Agile:
Transforming small-team thinking into big business results

Introduction

It is safe to say that agile is no longer a fad. In fact, it is fast-becoming the development method of choice for many businesses in Australia. But for enterprises, implementing agile at scale is still a novel and challenging idea.

Familiar with the benefits of agile on a small scale, CIOs are increasingly looking to apply agile methods to broader projects. Geographical distribution, compliance and organisational culture increase the complexity of scaling agile strategies, but do not necessarily stand in the way. The real issue is how to bridge the gap between grass-roots development and cross-organisation delivery.

Scaling agile methods has been proven in many large companies in the US and Europe, but is still in its infancy in Australia. IBM® has a long and proud history of delivering agile projects at scale. We started using agile methods almost 15 years ago, and then began our own official corporate journey in 2006 and now use agile methods across 85% of our internal development. Today, we are working with enterprises, including telcos, financial institutions and government agencies to facilitate agility at scale.

In this whitepaper we will discuss the challenges and barriers Australian businesses are facing, share our experience gained working with local and global companies, discuss key trends, and outline best practices for scaling agile within complex organisations.

Putting agile into context

Agile is not new. These principles were in practice long before the Agile Manifesto was first published in 2001, but it is only in the last ten years that agility has grown from a philosophy into a disciplined delivery method. Many people point to the manifesto when attempting to define agile development, but the agile community has never settled on a definition and it is doubtful they ever will.

Agile software development processes are as diverse as they are complex. Traditionally, they include Scrum, Extreme Programming (XP), Open Unified Process (OpenUP), agile instantia¬tions of Rational Unified Process (RUP), and Agile Modelling (AM), to name a few.

In the past, companies would opt for one method and run

with it, but these dynamics have changed and organisations are taking a more flexible approach, operating hybrid delivery models tailored to project or business needs.

Our experience working with clients, and through our own agile transformation, is that agile delivery should not be rigid or prescriptive. It is a collaborative, evolutionary, self organising approach that produces high-quality solutions in a cost-effective and timely manner via a risk and value driven lifecycle.

Agile in Australia

Over the past decade, the agile community in Australia has witnessed exponential growth. A simple search for 'agile' on seek.com.au clearly demonstrates this. Approximately 4,600 agile roles are advertised in Australia today. In 2002 this was not the case. In fact, Agile Business Stream Lead and Agile Delivery Coach roles did not formally exist.

Adoption levels of agile development methods have been very high at a grass-roots level, but their implementation has been limited to small companies or small independent teams within large organisations. To date, Australian enterprises have struggled to scale agile delivery methods enterprise-wide.

The reasons for this are both cultural and structural. To be able to scale, organisations need to be able to interface new systems with old systems, which is easier said than done. Traditional project management has also fought agile, labelling it as a 'loose cannon' approach when it comes to compliance, governance and traditional development processes. Culturally, agile teams have also been less than receptive to the idea of medium or large-scale coordination, and have not viewed agile as a delivery method suited to organisation-wide deployment.

Tooling has also been a major issue for Australian enterprises, despite established vendors offering ready-made, cheap software. These tools have facilitated the rapid growth of agile software development, but have also encouraged a throw-away project culture, led by small teams focused on speed of construction, not the delivery needs of the wider organisation. Many enterprises are now faced with complex multi-vendor environments which offer little cohesion and offer no single-view of the over-arching delivery lifecycle.

Organisational change

The biggest challenge facing enterprises in Australia is how to coordinate agile teams – across multiple projects in multi-disciplined environments – while keeping them running fast. Companies are appointing agile coaches to individual projects, but there is little or no company-wide coordination. Screaming 'run fast' will only get you so far. Secondly, coaches do not have the authority or the ability to prioritise tasks and resources at an organisational level, which means their scope is limited and often ineffectual. In our experience organisational change requires 'organisational change managers' not only responsible for setting company-wide priorities, but also the adoption of change and new technologies which span agile teams.

Enterprise discipline

Globally, what we have found is that organisations either have too much discipline or not enough. Saying 'be agile' and expecting teams to sort it out is as ineffective as over-governing the development process. Finding the sweet spot between the two is the challenge.

IBM recommends a flexible approach to enterprise discipline. What we try to do is help organisations adopt a framework rather than a method. We believe disciplines like enterprise architecture need to be taken into account, but that a process framework which gives organisations the ability to adapt methods on a project basis, delivers the best results.

At the simplest level, IBM's Discipline Agile Delivery (DAD) process framework provides guidance but does not prescribe mandatory procedures. We do not see the sense in applying the same methods when developing a marketing website as you would rolling out a financial system.

DAD provides an actionable and agile framework which enables organisations to identify specific scaling factors, such as geographical distribution and domain complexity, and the amount of discipline required to deliver the best results.

Delivery cycle

Small agile teams trying to grow often creates challenges for the organisations we talk to. The reality is that small teams cannot take ownership of the entire delivery cycle, but they do need to take it into account. The trend we often see is small agile teams focused on the construction phase. Once they're done, they throw it over the wall to be integration tested with little warning or coordination. This leads to a sub-optimised delivery process which often takes longer than a traditional waterfall development. Just focusing on the 'fun stuff' will not deliver results at scale. Success hangs on an organisation's ability to make the complexities of software development and the entire delivery lifecycle explicit to everyone involved.

Within DAD, we recognise that for software to deliver business value, technologies can't just be developed at speed. Businesses need to look beyond the construction stage and treat the inception and deployment stages of development with equal pace and importance. Optimising the whole delivering cycle is the only way businesses can maximise their return on investment.

Tooling and culture

The idea that agilists can go off and set up whatever planning tool they want and cleanly integrate with the enterprise at large is a myth. It is impractical for anyone to capture all of the dependencies between projects without the right delivery platform. Many of the enterprises we work with in Australia are very progressive and on board with IBM's approach when we first meet them. What they often don't realise is that the investment required to successfully facilitate change reaches far beyond technology. Scaling agile requires an equal investment in cultural and organisational change, and this starts at the top. We have found that most executives are willing to say 'yes, let's go agile', but they often don't have a comprehensive understanding of the impact this will have on their organisation. Executive education is just as important as executive buy-in.

A delivery platform like IBM's Rational Team Concert™ will get you so far, but without organisational change specialists to bring a cohesive, holistic view of the entire delivery cycle and the business, companies will struggle to reap the benefits of agile at scale.

Conclusion

There is no doubt that the appetite to scale agile methods is growing in Australia and that the benefits are well understood, but without local success stories companies aren't ready to invest. Making the switch takes time and money and we have found that a truly agile transformation is a progressive endeavour.

Companies brave enough to embark on the journey need to focus on taking a disciplined, incremental approach. Without a strategic vision, rolling out agile methods in an environment with different development platforms, different resources and globally distributed teams, has 'recipe for disaster' written all over it.

The reality for most companies is that agile methods will play a major role in, but never completely dominate their development mix. Our own experience is that a hybrid approach works well. Eighty-five percent of our software development is done using agile methods, but we also accept that more traditional methods deliver better results under certain circumstances.

To successfully transform small-team thinking into big business results, businesses need to take a flexible, customised approach. Agile practices need to be tailored to the needs of each team, tools that support wider delivery goals need to be introduced and an investment in training and mentoring to help instil best practice needs to be made.

Technology is only one piece of the puzzle, but a delivery platform like IBM Rational Team Concert, which supports Disciplined Agile Delivery, will enable even the largest of companies to reap the benefits of agility at an enterprise scale.

For more information

To further explore the possibilities offered by IBM Rational Team Concert, and IBM's proven approach to agile at scale, contact your IBM sales representative or IBM Business Partner, or visit http://www.ibm.com/software/au/rational

For more detailed discussions about several of the topics covered in this paper, refer to:

- The Agile Manifesto: The 4 values of the Agile Manifesto are posted at http://www.agilemanifesto.org/ and the twelve principles behind it at http://www.agilemanifesto.org/principles.html

- Disciplined Agile Delivery (DAD): The basis from which you can scale agile is introduced in the IBM white paper "Disciplined Agile Delivery: An introduction" at http://public.dhe.ibm.com/common/ssi/ecm/en/raw14261usen/RAW14261USEN.PDF

- The Agile Scaling Model (ASM): The ASM is described in detail in the IBM white paper "The Agile Scaling Model(ASM): Adapting Agile Methods for Complex Environments"at ftp://ftp.software.ibm.com/common/ssi/sa/wh/n/raw14204usen/RAW14204USEN.PDF

- The Agile Transformation Zone: See how IBM is advancing agile success for better software and business innovation at http://www.ibm.com/developerworks/mydeveloperworks/blogs/agile/

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