

CHINA

Setting a new tone for Quality Engineering

China has been flourishing as an engineering powerhouse and making rapid technological advancements. Known for its enormous manufacturing prowess, the country has been working at breakneck speed to develop and deliver. However, over the last few years, the growing demand and the attempts to fulfill this promise has put immense pressure on testing and QE mechanisms.

So, how is Quality Engineering (QE) evolving to meet the demands of such a market? Is the implementation of agility within testing teams still considered critical? What kind of an impact is Artificial Intelligence (AI) really making on testing and QE processes? These are some of the topics we explored in the World Quality Report survey this year to understand current trends and predict the future of QE in the region.

The Arsenal: agile environments, cloud, AI

Agility has become a dominant force in software development, and testing teams are no exception. Agile methodologies have reshaped the role of test engineers, demanding a broader skill set beyond traditional testing abilities. Today, engineers must possess domain knowledge, as it plays a crucial role in project success. Technical skills in test engineering have also seen significant upward trends, with a growing emphasis on automation and API testing. The shift toward automation tools for API testing reflects the industry's growing reliance on efficient and accurate testing methods.

Another trend in China's quality engineering ecosystem is the increasing emphasis on data-related projects. Test engineers must be proficient in manipulating and validating data, reflecting the importance of data quality in modern software systems. Cloud adoption for test environments is also on the rise, with a growing number of projects being deployed in cloud environments. While this transition presents new challenges, such as adapting to cloud-specific testing requirements, it also opens up opportunities for testers to gain expertise in cloud-based testing.

The integration of Artificial Intelligence (AI) is also gaining traction in quality engineering. Generative AI (Gen AI) is being explored for its potential to create basic test cases, reducing the manual effort required in test case design. We think that it holds the promise of increased efficiency and accuracy in testing processes. This is especially true considering the rise of smart connected products, such as fitness trackers and smart home devices, which have raised a whole new host of challenges for quality engineers. Ensuring the reliability and

How is China investing in the future of QE?

Quality metrics have evolved to address the shifting landscape of quality engineering in China. While traditional metrics focused on testing activity and product quality, the current emphasis is on meeting client expectations and project requirements. User experience has become a pivotal criterion for project success, but defining clear requirements for it remains a difficult task to navigate. Achieving a balance between quality standards and cost-effectiveness also remains an unresolved issue for quality engineers.

Having said that, as the quality engineering ecosystem in China continues to evolve, we see investment priorities also shifting. Rather than making large-scale financial investments, the emphasis is now on investing in skilled resources who can adapt to new technologies and emerging trends. It's refreshing to see an active interest in investing in people, and fostering an environment of continuous learning. Organizations are increasingly viewing this as a strategic approach to future-proofing the industry.

Speaking of futureproofing, sustainability is also emerging as a major topic of discussion in China. In fact – the United Nations applauded the country for its successful environmental policies that helped drop overall PM2 (Particulate Matter) levels by 57% and increase life expectancy by 2.2 years in the last decade.

In the realm of sustainable IT initiatives, the focus in China is primarily on consulting services related to sustainability rather than system implementation. However, teams are actively preparing key resources and solutions in anticipation of future needs.

Overall, the trends suggest that we can expect continuous innovation in the QE space for the next few years. With AI, automation, and cloud expected to drive transformations, we are excited to see what a sustainable QE ecosystem will look like in China.

Survey Watch	
52%	Organizations have used AI for event correlation and root cause analysis of issues
73%	Organizations will focus on optimization and cost control of processes to involve sustainability in their QE&T practices
81%	Organizations ranked 'Testing Al' as the topmost focus area for the use of automation
57%	Organizations cited 'Environmental Issues' as one of the major issues while ensuring quality of 'digital core' solutions



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