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New futures in focus

WORLD QUALITY REPORT

16th Edition | 2024-25

Quality Engineering in North America

AI takes the lead in driving transformation

In North America, the landscape of Quality Engineering (QE) continues to grow in leaps and bounds, driven by a confluence of market trends and technological advancements. As organizations aim to enhance operational efficiency and customer satisfaction, the role of Quality Engineering is becoming more crucial, particularly with the integration of Site Reliability Engineering (SRE) and the adoption of General AI. In the subsequent sections, we will highlight the critical areas driving this progression and its implication for the future of QE in the region.

Quality takes the spotlight

Quality is no longer just a technical concern; it has moved to the boardroom level. There is a significant focus on quality, which is recognized as a major factor in guaranteeing positive business outcomes and improving the customer experience. More organizations are reinforcing holistic QE approaches by adding dedicated quality engineers within their teams to maintain consistency in methodologies, tools, and best practices. The shift toward a more federated model of QE—where quality experts guide QE activities across scrum teams, reflects a growing trend across sectors and emphasizes a product-oriented mindset over traditional IT-centric approaches.

Shifting focus from IT to innovation

Ohe other major theme is the rise of a product-oriented mindset. Transitioning from an IT-centric to a product-oriented approach alters the way quality is incorporated into working methodologies. Organizations are now moving towards dedicated quality engineers who drive consistency and best practices. This shift is essential for maintaining high standards in QE, as it fosters a unified approach to quality across departments.

AI-into the future: How Gen AI is driving QE?

The rise of Gen AI in North America is transforming the landscape, with organizations in full throttle adopting and investing in AI technologies. Clear use cases are emerging, illustrating the potential of AI to streamline processes and improve product outcomes. This is mostly done with the adoption of pilot projects where end-user applications are already established, and specific KPIs are in place. However, the success of these AI investments hinges on data quality. With this technology growing relevant in today's business environments, organizations are positioning themselves strategically to leverage AI in testing, automation, and innovation in the future.

Business meets quality

One major change is the increased participation of business teams in the quality process. Before, for instance, User Acceptance Testing (UAT) was the only phase where business leaders got involved in QE initiatives, but that's changing. Today, business

stakeholders engage much earlier in the product deployment phase and are interested to see that the quality metrics are aligned with business targets. This trend reflects a growing recognition that quality is much closer to the strategic business objectives and customer value proposition.

Clean data, clear results

As organizations deploy Gen AI, they have realized that data quality is central to success. Without clean, accurate data, even the most advanced AI technologies cannot deliver good results. In 2024, we expect chief data officers and data teams to be more involved in cleaning, obscuring, or preparing data to support AI-driven initiatives. Hence, there is a need to improve data governance, especially within the QE practices where Gen AI adoption is closely linked to data quality.

Bridging the gap between QE and sustainability

Despite increasing pressure around environmental, social, and governance (ESG) reporting, QE involvement in sustainability initiatives remains rather invisible. As businesses align with environmental goals, it is imperative that QE teams participate actively in validating these efforts to ensure accountability and transparency. This is an area that needs urgent attention, as quality teams have an important part to play in the delivery of sustainability objectives especially through green IT and ESG validation.

SRE-iously skilled: Quality engineers embrace AI and reliability

The rise of SRE and AI into QE departments signifies a transformative approach to quality management. SRE, a "shift right" concept, emphasizes the importance of monitoring system health post-deployment and using feedback to improve applications continuously. This approach ensures that QE extends beyond initial deployment, adapting to real-time needs and enhancing overall user experience. As SRE spreads from tech giants to sectors like finance and insurance, organizations must reskill QE teams to integrate both SRE and AI into processes like requirement validation, test automation, and system monitoring. This evolution, which emphasizes full-stack engineering and AI expertise, enhances operational capabilities and aligns with the broader objectives of innovation and sustainability.

Looking forward

QE in North America is marked by a comprehensive focus on quality, centralization, and the strategic use of Gen AI. As organizations embrace these changes, they pave the way for a more reliable and sustainable technological landscape. The challenge lies in actively involving QE teams in these initiatives, ensuring that they play a vital role in driving quality and accountability throughout the software development lifecycle.

Survey Watch

45%	Cited quality engineering as the most critical skills for quality engineers today
70%	Stated that the biggest challenge facing their Quality Engineering today is that quality engineer is not viewed as a strategic activity in their organization
96%	Of respondents are leveraging or planning to leverage Generative AI based solutions
67%	Cited that complex tooling was preventing their organizations for achieving a higher percentage of automation
50%	Are currently using an automation marketplace as a way to increase the reusability of their automation assets

Contact

If you desire more information about testing tools, please contact:

Sathish Natarajan
Group Vice President, Quality Engineering & Testing, Capgemini & Sogeti, Americas

Anand Moorthy
Vice President & Global Head, Quality Engineering & Testing, Financial Services, Capgemini

Kirthy Chennaian
Vice President & Head of Quality Engineering & Testing, Capgemini Americas

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