UNITED KINGDOM
Quality at speed

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The UK isn't alone in being keen to get business back on its feet after COVID-19. Many other countries and regions have, of course, been facing the same challenge. What makes the UK's case different, though, is that the pandemic arrived during the post-Brexit period, when the country most needed both to consolidate its strengths and to find new markets.

It was no wonder, therefore, that in last year's report, we saw an emphasis on the need for quality assurance (QA) to support business growth. Nor is it a surprise to find that the trend is continuing this year. As we shall see, the net effect is a drive not just for quality – but for quality at speed.

Business-oriented objectives

Evidence for this mindset can be found in response to the very first question. For the UK, a faster time to market was more significant than for our survey respondents as a whole. Other important aspects of overall IT strategy this year were deemed to be higher quality of software solutions (rated highly by 67% of them), higher responsiveness to business demands (66%), and an enhanced customer experience (61%).

The same pattern emerges in specific relation to testing and QA objectives. UK respondents saw themselves as "custodians of quality" to a far greater degree than our survey average; contribution to business growth also ranked highly; so did test automation (to which we shall return); and quality at speed was deemed as vital by 60% of them.

However, perhaps the most striking response was in relation to the suggestion that everybody in the team should be supported to achieve higher quality. This contention was regarded as vital by 72% of UK respondents, which was a full ten percentage points

higher than average. This, we feel, should be seen in the context of agile adoption, which we'll be examining shortly. The UK has taken wholeheartedly to the agile approach, and we see software development and test team members actively encouraging their peers to engage in QA. The days of standalone test teams are coming to an end.

In terms of application development targets, it was interesting to see the number of UK respondents who felt end-to-end automation was in place (55%, against a survey average of 49%). More than half of the UK survey cohort was drawn from the financial services, high tech, and TME (telecoms, media and entertainment) sectors, which not only are all strong UK markets, but are also home to big, interlinked organizations. The focus on integration is therefore no surprise – and given the nature of these markets, the integration will be happening at a rapid pace.

Enthusiasm for agile and DevOps

It's very encouraging to note that UK organizations are reporting improvements they've seen as a result of using agile and DevOps. Higher-than-average numbers of respondents said they achieved excellent or very good improvements in quality of software (70%) and productivity (75%). They're using a range of metrics to track applications quality, and, as we expected, test velocity featured prominently; quality at speed is once again evident here.

However, there are challenges, of course. The highest ranked, and by some margin (52%, over a global average of 42%), was the difficulty of aligning the tools to be used in agile teams. The next greatest (46%) was the difficulty of getting the right test environments and test data. It seems to us that these two challenges are characteristic of the agile mindset. The upside of the approach is that each team is multi-skilled and dedicated to the fulfillment of its own task, addressing that task in its own way.

The downside is that there is a danger of the proliferation of tools, environments, and approaches between teams. It's a constant trade-off of individual team autonomy against overall consistency.

Energy in test automation

In the field, we see that UK organizations are starting to make real headway in test automation, and there is ample evidence to support this in the survey data this year. A high proportion (59%) of respondents said they are getting a return on investment from their automation efforts. Other benefits include better control and transparency of test activities (achieved by a substantial 71% of UK respondents), reduction of overall security risks (56%), and reduction of test cycle times (54%). Achieving benefits such as these requires investment, so we weren't surprised to see the reduction of test costs polling a somewhat lower percentage (43%).

UK organizations seem keen to build their momentum in test automation, and in two ways. The first relates to skills: respondents rate their importance more highly than they did last year, in areas that include robotic process automation skills, skills in APIs and microservices, test data management skills, and skills in AI and machine learning (ML). We see here the rise of a new generation, well versed in test automation and in smart technologies, and a corresponding likely decline of testing roles that are purely manual.

The second way in which momentum in test automation is likely to increase can be seen in the UK's stated plans for the coming year. The country's respondents reported that they are highly likely to use test automation in every way suggested to them in the question, including pipeline automation, robotics automation for test activities, self-healing using AI and ML, test environment virtualization, and test data automation. It's good to see this energy and enthusiasm.

AI and ML: ready, willing, and almost able

A significant proportion (42%) of UK respondents said they always or almost always use AI over past cycles to optimize test cases. There's no doubt artificial intelligence is the next big thing in quality assurance. It's going to help teams know what to build, when to use it – and also, when to stop testing. That's probably why, in a question about skills gaps, the need for data analytics and AI skills was seen in the UK as the most pressing.

The UK's own take on AI in quality assurance is fairly robust. A much higher-than-average proportion of UK respondents said they have identified applications and programs that would benefit from AL and ML (56%, over a global average of 42%), and the same was true of those who felt their organizations are willing to act on intelligence provided by AI and ML platforms (58%, over 46%). However, lower-than-average numbers felt they had the right kind of test execution data right now, and there was a strong feeling that test strategies would need to change, and that greater understanding was needed of the bias and ethics issues implicit in AI solutions. In short, the UK seems ready and willing, but not yet quite able. The challenges of ability and capacity the country is currently facing here are broadly the same as those it's always faced in traditional approaches to QA.

"I feel the need – the need for speed"

Everything we see in this year's UK survey data is part of the same story. The progress in, and enthusiasm for agile and DevOps adoption, for test automation, for AI, machine learning, and more, all bear witness to the country's determination to make quality assurance as business-fit as it can possibly be. To make that happen, what will be needed are greater end-to-end integration, more skills, and above all, more quality at speed.

Because the faster the time to market, the more competitive organizations will be – and that's what the UK, in particular, needs. Now, more than ever.

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