

# WORLD QUALITY REPORT

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## Australia and New Zealand

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### IMPORTANT TRENDS

- Digital Transformation, automated testing, omni-channel testing and the increased adoption of agile are a few of the biggest QA and Testing trends in Australia and New Zealand this year.
- Whereas historically, it was business which used to drive technology, today there is a broad realization that it is technology which is crucial to driving business.
- Organizations today are searching for SDETs or Software Development Engineering and Testing skills and a lack of these skill sets is one of the major problems facing QA and Testing in Australia and New Zealand.

The QA and Testing market in Australia and New Zealand, gives a picture of a region that is slightly ahead of the rest of the world when it comes to the adoption of the latest technology trends. These trends, such as agile, DevOps, Digital Transformation and automation technologies are changing organizations, skill sets and workflows across the region. A large part of this is due to the increased focus on speed and time-to-market considerations, which directly drives the move towards agile, co-location and de-centralization of Testing Centers Of Excellence (TCOEs).

In general, the last few years have seen a lot of focus on IT and technology across different sectors and the digital revolution has accelerated this process. Whereas historically, it was business which used to drive technology, today there is an increasing alignment between IT and business and there is a perception that it is technology which is crucial to driving business. This increased alignment can be seen in our survey results as well. For instance, when asked to rank different aspects of their IT strategy, Australian respondents gave the highest importance to 'enhance customer solutions', while respondents from New Zealand gave the greatest weighting to 'higher quality of software solutions'. Similarly, when asked about the objectives of their QA and Testing practice, 'increasing the quality of software or product' and 'increasing quality awareness amongst all disciplines' were the two top priorities. Clearly, things have changed compared to a

few years earlier, when cost reduction would have been amongst the top goals of any firm's IT strategy.

Today, it is the digital revolution which is spreading those trends to even the more traditional sectors of the economy. A host of social, mobile and local solutions have gotten consumers used to higher and higher standards of speed, convenience and service, and they now demand this in every aspect of their lives. This is driving a transformation across sectors. In many companies, digital, which used to be a separate vertical or line of business earlier, is today a capability that is horizontally spread across every department. Companies are moving beyond just mobile apps, wearables, and social media to features, such as digital security stack and voice bio-metrics.

All of this is driving increased activity in omni-channel testing. According to our survey, companies are focusing on aspects such as efficiency/performance, user interface, and security when testing mobile applications. While organizations are becoming increasingly mature in their testing activities, there are still some significant challenges that remain. Top amongst these are challenges related to appropriate tools, testing environments, the need for security and the time available for testing mobile and multi-channel applications. As with a number of these new trends, the lack of the appropriate skill sets is another challenge.

Another big trend is the adoption of agile by companies across the region. In fact, according to our survey respondents, almost a 100% of projects in their organizations were using at least one agile practice. Popular agile development methods in Australia include Feature Driven Development (approximately 16% of all projects), Scrum (approximately 15%) and Extreme Programming (approximately 14%), while in New Zealand it was Dynamic Systems Development Method (approximately 40%), Feature Driven Development (approximately 36%) and Scaled Agile Framework (approximately 39%) that scored well. In fact, the Scaled Agile Framework or SAFE is predicted to see wider across the region, over the next couple of years, as more and more organizations try to take their agile learnings and apply them at the enterprise level.

Of course, significant challenges remain. The top challenges in implementing agile methodologies are related to difficulties in slicing test activities for more than one location in distributed agile, problems applying automation, and difficulties in identifying areas on which the test should focus.

One thing that needs to be pointed out is that all of these trends like agile, DevOps, automation and omni-channel testing are actually changing the ways in which work is organized and responsibilities are allocated. The old waterfall model, with its rigid separation of teams, clear allocation of responsibilities and more linear workflows is being replaced by a world of several smaller self-contained teams, with a mixture of various skills in each team and a blurring of the boundaries between testing and development. Basically, organizations are moving towards Test Driven Development (TDD) and Behavior Driven Development (BDD).

As a result, the skills required of QA and Testing professionals have undergone a sea change. More and more organizations today want SDETs or Software Development Engineering and Testing skills, that is to say people with both coding and development skills who can do white box testing as well. There is also a trend towards testers who can do business analysis and help craft the user stories and requirements. Add to that the demands of automation and omni-channel testers and we can see why there is a dearth of the required skillsets in Australia and New Zealand.

One can see the impact of the above trends in terms of the changes they have brought about in the organization of testing activities. More and more companies are moving away from centralized TCOEs to agile TCOEs or several loosely co-ordinated teams focusing on different activities. In such models, testing is often split between different locations and teams thus leading to the difficulties in slicing of test activities.

The final big trend that is on the upswing in the region is automated testing which is becoming increasingly specialized. The focus is moving away from regression testing to more in-sprint progression testing, where automation is done even before coding is completed. The obvious challenges in increasing the levels of automated testing again have to do with a shortage of skills and the need to restructure the entire organizational structure and delivery model.

Bringing it all together, one can see that the QA and Testing market in the region, is entering a period of rapid change brought about by the technological trends pointed out above. This transitory period is likely to last for a couple of years before maturity sets in and the full benefits of these technologies and ways of working are reaped. In short, Australia and New Zealand are at the cusp of some exciting times in QA and Testing.



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