

Growing market for software testing



Software testing as a growth market Steve Office reports on a study by Pierre Doing Consultants into perceptions of software testing and quality across Europe and discovers that with test optimization on the rise, organizations are increasingly looking to managed testing services. Companies around the world currently invest more than \$50 billion annually in applications testing and quality assurance.

The awareness of the commercial added value of flawless, fail-safe corporate applications is increasing, and as a result companies are actively seeking opportunities to improve both software and the organization of testing while meeting budget constraints. This article is based on a PACE (Pierre Doing Consultants) study sponsored by SQ Software Quality Systems, which surveyed 309 managers and IT decision-makers in companies across Europe and North America ranging from 1, 000 to over 5, 000 employees.

The study concluded that 91 percent of the managers surveyed recognize software testing and quality assurance as two of the most important IT disciplines within their companies. It also explores what approaches to software testing and quality management lend themselves to achieving the greatest possible added value; how expenditure and laity of testing can be harmonious; what standards companies expect from both testing activities and external testing service providers and how collaboration can be best organized.

Boom in optimization of test activities The majority of the companies surveyed are currently involved in optimizing their testing activities. Approximately a third of companies were in the optimization phase at the

time of the survey, while a quarter of interviewees confirm that optimization will commence within the next twelve months and a further eleven percent within the next two years.

The motives prompting increasing numbers of companies to opt for the test optimization include enhancing product quality (61 percent), increasing quality and transparency within testing processes (58 percent) and advancing the objectivity of testing activities (35 percent). Almost half the respondents expect the level of testing automation to increase as a result of these improvement measures but, interestingly, comparatively few respondents - around just a quarter - stated reducing costs as a reason for optimizing testing activities, showcasing that companies see quality as more significant.

The interviewees explained that benefits such as greater objectivity in the company's testing activities can be best achieved in collaboration with a dedicated, independent testing service provider. Additionally, many feel that an increase in automated testing can be realized via long-term managed test services engagements. Increasing acceptance of external testing support

There is growing interest in collaboration with professional service providers for software testing and quality management.

The integration of a professional service provider, either on a project or ongoing basis, is a way of achieving high quality wrought a more objective approach while also increasing efficiency and effectiveness in testing.

Longer-term testing engagements in the form of managed testing services partnerships based on strictly-defined Service Level Agreements are

increasingly important, experiencing double-digit annual growth and becoming one of the most dynamic segments within IT services.

While two thirds of the companies surveyed involve external service providers in their testing activities, the intensity of the collaboration varies from occasional collaboration on projects through to permanent cooperation in long-standing managed testing services agreements. Where longer-term engagements are involved, the service provider often also assumes responsibility for results and risks via robust Service Level Agreements.

The goals of a long-term collaboration usually also include the optimization and standardization of test processes, increasing the level of testing automation and the use of consistent and proven methods, best practices and suitable testing tools. Adding value Benefits that companies associate with the testing services model differ depending on the level of external support. For companies that already use external support, a Lear advantage is improved access to qualified testing specialists as well as reduction of internal IT expenditure.

The majority (85 percent) confirm that collaboration with external service providers for software testing and quality management cuts costs, reduces the burden on internal IT teams, freeing them up for other projects, and increases standardization of testing processes. Most expenditure is incurred for testing activities that are part of more comprehensive IT service agreements. As well as testing, these often incorporate the development, operation and maintenance of IT systems.

In contrast, dedicated contracts for testing and quality management exist and account for more than a third of the budget for external testing services; a trend that is on the increase. Ninety one percent of managers surveyed consider the independence of the testing team and the product development team to be an important or very important success factor, indicating that collaboration with specialized partners in the field of software testing will rise as customers increasingly demand independent objective tests of the application landscape.

The dedicated award of contracts, particularly in the scope of longer-term engaged test services agreements is also increasing in significance as the market matures. Companies that separate out software development and testing benefit from a clear allocation of roles, improved transparency of services and test quality and also the objectivity of testing performance guaranteed by the fact that the testing specialist is independent of the development team.

As experts in their field, independent testers also bring special competencies to the table such as involvement from an early stage in the development process, so contributing to the efficiency and effectiveness of overall testing performance. Blended service delivery Global service provision is a factor that impacts quality, flexibility and the cost of testing engagement. The study shows that 'blended service delivery, ii the use of local resources in combination with near and offshore testing centers is of high importance. 6 percent of companies have outsourced part or all of their testing activities to an external service provider and currently perform software tests in collaboration with near and offshore facilities. When asked about the ideal

distribution of testing activities, the number of companies that desire a very high repartition of near and offshore collaboration is currently relatively low: only 14 percent can imagine more than half of the testing activities being performed near and offshore.

None of the interviewees want to outsource all testing tasks to a near or offshore testing centre, as they consider it important to continue to perform a certain proportion of testing activities internally. For the companies surveyed, the use of external testing centers serves a range of purposes. For more than half of the respondents, reducing costs (61 percent) and increasing the quality of service provision (54 percent) plays a more important role. 8 percent stated the increasing availability and flexibility that can be achieved through global distribution of teams across different time zones.

Around a quarter of those surveyed consider access to additional competences to be an important argument for the integration of near and offshore resources into their testing activities. Success factors A main challenge raised in the study is identifying the ideal approach for optimizing testing activities in collaboration with an external service provider. The top consideration factors for choosing an external software testing and quality assurance provider are: Availability and flexibility: Speed and flexibility are at the forefront for companies in terms of their testing activities.

The majority of companies surveyed - 60 percent - expect high to very high availability and flexibility from a testing team, including permanent, "around the clock" readiness (24/7). Objective evaluation: More than 90 percent of

respondents consider a longer-term, partnership-based collaboration in testing to be indispensable and view the agreement of clearly defined performance indicators, which should be standard in managed test services agreements, to be crucial for success.

Two thirds regularly measure whether the testing team is achieving its agreed objectives by using selected key performance indicators (Kips) and, of these, 76 percent monitor whether deadlines are met. Results-orientated remuneration: 89 percent consider flexible billing based on results achieved, not simply days worked, to be important or very important. Linguistic capabilities: Language provides an additional facet to communication so multi-lingual capabilities are indispensable, above all in globally-operating companies and for international testing activities.

The principal requirement is for intact who can speak the language of the respective country and English. With more companies looking to optimism testing, whether via on- or off-shore testing teams, increased accountability through robust SLABS or results-orientated remuneration, the competition to provide specialist testing services will no doubt become fiercer. In my opinion, this study demonstrates that testing providers with round-the-clock availability, a blended services offering and innovative output-based pricing will become increasingly critical to the success of any large software testing engagement.