

A large, abstract geometric pattern composed of overlapping, nested diamond shapes in various shades of blue and white, creating a sense of depth and movement.

STATE OF TESTING™ REPORT 2025

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Opening Note

Welcome to the 12th edition of the State of Testing™ Report. Since 2013, we've brought together seasoned QA professionals, software developers, technology executives, and business leaders from across the globe to share their insights into the world of software testing.

In this year's survey, in addition to the ongoing questions we track over the years, we added questions around several areas. We couldn't avoid addressing the hot buzzword of AI, and we wanted to understand its impact on the world of software testing. Another angle dealt with the financial impact of QA and the metrics we use to measure our work in general. Throughout the report, we added the various relatable and topic - relevant quotes from survey respondents, in regard to the change they hope to see.

We're honored that the State of Testing™ Report has become a trusted source of information to organizations worldwide. Thank you to all who shared their experiences and expertise to help make the survey so impactful. So dive into the report, and get a snapshot of what's happening, where things stand, and what the future holds for software testing.

- Joel and Lalit



Joel Montvelisky

Chief Product Officer, PractiTest



Lalitkumar Bhamare

CEO, Tea-time with Testers



Demographics and Background



Who participated in this year's survey?

Job titles

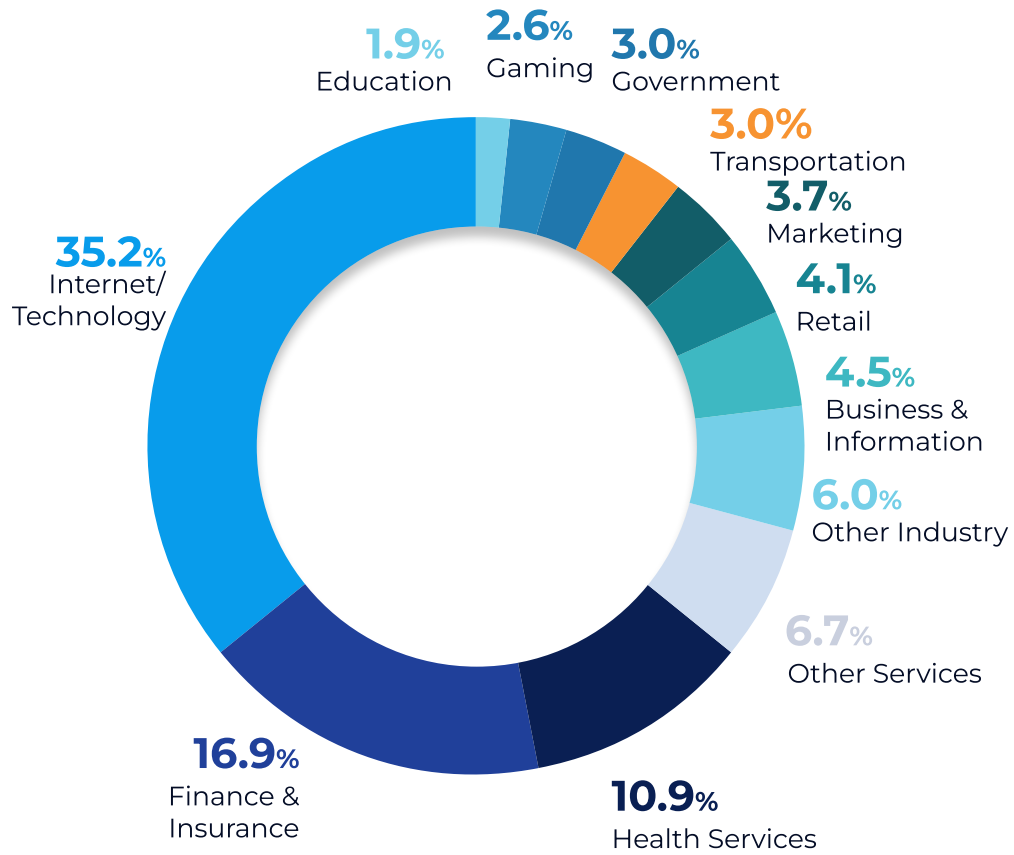
Test Leads/Managers/Directors	38%
Test Engineers/QA Engineers	27%
Tester/Test Analysts	8%
Automation Testers	7%
Developers in Test/SDET	7%
Test Architects	3%
*Other	3%
Consultants/Freelancer	2%
Development Team Lead/Manager	2%
Test Coach	2%
Software Engineer/Developer	1%
Project Managers	1%

*Others included:
Business Process Expert Testing,
Senior Quality Engineer, Principal Test
Engineer

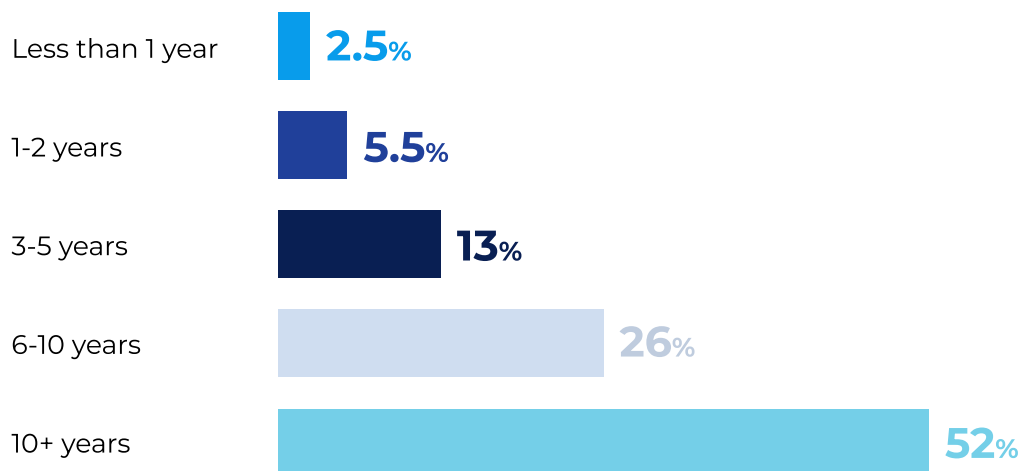


Industries

What Industry does your company operate in?



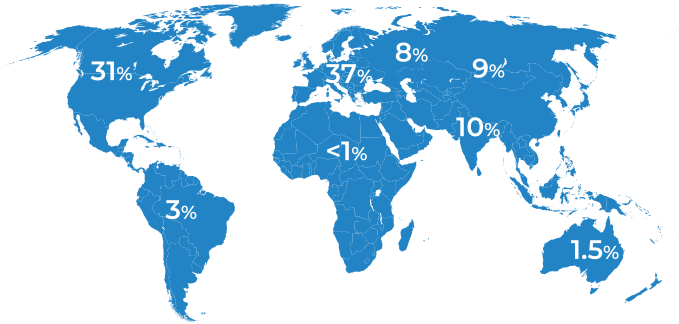
Experience



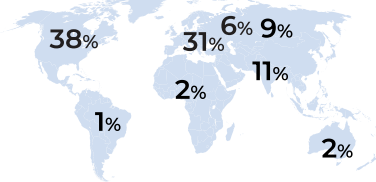
Work Locations vs. Company Headquarters

Where are your company's headquarters located?

2025

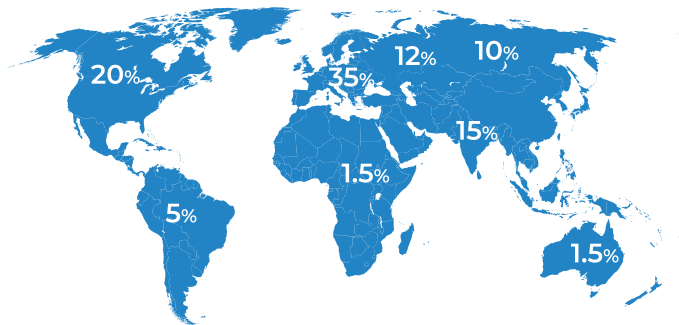


2024

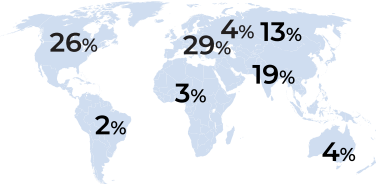


Where do you live and work?

2025



2024



Key Differences in 2025

- A significant portion of North American companies employ workers outside the region, indicating offshoring or remote work trends.
- Central Asia remains a key location for QA and testing talent, with workers frequently supporting companies headquartered elsewhere.
- Eastern Europe appears to be an emerging hub for testers, outpacing the percentage of company headquarters in the region.

The global landscape for software testing professionals is diverse, with opportunities varying by region. By aligning skills with regional strengths and global demands, testing professionals can maximize their employability and career growth, regardless of their location.

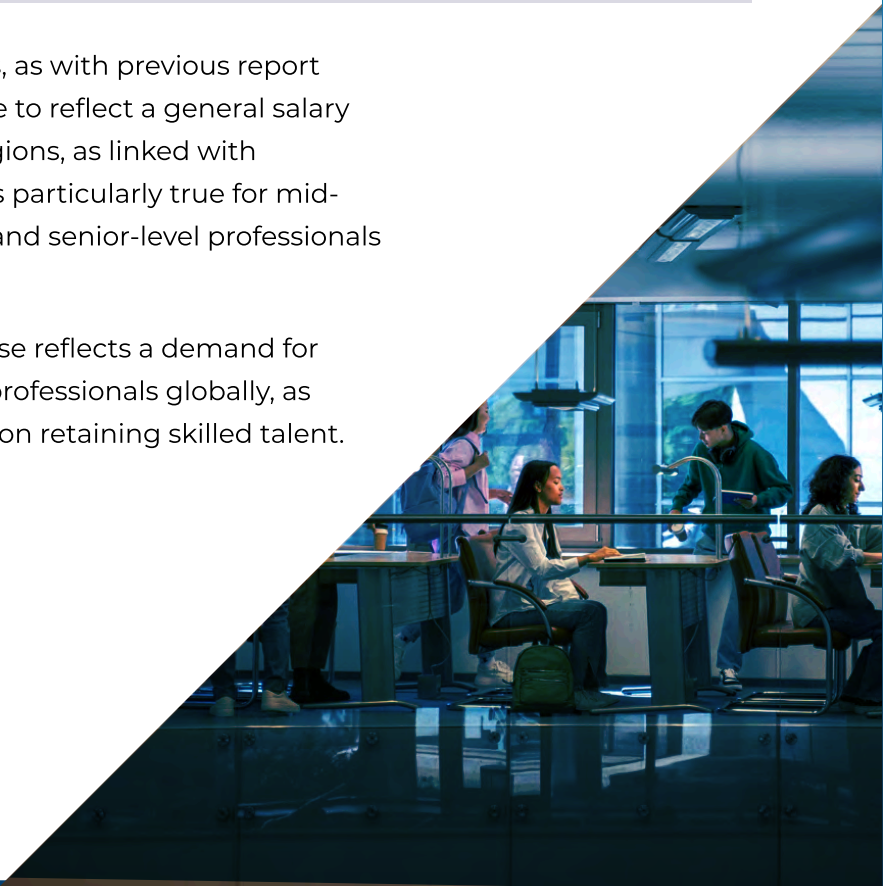
Avg. annual income from testing and testing-related activities

*Approximate value converted into US Dollars (gross amount, including salary, bonus, and perks if any)

	Less than 1 year	1-2 years	3-5 years	6-10 years	10+ years
Africa	N/A	N/A	N/A	\$45,000	\$55,000
Asia	\$10,000	\$13,333	\$23,000	\$51,000	\$72,778
Eastern Europe	\$10,000	\$20,000	\$36,667	\$37,500	\$64,091
Central Asia	N/A	N/A	\$15,000	\$37,083	\$66,818
Latin America	\$10,000	N/A	\$16,667	\$97,500	\$72,500
North America	N/A	\$96,667	\$105,000	\$131,111	\$127,903
Oceania	N/A	N/A	N/A	\$45,000	\$105,000
Western Europe	\$20,000	\$60,000	\$60,455	\$61,250	\$99,479

This year's figures, as with previous report findings, continue to reflect a general salary growth across regions, as linked with experience. This is particularly true for mid-level (6–10 years) and senior-level professionals (10+ years).

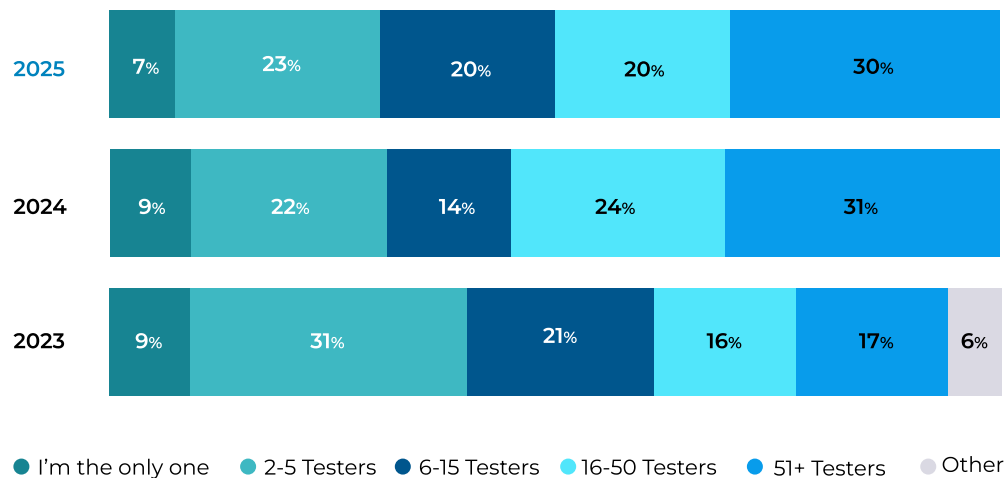
The steady increase reflects a demand for experienced QA professionals globally, as companies focus on retaining skilled talent.



Tools, Methodologies, and Processes



Size of QA teams



Key Trends:

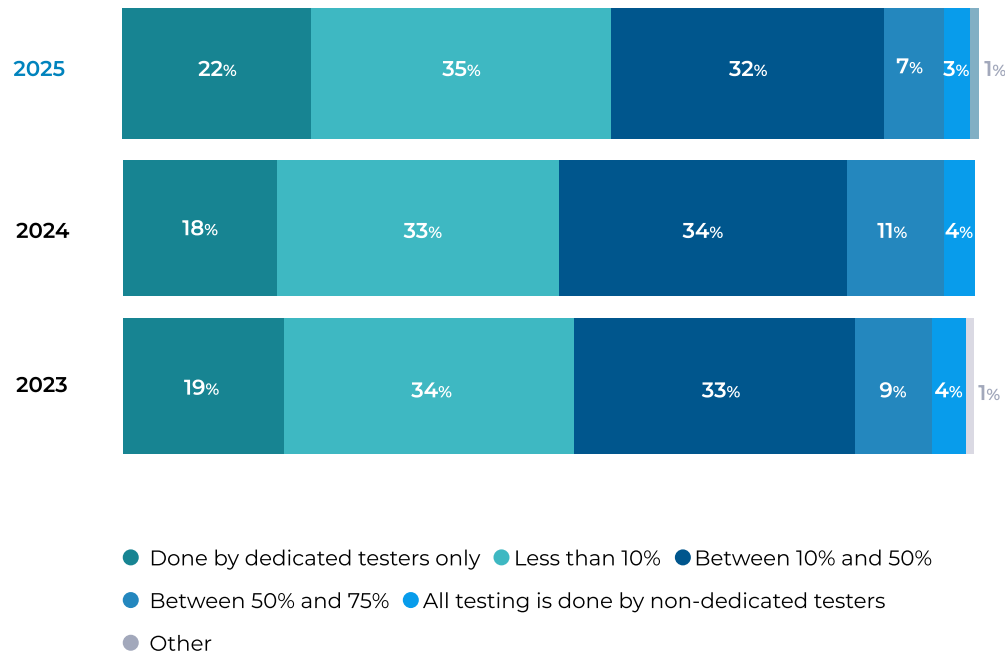
The significant increase from 17% to 30% over the past 2 years, regarding large testing teams may reflect the currently broader definition of who constitutes the testing team in modern software development environments.

Today's testing teams often include a diverse range of roles, such as DevOps engineers, developers, automation engineers, and even product owners contributing to quality assurance processes. This expansion aligns with Agile and DevOps practices, where testing and quality are shared responsibilities embedded throughout the development lifecycle. As organizations strive for seamless integration of testing within CI/CD pipelines, the inclusion of these roles ensures more comprehensive coverage and collaboration, effectively redefining what it means to be part of a "testing team."

Another way to account for this growth is to deduce that even though Agile and DevOps are more accepted models, organizations are realizing (once again) that they need to invest in testers and QA engineers, and they are once again increasing the number of people on the testing teams. Even when the whole company is in charge of Quality, it does not mean that everyone is doing Testing.

Non dedicated testers' involvement in the QA process

*In many organizations, other team members also participate in formal testing, e.g., Developers, Product Owners, Support, and End Users.



Interestingly enough we are seeing a decrease in the amount of testing done by non-dedicated testers. This could be accounted for by the increase in automation, reducing the need for other non-dedicated team members to assist with QA. When looked at in conjunction with the previous question regarding the size of testing teams, it can be concluded that more and more testers are being called to do most of the testing work. This is actually an attest to the recognition of QA as a established occupation, and an important function in the organization.

Changes we'd like to see

"Stronger collaboration between testers, developers, and product teams would improve alignment and help foster a quality-first mindset across the organization."

"Improved communication tools and asynchronous workflows would help streamline feedback loops and testing processes."

Most common testing-related tools



This time around we made this a multiple-select question rather than an open-ended question, to get a more focused response relating to specific testing-related tools.

Unsurprisingly, Jira stood out as the most mentioned tool, with 77% of respondents reporting using it. And GitHub overwhelmingly prevalent at nearly 60%.

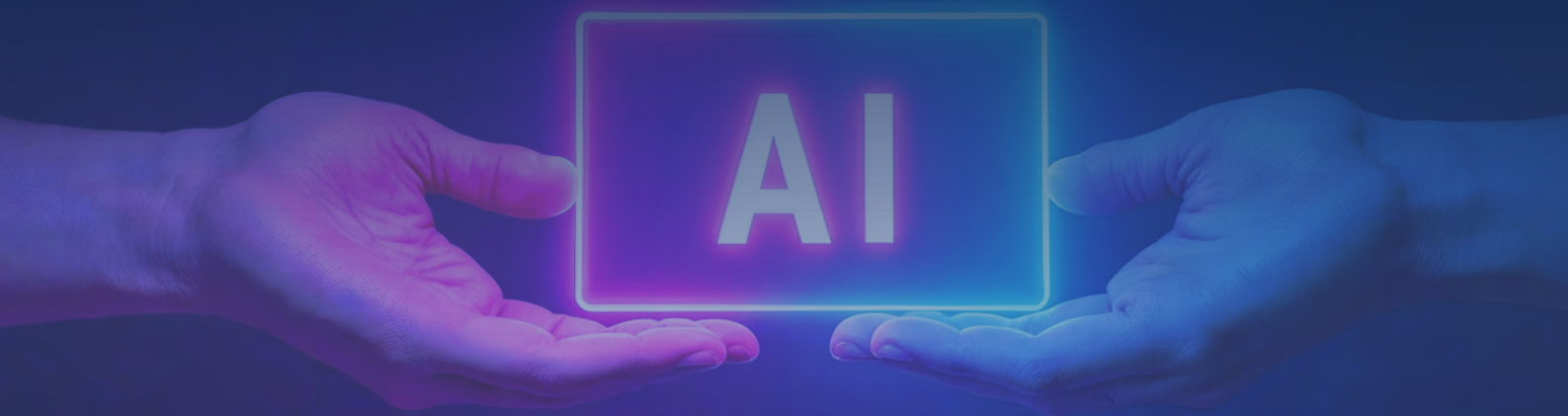
CI Frameworks such as Jenkins, and Cypress lead in usage with 35% and 28% respectively. Test Management tools such as Xray, Zephyr, TestRail & PractiTest remain competitive. Under 'Other' were mentioned Playwright, Selenium, and surprisingly Postman (which is more a developer's domain).

Changes we'd like to see

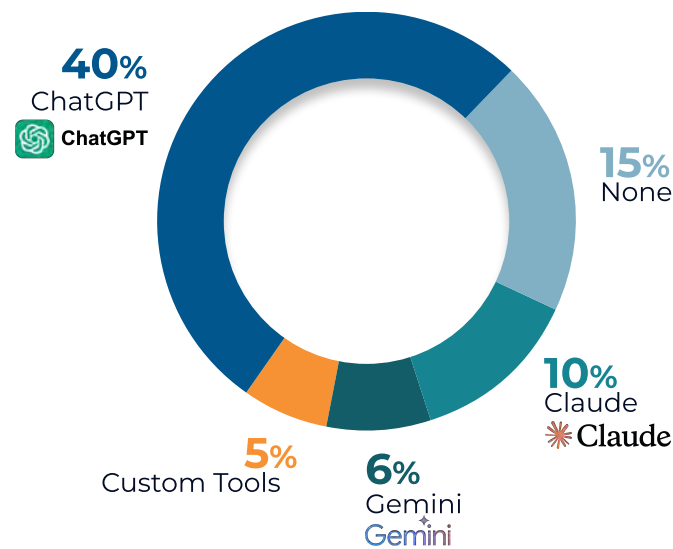
"Better test environments and data management systems would improve the accuracy and reliability of our testing efforts."

"A centralized and mature test management platform that integrates seamlessly with other tools would save time and reduce complexity."

AI & Automation Adoption



AI tools being used in the QA process



How much has automation reduced manual testing?

	2025	2024	2023
Replaced about 25% or less of our previously manual testing efforts	29%	22%	26%
Replaced about 50% or less of our previously manual testing efforts	26%	30%	25%
Replaced about 75% or more of our previously manual testing efforts	20%	19%	18%
It has not replaced any of the manual testing efforts	14%	18%	26%
We do not have automation	10%	9%	9%
Replaced all our manual testing efforts	1%	2%	3%

Automation is impacting more organizations than ever before. The percentage of teams reporting no automation impact has significantly declined from 26% in 2023 to 14% in 2025, indicating a steady shift toward integrating automation. However, while automation is transforming QA processes, its role is largely supportive rather than transformative at this stage.



AI & AUTOMATION ADOPTION

The proportion of teams reporting 25% or less automation has grown slightly, while those replacing 75% or more has steadily increased from 18% in 2023 to 20% in 2025. Conversely, the percentage of teams reporting no automation impact has significantly declined from 26% in 2023 to 14% in 2025, indicating a steady shift toward integrating automation. However, full automation remains a rare achievement, emphasizing the continued value of manual testing in specific areas.

Organizations looking to increase automation adoption should focus on overcoming barriers like skill gaps, cost, and tooling limitations. Balancing automation and manual testing will remain the optimal approach for most organizations.

AI's expected impact on automation adoption in testing

(Multiple select question)

Reduced manual work and faster execution	39%
New challenges in testing AI systems	38%
Improved test maintenance and self-healing	37%
Shift in tester skill requirements (AI Literacy)	37%
Enhanced test coverage and efficiency	35%
Enhanced reporting and analytics	34%
Accelerated adoption of test automation	32%
Better defect prediction and early issue detection	22%
Intelligent Prioritization of test cases	22%
More cross-functional collaboration with developers	13%
Other	<3%

AI in testing has led to significant improvements, including reduced manual work and faster execution (39%), not surprisingly, and a shift in tester skill requirements toward AI literacy (37%). Cross-functional collaboration with developers remains limited at 13%, highlighting the need for broader team integration. These trends underscore AI's growing impact on testing while emphasizing the evolving skill requirements for QA professionals.



Where are AI tools being used in the testing process?

(Multiple select question)

I am not using AI tools for testing	46%
Test Case creation	41%
Test Planning	20%
Test Reporting and insights	19%
Test Data Management	18%
Test case optimization	17%
Other*	11%

*Other includes:

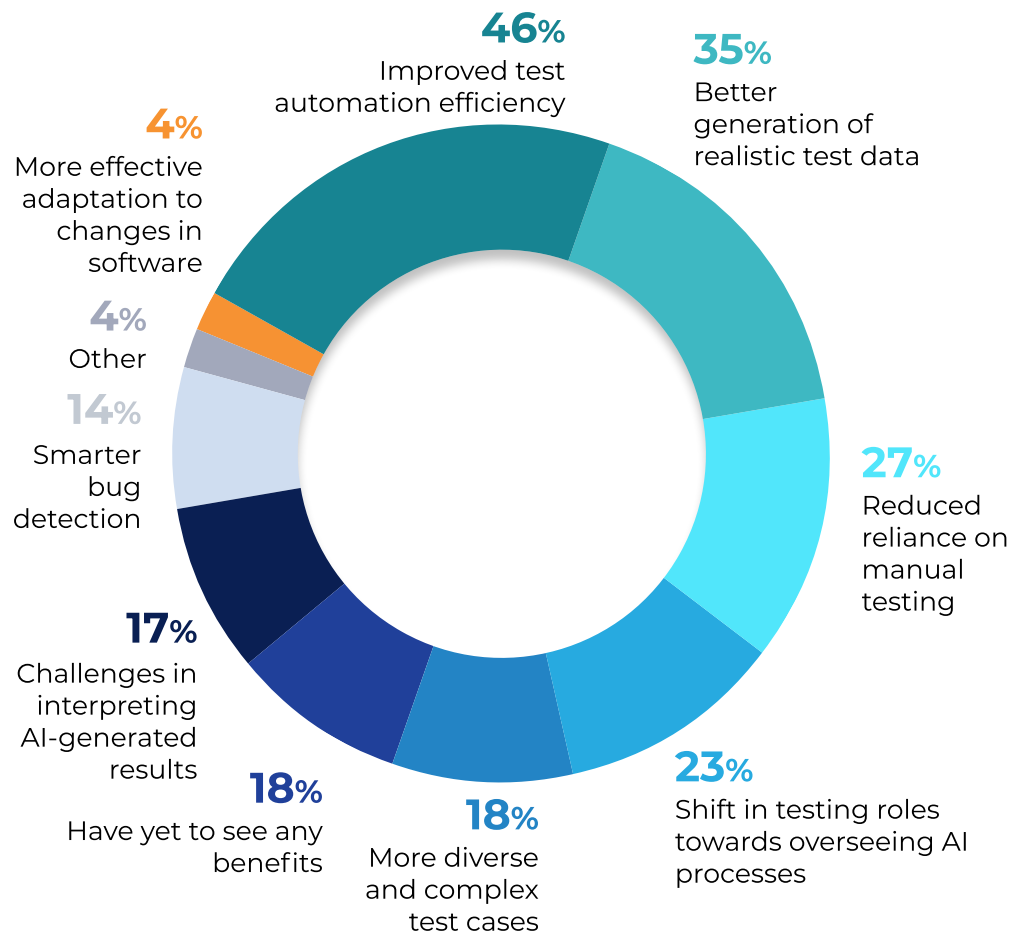
Research, ideas, code solutions, analytics
Mostly just improving engineering speed/efficiency in general
API testing
Bug and Improvement reporting
Programming for testing, test idea generation
Code & review
Requirements Management
Write Automation code, coding, scripts, test strategy, test case execution, gap analysis.
Automating functional tests

Nearly half of the testing community has yet to adopt AI tools, suggesting barriers such as a lack of awareness, confidence in AI capabilities, or organizational readiness for AI adoption.

Test case creation is seen as an accessible entry point for AI adoption, likely due to the repetitive nature of the task and the potential for AI to save time and reduce errors.

The data suggests AI adoption in testing is still in its early stages. Hence, organizations are cautious, starting with safer applications before expanding AI's role in strategic or critical testing processes.

Main benefits of AI adoption



The primary benefits of AI in software testing include improved test automation efficiency (45.6%) and better generation of realistic test data (34.7%), reflecting AI's ability to enhance key testing processes. AI is driving a shift in testing roles toward overseeing AI processes (23%) and reducing reliance on manual testing (27%). Yet, its impact on adapting to software changes (4.08%) and generating more diverse test cases (18%) remains limited. These findings highlight the transformative potential of AI in testing, tempered by ongoing challenges in adoption and effectiveness.

Main barriers to AI adopting in QA teams

Data privacy & security issues

56%

Lack of skilled personal

33%

Uncertain about the benefits

29%

High initial cost, ROI concerns

25%

The complexity of AI tool's technologies

19%

We are satisfied with our current process

13%

There are no barriers

11%

Other

6%

The primary barriers to AI adoption in software testing are data privacy and security concerns (56%), followed by a lack of skilled personnel (33%) and uncertainty about the benefits of AI (29%). Notably, 11% reported no barriers, highlighting a minority ready for AI integration. These findings underscore the need for organizations to address technical, financial, and skill-related challenges to accelerate AI adoption in QA.

*Other responses:

I don't want to lose the ability to work through problems and become reliant on it. It often acts confident but does not provide correct answers.

AI feels too far ahead for our company although I am ready for it

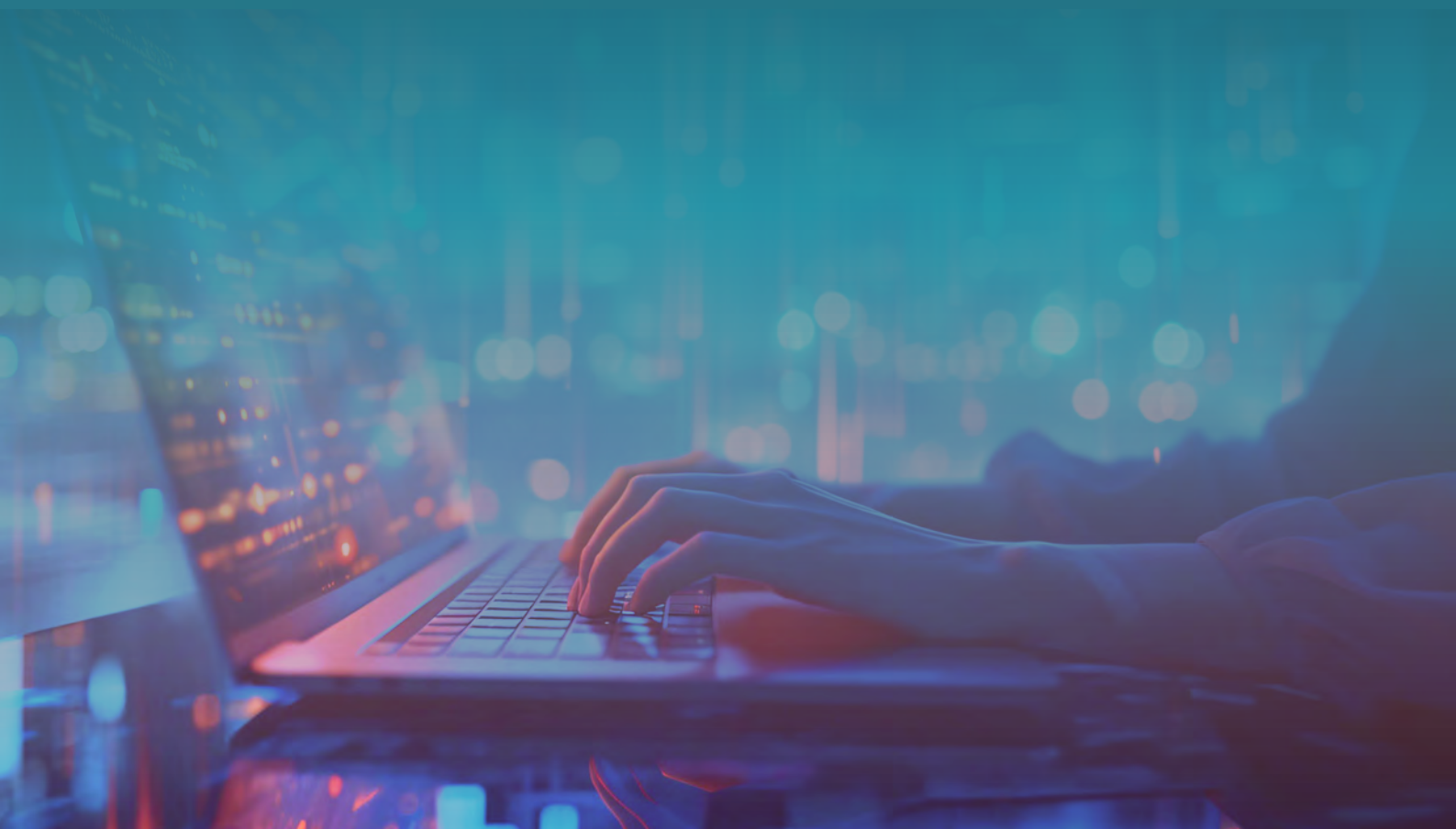
Changes we'd like to see:

"More practical implementations of AI in testing workflows would be helpful, such as tools that assist with test case generation, automation, and risk analysis."

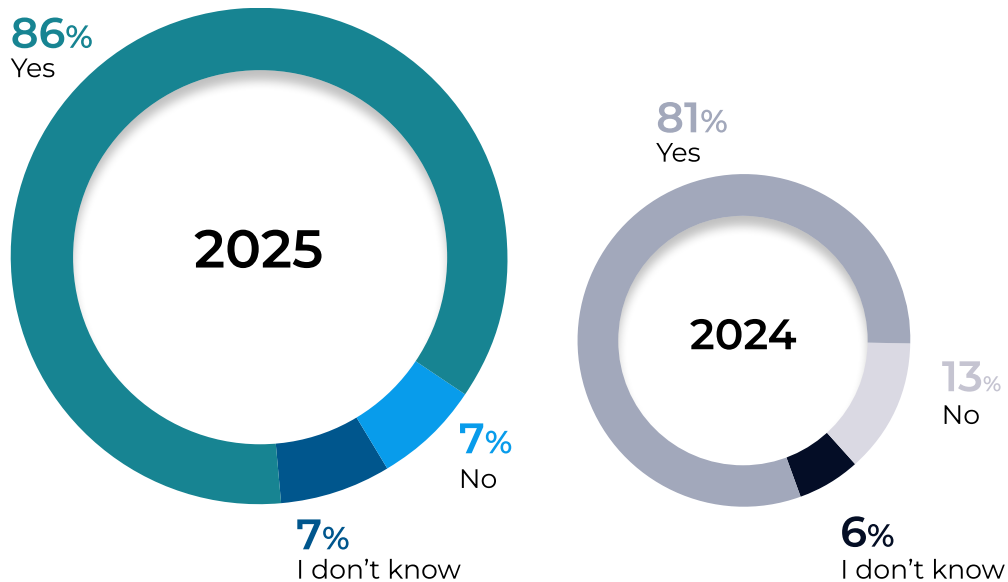
"I'd like more AI-powered tools that can reliably handle test automation and offer actionable insights into testing progress and risks."

"Training on how to integrate AI tools into everyday testing activities would improve effectiveness."

QA Accountability



Does testing have a say regarding release readiness?



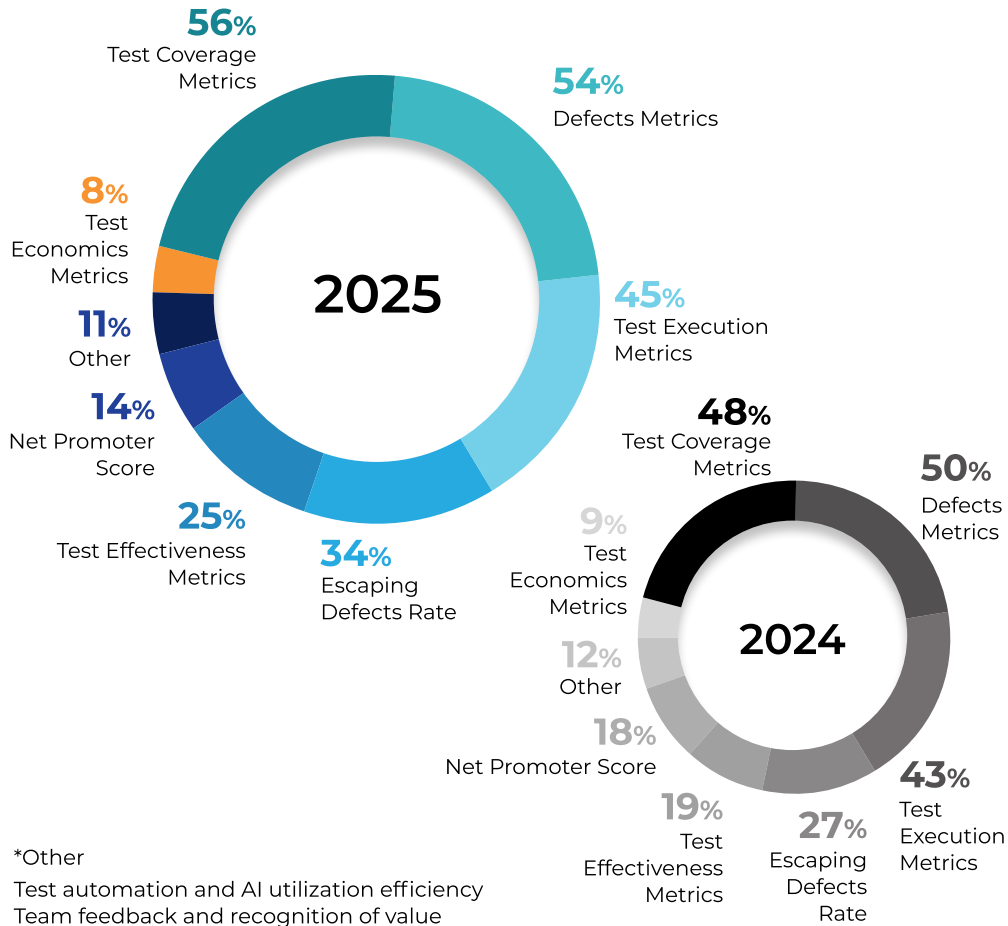
The results here are more positive regarding the importance that the QA role plays in organizations. In 86% of the cases, testing teams have a say regarding readiness for release. Suppose you belong to the remaining 7%, and in particular to the 7% who reported that they don't know. In that case, we encourage you to ask and take and be proactive, even in cases when you might not have enough seniority to alter such a decision (yet).

Changes we'd like to see

- "Testers should be empowered with autonomy and accountability over testing activities while being supported by management and stakeholders."
- "Organizations need to recognize that testing is integral to delivering high-quality software and ensure adequate resources and time for testing activities."

Which metrics is your team measured on?

(Multiple select question)



Increasing Emphasis on Test Effectiveness

25% of teams measure test effectiveness, up from 19% in 2024. This rise highlights a shift toward evaluating how well tests identify defects and contribute to overall quality, emphasizing smarter testing practices over sheer quantity.

The metrics highlight a clear industry focus on improving quality assurance through comprehensive coverage, defect identification, and testing effectiveness. As Agile/DevOps practices continue to dominate, efficiency metrics like test execution are growing in importance.

A significant decrease from 18% to 14% in NPS (Net Promoter Score) as a QA success metric. In challenging years where customer expectations are on the rise, we would expect this to be the other way around, and hope to see this metric grow as an indicator to the understanding of QA as a business enabler.

Changes we'd like to see:

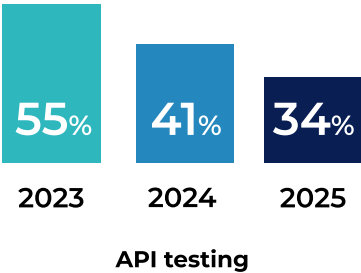
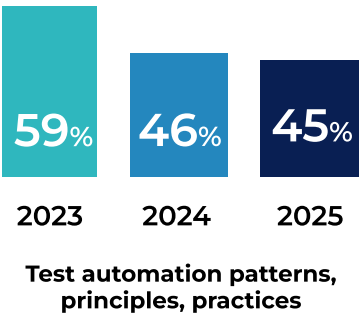
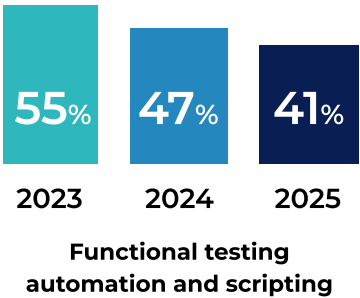
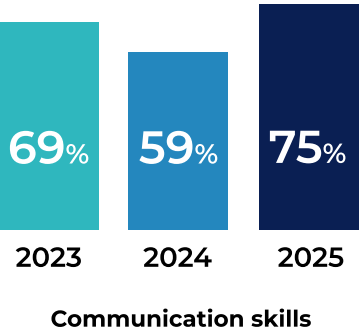
"I'd like to see greater recognition of the value testers bring to the development process, with an emphasis on their contributions being equally important to those of developers or product teams."

"Testers should be involved earlier in the software development lifecycle, allowing us to contribute to test case creation and quality discussions during development."

"Less emphasis on rushing to release and more focus on improving code quality and refactoring would allow for more thorough testing."

"A move away from rigid metrics and toward more meaningful ones, such as those that capture risk mitigation and customer satisfaction, would better demonstrate QA's value."

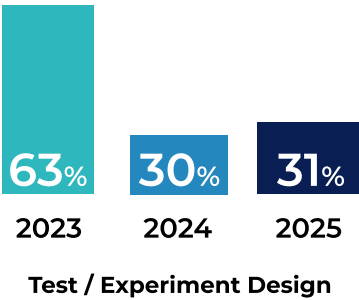
What are the top 5 eternally relevant skills and knowledge areas that testers need to thrive in testing?



Top testing skills

Key Trends

Rise of Communication Skills:
Communication skills saw a sharp increase from 59% in 2024 to 75% in 2025, making it the top priority. The growing emphasis on communication reflects the collaborative nature of QA in Agile/DevOps environments, where testers work closely with cross-functional teams. This also highlights the increasing importance of non-technical, interpersonal skills in ensuring quality and alignment across the organization.



Decline in Technical Skills as Differentiators: While at first surprising skills like functional testing automation and scripting (from 55% in 2023 to 41% in 2025), API testing (55% to 34%), and programming skills (50% to 27%) have consistently declined. The decline in focus on core automation and technical skills suggests that these are becoming baseline competencies rather than differentiators. Teams may now expect automation capabilities as foundational, shifting their focus toward higher-level skills like test strategy, communication, and exploratory testing.

Interest in Agile methodologies dropped significantly from 49% in 2023 to 28% in 2025. Since Agile practices are now well-integrated into workflows in 2025, we associate this commonality with the reduction to their status as a key skill area to learn.

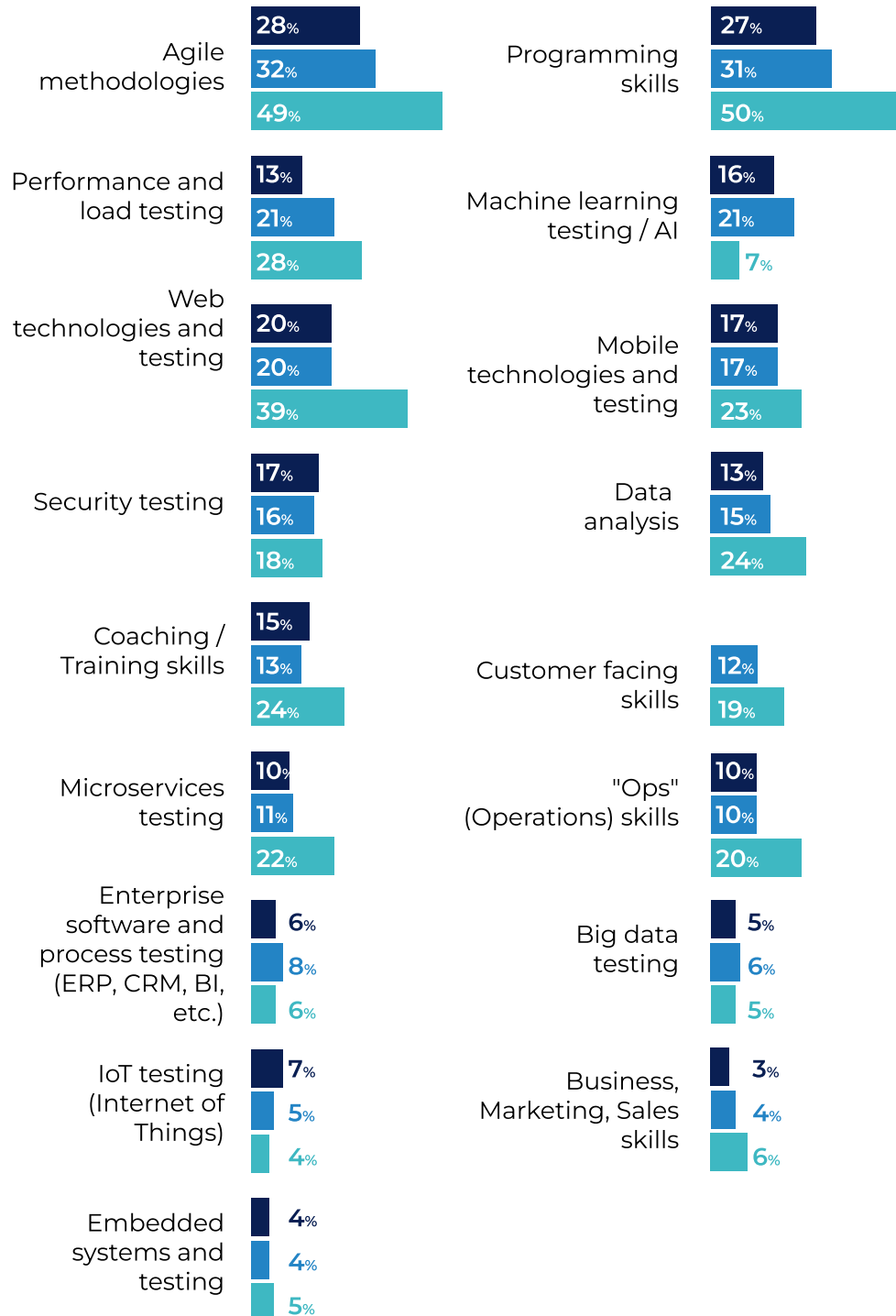
Machine learning/AI testing increased from 7% in 2023 to 16% in 2025, reflecting growing interest in leveraging AI for test automation, defect prediction, and analytics. While still niche, AI/ML-related skills are slowly becoming more important as organizations experiment with these technologies.

Changes we'd like to see:

"Dedicated time and resources for learning new tools and methodologies, especially around automation and AI, would help bridge skill gaps."

"Opportunities to develop technical skills like coding, API testing, and automation should be made more accessible."

Additional skills rated



Where do you see yourself 5 years from now?

		2025	2024
	I will be a tester or a test manager	29%	35%
	I will be a testing consultant or a coach	21%	26%
	I will be in a business role	8%	7%
	I will be a programmer or a programming lead	6%	5%
	I will be in an agile management role (agile coach, scrum master, etc.)	4.5%	5%
	I will be retired	3%	3%
	I will not be in the technological industry	3%	2%
	I don't know what I will be doing 5 years from now	27%	17%

The data reveals a workforce that is increasingly uncertain about its future in the QA industry, with declining interest in traditional testing roles and consultancy. Organizations should consider offering clearer career progression paths, reskilling opportunities (e.g., in AI/ML), and support for testers transitioning into adjacent fields to retain and develop talent in a rapidly changing environment.

Final Note

The State of Testing™ Report 2025 reveals a dynamic and evolving landscape for software testing professionals. The survey highlights several key shifts that are shaping the industry. QA teams are growing larger in many organizations, while also becoming more reliant on automation, cross-functional collaboration, and the early adoption of AI tools. Testers are increasingly advocating for more influence in the development process and a greater emphasis on the value they bring to the organization.

Looking ahead, the report emphasizes the need for organizations to invest in training and upskilling to fully leverage new technologies. Addressing concerns about data privacy and security is crucial to increase the adoption of AI in QA. There is a clear call for more practical applications of AI in testing workflows.

The survey also reveals a growing uncertainty among testers about their career paths in a rapidly changing industry, making it essential for organizations to offer clear career progression and reskilling opportunities. There is no doubt that the QA landscape is rapidly changing, requiring continuous adaptation and a commitment to quality across all teams.

Did you enjoy the report?

Share it with your QA community

