New futures in focus

WORLD QUALITY REPORT

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Quality Engineering and Testing in the United Kingdom

Key trends and future outlook

The Quality Engineering and Testing sector in the UK has seen significant advancements and changes over the past year. As we reflect on the trends, it is obvious that Automation and AI have become central to the industry's evolution. This year's World Quality Report sheds light on these trends, revealing a sector in transition towards enhanced automation, AI, data privacy, and sustainability.

Increasing focus on Automation

The demand for Automation in Quality Engineering has surged significantly. Where automation once hovered around 40%, current expectations have soared to nearly 70%. This shift reflects a broader industry trend, positioning automation as an essential part of testing rather than a mere add-on. Automation is now deeply embedded within CI/CD pipelines not only streamlines workflows but also drives innovation and responsiveness, enabling organizations to meet market demands with greater agility and precision.

The role of AI in Quality Engineering

Once met with skepticism, AI is now seen as essential for enhancing speed and efficiency across various domains in the UK, including Quality Engineering. Organizations are now actively pursuing partnerships to integrate AI solutions that not only streamline processes like test data generation and management

but also drive transformative change across the entire Quality Engineering lifecycle.

This growing reliance on AI is driven by the sheer volume and complexity of data that businesses must navigate, making AI a critical tool for staying competitive.

Data privacy and compliance

The General Data Protection Regulation (GDPR) has normalized data privacy considerations within the UK. Organizations are now highly aware of the importance of data protection and are expanding their scope to prevent business escalations. This heightened awareness has led to a greater emphasis on realistic and precise data in testing practices, ensuring compliance with stringent data privacy regulations.

Data management and test data generation

As automation takes on a more central role, managing test data has become a critical challenge for organizations. They are now expected to automate the generation of numerous test data sets and simulate production data to avoid mismatches. Automation helps streamline data sub-setting and cloning, providing targeted datasets for specific test cases and synchronizing data across environments. These capabilities improve efficiency, reduce manual effort, and ensure that test data is always accurate and readily available for testing cycles.

Skills and expertise requirements

The skillset for Quality Engineering continues to evolve rapidly. There is an increasing demand for professionals with a broad knowledge of diverse tools and methodologies, including SACD (Service, Application, Component, and Data), as well as a foundational understanding of cloud computing, CI/CD Setup, Service Virtualization, IaC, AI/ML Integration and security automation. The industry now prioritizes the E-shaped or X-shaped skill model, where individuals possess an understanding of the technical ecosystem and the target industry, paired with deep expertise in one or two specialized areas, making adaptability and versatility essential.

Sustainability in Quality Engineering

Sustainability continues to be a critical factor in UK's Quality Engineering sector. Both public and private sectors are incorporating sustainability into their evaluation criteria for technology solutions. As a result, customers are placing greater emphasis on sustainability in their decision-making, driving a focus on greener, more sustainable practices in Quality Engineering.

Integration of AI and Automation

Looking forward, AI and automation are set to dominate the future of Quality Engineering. Organizations will continue to seek partnerships to integrate AI into their processes, aiming to enhance operational efficiency and manage complex data sets. The emphasis will be on using AI to foster innovation and meet the evolving demands of global markets, ensuring that Quality Engineering keeps pace with rapid technological advancements.

Security and performance testing

The importance of security in Quality Engineering has grown considerably in the past years. Penetration testing, once a supplementary step, is now mandatory for many organizations, underscoring the need to protect against potential financial and reputational losses. Additionally, performance testing remains vital, particularly for large-scale projects. Many businesses are adopting performance engineering practices to establish performance baselines and ensure system efficiency, scalability, user experience, cost optimization, reliability, and proactive issue detection, emphasizing the critical role of non-functional testing in today's Quality Engineering practices.

The future outlook

Quality Engineering and Testing sector in the UK is evolving rapidly, driven by advancements in automation, Gen AI, and data management. While challenges such as data privacy and skill requirements persist, the industry is progressing towards more efficient and sustainable practices. The successful integration of innovative technologies and Gen AI inclusion, with a focus on security and performance, will be key to driving future success.

Survey Watch

59% Respondents said the use case most likely to be implemented for Gen AI (LLM and SLM models) is test reporting.

58% Organizations are currently grappling with the challenge of lacking a clear strategy to validate the usefulness of Gen AI solutions.

29% Organizations have successfully implemented Generative AI to enhance test automation and are actively utilizing it.

40% Organizations in the UK have established a mature repository for storing reusable test automation assets.

64% Respondents identify improved testing coverage as the top business outcome of test automation, which enhances overall confidence in IT systems.

Contact
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