THE CURRENT SITUATION

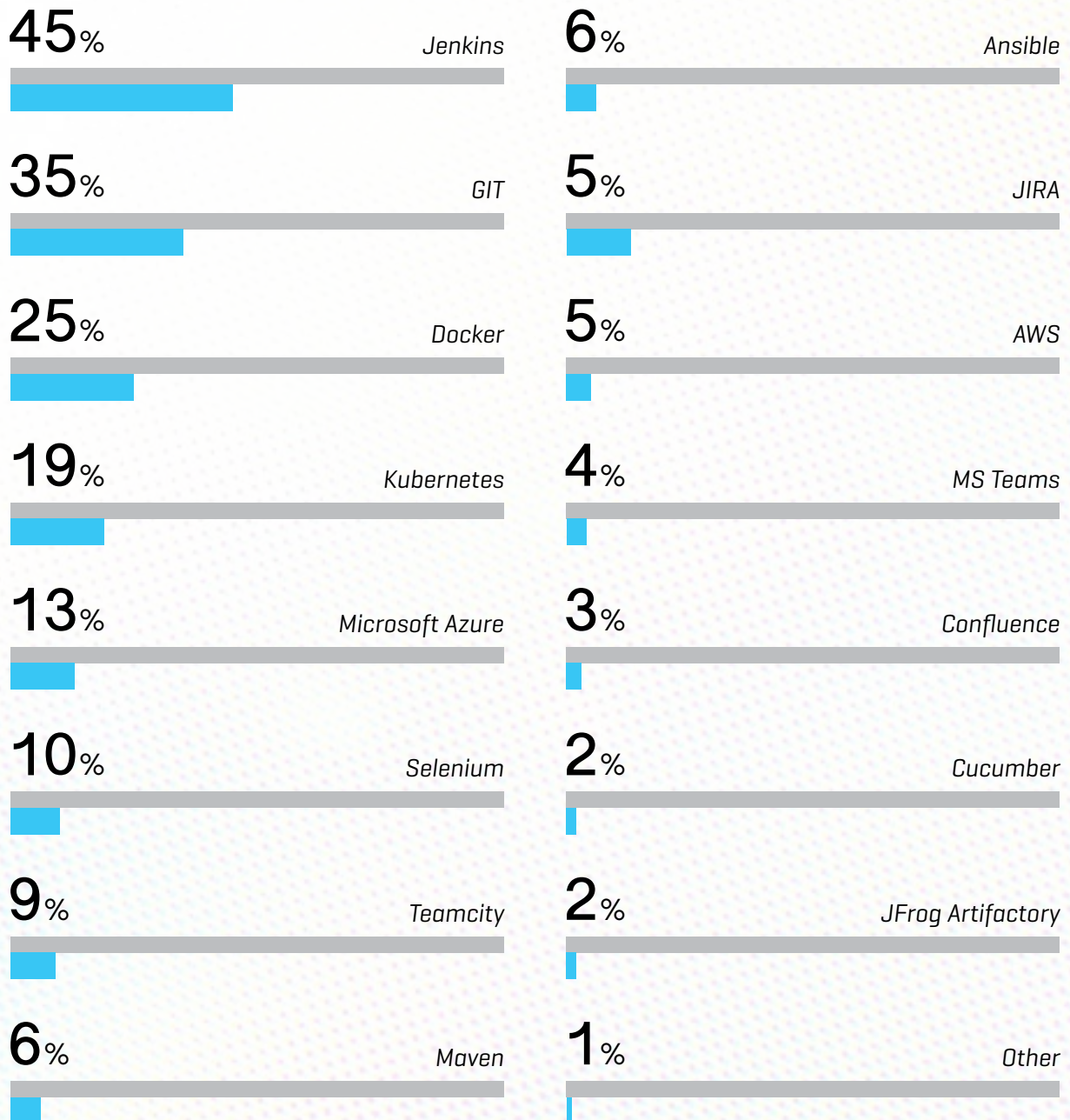
DevOps unites people, processes and tools by automation to fuel digital transformation and to achieve business goals more effectively. Since DevOps needs culture and mindset shifts, organizations prefer experiencing DevOps by building central teams, then roll it out to the whole organization which takes some time. Hence at the early stages, teams do not need to gain DevOps competencies, but as the process matures they probably have more need to adapt it. In Turkey, there are still many organizations that use traditional ways. Survey results are aligned with this trend.

FUTURE PREDICTIONS

In the near future, we will see more organizations in Turkey adopting DevOps principles. By its nature, test automation is necessary and vital for the success of DevOps implementation. In this sense, all team members need to change, especially software testers. Software testers will no longer be just focusing on functional testing, but they need to change their attitude and behavior, improve their technical skills, be familiar with multiple programming languages, DevOps tools, test automation tools and technologies. Software testers should definitely automate or help to automate all test types in the DevOps chain to achieve desired levels of code coverage, build test environments to detect problems before they occur. If a software tester wants to play a key role in the near future's companies, she/he definitely needs to gain DevOps competencies.

10 What DevOps tools are most commonly used in your software development projects?

** multiple selection was allowed*



ANALYSIS OF THE CURRENT SITUATION

In the last few years, we have observed undeniable progress in the industry in terms of DevOps Maturity. This also affected the tooling side.

According to the survey results, there is still an expanding market for DevOps tools and techniques. Companies heavily invest in technology and tooling, both on the vendor and customer sides. Even though there are plenty of tools [Git, Jenkins, Selenium Docker and Kubernetes are prevalent DevOps Tools compared to alternatives. Common characteristics of those are; open-source model, wide-community support, and technological capacity] in the market, none of them is good enough to provide end-to-end solutions. Teams select tools for different purposes among possible alternatives and integrate them with their current tool stack. Consequently, no tool-stack looks the same as any other.

Although having many alternatives for the same task sounds decent, this situation creates complexity beyond the paradox of choices. Integrating different tools may cause unidentified problems that take lots of time and effort to solve. Especially considering different tool versions, development teams might have various problems never experienced by the community before.

Good news, integrating different tools leads you to have a vendor-agnostic infrastructure, which is strategically important in terms of technology independence. You can easily move to any tool or vendor considering your own interest.

FUTURE PREDICTIONS

In the near future, we expect investment in tooling will continue. New tools will be released for different purposes on hype. However, in the long term we may expect the release of new tools will be normalized, leading to slower releases and mergers and acquisitions among current tools and tool vendors.

Moreover, the vast majority of the tools used today will not exist tomorrow. Companies must consider the fact that any tool popular today may not last a long time. Only the fittest will survive.

In addition to that, some tool categories are mostly missing in the survey answers such as; Monitoring, SecOps and Chaos Engineering tools. We can expect higher community attention and investment in these categories of tools and technology. This is also an indicator for DevOps/Continuous Delivery maturity. We may interpret that market is in between Continuous Integration and Continuous Delivery.

CONTRIBUTORS



Abdullah Emre Görgülü
Testinium



Abdurrahman Akın
Kuveyt Türk Katılım
Bankası



Berk Dülger
Continium



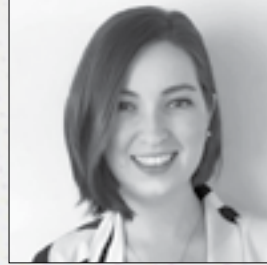
Berk Toprakçı
Continium



Bilge Makas
TTB



Fatma Molu
Kuveyt Türk Katılım
Bankası



Gizem Taşcı
TTB



Hayrullah Öztürk
Getir



Koray Yitmen
TTB



Miray Doğan
Keytorc



Serkan Cura
Getir



Sera Seren
TTB



Zehra Özaydın Taşgın
Allianz

ABOUT



Turkish Testing Board (TTB) is the regional body representing and supporting software testing professionals in Turkey. The TTB was constituted in Istanbul in September 2006 as a non-profit organization and a member of the International Software Testing Qualifications Board (ISTQB).

TTB is responsible for certification of testing professionals to the standards and syllabi laid down by the ISTQB. TTB also acts to generate public awareness of the economic and risk mitigation benefits that professional software testing practice offers.

www.turkishtestingboard.org



TestIstanbul is the largest conference in South East Europe and Middle East on software testing. TestIstanbul introduces the region not only to the advancements in software testing but also to the advancements in other streams of SDLC like business analysis, design, development and usability. With its more than 500 participants from all over the world every year, TestIstanbul creates a healthy discussion and networking platform for IT professionals and organizations.

www.testistanbul.org



ISTQB is a global, non-profit organization responsible for enabling test professionals, through globally accepted software testing certification standards to support their career development. As of January 2021, ISTQB® has administered over 1,030,000 exams and issued more than 750,000 certifications in over 129 countries world-wide. The scheme relies on a Body of Knowledge [Syllabi and Glossary] and exam rules that are applied consistently all over the world, with exams and supporting material being available in many languages.

www.istqb.org

TURKISH TESTING BOARD

Turkish Testing Board has been carrying out the following activities to increase software testing awareness in the information technology sector since 2006:

International Certification

Turkish Testing Board conducts international ISTQB® certification exams and gives internationally accredited certificates to participants who are successful in the exam. Nearly 5,000 test specialist candidates have applied to the board and entered the certification exams since 2006. Certificate exams organized within the association:

- ▶ ISTQB® Certified Tester Foundation Level
- ▶ ISTQB® Certified Tester Foundation – Agile Tester Extension
- ▶ ISTQB® Test Manager – ISTQB® Certified Tester Advanced Level
- ▶ ISTQB® Test Analyst – ISTQB® Certified Tester Advanced Level
- ▶ ISTQB® Technical Test Analyst – ISTQB® Certified Tester Advanced Level
- ▶ ISTQB® Test Automation Engineer – ISTQB® Certified Tester Advanced Level
- ▶ ISTQB® Performance Testing Specialist – ISTQB® Certified Tester Foundation Level

International TestIstanbul Conferences

Turkish Testing Board has been organizing International TestIstanbul Conferences since 2010. In the last twelve conferences, 50 keynotes and more than 6,500 participants from 53 countries were hosted. Turkish Testing Board is a non-profit organisation, the profit of TestIstanbul Conferences is donated to scholarships.

Panels & Events

The board organizes sector or topic-based panels for the development of the software testing industry. More than 1,300 professionals have attended the events. The panels and events held so far are TestFinance, TestInsurance, TestAnkara, Testİzmir, TestGames, TestFinTech, TestDefence.

Translation Projects

The translation group within the board works on the translation of ISTQB® documents in order to bring international software testing terminology to Turkey. Documents translated so far are as follows:

- ▶ ISTQB® International Certified Foundation Level Software Testers Curriculum 2011
- ▶ ISTQB® International Certified Fundamental Level Software Testers Curriculum 2018
- ▶ ISTQB® Software Testing Glossary
- ▶ ISTQB® International Certified Advanced Level – Test Analyst Curriculum.





TURKEY SOFTWARE QUALITY REPORT

2021-2022

TURKEY SOFTWARE QUALITY REPORT 2021-2022

