PLANIT TESTING INDEX 2011 AUSTRALIA & NEW ZEALAND

the BENCHMARK *in* SOFTWARE TESTING AND SYSTEMS ASSURANCE

EXECUTIVE SUMMARY

VITAL KNOWLEDGE TO HELP YOU BETTER PLAN, BUDGET AND EXECUTE IT PROJECT STRATEGIES

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Planit SOFTWARE TESTING

Planit
SOFTWARE TESTING

Are YOU MAXIMISING THE OUTCOMES OF YOUR IT PROJECTS?

Software is the lifeblood of modern organisations. Given their prominence and the subsequent high levels of investment, it is vital that software development projects reap their intended rewards. A key factor in ensuring success is to invest appropriately in quality assurance processes from the initial scoping of requirements through to the final delivery of the project.

But while software testing is essential to ensuring that projects are delivered on time, on budget and in line with their original scope, testing itself faces constant pressure in the form of organisational cost-cutting. It is essential therefore that organisations truly understand the value of testing, and how that value can be increased through better investment in testing resources.

1. *Software testing is winning the battle to gain respect in organisations, with two thirds ranking it as strategically important or a critical element in producing reliable software.*

2. *Despite the heavy emphasis on cost reduction in many organisations, software testing's popularity is based overwhelmingly on its ability to improve customer satisfaction.*

3. *Most often organisations commence testing in the development phase, but almost two thirds would prefer to start their testing processes earlier, in the requirements phase.*

4. *Almost 98 percent of respondents felt their organisation would benefit from improving the requirements phase of projects, with a third rating existing processes as poor or very poor.*

5. *While Agile methodologies have captured the industry's attention, it is the traditional iterative approach of the Waterfall methodology that is still most commonly used.*

6. *Agile methodologies will continue to grow in popularity, with more than half of all respondents finding it more successful than alternate methodologies.*

7. *Organisations consistently struggle to deliver software projects on time, on budget and in line with their original scope, with only 41 percent succeeding on all three measures.*

8. *The importance of getting requirements right was highlighted by the finding that more than half of all project failures were due to changes to business requirements or priorities.*

9. *Organisations are more likely to stretch the completion date or even increase its budget before reducing the scope of the project.*

ABOUT THE PLANIT TESTING INDEX 2011

The Planit Index is the leading tool for benchmarking your software development projects, assisting organisations to make better informed decisions regarding planning, budgeting and executing testing programs.

Well over 200 respondents participated in the 2011 Index, with breakdowns of respondents by industry, region and organisational size provided below.

The data included in this report represents over 9100 IT projects, up from 5400 in 2010, reflecting the growth in project activity indicated by 59 percent of respondents.

75 percent of the projects represented were valued at $2 million or less, with 7 percent valued at $70 million or more.

This Index has been compiled in conjunction with Lagrange Communications.

ENQUIRE ABOUT THE FULL INDEX REPORT

To receive more information from the 2011 Planit Testing Index contact:

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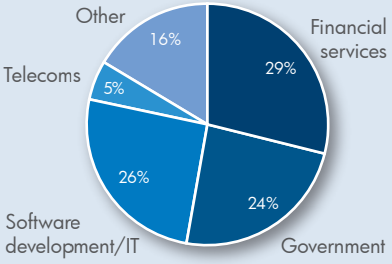
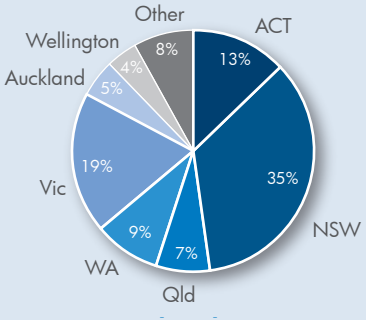
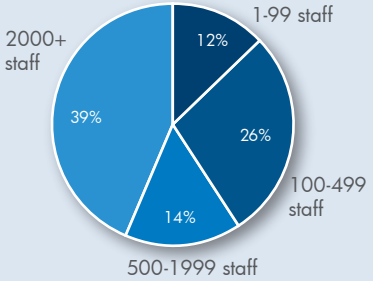


Respondents by industry segment



Respondents by region



Respondents by organisation size

ORGANISATIONAL VIEW OF TESTING

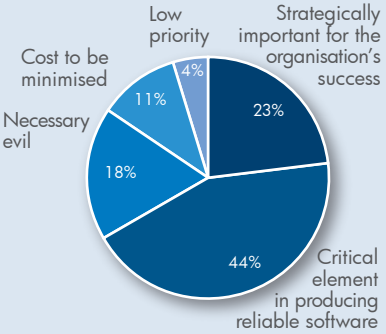
For five years the Index has proven software testing's ability to deliver better project outcomes, and this is well understood by the 43 percent of organisations that regard testing as critical in producing reliable software. But in many quarters testing continues to struggle to win respect. Cost pressures have seen a doubling in the number of organisations for whom testing is a cost to be minimised.

BUSINESS CASES FOR TESTING

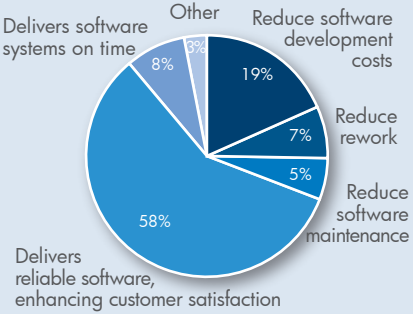
The strong desire of software testing professionals to win support from their organisation was reflected in a sharp increase in the number who use customer satisfaction as the primary argument for winning support for testing, up from 40 percent in 2010. The impacts of cost pressures were evident through the use of financial arguments by 25 percent off respondents.

BUDGET ALLOCATION

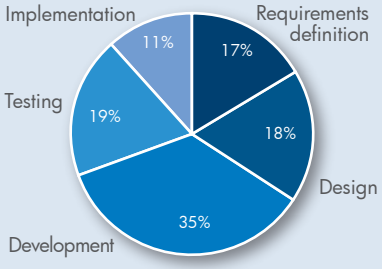
Quality assurance activities, including requirements definition and testing, slightly increased their share of project budgets this year, accounting for over a third of software project budgets. Together, these budgetary items approximately equated to the investment in development itself.



Which statement best describes how your organisation views software testing?



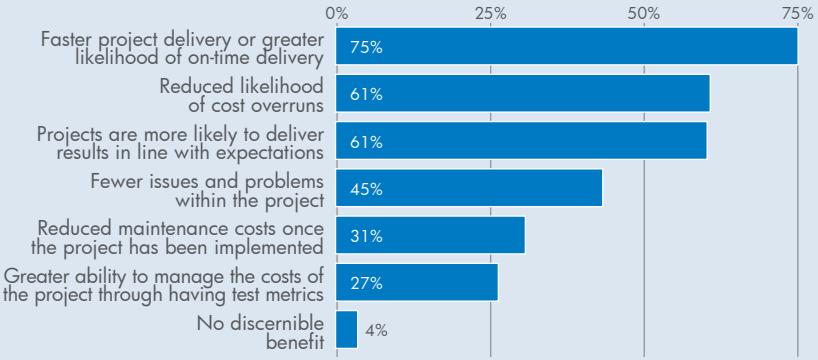
Most likely testing business case justifications



Budget allocation across project phases

BENEFITS OF TESTING

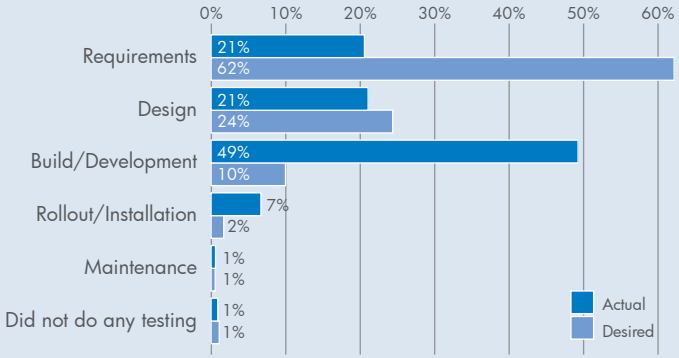
The ability to support organisational goals is clearly the most common benefit of testing activity, including its ability to reduce issues and problems within the project. The high cost of testing is also somewhat offset by its ability to reduce maintenance costs post implementation.



Benefits observed when the investment in software testing is increased

WHEN TESTING STARTED

There is a clear feeling of dissatisfaction with the implementation schedule for software testing. While almost half of respondents indicated that software testing commenced in the Development phase, only 10 percent preferred this phase to be the starting point for testing. By comparison, almost two thirds preferred to commence testing at the beginning of project planning, during the scoping of requirements, if given the opportunity.



When testing started (actual vs. desired)

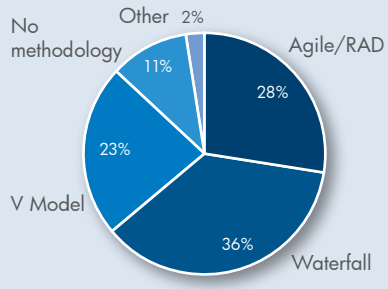
PROJECT METHODOLOGIES

Over the past five years, the Index has reported the rapid growth in the popularity of Agile. In 2010, Agile proved to have been adopted by more organisations than any other methodology (48 percent). Upon conducting more thorough analysis of project methodologies this year, it has become evident that its popularity doesn't translate directly into the quantity of overall projects utilising the methodology, with Agile only being utilised in 28 percent of projects. The more traditional Waterfall model, which promotes a sequential development process, revealed itself to be the dominant methodology, with implementation across 36 percent of projects.

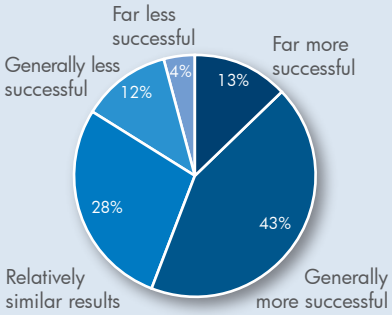
While Agile may not be best practice in all software development projects, it demonstrates key benefits. The heightened buy-in, collaboration and team work involved in Agile projects can boost productivity and efficiency, not to mention the fact that working software can be delivered to the client far earlier.

The Australian and New Zealand market continues to demonstrate immaturity in its Agile practices, as reflected in the 44 percent of respondents who saw no benefit or detrimental results from utilising an Agile methodology. This immaturity is acknowledged by organisations, with an overwhelming movement to find solutions to develop these skillsets and better utilise this powerful methodology.

Promisingly, over 50 percent of people using Agile have realised more success than using alternative methodologies, including 13 percent who believed it to be far more successful. These responses indicate that the benefits of Agile are sufficient to drive the significant changes in processes and practices required to see it more broadly adopted. Further investment in developing the necessary skills and implementing the right processes will bring success to projects.



Software development projects by methodology

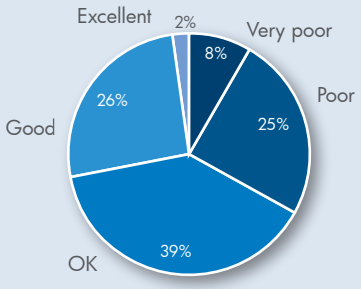


Success of Agile vs. other methodologies

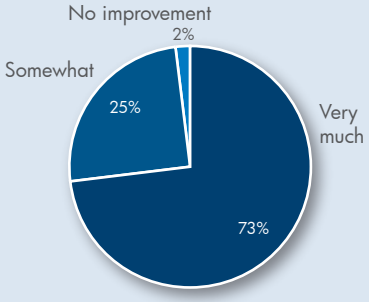
REQUIREMENTS ENGINEERING

Project success stems from having the right processes and procedures in place from the very beginning. But in software development, Australian and New Zealand organisations still have significant room for improvement at the initial stage of requirements definition. Only 2 percent of respondents rated their organisation's requirement definition as excellent. That said, the overall majority of responses were positive, as opposed to the third who indicated that requirement definition was poor or very poor.

With changed business requirements and priorities being the most common cause of project failure, contributing for 59 percent of the negative outcomes reported, the potential benefits of improving requirements definition are obvious. 98 percent of respondents agreed that improving requirements definition would deliver a benefit to the business, which corresponds with the strong desire for respondents to be able to commence testing in the requirements definition phase of the project, rather than within the development phase. Making this shift however involves them overcoming numerous obstacles, with half reporting that they are held back from the earlier commencement of testing by entrenched business practices.



Rating of your requirements definition



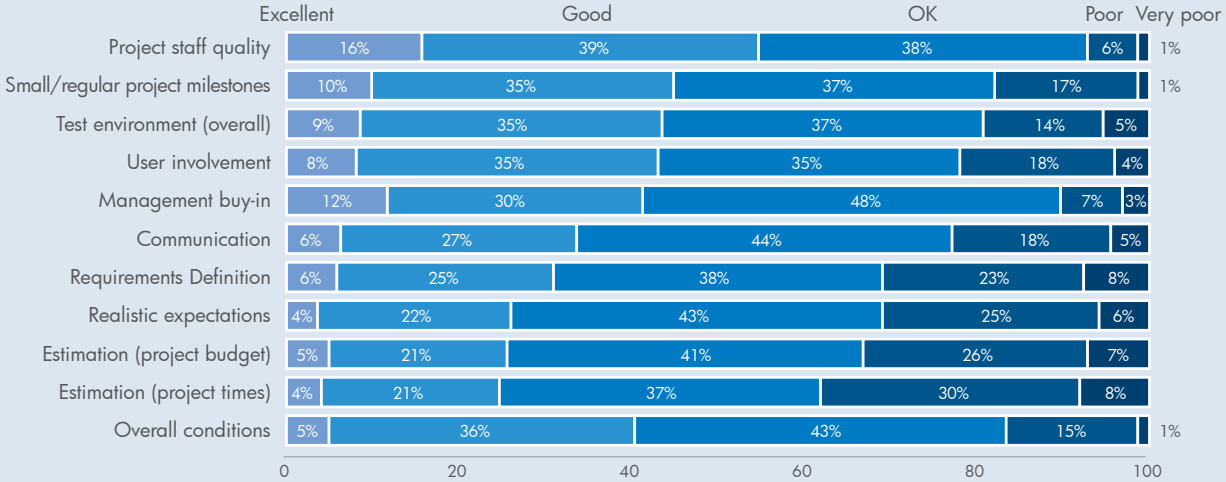
Benefit expected from improving requirements

PROJECT CONDITIONS

The high rate of project failure reported is directly correlated to the implementation of quality assurance practices. Examination of project conditions reveals that there are numerous reasons why quality assurance is not conducted in an optimal manner.

A key issue affecting project success is estimation, with 38 percent of respondents rating the estimation of project times as either poor or very poor, while 33 percent indicate the same result for estimation of project budgets. Further causes of turmoil in projects were unrealistic expectations and requirements definition, both cited by 31 percent of respondents.

Despite some of these negative results, overall project conditions were rated as OK or better by 83 percent of respondents. They were particularly positive about project staff, with 16 percent nominating staff quality as excellent, and only 7 percent considering their staff as being poor or very poor. Management buy-in for projects was also rated highly, and was considered excellent by more respondents (12 percent) than those who considered buy-in to be poor or very poor (10 percent).



How would you generally rate the conditions for your software development projects in terms of the following criteria?

PROJECT OUTCOMES

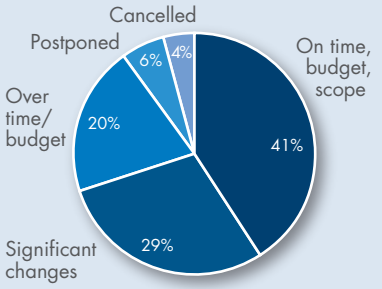
Despite everything that has been learned about the requirements for successful software development outcomes, project failures remain unacceptably high. The number of projects completed on time, on budget and with no significant change in scope decreased this year to 41 percent from 48 percent in 2010, while the number that underwent significant change grew from 22 percent in 2010 to 29 percent.

CAUSES OF FAILURE

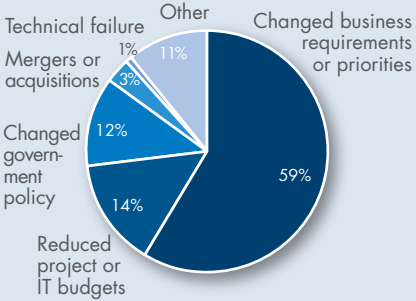
The persistent complaint that poor requirements engineering is the root cause for the majority of project failures was reiterated again this year, matching the response reported in 2010. In fact, problems with requirements outnumbered all other causes of failure combined. Another growing factor in project failure over the past 12 months was changing government and regulatory requirements.

WHEN PROJECTS COME UNDER PRESSURE

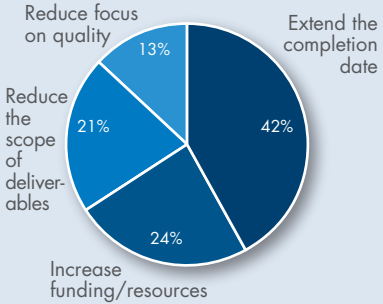
While two thirds of organisations were not interested in compromising the quality of the originally intended products, there was significant growth in the number of organisations who would prefer to reduce the scope of deliverables to overcome project issues. Despite the clear focus on costs in software development the number of respondents who indicated that their organisation would first increase funding and resources rose this year from 20 percent in 2010.



Project outcomes, last 24 months



Most common causes of project failure



Priority strategies when a project comes under pressure

UTILISATION OF PERFORMANCE TESTING

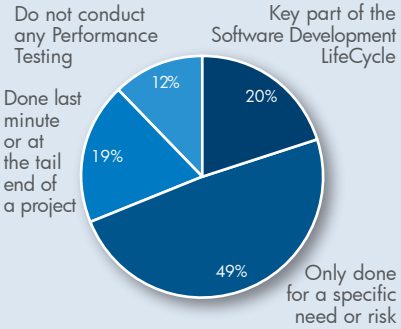
Results overwhelmingly indicated a lack of emphasis on performance testing, which could be a contributing factor to project issues. Almost half of all respondents indicated that performance testing was only conducted to counter a specific need or risk, while 12 percent do no performance testing at all.

UTILISATION OF TEST AUTOMATION

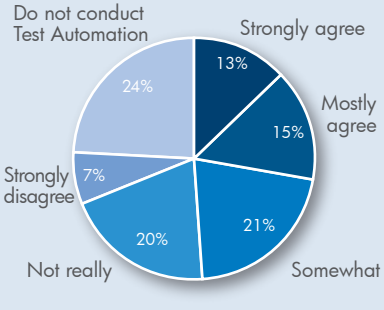
The significant benefits of test automation in cost reduction and resource efficiencies are not being fully realised by organisations throughout Australia and New Zealand. The utilisation of test automation was particularly low, with more than a quarter of respondents indicating that automation of test execution is not significant element of testing, while 24 undertake no test automation all.

DEMAND FOR CLOUD-BASED TESTING TOOLS

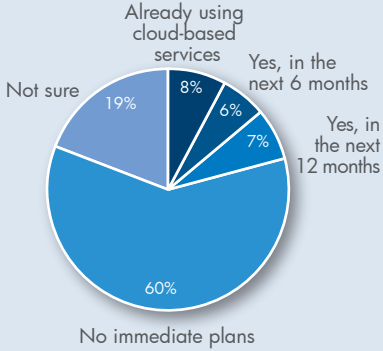
While cloud computing is a hot topic across the Australian and New Zealand business community, its impact is yet to be felt in software testing. More than half of all respondents had no plans to implement cloud-based testing while another 19 percent were unsure. But a small vanguard of early adopters has emerged, with 20 percent either having started, or expecting to start using them in the next 12 months.



How is Performance Testing conducted in your organisation?



Is Automation of test execution a significant element of your testing?

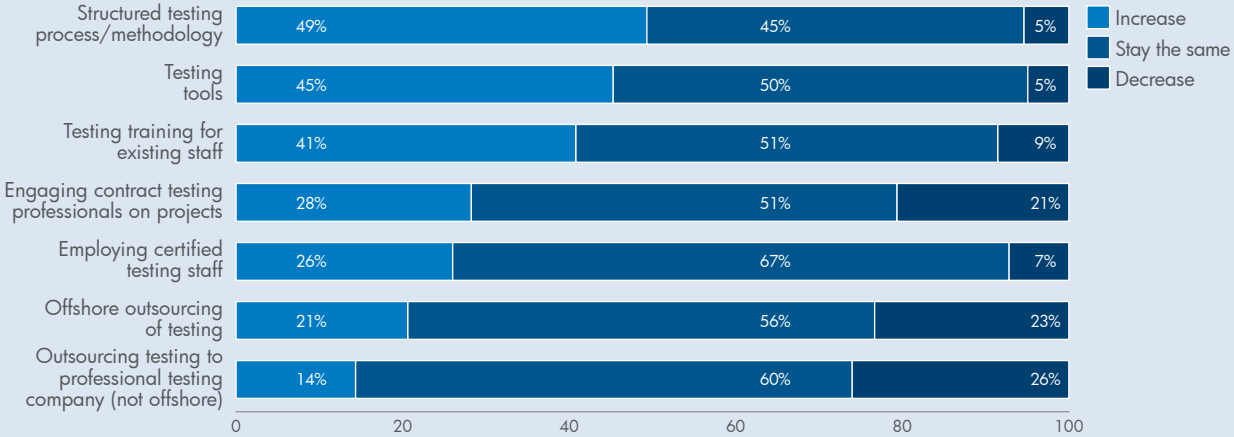


Future demand for Cloud-based Test Management tools

INVESTMENT IN TESTING

Despite the clear cost constraints that many organisations are working under, there is a generally positive outlook for their use of testing tools and resources over the next 12 months. The most obvious area of increased investment is in structured testing and process methodologies, where almost half of all respondents expect to be spending more money next year. Also 45 percent intend to increase their spending on supporting testing tools, which could lead to a rise in test automation, or may be a reflection of the intention of some organisations to embrace cloud-based testing tools in the next 12 months.

There is also a strong desire by many organisations to take some testing back in house, as indicated by 26 percent that plan to reduce investment in outsourcing of testing responsibilities to local providers, and offshoring of testing is also out of favour, with 23 percent indicating they will spend less on this activity. It appears that the money may be redirected internally, with 41 percent expecting to increase their investment in testing training for existing staff.



Investment in testing resources / tools over the next 12 months