STATE OF TESTING ™
REPORT 2021

Contents

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Introduction

Welcome to the State of Testing Report

What else can be said about the last year...?

It was not the simplest year to be human, that's for sure. But how did it affect us as testers overall? This is what we are here to try and find out!
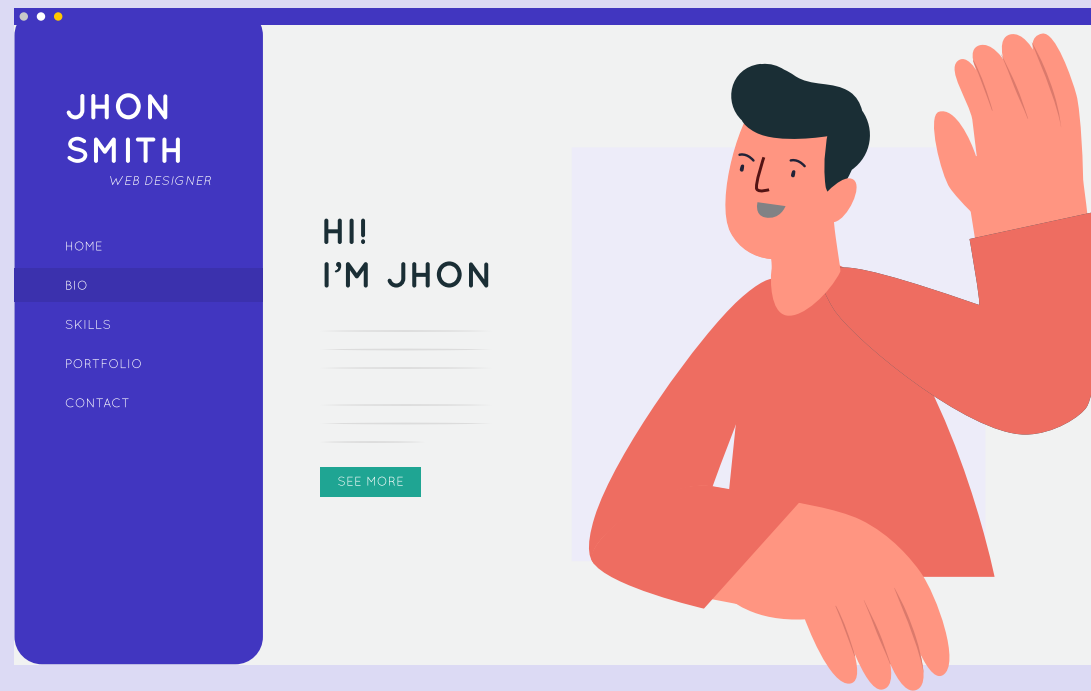
This is our 8th State of Testing Survey and Report. Like with all previous editions we are trying to understand what is happening in the world of Testing & Quality Assurance by reviewing both the answers of testers worldwide, but mostly by looking at the trends as they help us paint a picture of where we are headed as a profession.

We do not want to spoil your reading and exploration of this report, but we do recommend you pay attention to answers around Methodological approaches and the activities being done by testers and developers as part of their work and outside of their usual testing tasks.

Finally, we wanted to thank every one of the testers who took the time to answer the survey, and made possible the report we present before you.

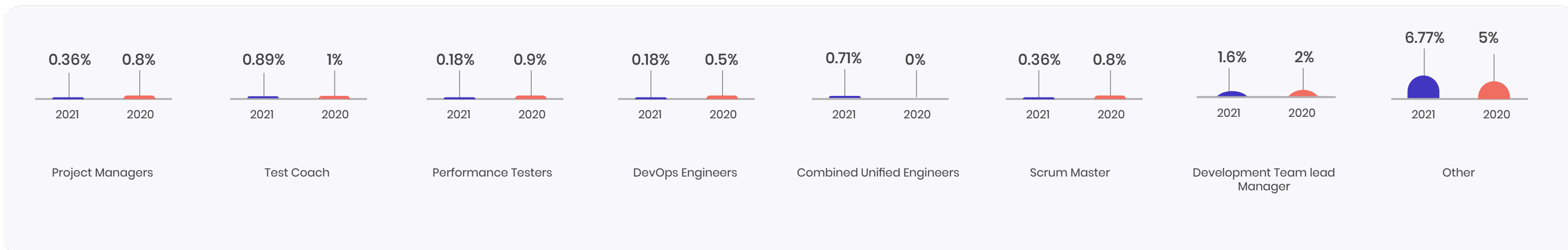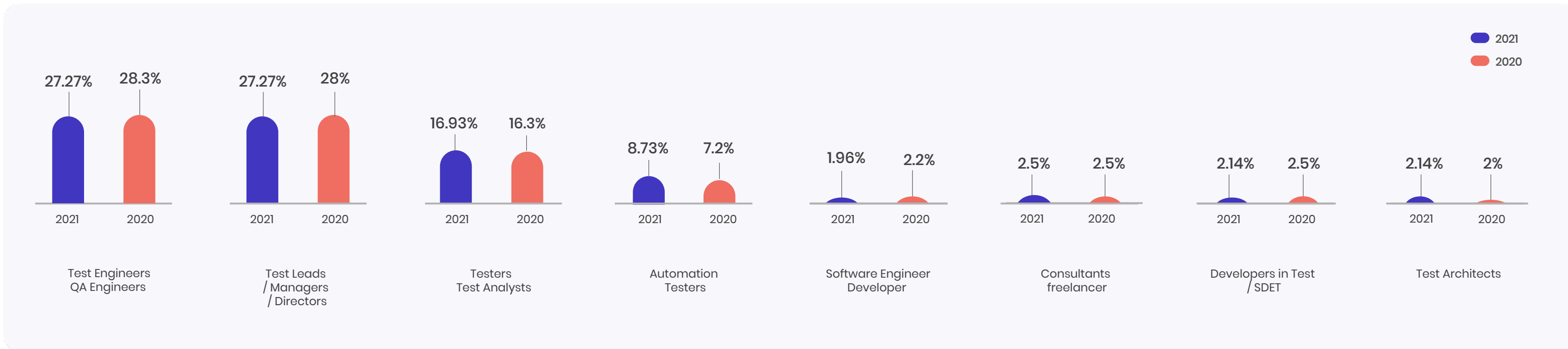May we continue pushing testing and quality for years to come!

-Joel & Lalit

> " Technical capabilities combined with the best human support is what makes PractiTest a better solution for you "

Personal Information

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Your current testing position is...

Which of the following most closely matches your job responsibility and title?

Legend: 2021 / 2020

Position	2021	2020
Test Engineers QA Engineers	27.27%	28.3%
Test Leads / Managers / Directors	27.27%	28%
Testers Test Analysts	16.93%	16.3%
Automation Testers	8.73%	7.2%
Software Engineer Developer	1.96%	2.2%
Consultants freelancer	2.5%	2.5%
Developers in Test / SDET	2.14%	2.5%
Test Architects	2.14%	2%
Project Managers	0.36%	0.8%
Test Coach	0.89%	1%
Performance Testers	0.18%	0.9%
DevOps Engineers	0.18%	0.5%
Combined Unified Engineers	0.71%	0%
Scrum Master	0.36%	0.8%
Development Team lead Manager	1.6%	2%
Other	6.77%	5%

It is interesting to see that most respondents defined themselves as overall testing professionals and not as some sort of technical tester (e.g. Automation Tester or Performance tester). We think this may come from the fact that the testing profession is looking at itself in general more as a technical occupation where most practitioners use some sort of scripting tool as part of their day to day work.

Is testing 100% of your work?...

What percentage of your formal role involves performing testing activities?

Between 100% and 75%: 55 (2021), 47 (2020), 51 (2019)

Between 75% and 50%: 16 (2021), 21 (2020), 21 (2019)

Between 50% and 25%: 14 (2021), 14 (2020), 13 (2019)

Below 25%: 16 (2021), 12 (2019), 13 (2019)

Other: 4 (2021), 2 (2020), 2 (2019)

2021
2020
2019
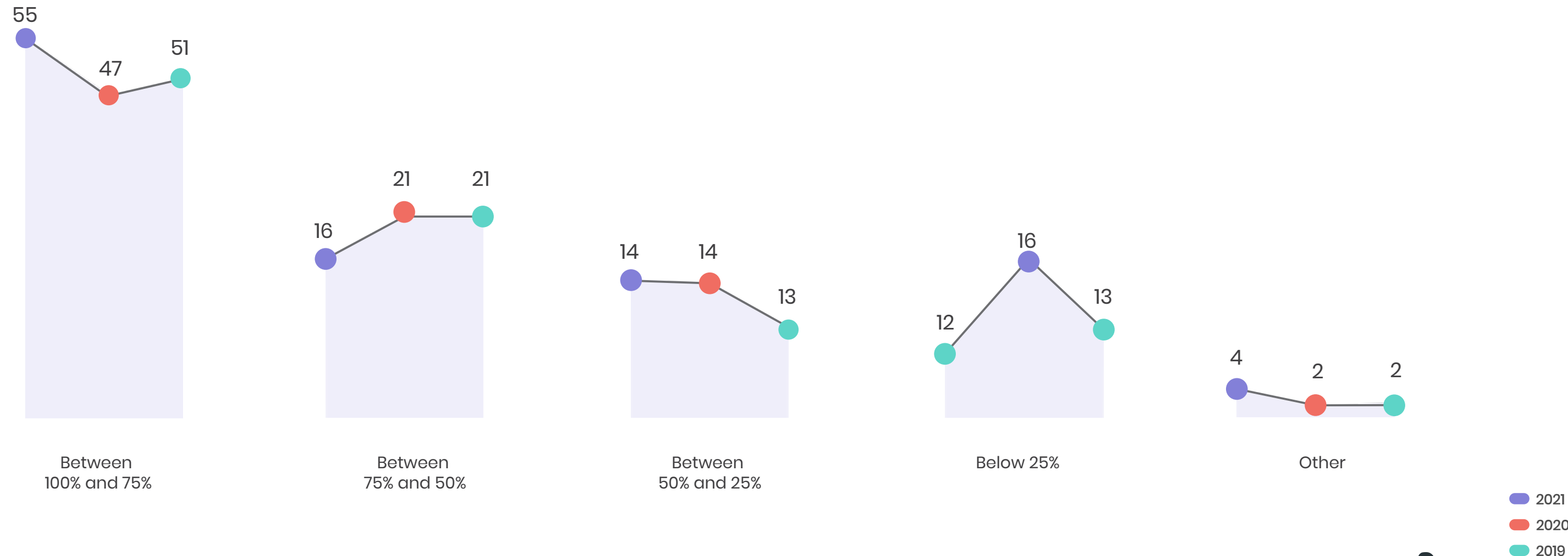
The trends for this question are not conclusive when looking at them at first glance. We were seeing a decrease in the number of testers committed 100% to testing tasks (vs those that perform additional tasks as part of their work), but this trend took a turn on the current survey.
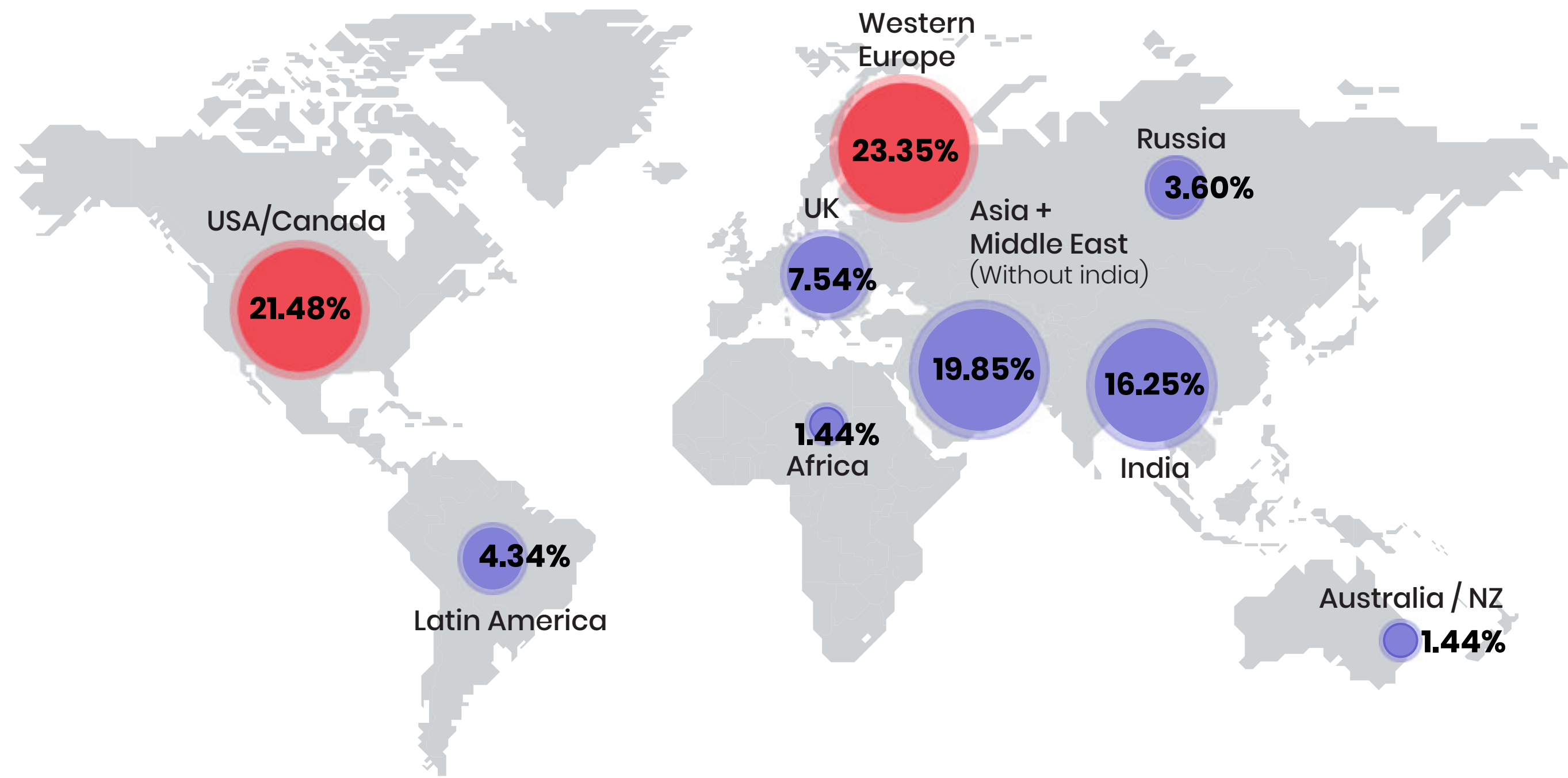
What we can see is that the size of your testing team will have a big influence on this. The larger your testing organization, the higher the percentage of your work that will be focused on testing. This reinforces the existence of dedicated testing teams, especially in organizations having 50 testers or more in them.

Finally, there is also a correlation between your methodology and the percentage of the time you spend in actual testing activities. Respondents working based on Modern Testing principles showed a trend of investing less time in formal testing activities, while respondents working both in Waterfall as well as Agile teams showed the opposite trend.

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You work in...

What Country do you work from?

Western Europe **23.35%**

Russia **3.60%**

USA/Canada **21.48%**

UK **7.54%**

Asia + Middle East (Without india) **19.85%**

India **16.25%**

1.44% Africa

Latin America **4.34%**

Australia / NZ **1.44%**

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Your annual income from testing and testing related activities is

	>1 YEAR	1-2	2-5	5-10	10+
Africa	7K	24K	50K	78K	NA
Asia +Middle East	NA	NA	40K	59K	NA
India	15K	NA	28K	39K	49K
Latin America	5K	15K	20K	37K	NA
Russia & Eastern Europe	5K	18K	20K	NA	NA
USA/Canada	52K	68K	85K	89K	111K
Australia/NZ	NA*	40K	65K	76K	87K
Western Europe	21K	29K	35K	52K	69K

*NA- Not enough data to conclude
All numbers are in USD

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Your professional experience in the testing field is...

For how long have you been working in testing? %

Legend:
- 2021
- 2020
- 2019
- 2018

Less than 1 year

Year	Value
2021	6
2020	5
2019	7
2018	10.5

5 to 10 years

Year	Value
2021	30
2020	27
2019	28.5
2018	25.5

1 to 2 years

Year	Value
2021	8
2020	7
2019	8
2018	11

10+ years

Year	Value
2021	37
2020	37
2019	32.5
2018	28.5

2 to 5 years

| Year	Value
2021	19
2020	24
2019	24
2018	24.5
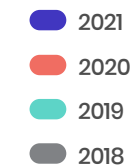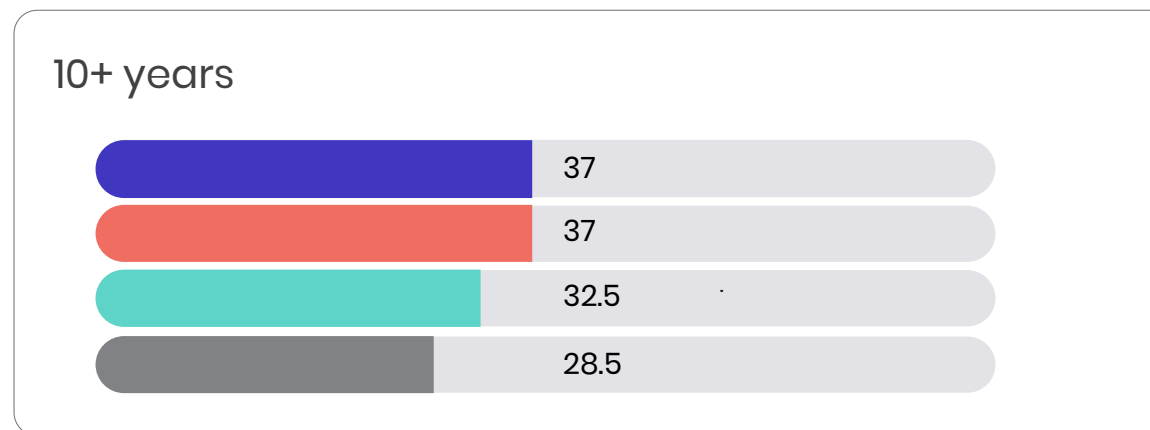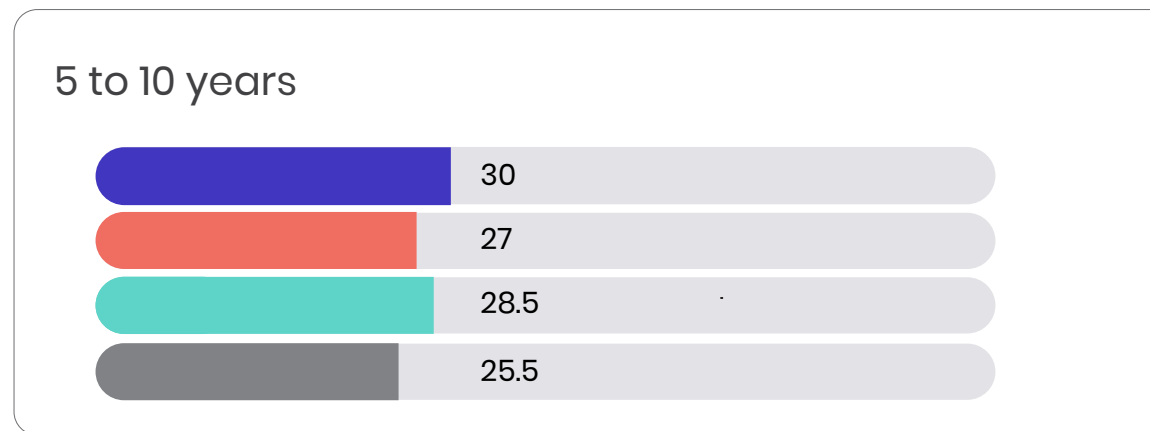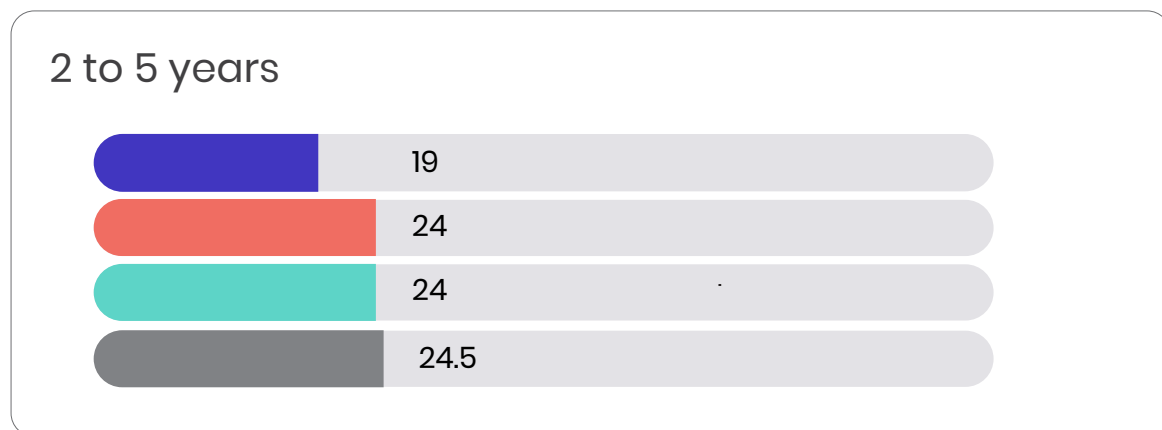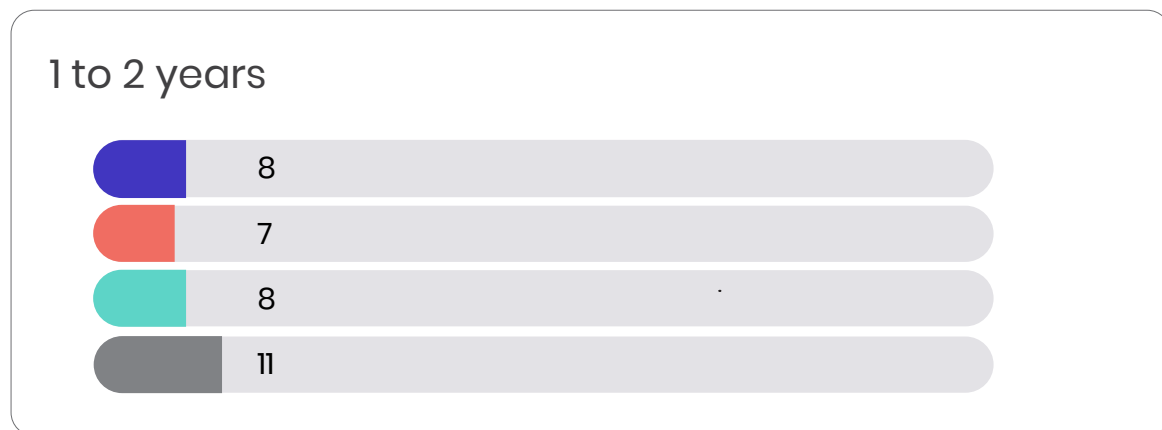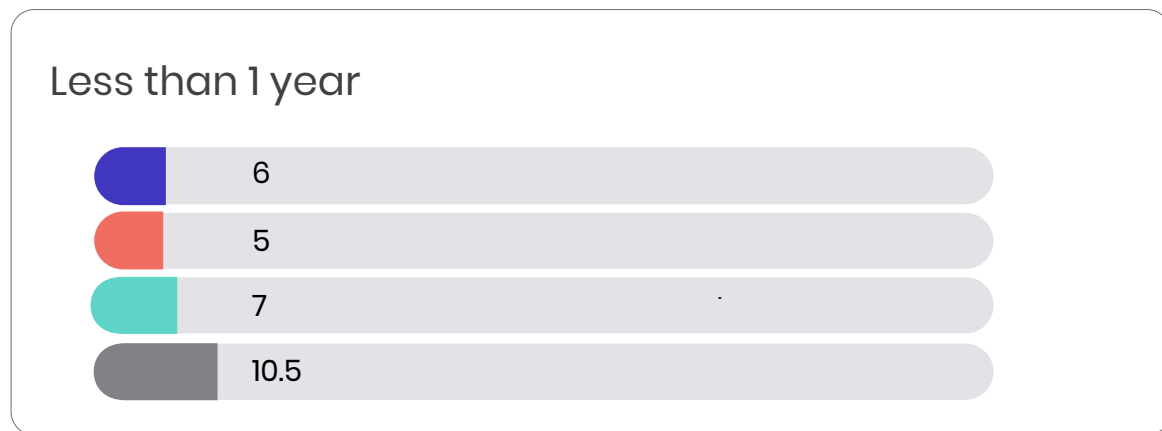
Similar to last year's results, we see a continuous trend of testers who are staying in the field for years, becoming testing professionals and advancing both their knowledge as well as the overall quality of our domain.

On the other hand, we see a larger concentration of newer testers on smaller companies. This can serve as a tip for people who want to go into testing for the first time. If you want to land your first job as a tester, it may be easier on a smaller team willing to bring a person with less experience and more potential. On the other hand, if you are an experienced tester looking for a job, it may be easier to find it in a larger testing organization.

Was your income affected by the current COVID-19 pandemic?

No

Yes

71%

29%
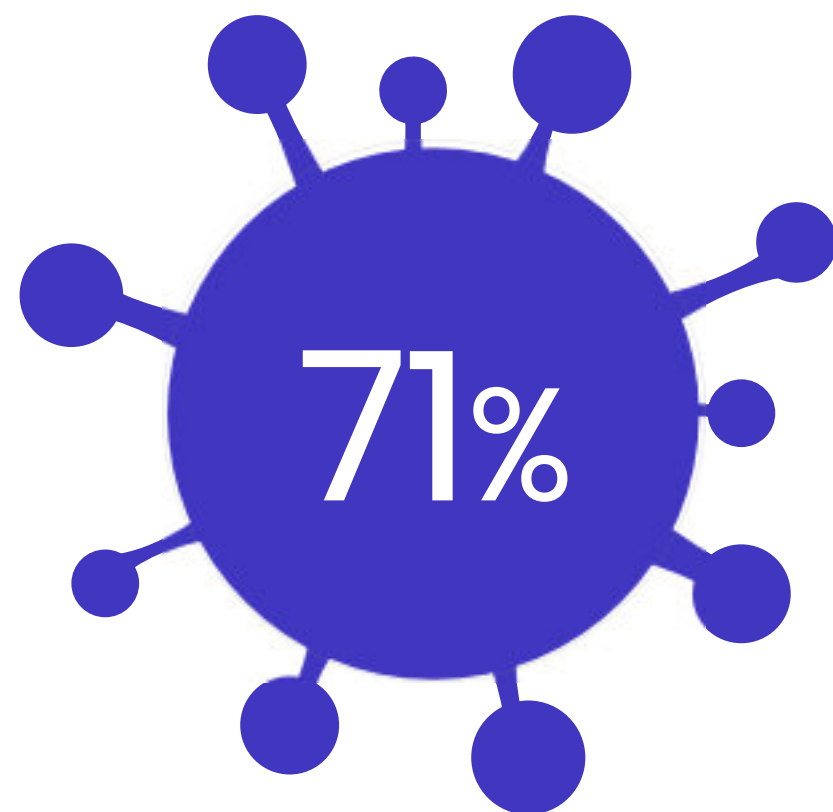
We were happy to see that the majority of respondents were not affected by the COVID-19 pandemic in regards to their income. Among those who were affected, effects ranged all the way from salary or contract hours decrease, companies that had stopped the price match for the 401K and didn't give annual raises and decrease in company's stock price that have an indirect impact on compensation.
On the positive side some respondents reported to have found a better job, and improved their work-life balance or had their Income improved due to their company receiving more work and contracting business drastically increased.

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Education
and Training

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How do you learn "testing" - at present and when you started your career?

What methods do you use today or have used in the past to enhance your knowledge and sharpen your testing skills (you can choose more than one) %

Just doing it	63	67.5	65
Testing books	54	56.5	55.5
Conferences, meetups and seminars	49.5	49.5	46.5
Webinars and podcasts	46	45	42.5
Certifications and Courses	44	44	43.5
Online communities and forums	44	40	37
Peer mentoring	43	49	43
Facebook, twitter, linkedin and blogs	35	34	31
Formal Training	34	35.5	38.5
Magazines	24	21	27
From other fields (e.g. psychology, writing, etc)	16	16	14
Testing Diplomas	7.5	7.5	7.5
Testing competitions	7	5	4.5
Weekend Testing and Miagi Do	2.5	2.5	2.5
Other	4	4	7

Similar to what we saw in previous years, more testers are going to conferences and also using online resources to sharpen their skills, while less are doing formal training. The increase on the online resources and activities may also be the indirect result of the COVID crisis this year.

We like looking at the "other" replies in here as they may provide ideas to people on how to continue expanding their knowledge, and so a number of the answers people added were: Udemy test automation academy, Coursera, StackOverflow and talking to other testers in the company.

**Food
for thought...!**

Number of testers in your team/s.

How many testers work in the organization? (if there is more than one team count them all) %

2021
- 8 — I'm the only one
- 30 — 2 - 5 Testers
- 25 — 6-15 Testers
- 20 — 16-50 Testers
- 14 — 51+ Testers
- 3 — Other

2020
- 8 — I'm the only one
- 34 — 2 - 5 Testers
- 27 — 6-15 Testers
- 18 — 16-50 Testers
- 13 — 51+ Testers

2019
- NA
- 47 — 2 - 5 Testers
- 24 — 6-15 Testers
- 16 — 16-50 Testers
- 13 — 51+ Testers

2018
- NA
- 46 — 2 - 5 Testers
- 28 — 6-15 Testers
- 15 — 16-50 Testers
- 11 — 51+ Testers

Legend:
- I'm the only one
- 2 - 5 Testers
- 6-15 Testers
- 16-50 Testers
- 51+ Testers
- Other

From last year and onward, we have split between cases of a single tester in the organization to small testing teams of 2-5 people. We see an increase in the % of large teams, which is surprising and will need to be further explored in next years' survey.
A possible explanation - to be reviewed - might be that as companies realize that testing is not a trivial task to be done only by Developers and DevOps engineers, they move back to incorporating dedicated testers into their Agile and DevOps teams. Something to keep looking at.
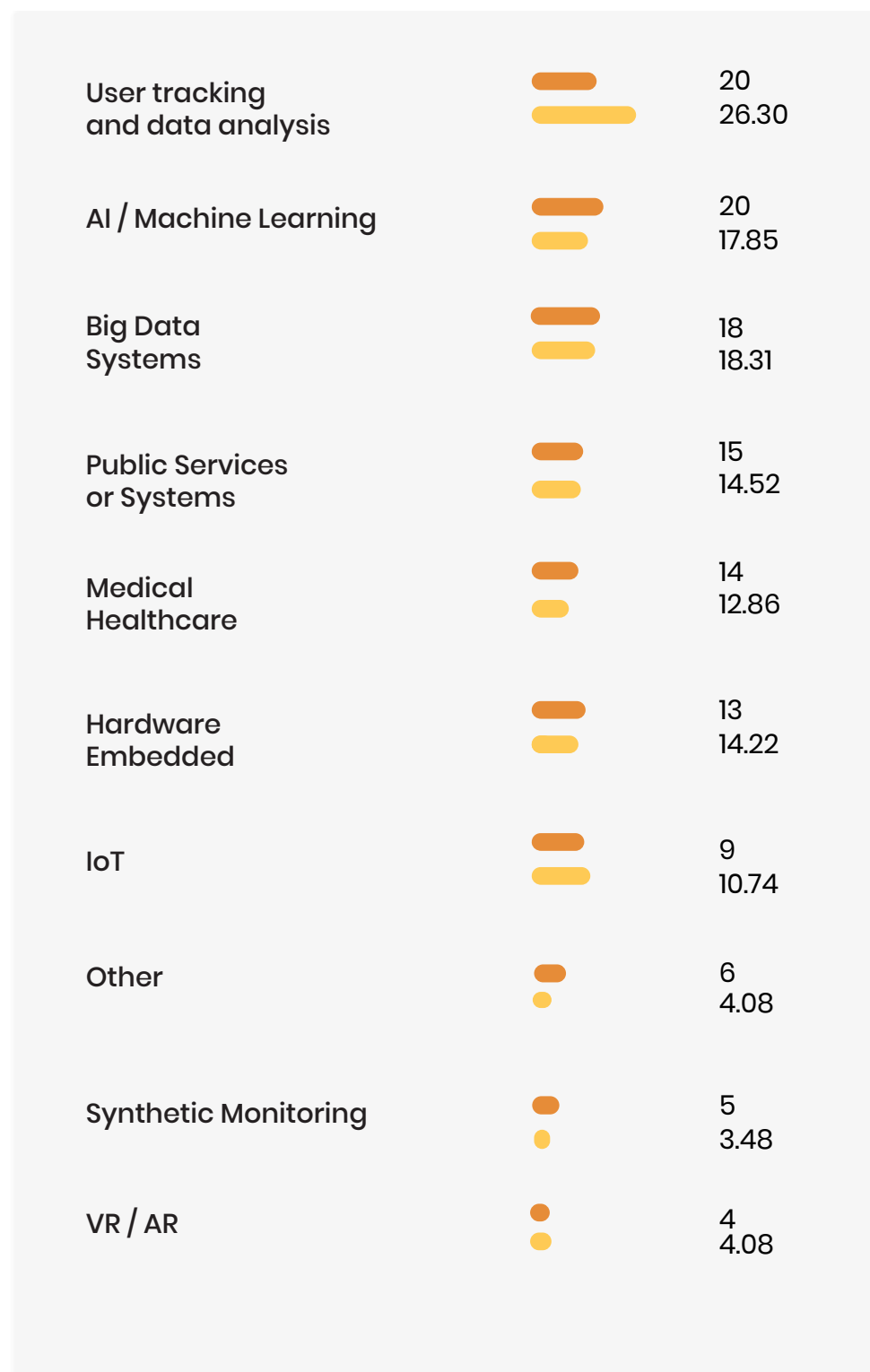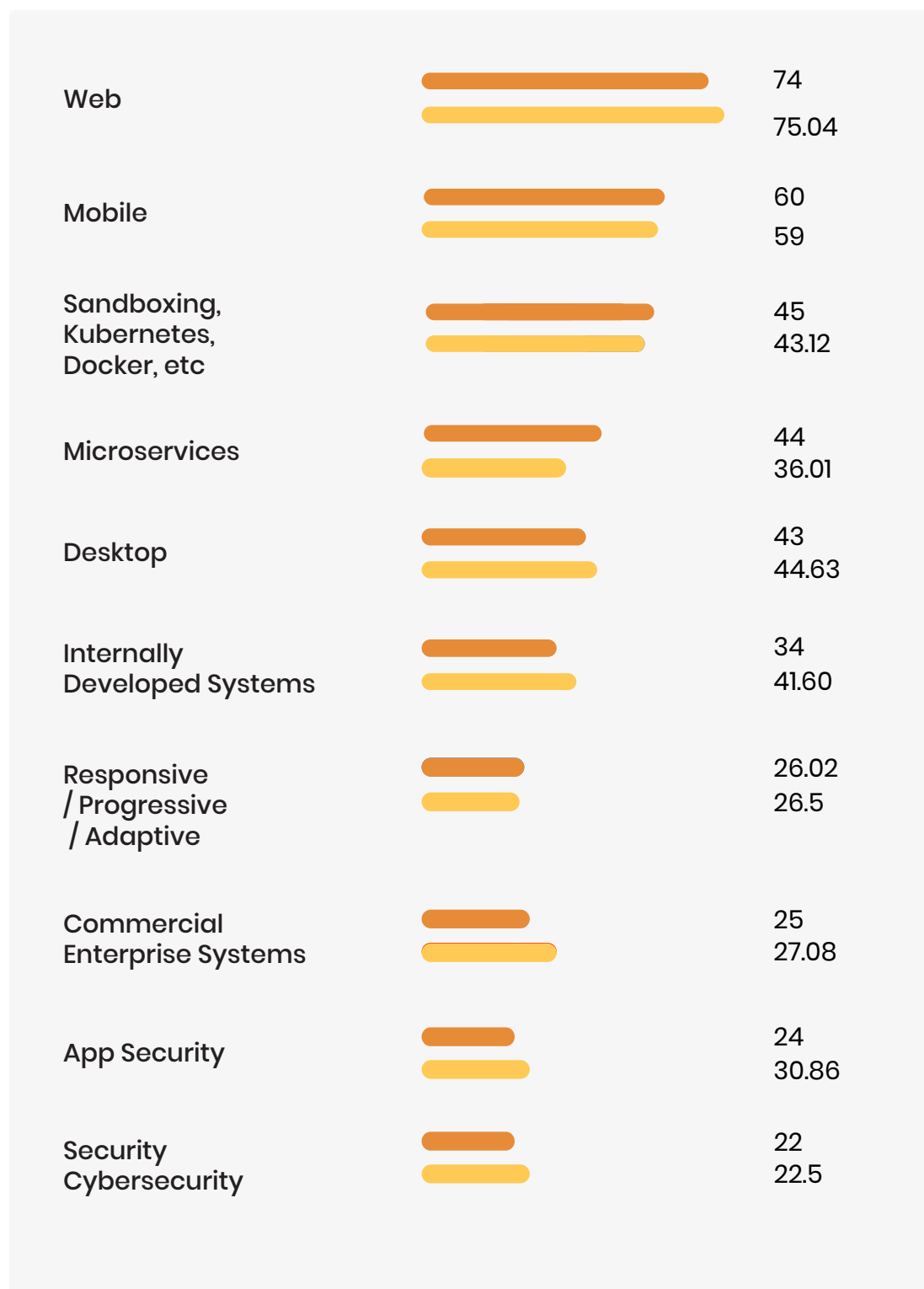
*Before 2020, the lowest option was 1-5 testers

Testing in your Organization

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Systems and technologies being tested.

Which of the following systems and technologies is your company currently using, developing and/or testing? (You can choose more than one) %

Technology	2021	2020
Web	74	75.04
Mobile	60	59
Sandboxing, Kubernetes, Docker, etc	45	43.12
Microservices	44	36.01
Desktop	43	44.63
Internally Developed Systems	34	41.60
Responsive / Progressive / Adaptive	26.02	26.5
Commercial Enterprise Systems	25	27.08
App Security	24	30.86
Security Cybersecurity	22	22.5

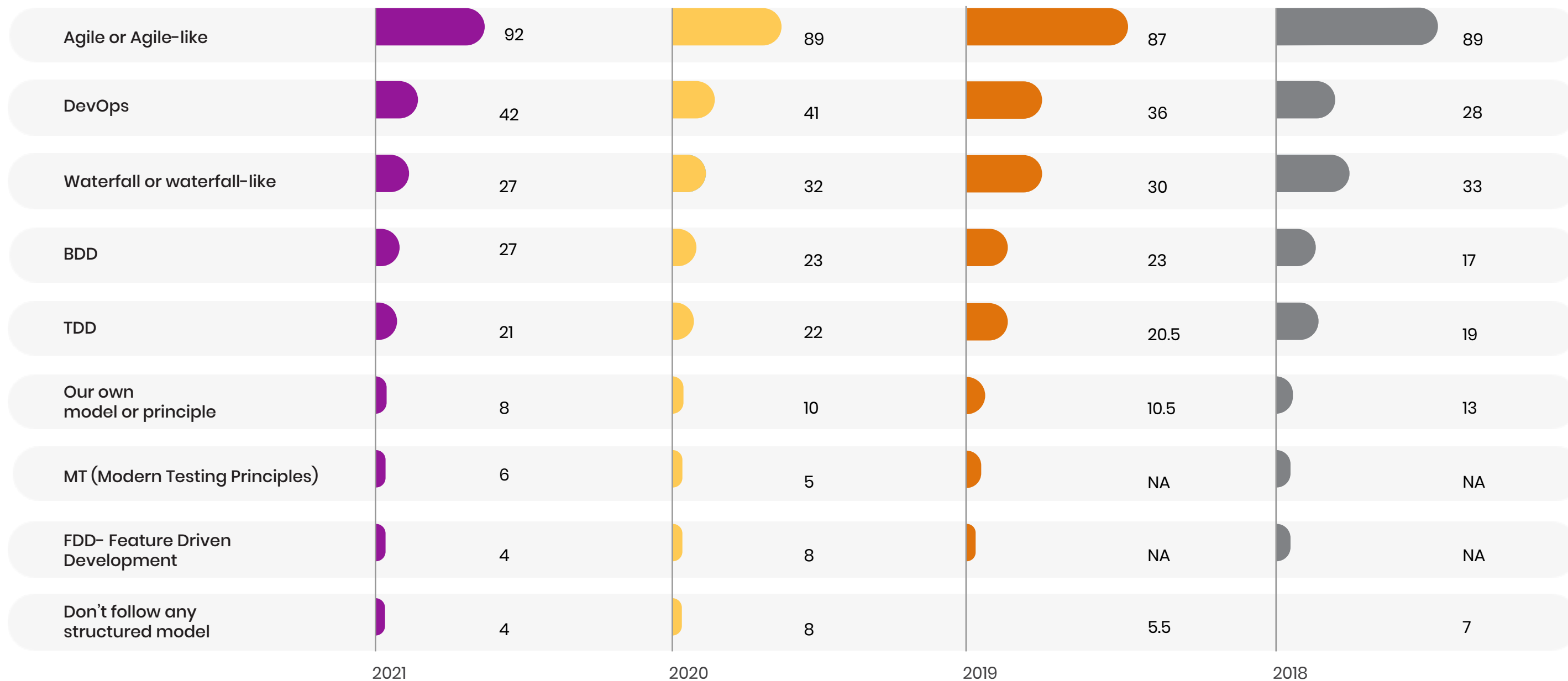| Technology	2021	2020
User tracking and data analysis	20	26.30
AI / Machine Learning	20	17.85
Big Data Systems	18	18.31
Public Services or Systems	15	14.52
Medical Healthcare	14	12.86
Hardware Embedded	13	14.22
IoT	9	10.74
Other	6	4.08
Synthetic Monitoring	5	3.48
VR / AR	4	4.08

Microservices continue to grow in presence, in accordance with our assumption that this technology will continue to be relevant in the upcoming years. In contrast, there is a marked decline in the number of Internally Developed Systems being tested by organizations. Which is a good news for vendor companies.
In the "Other" category there were technologies such as Telecon, API, SAP, CRM, and more.

We believe that new and newer technologies coming in and the challenges they pose create more opportunities for testers, which compels us to learn new things and come up with interesting strategies, toolings, frameworks, and methods. This is where learning from each other, through conferences and other modern platforms seem to have become more relevant. It is interesting to notice how the questions raised by some trends in the survey are partly answered by other trends we come across.

● 2021
● 2020

Development and Testing models or principles followed in your organization

What type of development models or principles do you follow in your organization? (You can choose more than one) %

	2021	2020	2019	2018
Agile or Agile-like	92	89	87	89
DevOps	42	41	36	28
Waterfall or waterfall-like	27	32	30	33
BDD	27	23	23	17
TDD	21	22	20.5	19
Our own model or principle	8	10	10.5	13
MT (Modern Testing Principles)	6	5	NA	NA
FDD- Feature Driven Development	4	8	NA	NA
Don't follow any structured model	4	8	5.5	7

Agile followed by DevOps are the top models currently, still gaining traction year over year. We also see that Waterfall projects keep their slow by constant decline in the industry.

BDD keeps gaining momentum, as more organizations implement this approach to define their development and testing processes.

Looking inside the numbers we see that larger companies will use BDD and TDD more than smaller companies, where are as the vast majority of respondent saying they do not follow any structured model came from companies with 10 employees or less

Brought to you by: PractiTest

Do you work with CI or CD (Continuous Integration or Continuous Deployment) in your organization?

2021

44 35 16 2 2

2020
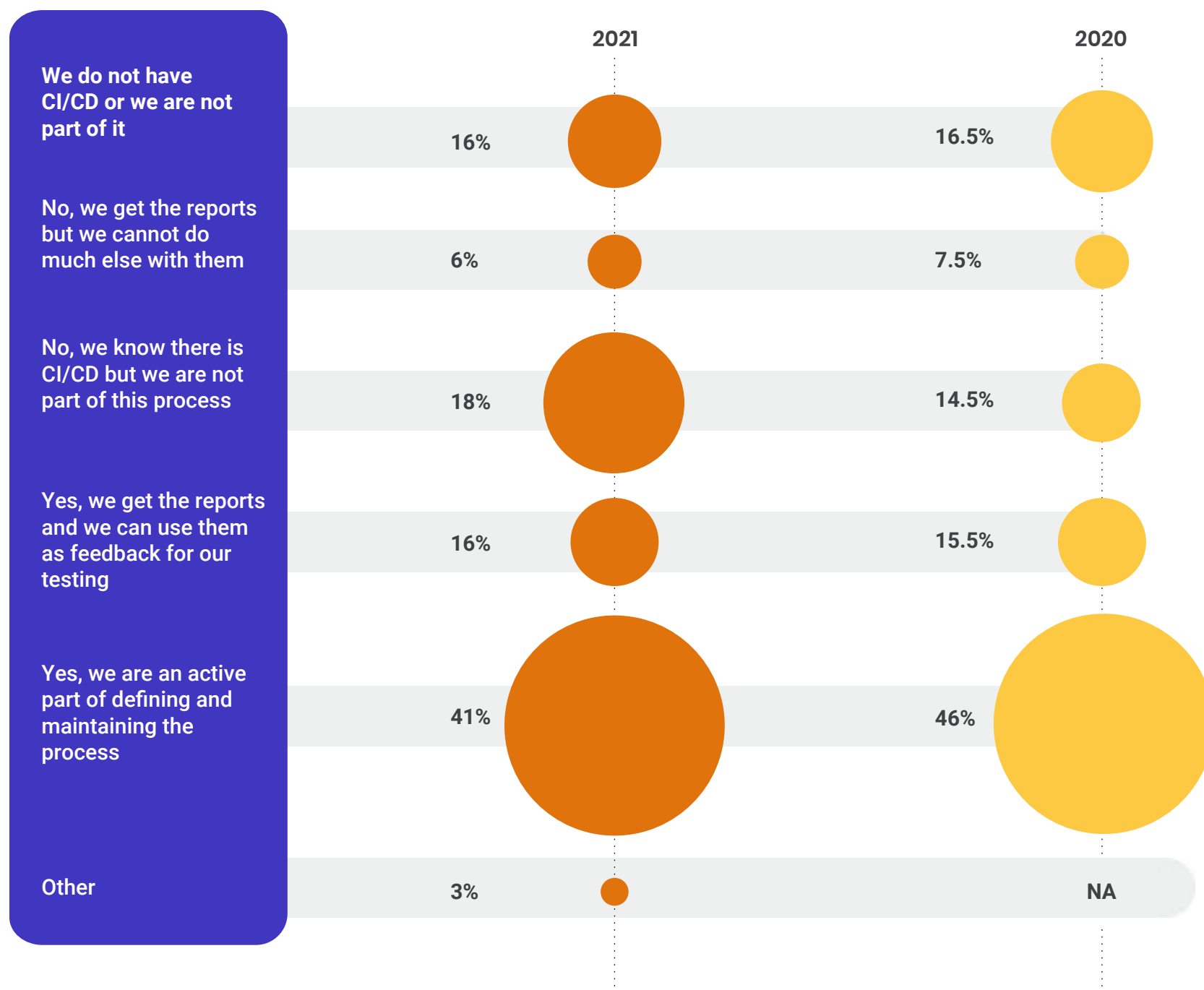
41.5 38 16 2 1

2019

38 42 14 2 2
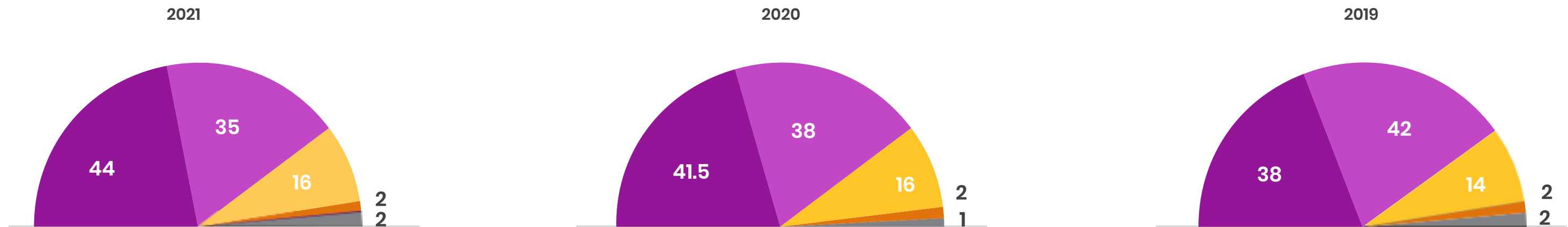
- ● Yes, in all projects
- ● Yes, in some projects
- ● No
- ● What is CI/CD?
- ● Other

This year's results continue the trend towards greater usage of CI in all projects, although the overall usage of CI remains the same (roughly 80%).

The question regarding testers' involvement in this process remains. In our minds, testers should be a part of the definition and execution of the CI process, given the Quality aspect of it, and the overall importance to the stability of the product being developed.

CI or CD

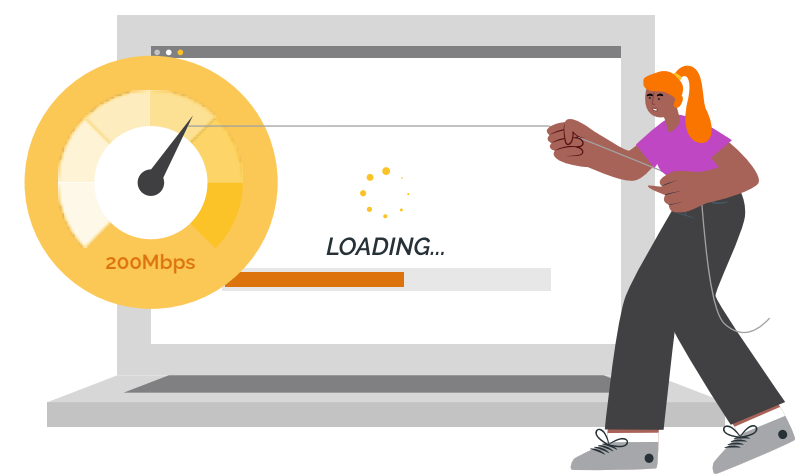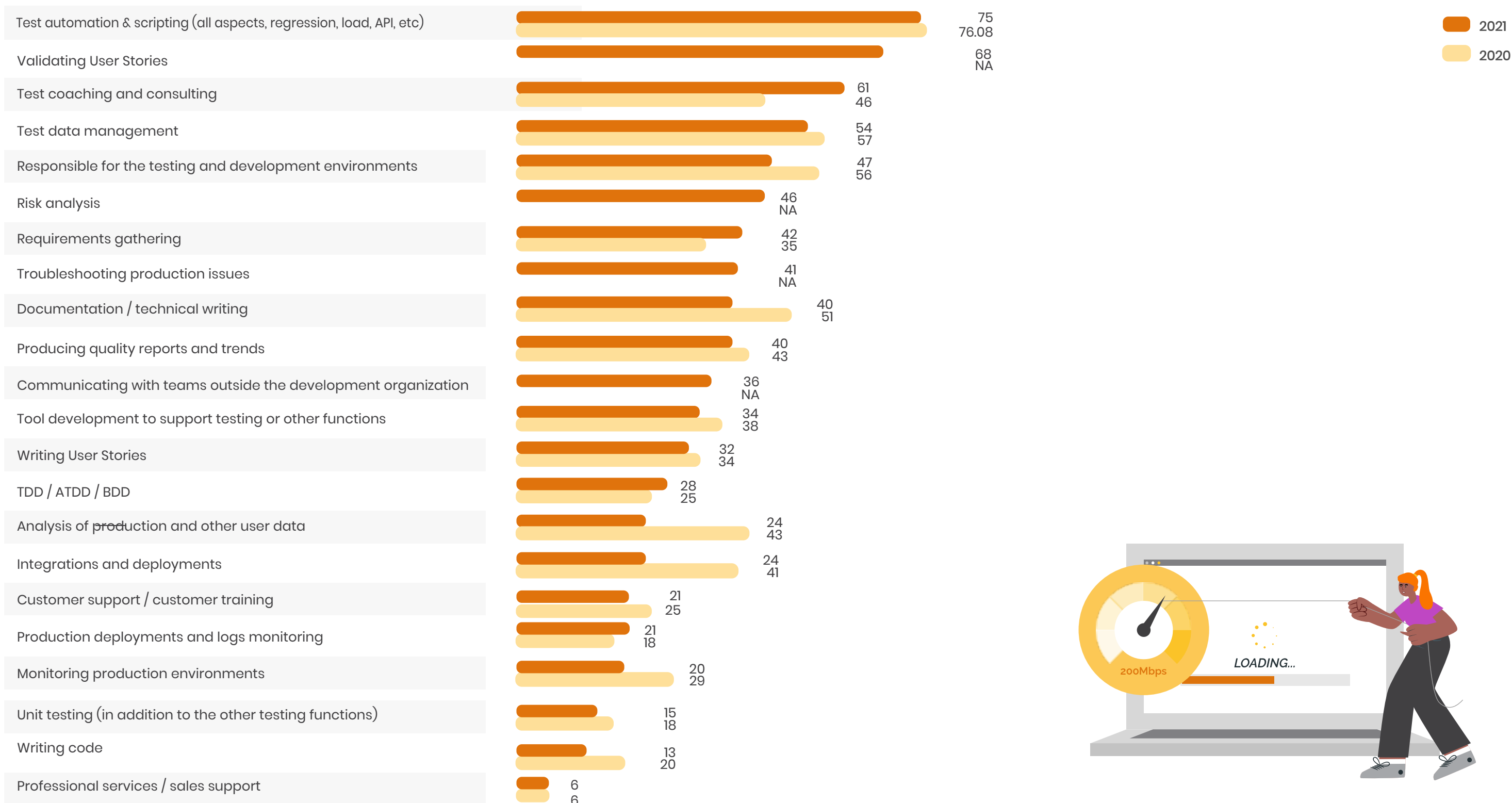# Is the testing organization part of the CI/CD process?

2021   **2020**

We do not have CI/CD or we are not part of it
16%   16.5%

No, we get the reports but we cannot do much else with them
6%   7.5%

No, we know there is CI/CD but we are not part of this process
18%   14.5%

Yes, we get the reports and we can use them as feedback for our testing
16%   15.5%

Yes, we are an active part of defining and maintaining the process
41%   46%

Other
3%   NA

This is a step back for testing in the CI/CD process, with less respondents participating in what needs to be a part of the overall quality and testing process of the company.
We still have work to be done!

Tasks of the Tester in your organization

What tasks do testers perform in your organization other than testing? (you can choose more than one)

Test automation & scripting (all aspects, regression, load, API, etc)
75
76.08

Validating User Stories
68
NA

Test coaching and consulting
61
46

Test data management
54
57

Responsible for the testing and development environments
47
56

Risk analysis
46
NA

Requirements gathering
42
35

Troubleshooting production issues
41
NA

Documentation / technical writing
40
51

Producing quality reports and trends
40
43

Communicating with teams outside the development organization
36
NA

Tool development to support testing or other functions
34
38

Writing User Stories
32
34

TDD / ATDD / BDD
28
25

Analysis of production and other user data
24
43

Integrations and deployments
24
41

Customer support / customer training
21
25

Production deployments and logs monitoring
21
18

Monitoring production environments
20
29

Unit testing (in addition to the other testing functions)
15
18

Writing code
13
20

Professional services / sales support
6
6

2021
2020

LOADING...
200Mbps

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Testing Techniques and Methodologies

What testing approaches do you use during your testing activities? (you can choose more than one)

Mob Testing
8% 14% 10%

User simulation Persona testing
26% 23% 20%

Coordinated User (Beta) Testing
24% 26% 26%

Test specification techniques (e.g. equivalence partitioning, boundary analysis, etc)
61% 54% 56%

Exploratory Testing Session based Testing
84% 84% 82%

Traditional script based checking
62% 64% 61%

Ad Hoc Testing
62% 60% 58%

Pair Testing
30% 27% 28%

Bug Hunts / Test Sessions
38% 37% 37%

Analytics of Product Telemetry
9% 9% 7%

A/B testing
17% 22% NA

Review of product logs (production or testing)
24% 29% 30%

Code walkthroughs
20% NA NA

There is no real movement on the blend used by most testers when approaching their day to day testing work. But we see some steady increases in the percentage of testers using Pair Testing and Personas as part of their virtual toolbox.

We also added this year the option for Code walkthroughs, a very valuable tool when working with developers, and we are happy to see that <of the respondents are already using this approach as part of their work.

- 2021
- 2020
- 2019

Sources for testing information

How do you know what tests you need to run or write for your testing operations?

83%	User Stories
66%	Past experience in other testing projects
61%	Bugs from customers
54%	Work based on Exploratory Testing and Heuristics
52%	Brainstorming sessions with in the team
48%	Formal Requirements
31%	Interviewing Customers / Product Owners
19%	Production logs / Monitoring services
13%	Application modeling
6%	Formal process (e.g. STPA)
2%	Other
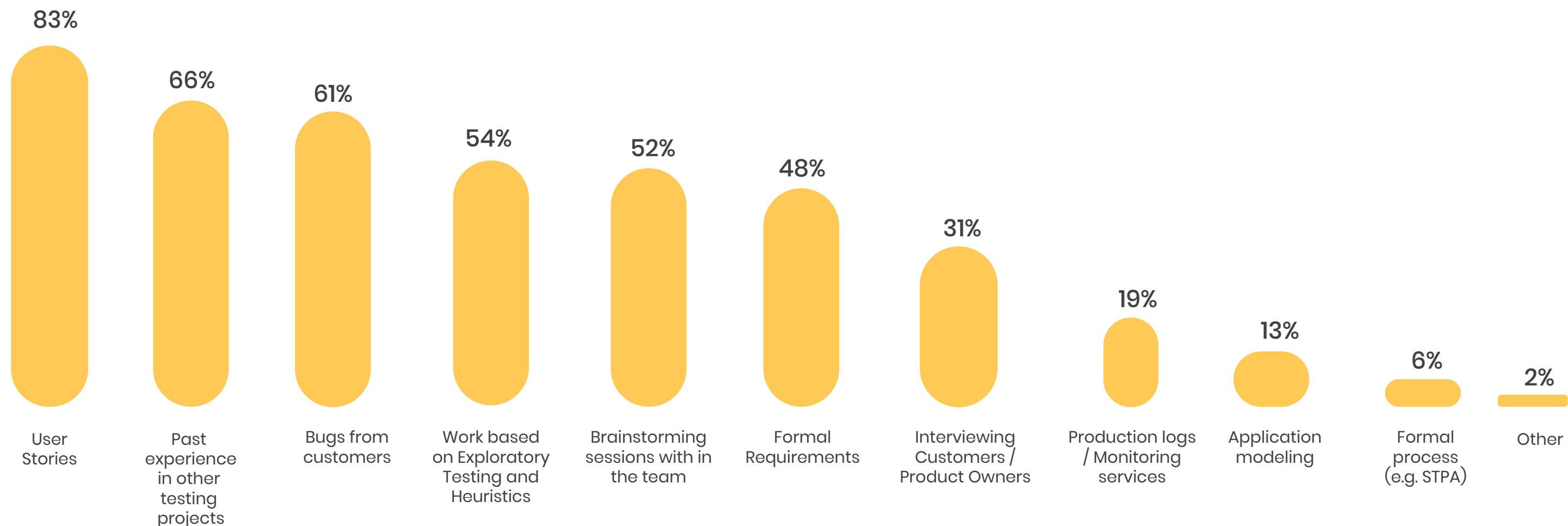
User stories and past experience are the top sources for getting the needed information to decide what to run. The other sources of information on the top of the list are the obvious bugs from customers and exploratory testing, which is growing in importance as a source of knowledge. With the industry growing professionalism and years of experience, this comes with no surprise.
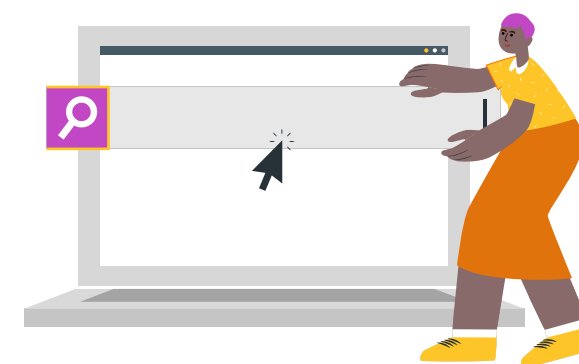
How much of your testing is done by non-dedicated-testers?

In many organizations other team members also take part in the formal testing process.
(Developers, Product Owners, Support, End Users etc.)

■ 2021
■ 2020

| 15% | 10.50% | 43% | 39.50% | 29% | 37% | 11% | 11% | 2% | 2% |

All testing is done by
dedicated testers only

Less than 10%

Between 10% and 50%

Between 50% and 75%

All testing is done by
non-dedicated testers
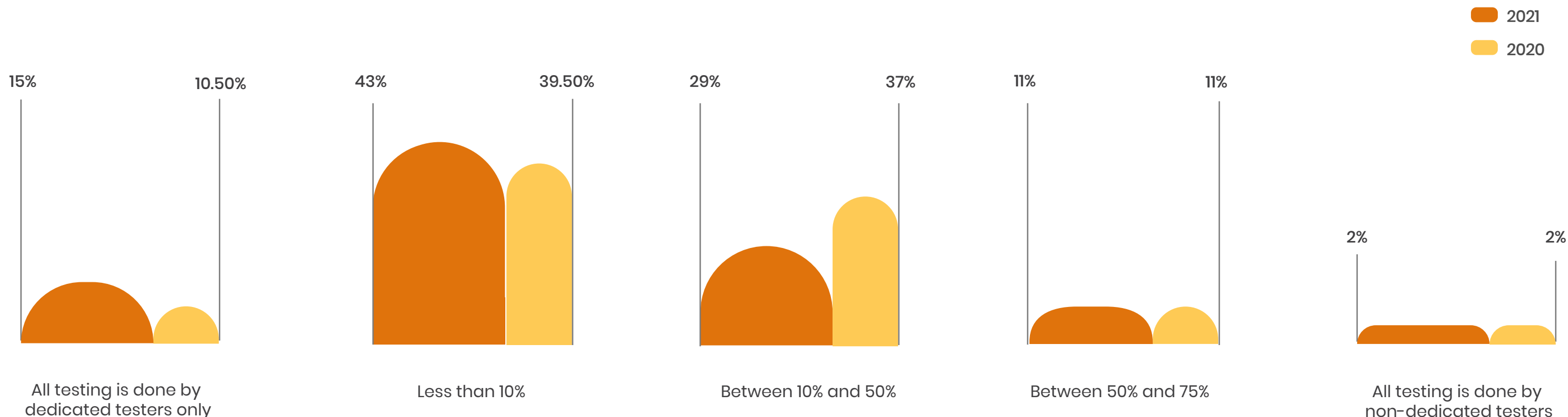
This year we see more organizations where all the testing is done solely by testers, something that surprised us somewhat and we will keep watching in future editions of the State of Testing.

But looking closer at the data, we were able to see some interesting patterns to keep in mind:
- Single testers (organizations where there is only one tester) still report the highest percentage of answers where all the testing is done by testers (by them alone).
- Large organizations tend to push toward participation of the whole team in the testing process just as smaller organizations
- Organizations following Modern Testing principles (unsurprisingly) will share more of their testing tasks between testers and developers, they will be followed by organizations working with TDD and BDD approaches, and only then will we see teams working with DevOps and Agile, and closing with teams working under Waterfall principles.

Adoption of testing processes or techniques by your organization

What techniques or processes are you following or implementing?

59%	55%	39%	9%	27%	33%	12%	36%	9%	14%	6%	7%

Shifting Testing Left   **Chaos Engineering**   **Modern Testing Principles**   **Testing in Production**   **Shifting Testing Right**   **Other**
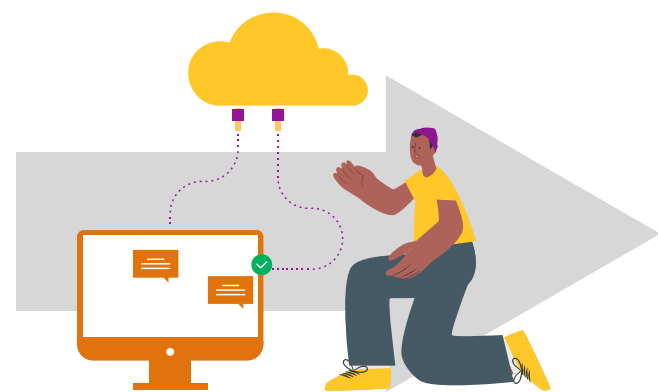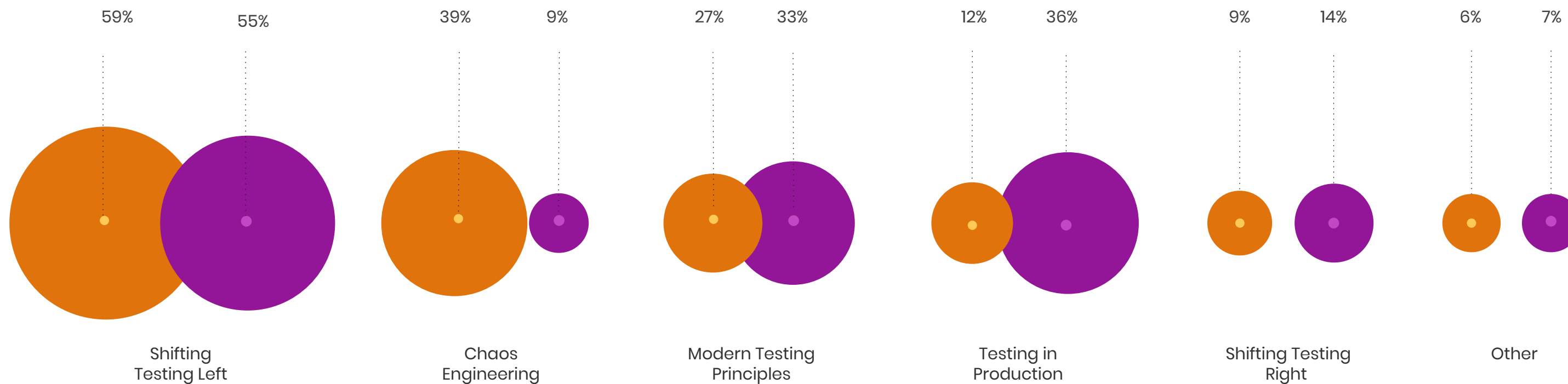
We see how on the one hand shifting left is increasing in adoption, but at the same time testing in production and shifting right is decreasing (this is somewhat contradictory with the increase in Chaos Engineering). We will need to keep an eye on this question in years to come.

Among the "other" answers we see "Automation first" approach and the adoption of "Continuous Improvement" as an organizational methodology.

- 2021
- 2020

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Who else participates in testing in your organization

Following up on the previous question, if there are people running tests in your company who are not dedicated testers, we want to know who these people are.

33% **44%**	**15%** **12%**
Programmers / Operations	Customers / End Users

5% **NA**	**0.25%** **0.50%**
Domain specialist	Sales

26% **25%**	**7%** **7.50%**
Product Owners / Managers	Customer Support / Customer Success

2% **NA**	**12%** **11%**
Management	Other (please specify)
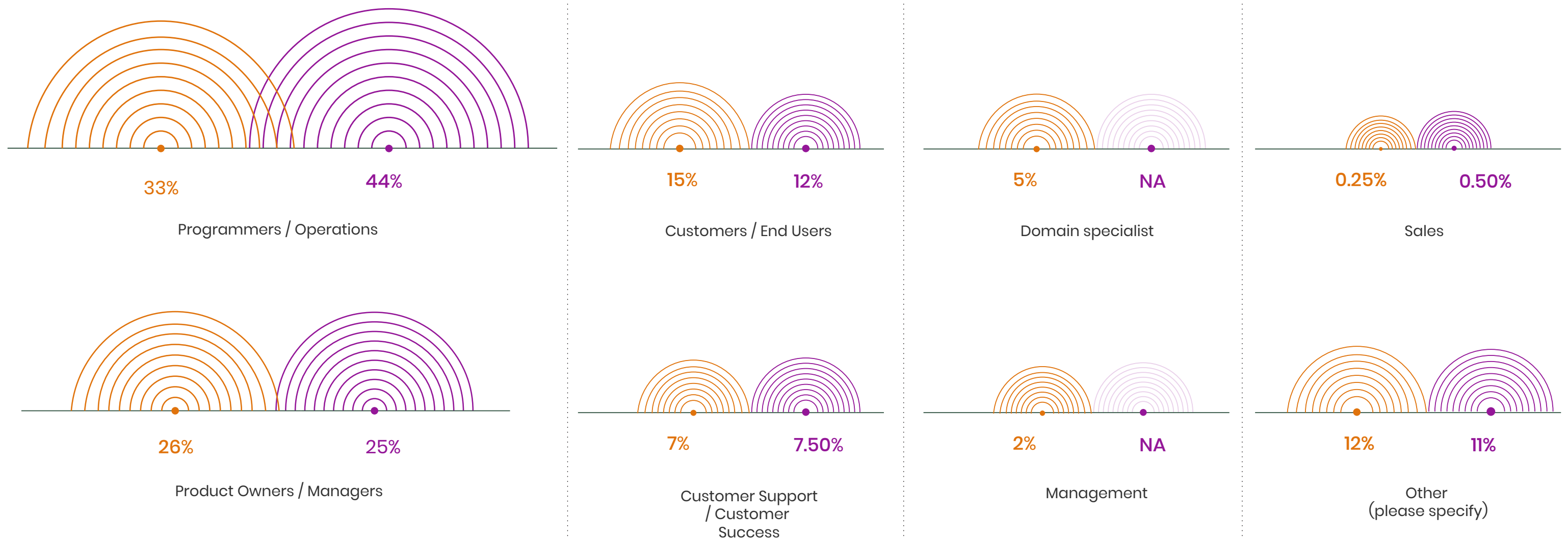
It is important to know who else can help us in our testing tasks, and it is not surprising to find developers heading the list, but notice that we can also turn to Product Owners and Customer Support people for help, just as we can ask End Users and Domain specialists.

We are not 100% sure why sales people do not take a more active part, given that they are in direct contact with users most of the time, but it is something to review.

■ 2021
■ 2020

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Test management tools

What tools do you use to manage your testing?

Tool	2021	2020
Bug tracking tools (Bugzilla, Jira, Redmine, etc)	75%	76%
Agile Workflow tools (Trello, Jira Agile, etc)	59%	54%
MS-Excel, MS-Word, Mail and the like	54%	52%
Source control systems (GitHub, BitBucket, etc)	46%	43%
Test or QA management tools (QC/ALM, TFS, PractiTest, etc)	38%	40%
Mind Maps	22%	17%
Project management tools	18%	17%
Exploratory note-taking tools	14%	16%
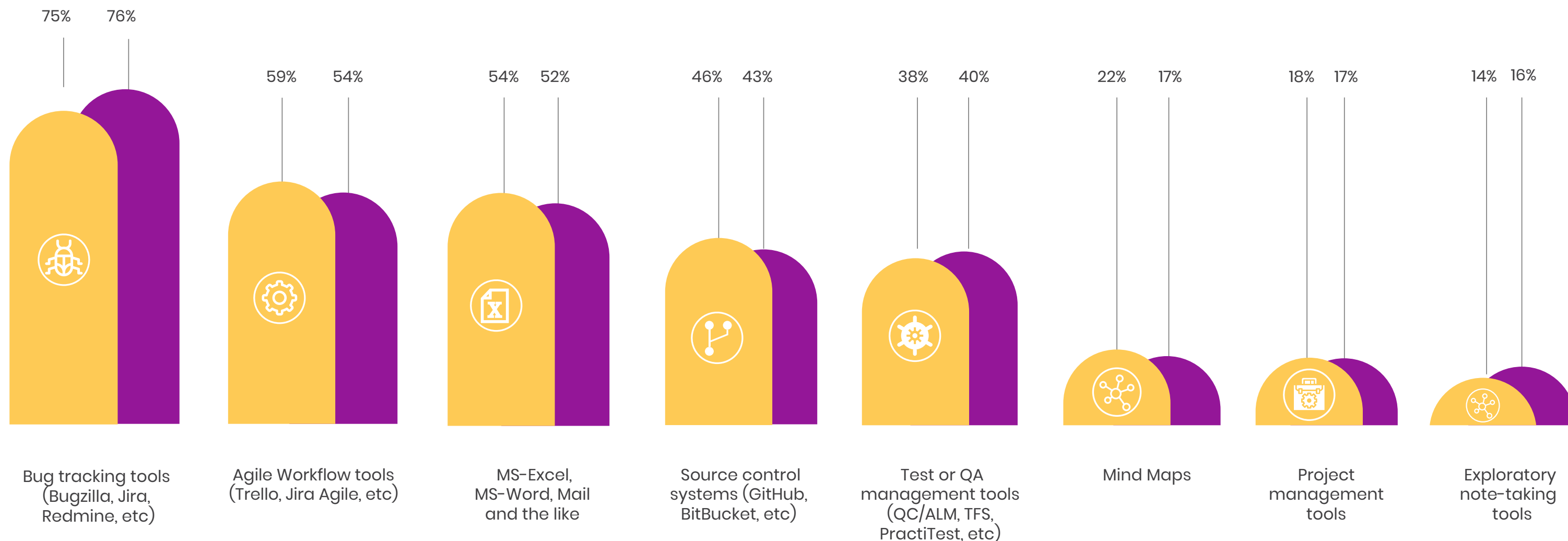
As more and more teams work Agile, we see Agile Workflow tools taking a big part of the test management efforts, but we also see how many non-testing or even development systems such as Office and Email take an important part as well.
Compared to previous year, we see an increase in the use of Mind Maps while we see a decrease in the use of dedicated ET Note-Taking tools.

- 2021
- 2020

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Scripting / Automation

Where do you use scripting and/or test automation in your organization? %

Functional or Regression Testing
75
75
75.80

Continuous Integration (CI) / Continuous Delivery (CD)
49
50
50

Unit Testing
43
52
45

Load and Stress Testing
43
41
40

Production and synthetic monitoring and alerts
6
18
20

Test data generation
30
29
29

BDD scripts using Specflow, Gherkin
20
17
20

Home-built scripts
17
19
17

Log and Data analysis
14
11
11

I don't know where we have automation
2
2
3

No, we don't have automation
11
12
11

The points that caught our attention here are the rise in the use of BDD and in log and data analysis. The sharp decrease on Unit Tests is also something we will want to keep our eye on, but then again in most organizations these fall under the responsibility of the development team.

The drop in production monitoring is also interesting, but it is aligned with the decrease in the shift right and testing in production answers we saw in some of the previous answers.

■ 2021
■ 2020
■ 2019

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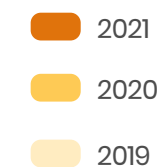
Testing team challenges

How challenging are each of the following aspects of the testing team and their work in your organization

Aspect	Very Challenging	Challenging	Not Challenging
More early involvement in the work of the company	41	29	30
Managing the testing data and environments	40	36	24
Coping with timeframes	39	33	28
Team Size	41	29	30
Whole Team testing	35	32	33
Training	40	33	27
Political & cultural issues	34	24	42
Team Budget	35	28	37

Aspect	Very Challenging	Challenging	Not Challenging
Getting good tools	36	31	33
Keeping up with change drivers (technology and methodologies)	30	38	33
Communicating the value of testing to the organization and management	34	27	39
Time spent on side tasks not related to testing	29	36	35
Work with Offshore / Outsource	24	22	54
Interactions with Developers	19	25	56
Adjusting to work on Agile teams	26	24	50
Working with business to understand the product before coding begins	35	31	34

● Very Challenging   ● Challenging   ● Not Challenging

Changes to the way we test

As part of our "open questions" we like asking people how are they implementing new processes in their teams, we got some pretty interesting responses:

> Introduced Keyword driven automation tests and subsequent implementation to improve test automation and disseminate automation over the whole team

> We eliminated dedicated QA Engineer role in agile teams. We converted all QA engineers to software developers. They main responsibility is now coding and they are testing champions in their agile teams

> Introduced formal peer review system of tests/test coverage.

> Adapt to test driven and behaviour driven models due to needs, demands.

> Mix manual test with automation judiciously due to fragmentation of tools

> We are moving away from traditional script based testing to practically testing and documenting the tests. This increases the test efficiency and the amount of time spent in documentation. We are still getting this change done organically, so as not to cause immediate disruption.

> I already changed the way *I* test, now I'm trying to get the rest of the organisation on board to adopt the Modern Testing principles. In order to stay competitive we need to increase our throughput of quality software or "Accelerate the achievement of shippable quality"

New Technologies or subjects in general that will be important to the testing world in 3 - 5 years from now

Another open question for our respondents to try and understand what topics or areas are going to be "hot" in the coming years. For all those young testers, or people asking themselves what technologies should I be investing my knowledge for the coming years, here are some interesting ideas!

IoT and Microservices

RPA
(Robotic Process Automation)

Machine learning - one of the most common responses with **more than 35%**

Cloud

Automation

AI Testing

VR

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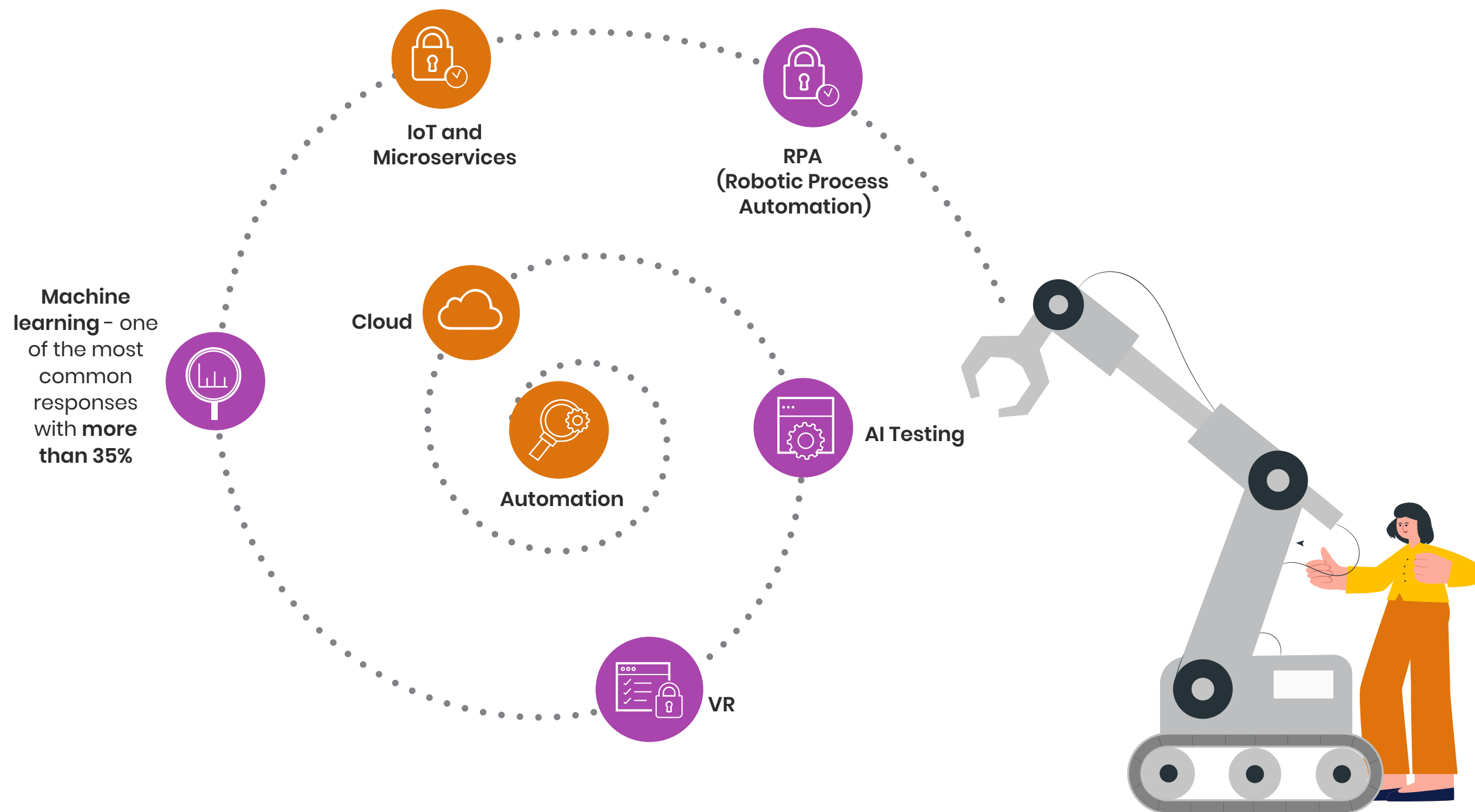
Additional non-testing activities

Coaching team for testability

Acting as Scrum Master

Writing user stories, analyzing design screens against user stories

CI work in Jenkins

They made me a Senior Manager for a 10 people team including developers and testers (!!!)

Training sales and other team members regarding new product features developed.

Setting up a traceability concept using the estab-lished project tools to ensure requirements-based testing.

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Testing skills and knowledge needed to succeed

	Very important	Important	Not important
Communication skills	78%	20%	2%
Functional testing automation and scripting	63%	34%	3%
API testing	63%	34%	3%
Web technologies and testing	59%	36%	5%
General testing methodologies	58%	40%	2%
Test automation patterns, principles, practices	49%	47%	4%
Test / Experiment Design	49%	47%	4%
Security testing	44%	46%	10%
Agile methodologies	44%	47%	9%
Performance and load testing	38%	55%	7%
Coaching / Training skills	37%	52%	11%
Microservices testing	34%	50%	16%
Mobile technologies and testing	33%	56%	11%

	Very important	Important	Not important
Customer facing skills	33%	50%	17%
Testing in the Cloud	33%	50%	17%
Programming skills	30%	58%	12%
Data analysis	29%	59%	12%
Enterprise software and process testing (ERP, CRM, BI, etc)	22%	52%	26%
Machine learning testing / AI	19%	47%	34%
Big data testing	19%	53%	28%
Business skills	18%	56%	26%
Embedded systems and testing	16%	53%	31%
IoT testing (Internet of Things)	14%	50%	36%
Operations management	10%	56%	34%

It's somewhat surprising to see that close to 10% of respondents still consider Agile methodologies to be not important for them. An important reminder that many organizations are still working Waterfall.

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Personal Development

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The Future of Testing

Where do you see yourself 5 years from now?

	I will be working as a tester or test manager	I will be a testing consultant/ coach	I don't know what I will be doing 5 years from now	I will be working on an agile management role	I will be working in a business role	I will be working as a programmer or programming lead	I will be retired	I will not be in the technological industry
2019	39	19	17	8	8	6	2	1
2020	38	19	19	8	6	6	2	2
2021	46	19	13	6	6	5	4	1

- 2021
- 2020
- 2019

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How concerned are you about your job stability

Not concerned

46	59	52	48
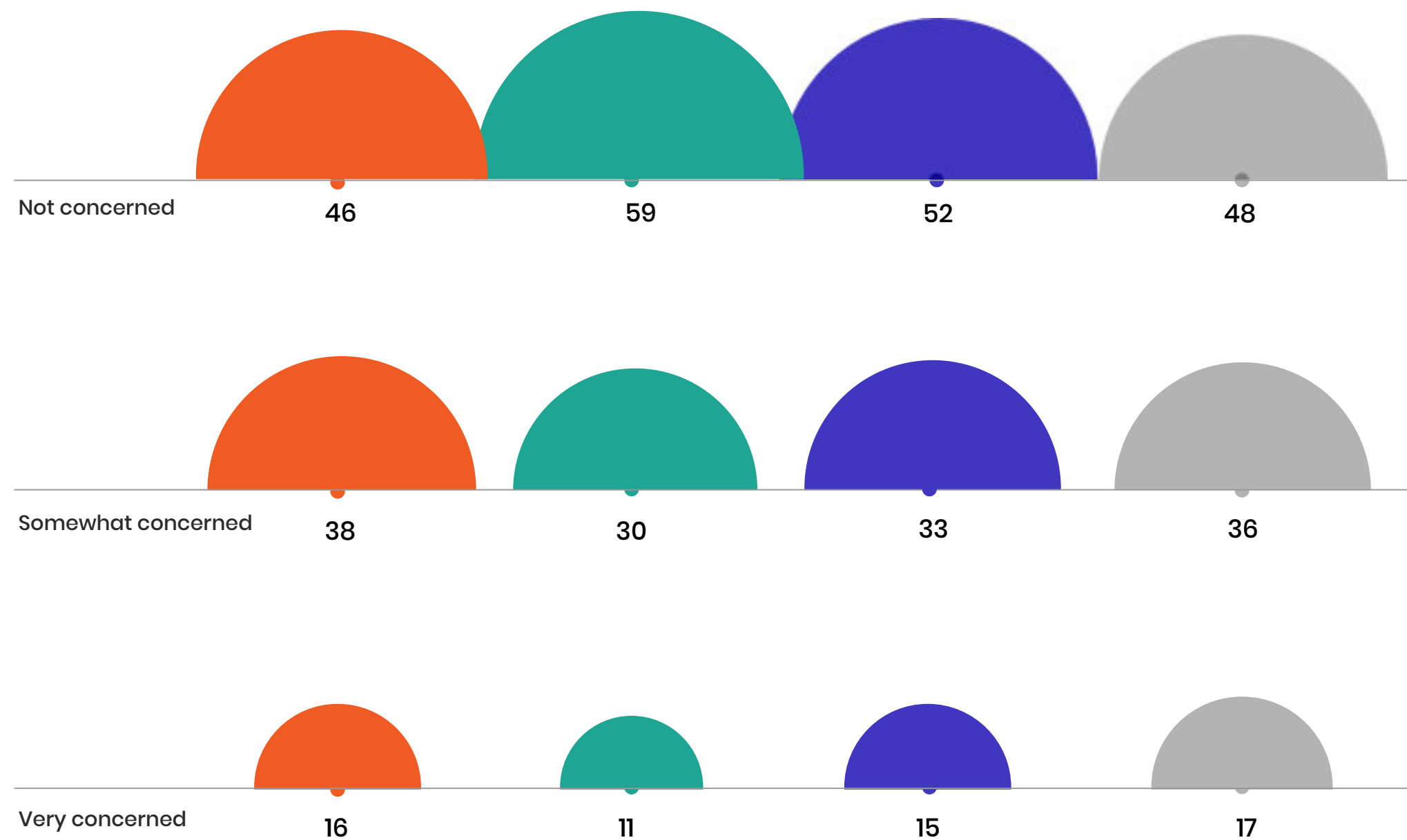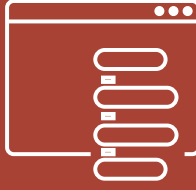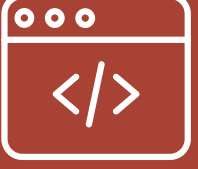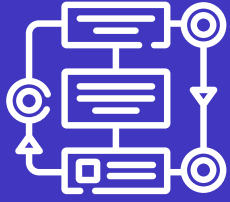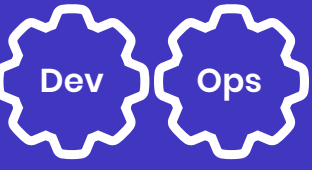
We are seeing some shifts in the level of concern, going back a number of years in what was up to last year a positive curve. We believe this may be a general effect from the current global situation.

Somewhat concerned

38	30	33	36

- 2021
- 2020
- 2019
- 2018

Very concerned

16	11	15	17

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If you are a hiring manager, did you change or add any desired skills in the people you are looking to hire for testing jobs? What are those skills?

Keyword driven tests have been added to the required skills.

SQL query writing skills, api testing , performance testing

Heavy emphasis on soft skills.

Programming, logic thinking analysis

Exploratory testing skills

Communication

Continuous Testing (not fake CI/CD stuff)

People who are flexible to spread to Developer/Devops areas in addition to Core testing.

Dev Ops

Basic security testing skills

Real test automation, understanding most test automation efforts is on maintenance.

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As a tester, what would you like to see changed (regarding people, your organization, the Industry) that would help you do your job better?

> More respect for testers

Abolish the assumption that exploratory testers are less skilled

Automation is 100% achievable in all contexts should be blown out of existence

Processes - for Quality it is important to have an efficient process for gathering requirements from Product Owners, and discuss with developers as one team.

Give more powers to testers, let them think from their point of view. Empower your QA, you can save a lot on your budget.

SRE training- That training is an ongoing process. For example it should not be limited to week 1 or the first year at a new company in getting familiar with the product because a web application is constantly changing, so having dedicated time to get familiar with the changes amongst the other testers could be a step in the right direction to address this.

Greater adoption of whole-team approaches to testing and quality.

Better coordination between scrum teams

Final Comments

Let's start from the end: The previous year wasn't a great year for anyone, but less so for testers.

Sure, 71% of respondents reported that their income was not affected, and this is not trivial in a global pandemic year. However, we do see a rise in the percentage of respondents who are very concerned, or somewhat concerned about their jobs (16% and 38% this year, compared to 11% and 30% last year). This may be just a reflection of the general sense of human beings under the stress of the Pandemic, or maybe it is not.

We see some additional areas of brightness and promising numbers in the report.   For example the fact that more and more organizations are adopting TDD and BDD as part of their development and testing processes, indicating the importance of testing across the entire organization.

This is aligned with the suggestions of "all team testing" gaining momentum, with around of respondents saying that Developers are taking part in the testing operations of their teams, and the fact that testers are taking a more central role coaching team members.

Some additional points worth mentioning are the "shifting left" trends represented in the report by the higher participation in Requirements' Reviews and User Stories' Validation processes.
Overall it seems that we are making progress.

Testing still seems strong and it looks like we are in our way to increasing the value we provide in our teams by perfecting the operations we perform day to day, and also by expanding towards additional areas of the process where the increase of visibility and faster understanding of issues arising can become critical.

We look forward to the results we'll be able to get on next year's State of Testing!
Thanks again to everyone in the team that collaborated with this project!

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