

QA and testing report

Issues and opportunities for the QA and testing function 2011/2012

Quality assurance and testing has been emerging as a way of managing quality while being seen to reduce development costs as part of a change programme. However, this could be perceived as an over simplification of the potential benefits of testing. This is because we are also working in an environment where there are increasing levels of complexity in programmes due to a number of factors. These can include working with multiple suppliers often in a distributed environment, use of Agile techniques and the Cloud to deliver flexibility, scale and speed, and new and multiple delivery channels including mobile.

This very complexity provides an opportunity for the QA and testing function to engage with key stakeholders and play a really crucial role in ensuring that the business gets what it needs and wants from these programmes. This will in turn make sure that the business gets a much better understanding of what testing can bring to the table and QA and testing gets the appropriate recognition.

In our short online survey we have explored how the testing function fits within the organisation, budgets allocated to testing and if they are anticipated to change, the link between testing and achieving the right business outcomes and the anticipated challenges facing testing functions in the next two to three years.

Trends in the way QA and testing is organised

We asked respondents how testing fits into their organisation, either centrally, as part of the project or programme, outsourced or where they operate a mixed model. See Figure 1.

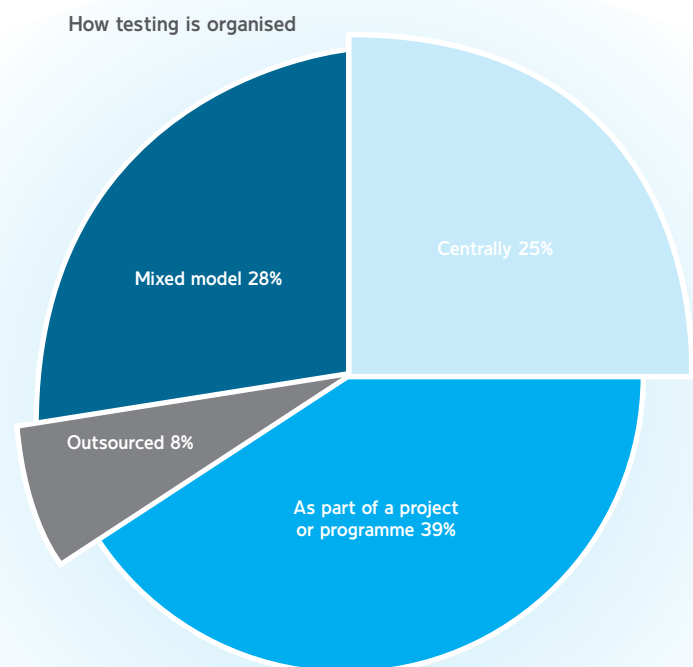


Figure 1

While nearly 40% of testing is included as part of a project or programme organisation, this is now considerably less than was the case five years ago when we asked our respondents a similar question. At that time nearly all testing was included within project budgets. Now well over half of testing conducted by our respondents' organisations is either organised centrally, outsourced or in a mixed model.

Budgets allocated to testing

Organisations vary in the amount of budget they allocate to testing. More than a third allocate over 20% to testing while around a quarter still allocate less than 10%, with the largest number of respondents allocating 11-20% of their budget to testing. See Figure 2.

We asked the same question four years ago and the difference we see is that the number of programmes spending less than 10% of their budgets on testing has considerably reduced since then, while those that spend between 21% and 30% of budget on testing has increased.

Proportion of change budget allocated to testing

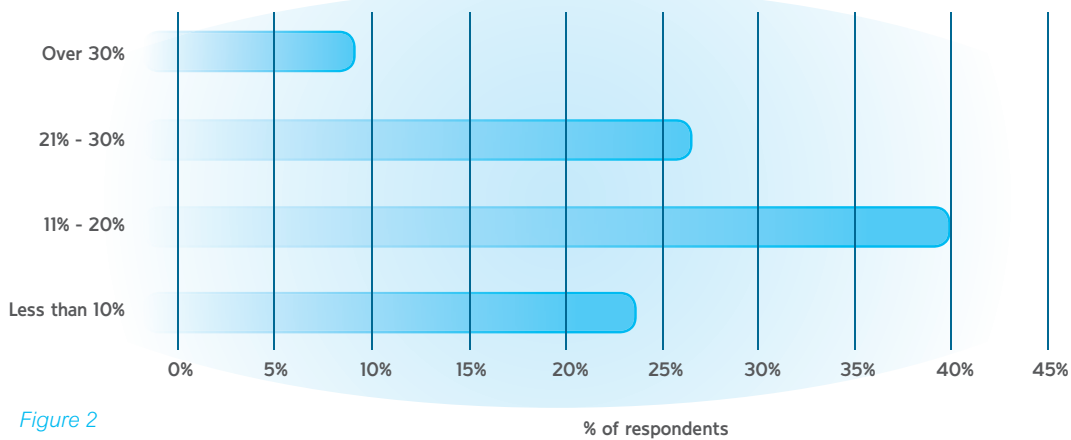


Figure 2

How budgets are anticipated to change in the next year

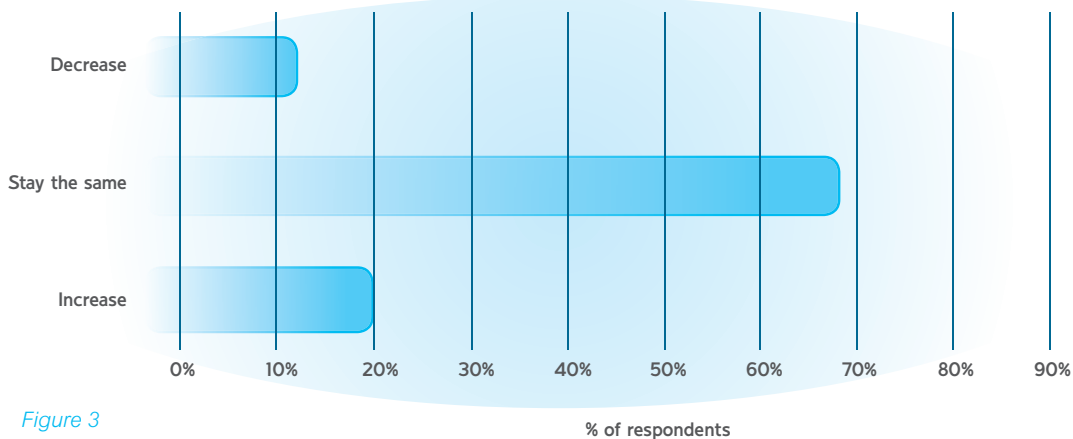


Figure 3

However respondents are fairly optimistic about their budgets for next year as the vast majority see these as remaining stable with a fifth anticipating an increase. See Figure 3. Testing has held up well throughout the recession as most organisations have seen it as a means of increasing efficiency and reducing overall programme cost. The challenge for businesses now is to move from using the QA and testing function exclusively in this way to clearly linking QA processes to achieving the desired business outcomes.

Linking QA and testing to achieving business outcomes

The need for this link to the business requirements is reflected in the responses given when we asked how well testing functions are able to help their organisations to achieve better business as well as technical outcomes. The areas where respondents are most confident of their contribution is in ongoing governance, providing clear and accurate reporting and when engaging the business in the end-to-end acceptance process.

The area that is felt to be least strong is in communications between testing, IT and the business functions. This is despite the fact that clear and accurate reports were felt to be delivered. It is important for testing to listen and understand what are the most important business outcomes and then play this back clearly so that a common understanding of what is required is reached.

Other areas in which only moderate success is felt to be achieved are linked. Firstly time is needed to invest up front in structuring a programme and secondly to ensure that the requirements are clearly stated and understood. Both of these activities will allow the organisation to drive more effective change delivery.

Only moderate success was felt to have been achieved in managing quality gates for 3rd party suppliers and in fact this was an area pinpointed as an ongoing challenge by some respondents. There are ways of developing informed commercial contracts with suppliers which are linked to the right behaviours and service outcomes to underpin success while still working within an overall gating process that makes sure that releases are clearly planned and managed.

Challenges facing testing functions over the next two to three years

The challenges facing our respondents' testing functions over the next few years can broadly be described as coming under the headings of Change, Resources, Technology and Methods and how best to manage the evolution of the QA and testing function itself.

Perhaps surprisingly, cost is mentioned by only three respondents. This could be because of where budgets reside within each organisation or that testing is seen as less of a commodity. However it can also be said that

testing budgets appear to have held up remarkably well over recent times considering the economic environment.

On the other hand, nearly one third of those who responded mentioned either attracting new resources or difficulty in retaining skills to be a future issue. This includes wanting to retain knowledge of a particular system or keeping resources with specific domain knowledge. Respondents referred to the need for testing functions to be responsive; doing more in less time. Coping with the sheer spread of change as well as having to respond to the volume of change without increasing the levels of resource is anticipated to be an issue. This resource volatility will clearly need to be addressed and other options such as outsourcing or increasing use of automation could be a part of the solution.

A range of technical challenges were mentioned which shows that respondents feel that complexity is likely to be the order of the day with new delivery channels including mobile platforms. This will mean potential migration and integration issues. Techniques such as Agile development are being used in order to be responsive and to keep up with the pace of change. We also believe that increased adoption of the Cloud will have its testing challenges both in migrating to Cloud and also in risk management resulting in the need for end-to-end business assurance.

So how will testing functions be able to retain the focus on quality while still being able to satisfy the desire for speed and reduced delivery cost?

The testing function still has to prove itself to the rest of the business. This ranges from understanding how testing fits into the rest of the business and gaining recognition that the QA function is not an optional overhead to perpetually needing to engage and educate the business in the importance of the function.

Organisations are seeking to add value through consistent QA across the project lifecycle by optimising their testing processes and are looking at new and better ways of operating in order to achieve this. These ways range from building in time for process improvement to increase efficiency for the longer term without impacting on project delivery in the short term, to adopting a continuous process improvement mentality; moving to a more risk-based approach and strategic enforcement of quality gates.

Complexity, complexity, complexity

We named a range of scenarios and asked which presents the most challenge in terms of its potential impact on systems quality, increased cost or delay. Perhaps not surprisingly, complex and large scale change programmes provided by far the most challenges but this is compounded by the increased complexity of using multiple suppliers and working across different business areas. Adapting new techniques such as Agile followed closely on as an area that needed to be addressed. When asked which of the scenarios were likely to increase in the next year, complex large scale programmes remained top of the list while quite a number felt that they would need to address new technologies in the future.

Choosing the right vendor

When selecting a consultancy to work with on quality assurance and testing, we asked respondents how they decide which vendors should be asked to respond to a tender. See Figure 4.

Vendor selection criteria

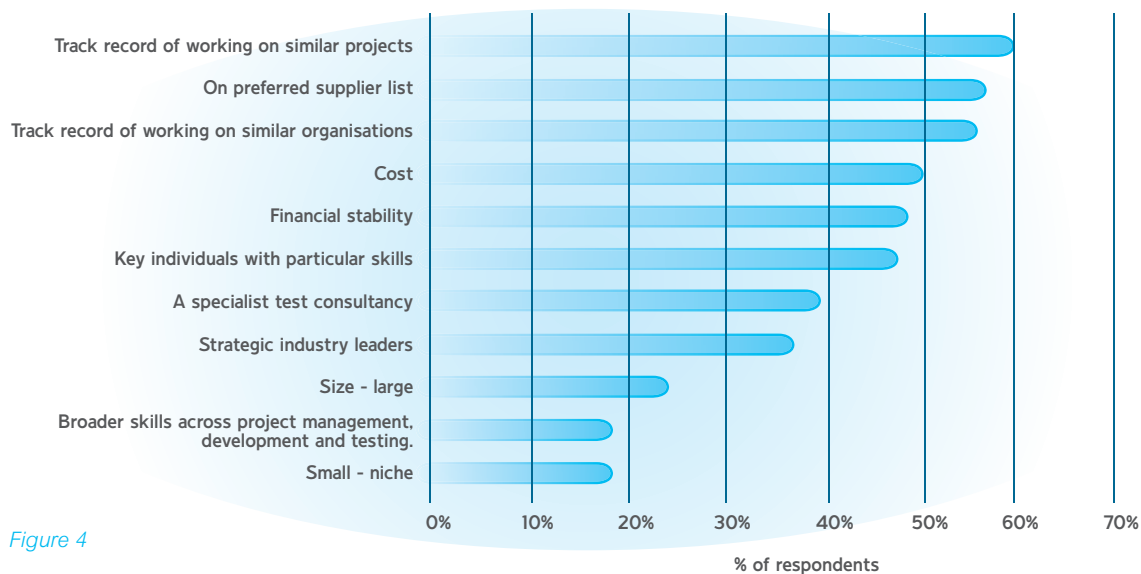


Figure 4

Track record of working on similar projects or in similar organisations is the most important criteria when selecting potential suppliers alongside those who are already on an organisation's preferred supplier list. Testing departments should consider how they can best work with procurement functions to ensure that cost is just one of the dimensions to consider in selecting a vendor and that innovative approaches can save overall expenditure on the programme. Clearly the commercial contracts are a powerful tool to drive through the behaviour which will deliver the results the business is looking for but only if they are framed in the right way.

The size of the organisation appears to be less important as does having broader skills other than QA and testing such as project management and development.

Buyers get their information on vendors primarily from the procurement department, from an existing relationship or from industry analysts or a mixture of these.

In the summer of 2011, Capita conducted a short online survey designed to get market feedback on quality issues facing senior executives today and the current state of QA and testing and how it is evolving.

We received 77 responses from a range of industries including financial services and IT. Respondents' roles were as follows and the majority were budget holders for testing services:



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