SOUTHERN EUROPE The great game-changers: knowledge and experience Carlos Vidinha Principal Solutions Director, Capgemini Portugal Diego Bruzzone Test Management Expert, MALS Testing Advisor, Capgemini Italia Jose Luis Anton Vice President, MU Head, Sogeti Spain

In many respects, the picture hasn't changed greatly in Italy, Spain, and Portugal since last year. For example, the three aspects of IT strategy deemed by respondents to be of greatest importance were once again enhancing the customer experience (CX), enhancing security, and achieving a higher quality of software solutions. The high CX score is a testament to the long-standing focus on business outcomes that we see in the region.

It's also notable that the emphasis on the cost optimization of IT was higher than the global average, and by some margin. This is consistent with what we see: in our experience, Southern Europe tends to have a time-and-materials mindset.

This mindset is also evident when we look more specifically at testing and QA objectives. The most important target was adjudged to be the achievement of quality at speed, which was given a high rating by 66% of the region's respondents. While this objective makes sense for competitive reasons, it needs to be pursued within a clear methodology, and that's not something we see right now. For example, far fewer Southern European respondents than average felt their testing always or almost always covers all that's needed. This seems to us to point to a lack of strategy — and this problem is, in turn, the result not just of a lack of method, but of a shortage of the necessary people and tools.

Given all this, it's surprising to find over two-thirds of the region's respondents (68%) saying they always have the right QA and test expertise. We suspect these are politically correct responses. For one thing, as we see in the field and also elsewhere in this year's survey, there is a clear and abiding skills need in Southern Europe. Indeed, in the very next question, an even higher number of respondents (68%) said that testing efficiency was dependent on having adequate staff with the right skills.

For another thing, it's a claim that is contradicted by other survey responses. For instance, a lower-than-average 54% of the region's respondents said they always or almost always meet their quality goals. If they had the requisite skills, we feel this figure would be higher.

For Southern Europe, one of the most important enablers of efficiency was better collaboration across the lifecycle. A coordinated approach throughout software development and test is desirable even at the best of times, and during the global pandemic, we were by no means living through the best of times.

Shouldn't this mean that better team collaboration tools ought to be an area of focus in the post-COVID era? You'd think so—but this was one of the lowest-ranking responses in a question about QA after the pandemic. This, we feel, is because many organizations in the region—and especially the larger ones—do have the collaboration tools they need, but they don't implement them very well.

Post-COVID focal points that attracted more attention from the region included remote access to test systems and test environments (52% of respondents) and customer experience validation and usability testing (53%). For different reasons – working-from-home practicalities and business outcomes – these two responses make sense to us.

Maturity needed in agile and DevOps

In our introduction, we noted the beginnings of interest in DevOps, and we also see some growth in agile developments. We asked the region's organizations about the approaches they are taking to speed up and optimize their testing in these environments, and the highest-ranked responses were shift left (rated highly by 56%) and maximizing the use of test automation (53%). Shift left lends itself to agile ways of working, and it

received a high score in Southern Europe last year, too – but even so, in our experience, it is not especially well executed.

A higher-than-average 47% of respondents said they integrate test as automatic quality gates in the CI/CD pipeline, which we see as indicative of DevOps ways of working.

There are challenges, of course. The greatest of these is the difficulty of aligning which tools should be used in agile teams, which was also the case last year. In our view, this indicates a lack of maturity. Southern European organizations are wont to adopt agile and DevOps tools, but they don't use them within a defined governance model as much as they should, and, as we have seen, there aren't enough skilled people to help to resolve the issue. Indeed, another noteworthy challenge is a reported lack of professional test expertise in agile teams — which undermines still further the unwarranted claim of skills confidence we saw earlier.

And there's more. The region's respondents gave us details of where their greatest skills needs are. The biggest perceived gaps were in knowledge of new test automation skills, and data analytics and AI skills, mentioned by 37% and 33% of respondents respectively. These are substantially up on last year, and may reflect what we feel to be a new realism about the extent of the challenge. Other skills needs aren't far behind, either.

Progress in test automation – less so in AI/ML

While we're on the subject, we see a skills area that was judged to be one of the most important in the field of intelligent test automation was architecture expertise. For automation to fulfil its promise, it's important that teams know how to design and structure its use throughout the lifecycle.

In fact, test automation is an area in which we see some progress being made. Most of the benefits that accrue from it, including shift left detection, better test coverage, and lower test costs, were ahead of the survey-wide averages, and in the case of control and transparency of test activities, there was a significant rise from last year. In 2020, 58% of Southern European claimed to have achieved this benefit; this year, the score stood at 70%.

Last year, we remarked on the positive story that emerged from responses on the use of artificial intelligence (AI) and machine learning (ML) in quality assurance and testing. We said that in our view, the figures were aspirational—and this year, the same thing is true. High proportions of Southern European respondents expressed confidence in various aspects of the robustness of their AI/ML platforms, and high proportions also namechecked use case options that were relevant to their organizations. In our experience, these views don't reflect current realities. For example, we feel that the region's use of AI in tools isn't yet sufficiently mature to support test automation in general, and mobile test automation in particular.

However, you can't deny the region's keenness. Higher-thanaverage numbers of respondents said they are planning to use AI in almost every scenario presented to them, including the generation of test environments and test data, the storage and reuse of important domain knowledge, and the development of self-healing test automation.

Clear objectives, but a road still to travel

In all these areas, it's fair to say that progress has once again been slow this year. This is also the case in the emerging arena of what is termed intelligent industry, which is still in its infancy in Southern Europe, and so is not covered here.

Overall, the objectives are clear, but there is still some distance to travel. Perhaps the biggest obstacle to progress has been the lack of skills, which, as we have seen, respondents sometimes seem reluctant even to acknowledge.

If that issue could be tackled, it would be a real game changer for Southern Europe – not just in quality assurance, but in digital transformation at enterprise level. Let's hope we can report significant developments in this area next year. Knowledge and experience can make everything better.



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