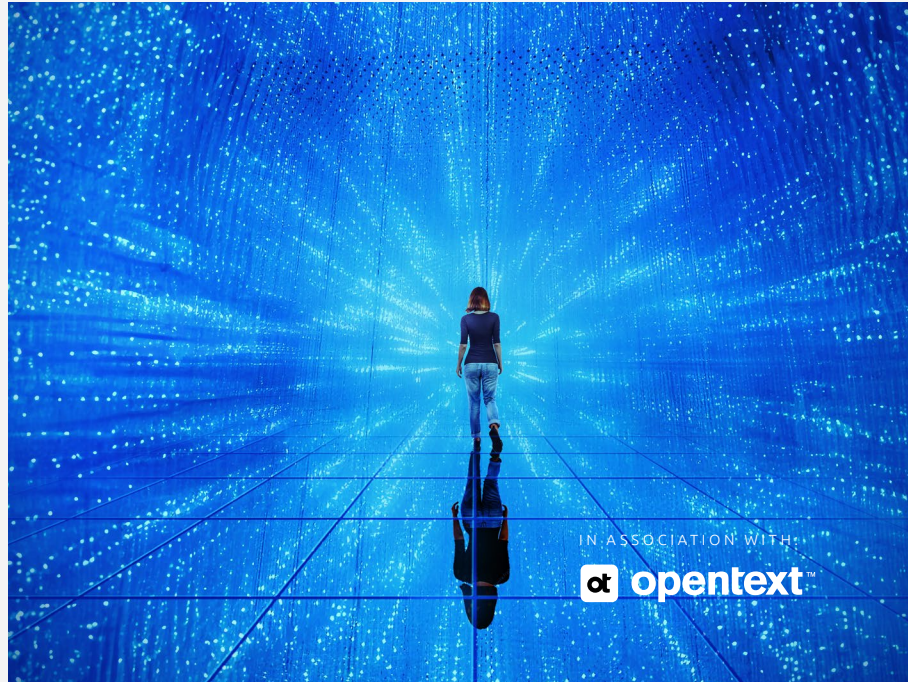# New futures in focus

WORLD QUALITY REPORT

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IN ASSOCIATION WITH

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China's rapid ascent in Quality Engineering and beyond

Exploring Gen AI, challenges, and sustainable solutions

When we look at what's happening in the IT sector in China today, especially in testing, one thing stands out: AI is changing the industry. We've seen a big move from traditional functional testing to high-tech, AI-driven testing. If you compare it to ten years ago, the difference is huge. These days more organizations are integrating AI into their testing processes, and it's obvious that AI will keep having a bigger and bigger impact on the field.

The rapid integration of AI in Quality Engineering in China is truly remarkable. A recent survey indicates that almost 50% of companies are currently utilizing generative AI (Gen AI) for Quality Engineering, while an additional 21% are in the pilot phase. This swift

adoption, particularly over the past year, has transformed the perception and execution of Quality Engineering. In China, AI is being utilized in various testing domains, from creating test cases to conducting unit tests, leading to notable enhancements in testing coverage and efficiency.

Apart from AI, cloud adoption stands out as a major trend. The Chinese market shows signs of maturity in the market as many big companies keep moving their applications from on-site to cloud-based systems. This transformation began a few years back and continues to this day. Additionally, many organizations now put sustainability at the forefront. While we at Capgemini China

have offered advice on this subject, we haven't yet branched out our testing work into the sustainability area. Still, I think this field will attract more attention in the future.

Automate to elevate: China's testing revolution

China's strategy towards test automation is another domain where we observe significant progress. The local market in China is more developed than the global average. The rate of automated testing is considerably higher, with numerous organizations striving for increased automation, especially in data testing. Automation plays a vital role in meeting quality demands, particularly in data-intensive environments. In China, test automation has become standard practice, with many organizations achieving substantial cost savings and faster testing cycles.

Crafting custom solutions for China's connected world

We've also observed a growing trend towards the use of open-source tools in testing. Many organizations in China favor these tools for automation, often creating their own testing solutions tailored to their specific requirements. The demand for testing connected products, such as those that integrate hardware with software and cloud services, is on the rise. However, our participation in this area has been somewhat limited thus far.
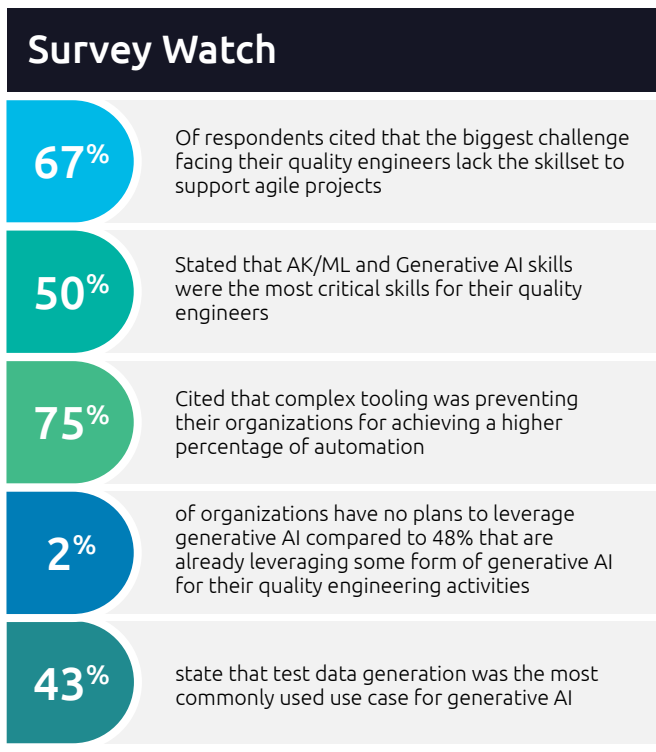
Challenges in AI and Quality Engineering

The rise of AI in testing brings its own set of challenges. Data security stands out as a major concern, along with the accuracy of AI models. While many clients are keen to adopt AI, they often express worries about information security and the potential for data breaches. Additionally, demonstrating the accountability and effectiveness of AI models in testing remains a significant hurdle. Clients frequently inquire about how we can guarantee that the AI models we develop are both reliable and trustworthy.

Ahead in the cloud

The integration of AI and cloud technologies is also transforming the skill sets needed for quality engineers. As we move towards more advanced and automated testing methods, our teams must continuously enhance their skills. Moreover, the structure of testing organizations in China varies widely. Some companies have integrated testing teams within Agile squads, while others opt for centralized testing departments to better manage quality.

A leap into the future of testing

As we look to the future, it's essential for us at Capgemini to keep evolving with these trends. Whether it's broadening our services in sustainability, boosting our AI capabilities, or fine-tuning our automation processes, our aim is to meet the increasing demands of our clients and ensure that we maintain our leadership in Quality Engineering.

Survey Watch

67%	Of respondents cited that the biggest challenge facing their quality engineers lack the skillset to support agile projects
50%	Stated that AK/ML and Generative AI skills were the most critical skills for their quality engineers
75%	Cited that complex tooling was preventing their organizations for achieving a higher percentage of automation
2%	of organizations have no plans to leverage generative AI compared to 48% that are already leveraging some form of generative AI for their quality engineering activities
43%	state that test data generation was the most commonly used use case for generative AI

Contact
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