World Quality Report

Gary Moore
Vice President, Head of Delivery, Sogeti UK

Uma Pillai
Senior Director, Financial Services, Capgemini

UK

The UK is keen to see faster progress in QA and testing – especially in agile, DevOps, and test automation

As a proportion of the total survey sample for this year, the UK is one of the larger contributors. Our respondents are drawn from a representative spread of the country's economy, with 60% of them in financial services, the public sector, and telecommunications, media, and entertainment (TME).

Before we consider the survey data, let's start by briefly setting the scene:

- Now more than ever, quality assurance (QA) in the UK is dominated by the need for faster time to market, and by the promise of agile and DevOps methodologies to deliver it.
- We are seeing a greater demand for test engineering functions than for traditional QA.
- Multi-channel customer demands are driving IT developments.
- The demand for professionals who can multi-task across multiple disciplines is continuing to grow.
- Cost is being overtaken as a major issue this year by other criteria, and in particular, by the abiding need for quality, by the need for skills, and by the necessity of successful outcomes.

In addition, we observe that question marks remain about artificial intelligence (AI), which is still in early stages of adoption. We also note that, in general, quality assurance is still not fast enough to meet customer-driven and business-driven demands, and that as a result, more automation is needed. (We'll be returning to this later.)

Testing times

And so to the data. One of the first things we see is that the UK's principal concerns about aspects of IT strategy are largely in line with the rest of the world. The importance of enhancing security and also of customer experience, the need for higher-quality software solutions, and the need to respond flexibly to business demands – all these are factors that have the potential to impact the brand. The business world is, in short, increasingly customer-driven. Indeed, it's hard now to imagine how it could ever have been otherwise.

We start to see differences when we explore the challenges UK businesses face when developing applications, and also when testing. The testing process is too slow for more British respondents than for the global average. In our experience, quality assurance in the UK is, in general, slow and struggling across all sectors, and speed in continuous integration testing in particular is still a problem (it was last year, too). It's a constant trade-off between quality and time to market and, as we shall see, one cause is the lack of sufficiently multi-skilled engineers.

The UK's reported levels of testing in agile and DevOps are lower than for the rest of the world. In agile, 21% of UK team effort is assigned to testing, against a survey average of 25%; in DevOps, the figures are 25% and 27% respectively. We find this surprising – we're seeing far more activity in these areas in the UK now than in previous years.

Agile developments bring challenges to testing, and the UK is no different from the rest of the world in this respect. In particular, British organizations report a higher-than-average inability to apply test automation at appropriate levels, a marked lack of professional test expertise in agile teams, and difficulties in identifying the right areas on which tests should focus. In the field, we do indeed find that QA strategies and procedures are not always as in synch with agile and DevOps approaches as they should be.
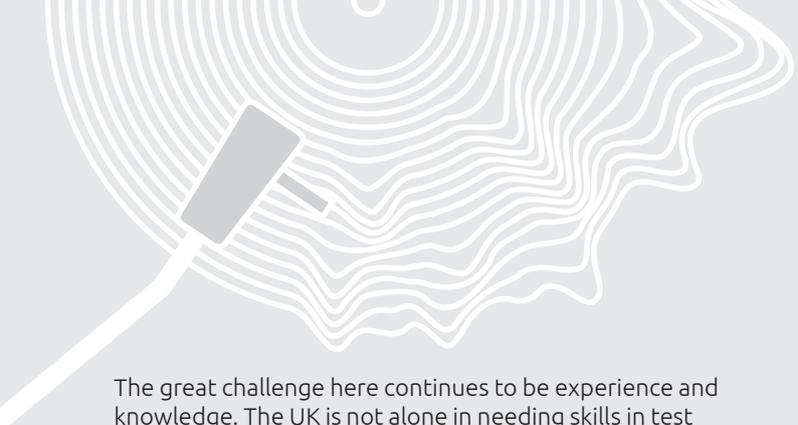
The great challenge here continues to be experience and knowledge. The UK is not alone in needing skills in test automation, in performance engineering, in test case design, in collaboration, and more. (We're surprised to see the UK reporting average figures here; we would have expected them to be higher.) Ideally, British businesses would like to find all these skills wrapped up in fewer, more multi-faceted team members.

AI in the UK

The UK is reporting significantly higher-than-average levels of AI and machine-learning projects. For example, almost two-thirds (64%) say they have AI projects in place on customer processes, against a survey average of 54%. We find these numbers surprising. While it's true that AI and smart data are in greater use, this is an area that is still in development, and from a QA perspective, it's early days: organizations still need to decide where their focus should be – which is why we would expect demand to be high for multi-faceted skills in this area too, and especially in data science, development, and coding. Indeed, our survey shows that more than half (51%) of British respondents are bringing in external AI knowledge permanently or temporarily to support their core functions. There is a UK market for people with such skills, and who realize their current worth.

Test automation trends

The quality-versus-time trade-off we mentioned earlier inevitably suggests test automation as a solution. Curiously, while British respondents say they face challenges in the application of test automation, the UK is reporting significant benefits in this respect: 77% of British respondents say they are reducing test costs and test cycle times, against figures in the mid-fifties for the rest of the world.

This may be partly be because we see that in the UK, the challenge of insufficient automation tools is much less than elsewhere: 18% of respondents opted for it in the UK, against 42% of the global sample. However, the choice of tools is another matter. We note that 45% of UK respondents say that, if anything, they have too many. In our experience, this is because testing teams frequently work in siloes, and make their own tool purchase decisions. Companies need to impose some order, and to set a clear tool strategy.

A strategy is also needed on where and what to automate first. We can see that over a third (36%) of UK respondents say they are starting too late with testing and test automation, and that a similar number have difficulties in deciding on the right test scenarios. These issues become more acute when, as we currently find, the market is moving too fast, and QA in general is finding it hard to keep up.

Finally, let's take a look at costs. The percentage of the total IT budget allocated to QA and testing is 23% in the UK, which is down on last year. Why should this be, when – as we have seen – these are such important areas for competitive and customer-driven British organizations?

The answer may lie in the trends we have been examining. Tools are plentiful and becoming cheaper, and people are becoming more multi-faceted, meaning that businesses need fewer of them. Indeed, our survey shows that software licenses and human resources account for a smaller proportion of the testing and QA budget than hardware and infrastructure does.

As time passes, we may find not just that testing and QA become more cost-efficient, but that they start to deliver better quality, and faster. And that, of course, is exactly what any business needs.