GERMANY
Germany means business

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WORLD QUALITY REPORT

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Germany's business-oriented mindset is still very much in evidence in this year's data. The most important aspects of their IT strategy were adjudged to include enhancing the customer experience, achieving a higher quality of software solutions, and being highly responsive to business demands, all of which were rated as vital by 56% of German respondents. However, enhancing security was rated highly by as many as 60% of them, which is up a full ten percentage points on last year's response. The boost given to online business in a lockdown world may have been a factor here; high transaction volumes can make some organizations feel more vulnerable.

The IT strategy option given emphasis by the lowest number (43%) of German respondents was achieving a faster time to market – and later, in a question specifically on the most important testing and QA objectives, we see again that quality at speed was rated highly in Germany by fewer respondents than average. We find this surprising: after all, a fast time to market delivers real business dividends. It isn't some arbitrary metric.

Test automation was also highly rated in Germany by a below-average proportion (52%) of respondents, and in addition, only 47% of German respondents said they have the right level of automation, against a survey-wide response of 61%. We find these figures most surprising. The enthusiasm for test automation that we saw last year is still very much part of the picture. Everyone is talking about it.

However, overall, the confidence levels we witnessed last year are still evident. Higher-than-average numbers of German respondents said their testing is comprehensive (65%), and that the QA tools and methods they need are sufficient and available (62%). The same proportion (62%) of them also felt they had the right testing strategies, processes and methodologies, and that they have sufficient test environments available when

they need them. In addition, 59% of them said they always or almost always achieve their quality goals, which is in line with the survey-wide average.

This year, our survey asked people to anticipate where most of their quality efforts would be two years from now. It was a shame that for this question, statistically significant numbers weren't available for some individual countries, including Germany. If, however, we were ourselves to anticipate trends, we'd expect to see significant growth in end-to-end testing, and also in acceptance testing – especially if, in this latter case, it included links to the user experience.

Which factors did German organizations feel were making testing more efficient? The options rated highly by most of the nation's respondents were first, better communications and collaboration across the workforce (61%), and second, having adequate staff with the right skills (60%). We suspect the global pandemic may have had a bearing on these responses. Indeed, in a question specifically about areas of focus in a post-COVID world, one of the highest-rated options was the availability of remote access to test systems and test environments. Another was, as our own experience bears out, a determination to improve automation of QA activities; but the option rated highly by most people (52% of respondents) related to monitoring the productivity of remote teams. The need for reassurance that things are under control is highly characteristic of the German market.

Agile development: help needed

As was the case last year, there is still much enthusiasm in the German market for the adoption of agile and DevOps in quality assurance. It's clear to see why: well over half of our German respondents reported excellent or very good improvements as a result of their use.

However, these numbers of people reporting improvements are lower than our survey average, and also, some challenges remain. In particular, this year's survey data points to lack of professional test expertise in agile teams, which was rated highly as an issue by almost half (48%) of German respondents. This corroborates what we see in the field: many German organizations are still in the early stages of agile adoption in QA, and are seeking external help.

It seems many organizations in Germany are doing almost all the right things to track the quality of their applications. Popular indicators include static code analysis, the percentage of tests that passed or failed, risk coverage by test, and requirement coverage by test. Almost all the right things – but not all of them. We were somewhat taken aback to note that only 29% of German respondents said they always or almost always track defect leakage into production, against a survey-wide average of 43%. It's hard to think that quite so many organizations aren't concerned that errors may be slipping past them and going out into live applications.

Last year, for the first time, we asked people to rate the critical success factors for the adoption of agile and DevOps. The difference this year is remarkable. Just under half (46%) of German respondents highly rated the underlying technology stack, whereas in 2020, the figure was 97%. Also, last year, only 25% of respondents said business priorities were critical, and this year, the figure has almost doubled (48%). This year's numbers are consistent with the direction of travel that we see in the field.

Test automation: popular, but work in progress

We may ourselves see the popularity of test automation in the German market, but that doesn't mean it is fully delivering benefits just yet. While almost three-quarters (72%) of respondents said they had better control and transparency of their test activities, only around half of them said they were seeing reductions in their test cycle times (51%) and in their test costs (53%). Time and cost are of course the two main arguments in favor of automating tests, so there is clearly still some work to do here.

The Intelligent Industry: drivers and skills

The shape and maturity of the German economy provide a natural fit for the development of what's called the intelligent industry, which is a term we're using for organizations that are digitizing 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 Germany, the key drivers for this digital transformation include cost reduction, which was ranked highly by 49% of respondents, and increased service and product quality (46%). These are good signs, we feel. Taken together, they show that quality is not being sacrificed for cost.

Looking ahead in Germany

There's no reason to think current trends in German quality assurance will change any time soon. We can expect to see more test automation, and we can also expect progress to be made in the adoption of agile development environments. However, in this latter case, we see many German organizations evaluating their positions. Several of them are taking a nuanced approach, because they find it easier than what might be called "pure agile."

We can also expect to see some consolidation around the new normal. Post-COVID, it's likely that more QA team members will be working remotely more often. This means that in many organizations right now, the working models are up for discussion. In this, and in so much else in our analysis of the German picture this year, it's good to see that the nation's determination to progress continues unabated.