

## CHINA

### *The pressures of speed and scale*

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# WORLD QUALITY REPORT

14th Edition | 2022-23

THE CLOSER  
YOU LOOK

# THE MORE YOU SEE

China is a large and fast-growing economy and, while that has obvious advantages, it also brings challenges. Chief among these is the question of support: when you're moving at speed and scale, everything else needs to keep up, and that includes IT services in general and quality engineering (QE) in particular.

In recent years we've seen a significant appetite in China for agile, which in our experience is now being used in more than 90% of legacy upgrades and new developments. Quality engineering is embedded in agile teams and is often performed by the developers themselves. We estimate that around 10%–15% of QE in agile teams is conducted by dedicated team members now, and one of the greatest quality engineering resourcing needs in China is for people with a combination of development and test skills.

We see many requests for testers who have experience working on cloud platforms and in data validation. This last area is growing fast: companies are investing heavily in big data, and they are looking to innovate.

### **Growth in test automation**

The speed and scale of the economy also account for the increasing popularity of test automation. Industries such as automotive and high tech have been building automation into their CI/CD and DevOps approaches for several years now. Mobile communications and retail businesses are investing in dedicated test automation platforms. While some industries do buy commercial tools—for example, we've seen branded automation tools used for performance testing in the automation industry—the automation tools of choice tend to be open-source, which organizations then customize to suit their own purposes.

As a result of all this test automation activity, organizations are seeing improvements in regression testing, overall testing coverage, and return on investment. There are some areas in which test automation has been less productive—for instance, UI test automation lags behind automation in API—but typically, we estimate from our observations that it is common that around 40%–50% of testing is automated and, in some cases, the proportion is a great deal higher.

What are the prime drivers for quality engineering in China? The chief priorities are probably the needs of the business and time to market, but if that sounds to you like an invitation to cut corners and compromise, you'd be wrong. Quality absolutely has to be ensured. There may not always be formal metrics in place, but service providers are expected to demonstrate several "quality touchpoints" in the development cycle, so the organizations with whom we work can ensure that there is a clear path to their quality goals and their business needs are being supported.

Indeed, despite commercial imperatives such as time to market, and despite budget constraints, Chinese organizations are very mindful of security, and they are investing significantly in testing in this area, partly to mitigate risk and partly because of stringent regulatory and industry compliance requirements. Several companies are setting up their own dedicated security testing teams.

## Keen to progress

The worldwide growth of digital technologies such as Web 3.0 and blockchain is taking place in China too, and the pressure this puts on QE approaches is likewise increasing, although the pace will probably need to accelerate in order to keep up with demand. We're also beginning to see greater use of artificial intelligence in quality engineering, but it's fair to say that it's early days yet.

Overall, our observation is that Chinese organizations are keen to progress in quality and testing – but within budget, on which, as we've already noted, there are of course always constraints.

## Survey watch: Agile Quality Maturity of Chinese organizations

41%

of agile teams have professional quality engineers integrated

48%

of agile teams have test automation implemented

44%

of teams achieved better reliability of systems through test automation

47%

of teams achieved faster release times through test automation



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