

# WORLD QUALITY REPORT

COUNTRY ANALYSIS

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SIXTH EDITION

## NORTH AMERICA

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### Top Trends

- A growing trend among North American companies is to achieve capex reduction by moving application infrastructure to the Cloud.
- Only 16% of North American companies report having no interest in creating a TCOE – a steep decline from 26% in 2013, indicating growing QA and Testing maturity levels and a strong drive toward consistency of quality processes.
- Mobile testing is rapidly gaining momentum – only one in 10 research participants states that they don't engage in mobile testing.

As the economic situation in the US and Canada and business confidence continue to improve, companies are resuming their previous levels of IT investments. However, the technology budgets don't look like they will return to their pre-recession levels. Instead, senior IT executives are looking for ways to improve the efficiency of IT spend and reallocate resources to be able to support new development initiatives while still maintaining existing applications.

A growing trend among North American companies is to achieve capex reduction by moving application infrastructure to the Cloud. When asked about their key technology focus areas for 2014, 68% of senior IT executives interviewed rank investment in cloud services among the two most important priorities. Research participants state that 32% of applications have been migrated to the Cloud in 2014 – an increase from 21% in the previous year, and 37% of all testing occurs in cloud-based environments (both figures higher than the worldwide average). North American companies' IT leaders interviewed for the research predict that the use of cloud will continue to grow in the near future, with as much as 56% of all testing being performed using cloud-based applications and infrastructure by 2017.

In 2014, cloud initiatives are consuming a quarter of the Quality Assurance (QA) and Testing budget dedicated to new development. Other key focus areas include business analytics and big data, which together account for 41% of this budget, and mobility 17%. These digital transformation projects require skills that are not always readily available in organizations. In 2014, the share of the testing budget allocated to

staffing and human resources has increased from 22% to 36%, suggesting that businesses augment their skills by hiring internally or engaging with external service providers to meet the changing needs created by these new initiatives.

In response to higher quality requirements by customers, organizations are increasing the proportion of the budget that they spend on QA and Testing: In 2014, the share has grown from 26% of the overall IT spend to 30%, and is forecast to increase further to 33% by 2017. The 2014 research data also shows that the overall proportion of QA and Testing budgets spent on new development projects now outweighs maintenance work. A year ago, 53% of the QA and Testing spend was dedicated to maintenance tasks. In 2014, the proportion of budget allocated for updates and enhancements to existing applications has dropped to 47%, leaving more than half of QA and Testing spend to be focused on new development initiatives.

Alongside increasing the share of the IT budget allocated to QA and Testing, organizations are focusing on efficiency – looking for solutions that will help deliver better quality applications faster. This year has seen an increase in the number of companies who centralize their testing function within one stream across the organization – from 23% in 2013 to 29% in 2014. At the same time, the share of companies that state that their QA and Testing function is highly decentralized across business units and geographies has also grown from 14% to 17%. The number of senior IT executives interviewed who report having no separate testing stream within their organization has decreased from 14% to 8%. These findings



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indicate that awareness of quality and organizational maturity is growing, while companies are experimenting with various QA and Testing organizational structures that fit their unique business needs. Over the years, some companies have attempted to centralize specific QA and Testing functions such as performance testing or regression testing. However, these measures alone often don't deliver expected benefits. As a result, a growing number of companies are looking at industrialized QA and Testing processes to help reduce testing cycles, get applications to market sooner, and with higher quality.

The research shows that 29% of senior IT executives interviewed state that their companies have fully operational Testing Centers of Excellence (TCOEs), while an additional 55% have plans to centralize and industrialize their QA and Testing processes across the organization or have already started the process within the last two years. Only 16% of companies report having no interest in creating a TCOE – a steep reduction from 26% in 2013, indicating growing QA and Testing maturity levels and a strong drive toward consistency and repeatability of QA and Testing processes.

Big data and analytics are among the highest priority areas for QA and Testing organizations in North America – particularly in large companies. Two-thirds (66%) of North American IT leaders interviewed say that business intelligence and data analytics are among the highest priorities for their organizations. In order to be able to use the data that's being collected from various applications, the business needs to understand it, structure it, and ensure its quality and consistency. However, 53% of

North American QA and Testing organizations state that they have difficulties in dealing with the unprecedented amounts of data coming from various sources. This area is also seeing an increase in partnerships with specialized service providers, helping companies build the strategy and roadmap for big data, create consistent data testing strategies, and implement process-oriented solutions.

Mobile testing is also rapidly gaining momentum. Last year, more than half of North American businesses (55%) stated that they tested mobile applications, whereas in 2014, only one out of 10 research participants state that they don't engage in mobile testing. In response to the growing usage of mobile devices and the customer demand for all-channel experience, companies are expanding their mobile testing efforts for both internal and externally facing applications, focusing their efforts on security (60%), functionality (57%) and performance (50%).

North American businesses are seeing a sizable increase in adoption of agile methods, with only 4% of research participants reporting that they don't use agile methodologies (compared to 7% worldwide). Although more companies are using agile, the challenges faced by agile teams remain largely the same as in previous years. Three out of five research participants state that their organizations are still struggling to find a good testing approach that fits with the agile development methodology, and 56% say that they are not able to apply test automation to their agile projects at appropriate levels. Furthermore, 43% of IT leaders interviewed state that they are having difficulties in identifying the right areas on which testing teams should focus their efforts within the agile framework.



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