

AUSTRALIA & NEW ZEALAND

Confidence is growing

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The year that has passed since the previous World Quality Report has been a tough one for many countries, and Australia and New Zealand are no exceptions. They have faced the challenges of COVID-19 in different ways, both from one another and, to differing degrees, from other parts of the world, but what they have shared is a determination to come through it.

For quality assurance (QA), the same resilience was evident in last year's survey data. There was a real sense of collective responsibility; for instance, almost everyone (95%) in 2020 said they would need to build a stronger community culture.

Firmness of purpose

We see the same firmness of purpose in this year's responses. The organizations we polled in the region told us that the most important aspects of their overall IT strategy were, first, a higher responsiveness to business demands (rated as vital by 62% of respondents), followed by enhancing customer experience (60%) and achieving a higher quality of software solutions (58%). There is a clearly outward-facing commercial mindset at work here – and the fact that the cost optimization of IT was rated highly by far fewer respondents (49%) is an indication that organizations are prepared to pay in order to meet their business goals.

In relation specifically to testing and QA objectives, we see a significant shift. Last year, the lowest-rated responses were quality enablement, automating QA processes, and achieving quality at speed. This year, these same three responses came top. Quality enablement, by which we mean supporting everyone in the team to achieve higher quality, was deemed vital this year by almost two-thirds of the region's respondents (64%). We feel this may be because of the growing realization during the global pandemic of the need for teamwork.

We see a more mixed picture in relation to how well application development targets are being achieved. High numbers of Australasian respondents said the tools and methods they need for test activities are always or almost always available (62%); that their testing covers all that is needed (60%); and that activities across distributed teams are well orchestrated and integrated (59%). By contrast, lower numbers reported that testing is optimized in terms of speed and cost (42%); that their requirements are clearly defined (44%); and that end-to-end automation from build to deployment is in place (45%). It's interesting to note that the same high-low split occurs across our survey cohort as a whole.

There also seem to be some challenges as far as testing key applications is concerned. Fewer than half the respondents in the region (48%) said they always or almost always have the right testing strategy, process, or methodology. Our local experience suggests some organizations may be struggling with digital transformation, or with a shift to agile methods, or both.

On this last point, we see evidence elsewhere in the survey data of challenges with testing in agile developments. Easily the highest ranked option was the difficulty of getting the right test environments and test data, which was given a high rating by 55% of Australasian respondents, against a survey average of just 41%. We shall be returning to test environments later.

What are the key factors in making testing more efficient? As we would expect, the highest-rated response (66%) was having adequate people with the right skills. Other popular criteria were shift-left testing (57%), enhancing test data generation and provisioning solutions for teams (55%), and better communications and collaboration across the lifecycle (54%). These were all broadly in line with global averages.

So, too, were the areas that people felt needed most focus in the post-COVID environment. In a world that has grown accustomed to working from home, it's no surprise to see an emphasis on remote access to test systems and test environments, for example using Software-as-a-Service and the cloud. Better collaboration tools for teams scored highly, too, and so did improving the productivity monitoring of remote teams.

Keen on test automation – and also on AI/ML

What benefits are organizations realizing from intelligent test automation? When we asked that question last year, 71% of Australasian respondents said they were achieving better control and transparency of their test activities – and this year, the figure was exactly the same. For the most part, and also like last year, other benefit responses were in keeping with the averages for the survey as a whole. They included reduction of test cycle times, detection of defects earlier in the testing lifecycle, and reduction of test costs.

Does this mean organizations in Australia and New Zealand are keen on test automation? They certainly seem to be. High proportions of them said they have plans to use a range of automation techniques in the coming year. Popular options included pipeline automation (rated highly by 61% of the region's respondents), self-healing capabilities using artificial intelligence (AI) and machine learning (ML) (56%), robotics automation (55%), and test environment virtualization (also 55%).

They're also keen on the use of AI and ML. Well over half of them (55%) said they have an established repository of the test execution data required by an AI/ML platform, and even more of them (58%) said their business owners trust the intelligence their AI/ML platform provides. This was significantly higher than the 42% global average figure. It shows how much management in the region is committed to success in the use of these smart technologies.

A brief look at test environments – and at intelligent industry

The most popular use case option was the use of AI to generate test environments and test data (80%). Broadly speaking, the region's respondents were satisfied with the progress they're

making in test environments in general. More than half of them (55%) were very comfortable with their ability to set up fit-for-purpose test environments; with their visibility of available environments; and with the sufficiency of facilities for their teams to book and manage those environments.

It was disappointing to see only 42% of them felt satisfied with the modernization of test environments – for example, in the cloud, or with containers. Progress needs to be made here, and this is something we're expecting to see in the next year or two. The cost efficiency of test environments also polled a low satisfaction score (41%). This, we feel, may have been partly because of reusability issues.

For the first time this year, our survey included a section on what we call the intelligent industry. This is an area of digital transformation in which organizations digitize the key industrial parts of their businesses. They're using embedded software, data, 5G, edge computing, smart technologies, automation, and the internet of things (IoT) to rethink what they do, and how they do it.

In Australia and New Zealand, our respondents told us the key drivers for this important new area included improved productivity and efficiency, increased service and product quality, better agility, and an enhanced customer experience. These are all pretty much to be expected. Cost reduction received a high rating by far fewer respondents – partly, we think, because it's an area still in development and in which investment will need to be made, and partly because during the global pandemic, there has been more onshore spending in the region than usual.

Momentum is building

If there were one word that characterizes the QA mindset in Australia and New Zealand this year, it would be confidence. In test automation, and in the use of smart technologies, as much as in intelligent industry developments, we are seeing increasing levels of determination to make progress.

Yes, there are still challenges to be faced in areas such as agile adoption, and developments in moving test environments to the cloud could have been faster, but overall, the momentum is building, and the future looks promising.



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