

The Software Testing Experts



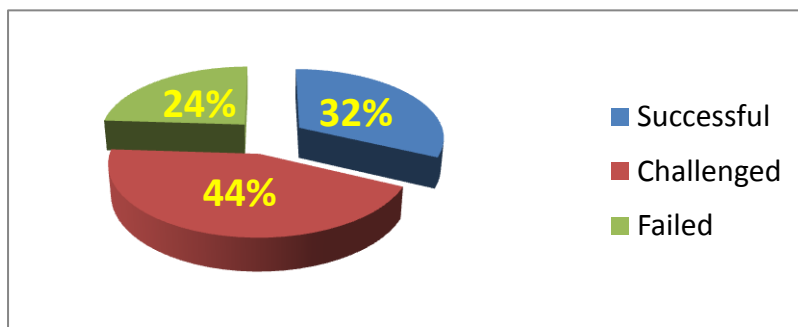
The Big Question: Why go Agile?

This issue we asked Dr Stuart Reid, TSG's Chief Technology Officer, why so many projects are choosing to follow an agile approach as opposed to a more traditional methodology. Agile development is based on the following principles: incremental development; allowing requirements to change as the project develops; and focusing on people instead of processes. Since its introduction it has revolutionised the way software is developed and tested.

With a wealth of experience in both development and testing, Stuart is well-placed to help us understand why Agile is fast becoming the approach of choice.

"My initial thoughts when asked this question were positive – put simply, I really like Agile. I thought it would make sense to first ask the question: what happens if we don't adopt Agile and follow a traditional approach instead?"

Well, the figures vary slightly from year to year and survey to survey, but the consistent message appears to be one of failure (or, at least, lack of success). The Standish Group's CHAOS Report project data for 2009 are shown in the figure below – not a comfortable set of numbers for an IT 'professional' – and these figures have changed little in the last decade.



Now let's turn to Agile. Two years ago IBM's Scott Ambler carried out an industry survey of Agile projects*. He reported a 78% success rate. Even if we accept that his respondents (642 of them, worldwide) define 'success' less strictly than those responding to the Standish survey, this seems a remarkable difference.

So, how does Agile do it?

Let's consider five of the top reasons that projects fail (in no particular order):

- Poor requirements;
- Lack of user involvement;
- Lack of resources;
- Scope creep;
- Misalignment with business.

Now, let's look at another survey**. This time people who had followed the Agile route were asked about the benefits achieved. The top benefits are listed below:

1. Management of changing priorities (90% of respondents)
2. Improved project visibility
3. Increased productivity
4. Improved team morale
5. Improved IT/business alignment (70% of respondents)

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Mitigating reasons for failure

It doesn't take long to see that going Agile directly addresses a number of the reasons that projects fail. Interestingly 'improved team morale' – my personal favourite – doesn't seem to focus on any one of the reasons for failure. I say this is interesting because, **in my experience team morale is the most readily observable indicator of Agile success**. When I consult on a project it may take several days to get a 'feel' for an Agile project, but the morale of the team is often immediately evident and is nearly always an excellent indicator of the overall state of the project.

Poor requirements and scope creep are mitigated to a large extent in Agile by ensuring that the customer and users are involved throughout. This is carried out when setting initial requirements (normally as user stories), collaborating on more detailed requirements as the project progresses, and in checking that the delivered product meets their needs. Luckily in Agile, unlike with traditional projects, we deliver frequently and quickly (improved project visibility) and so encourage feedback from the users that can be used to ensure their needs are met (improved alignment with the business) without delay even if we don't get it right first time.

Agile partially tackles the danger of a lack of project resources with the benefit of increased productivity (but note that this is not at the expense of reduced quality) and the joint team ownership of the final product and team self-management which are an integral part of Agile normally ensure that team resources are used as efficiently as possible.

More evidence?

There is thus ample evidence that many of the major causes of project failure are addressed by the reported benefits of going Agile (you would almost think that was their intention!).

Finally, if you are still a sceptic, let me provide a final impeccable reference that backs up the previous positive Agile figures. Capers Jones has been collecting software metrics for nearly 30 years - from 13,000 projects and 600 companies – and is one of the world's most respected software professionals. His latest book, published this year (Software Engineering Best Practices - Lessons from Successful Projects in the Top Companies), describes the results of an analysis of 200 software practices, scoring them on a scale of -10 (worst practices) to +10 (best practices). Agile is ranked as a 'very good' practice with a score of +8.41 at #21, while traditional waterfall-based development is ranked as a 'neutral' practice (it may help or it may hinder) at #147, with a score of -0.33. Which would you choose if you were starting a new project?

What would you choose?

So, why are more people choosing Agile? Well, with every study we see more compelling evidence that it addresses many of the major causes of project failure and based on that knowledge, perhaps the questions isn't 'Why are people choosing Agile' but 'Why isn't everybody using it?'

*<http://www.ambysoft.com/surveys/agileFebruary2008.html>

**VersionOne 4th Annual (2009) State of Agile Survey - 2570 respondents from 88 countries