

Australia and New Zealand

Australia and New Zealand have been keen to embed quality into every part of the development lifecycle. Could we see that trend accelerate this year?

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World Quality Report

2020-21 | TWELFTH EDITION

Last year in Australia and New Zealand, we observed growing enthusiasm to adopt agile and DevOps environments, and a determination also to make greater use of test automation. These desires are still very much in evidence this year, although in our experience, progress in implementation has been variable. For example, we see agile and DevOps approaches becoming embedded in project delivery teams, and only to some extent in technical teams.

The good news, though, is that even though these developments have been patchy, they are part of a bigger evolution. What we are witnessing is the beginning of a shift from quality assurance (QA) as a discrete function, to a future point at which it will be woven indistinguishably into every part of the software development lifecycle.

This general commitment to quality as a principle is clear in several of the region's responses in the research data this year. More than three-quarters (76%) of Australia and New Zealand's survey participants saw a contribution to business outcomes as a key QA objective, and almost as many (70%) placed a similar emphasis on the detection of defects before go-live. Making testing smarter and more automated was rated highly by 61%. If anything, given the enthusiasm we've witnessed in the field, we would have expected this figure to be higher.

Australasian respondents seem fairly happy about the extent to which they achieve their targets when testing key applications. More than three-quarters (76%) of them said they virtually always meet their quality goals; almost two-thirds (62%) said they almost always have the right QA and test expertise; and a similar proportion (60%) said they always have the necessary in-house testing environments.

Progress in agile and DevOps – and challenges, too

Our specific observations about growth in agile and in test automation are also corroborated in this year's survey data. When asked about various approaches used frequently to accelerate and optimize testing in agile and DevOps environments, more than two-thirds (68%) said they maximize test automation. Interestingly, the survey average for this option was just 51%. In our own experience, many Australian and New Zealand organizations automate their regression testing, in particular.

Similarly, over one-third (37%) of the region's respondents said they use tools to generate or update tests automatically. This, too, was significantly higher than average.

However, there are still challenges as far as testing in agile environments is concerned. For respondents in our region, the greatest of these relate either to knowledge or to administration. For instance, more than half (58%) of them said they have difficulty in aligning which tools to use for automated testing; almost as many (53%) said they find it hard to be clear on which tests their teams have run; and nearly half (47%) said they have difficulty in estimating test effort in agile initiatives. A partial answer can perhaps be found in the fact that half (50%) of our respondents identified a skills gap as far as knowledge of CI/CD pipeline tools was concerned. The proliferation of tools in this area makes it difficult to determine which toolset is the right one in which to invest.

Efficiency considerations

There are some interesting differences from survey averages in relation to Australia and New Zealand's approaches to improving test efficiency. Enhancing test data and test

environment generation and provisioning solutions for teams ranked highly for the region, both of which make a great deal of sense as criteria in this regard.

The region's growing commitment to end-to-end testing was also reflected here. Around half (51%) said that shift-right testing was essential for increased efficiency, and almost as many (44%) said the same for shift-left. The high figure also accorded to the implementation of intelligent autonomous test solutions was, of course, no surprise at all.

AI and machine learning: aspirations and requirements

Interest in the application to testing and QA of artificial intelligence (AI) and machine learning remains high. Over three-quarters (76%) of respondents from Australia and New Zealand said automated root cause analysis was extremely relevant for them this year, and over half (56%) mentioned fit-for-purpose test data provisioning in the same context. Looking ahead, as many as 84% said more AI proofs of concept would be featuring in their plans, and three-quarters (75%) said they would be using more smart QA dashboards. Overall, a sizeable 93% of the region's respondents said that AI now represented the strongest growth area of their test activities.

Needless to say, implicit in fulfilling these ambitions will be the availability of the requisite skills. The two most significant gaps identified by respondents from the region were the understanding of the implications of AI for business processes (48%), and software development engineer testing skills (47%).

Taken together, these two perceived gaps paint the general picture we see in Australia and New Zealand. These are countries where, as we stated at the outset of this article, quality assurance is being woven into every aspect of software development, and where business focus is a key objective. The more end-to-end and business-driven AI becomes as an element of QA, the more effective it will be.

Accelerated development?

The COVID-19 pandemic has had a major impact on business in Australia and New Zealand. Indeed, as we write this, Australia is officially in recession. It's therefore no surprise to see that budgets for testing and quality assurance have been hit. The average reduction was anticipated by our respondents to be 14%, which is pretty high compared to some other countries and regions in this survey. Indeed, almost a third of our region's survey participants (31%) were expecting a budget decrease of between 11% and 20%.

However, there are heartening signs of resilience. People in the region were also asked to take stock of the effect of the lockdown on testing and quality assurance, and it was interesting to see the extent to which new working practices were top of mind. Sure, they gave much attention to areas such as improving the customer experience, as you'd expect – but several other responses related to the improvement of operational dynamics. There will need to be a significant change in focus, they told us, in areas such as enabling more remote access to test systems and test environments (53% of the region's respondents); improving the orchestration of team QA activities (50%); and the need for more and better collaboration tools (44%).

Almost everyone (95%) said they will need to build a stronger community culture – but it's clear that the nature of that community will be different now. It's going to be conditioned not just by more flexible working, but by a greater, more collegiate sense of responsibility for quality. Last year, we saw the beginnings of a shift in that direction – but this year, we may well see the pace of that change accelerate to a degree we couldn't have predicted. Let's hope so.



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