Belgium, the Netherlands, and Luxembourg together form one of the largest geographical respondent groupings in this year’s World Quality Report. All sectors are represented, with more than half (58%) of the total Benelux sample drawn from the public sector, financial services, telecoms, media and entertainment, and the automotive industry.

In fact, to set the scene, the automotive industry is a pretty good place to start. Together with the high-tech sector, it’s been a highly active business area in parts of Benelux in the last year, and this activity has had an impact on testing and quality assurance (QA), in terms both of volume and of an increase in physical testing – both of which have created a greater need for test environments (to which we shall return).

We’re also seeing smart devices popping up in less likely places, including the financial services sector. For instance, some insurance companies are developing sensors that can be installed in vehicles to measure performance and assess it against their policy criteria. This, too, adds to the testing and QA workload.

Another trend we’re seeing in the field is the very idea of value. Twenty years ago, testing and QA were seen as costs. In P&L terms, they represented a negative. Over time, there was a transition to a point where they were regarded as investment. But now, the perception has shifted further still. While in some markets, testing and quality assurance are still regarded as a regrettable necessity, in Benelux, they are increasingly seen as something that creates value, that delivers a return on the investment businesses have made.

We have one more observation before we consider the survey data – and that is the growth and acceptance of agile and DevOps developments. Benelux businesses were early adopters of these approaches, and they are now consolidating their work and considering how they might best apply QA.

**Market maturity**

This point about the normalization of agile and DevOps is corroborated in the first point worth considering in the survey. Benelux organizations were asked about the importance of various aspects of their IT strategy. Security, customer experience, and the quality of software solutions all rank highly in their responses, as we would expect – but the importance of agile or DevOps attracts the lowest mark. We feel this is an indication of the degree to which these approaches have become commodities in the Benelux market. In a sense, they are perhaps almost too obvious.

Similarly, Benelux returns a low score when asked if it has sufficient development and test environments – just 25%, against a survey-wide average of 40% who report this technical challenge. This area of testing and QA is fairly mature in Benelux, and organizations are now using cloud-based environments for most kinds of testing, and to a far greater degree than our survey average. Indeed, they are starting to look for their next challenge, which for many of them is a transition to digital twin environments.

The challenges Benelux organizations face in testing their key applications are interesting. Here, we see customer-driven demand creating time pressures. Here, too, with searches for the right testing approaches and environments, we also see businesses looking for the next stage in their QA evolution – perhaps in the shape of a digital twin.

What’s driving this need to look to the future? Several factors. In the physical world, the increasing number of IoT-enabled products and components is increasing both the
scale and the complexity of the testing challenge, and similar trends can be observed in the non-physical world, including financial services. Current test processes and methods are inadequate in these circumstances, and so are in-house testing environments. Until a new approach is developed and put into service, it’s difficult for organizations to know what to test, and where. This is reinforced in relation to testing in IoT environments, where the figures suggest that Benelux organizations may be fairly well advanced in IoT implementations, but that testing and QA have some catching up to do.

Promise and confidence

There are some intriguing indicators of maturity in agile and DevOps in these figures. For instance, detailed analysis shows that 38% of Benelux respondents are expending the minimum possible effort (1%–10%) on agile testing, against a survey-wide response of just 26% at this level. From experience, we suspect two factors may be at work here. The first is that the work is of such high quality that less testing effort is needed. The second is that testing quality is itself high. Either way, we regard it as a good sign – and so is the general degree of confidence people seem to have in the agile and DevOps skills of their teams. Perceived skills gaps in these areas are lower than average in almost every case, with one notable exception being, once again, test environments and test data, as Benelux businesses continue to reach for the next level.

We likewise see confidence in this survey in AI skills. Benelux is showing real energy in this area, with significantly higher-than-average use of smart analytics, both to identify risk areas, and also to decide on areas on which tests should focus. Benelux’s investment in test automation is paying real dividends. It’s no surprise our respondents foresee using a wide range of automation techniques to a far greater extent than our survey sample as a whole.

Forwards to the future

As with development and test environments, so too in terms of overall cost and efficiency, we believe the figures are telling a more positive story than might at first seem likely. For instance, Benelux respondents estimate that over the next three years, they will be allocating 25% of their IT budgets to testing-related activities, against a survey-wide average of 27%. We see this as evidence of success. Five years ago, this figure was much higher in Benelux – possibly in the high 30s. Even two years ago, it was high.

But all that spending constituted an investment, especially in test automation. The result has been greater efficiency, on which people feel they will be able to continue to depend as they look to the future.