

Agile in the Public Sector:

Why the Product Owner holds the key
and how to unlock greatness.

Why Agile can work in the public sector and how e-petitions handled the challenges every public sector project faces.

What public sector Product Owners can learn from Silicon Roundabout, and how to become an exceptional Product Owner in the public sector.

How to create an environment in which Agile and Product Owners can flourish and create value.



The public sector is both the sworn enemy and best friend of the Agile development process...



Agile poses one of the greatest opportunities for innovation in public sector transformation, creating applications that can streamline process and communication at a fraction of the cost, time and risk of traditional development.

But the public sector can be an incredibly inhospitable environment for Agile. From decision making to budgeting, the public sector is designed for waterfall.

The key is the Product Owner. Your project is as strong as your product owner. The RIGHT product owner is the single biggest driver of successful Agile dev in the public sector. How to find or become the RIGHT product owner.

We offer a unique fly-on-the-wall perspective on the role of the Product Owner in one of the most successful web applications in the public sector so far, built using Agile.

“The key is the Product Owner. Your project is as strong as your product owner.”

Let's set the scene

What people are saying about Agile in the public sector...

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The government has committed itself to using agile methodology for software development in 50 percent of IT projects by 2013"

Government ICT strategy, March 2011

"The sheer scale of the challenges that still face us – and the need to hold our own in a competitive world – mean that we need to change the way government works. Put simply, it needs to be sharper and quicker. We need the whole machine to be more agile, more focused on delivery and on getting results.

The core of the Civil Service Reform Plan is this: harnessing the world-beating talents of those who work in our Civil Service and making sure they aren't held back by a system that can be sclerotic and slow. That means learning from the best in the private sector. Of course delivering good public services is very different from running a business.

But the way the best businesses nurture talent, flatten management structures, reduce unnecessary bureaucracy, and improve services while reducing costs all hold lessons for us in the public sector. When companies live or die on their ability to deliver, that gives them an urgency that we can learn from in government, for the good of those we serve."

Rt Hon David Cameron, Prime Minister

"A good example of this [opportunity]: HMRC, which is an organisation in significant need of innovation. Most transfers of value are electronic – offering opportunities to collect tax effectively, efficiently and accurately. To change the organisation, they must be prepared to be open so that innovators can see opportunities and pathways to modernise the way the tax system works and plan a migration away from the legacy, mainframe spaghetti you will find behind the scenes."

Andrew Hawkins, Business Development Director for Eduserv

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"If public sector and agile don't mix, how did e-petitions launched Agile in 8 weeks on what Chris Chant (G-Cloud Programme Director) at the G-Cloud Supplier Briefing 2011 described as an "unfeasibly small budget"?

Richard Stobart, co-founding director, Unboxed Consulting

"Individual project managers don't have the remit to change the procurement model or the process and are measured against how they perform and adhere to the existing governance process. There is no real incentive for project managers to change what they do even if they think there is a better way! ... Currently, agile projects only succeed in Government when the project team takes a 'risk' and goes outside the standard governance process."

John Wright, Senior Consultant for IndigoBlue

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"Agile made e-petitions the success story it is. At 3p/signature (and reducing all the time), it's hugely cost effective. Against other estimates in the region of £1m and 6 months using a waterfall approach, e-petitions was built in for £80k (all in) in 8 weeks."

Peter Herlihy, Product Owner of e-petitions, GDS

Not everyone is convinced though

“Working in an Agile way means letting go of the fear of failure, and being ready to learn when it happens. This is always challenging, but next to impossible in a ‘command and control’ organisation, without a revolution in management culture – replacing enforcing and dictating with encouragement and support.”

Andrew Jones,
Agile Blogger
adpj.wordpress.com

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“The Cabinet Office expects Agile will reduce the risk of ICT project failure. It’s a nice idea in theory. But it won’t work in government IT. It won’t work in the real world.”

Alistair Maughan,
Partner and head of Technology
Transactions at international
law firm Morrison Foerster



Delivering a project using Agile methods usually means assembling a team comprising:



A Product Owner



A Scrum Master



A number of Developers



A Tester

Who is the most important member of the team?

If one of the Developers is weak, it probably does not matter too much. The velocity will be a little slower, but the team can still maintain quality by good practices such as pair programming. If the Tester is weak, the developers can rally round and help out.

If the Scrum Master is weak, you would think there might have a problem, but if the rest of the team is strong and understands Agile and is prepared to self organise, the impact is likely to be relatively small.

What if the Product Owner is weak?

You may well be in trouble! You'll get surprises from stakeholders, you could end up endlessly iterating over things you thought were done and the team is likely

to expend valuable energy on the wrong thing. You can of course solve those problems, working around and over the Product Owner. It is likely to be a struggle.

“The team is strong, understands Agile and is prepared to self organise”

What happens if your Product Owner is great? “Your project runs like a dream” according to one Scrum Master at Unboxed Consulting. “You will find your Developers begging to work on that project!”

In this white paper, we will explore what makes a great product owner, and specifically exploring this challenging role in the ‘new to Agile’ public sector environment.

The DNA of a typical Product Owner

Let us start with one thing: Agile is cool. Those who like it, love it, and rarely want to return to traditional project management techniques. Since agile is cool, it is generally liked by certain kinds of Product Owners...



Great Agile Product Owners are always passionate about the idea behind their product. They often have a limited budget and recognise how Agile can make that finite budget guaranteed to deliver working code, and therefore business value.



They will leave voicemails at 3am as they come up with ideas on their project. They are interested in the real outcome, not just going through the motions.



Their passion is what drives the rest of the team forward and they make sure that the team has what they need to succeed. If they fail, they could lose everything.



The reason these people are great Product Owners is usually because they are personally invested in the project. It is their money (budget), their ideas, their baby.

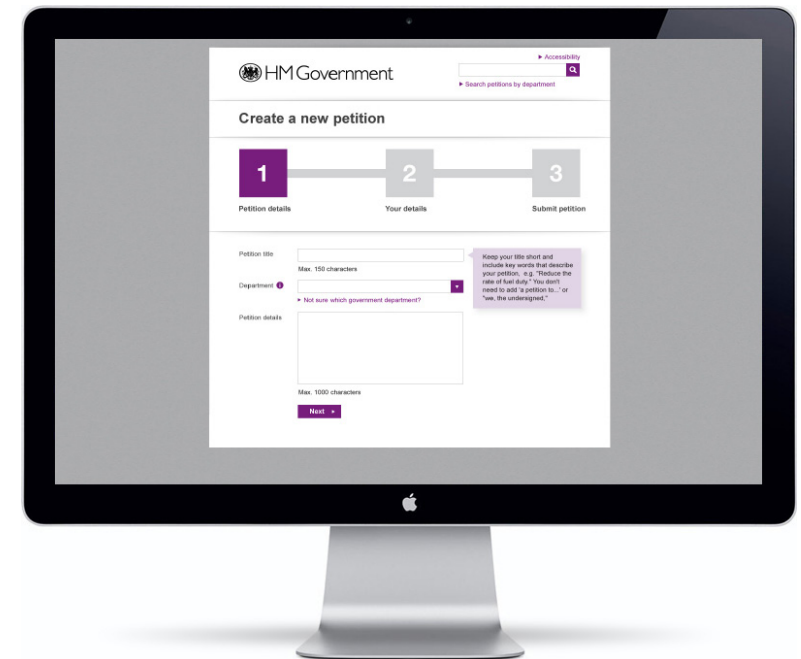
So what is the difference in the public sector?

The key question is, where is the passion going to come from? The sense of ownership, autonomy, pride, self-reliance that characterises ‘Silicon Roundabout’ start-ups is hard to simulate when most projects are designed and specified by a senior committee and handed over for development and go live to a project manager, or worse a system integrator.

The Product Owner has been given a project and a budget by a remote and senior group and asked to get the job done. There is not much to lose if the project doesn’t go well. It is relatively normal to ask for more money and time.

“Definition of a Product Owner: Empowered person who is responsible for that product and makes decisions about where the product is going and whether it is achieving its users needs. Product Owners deal in What not How.”

Peter Herlihy,
Product Owner of e-petitions,
GDS

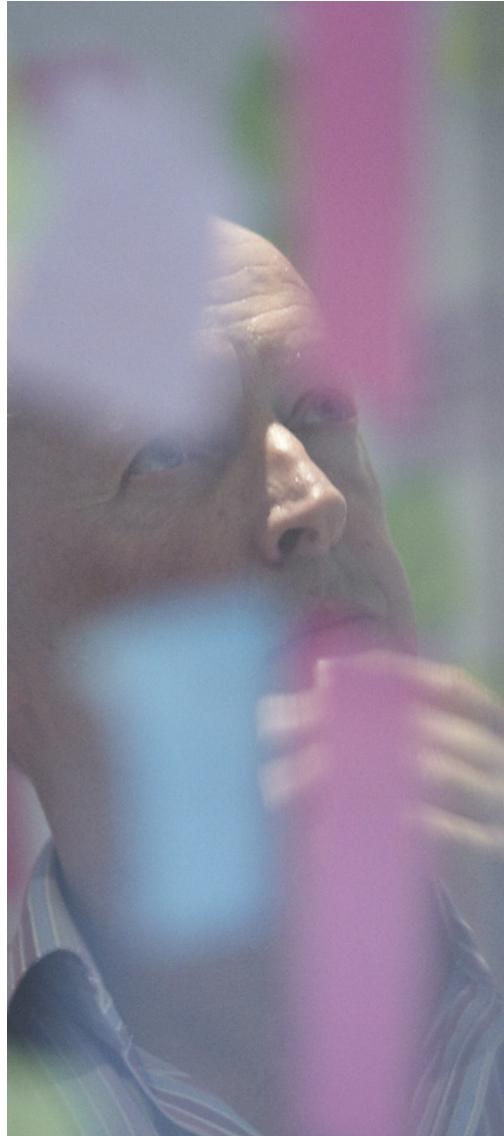


What's emerging in the public sector?

So, until recently, the chances of finding someone with the potential to be a great Product Owner in the public sector have been slim. Agile itself has not even really been on the agenda.

A key milestone in HMG's ICT strategy is that Agile techniques will be used in 50% of major ICT - enabled programmes by April 2013

Has it? Here is the thing. Pockets of Agile excellence are springing up. Product Owners are making themselves known. They are achieving extraordinary things in a hostile environment. The public sector is recognising the value these people and methods bring and carving out space for them.



Alan Thomas, Scrum Master at Unboxed Consulting for the e-petitions project continues the story...

"I recently worked on a project with GDS (the Government Digital Service) and as I pitched up for my first day at their bland concrete office, I did have a few preconceptions...

At first they were proved right: the geriatric security guards, filling in a form for a security pass, three uniformed receptionists at one quiet reception desk, the Klix coffee machine in the corner vending a sludge masquerading as coffee etc etc.

Then I went up in the lift to where I was going to be working. I imagined banks of desks manned by people in bland suits working on their government issued identikit desktop PCs, a turgid place to work where everyone would be staring at the clock on the otherwise blank wall, waiting for it to hit 5pm, so they could make their escape.

But when I walked in I was amazed. I was greeted by Peter Herlihy – my new Product Owner for the next four

weeks. He was (and still is) a big amiable New Zealander, wearing shorts, a hoodie and clutching a MacBook Air in his spare hand as he gave me a big friendly handshake.

The office was not what I expected, there were white boards everywhere with task boards on them. Stand-ups were happening, there was a buzz around the place, barely a suit in sight. The cool kids had turned up. "Government has changed" I thought..." They are hiring the best people and giving them the right environment to succeed."

After 10 years of delivering Agile at Unboxed, we're now the Agile Grown Ups – an interesting concept! Our experience shows that hiring the cool kids won't fix everything in an instant. Nowhere is this more true than in the public sector where the environment continues to prove hostile."

10 reasons why Agile shouldn't work in the public sector

...(but which the right Product Owner can work around).

1. Decisions are made by groups (or worse, committees) so the single decision maker who can keep the project flowing freely is unlikely to exist. The project may be required to follow the traditional way things are signed off – in large chunks of money with fixed, gated, defined processes.

2. Have to collaborate with or report to other non-agile departments. Even if the department has adopted Agile (like GDS), they may be hamstrung by having to deal with other departments who either do not understand Agile or are sceptical of its benefits.

3. It's risk averse. Rather than 'How can we make this better?' the line is often 'If it ain't broke don't fix it' However just because something worked 10 years ago, it does not mean it is not broken now

4. Have large teams and large functionality with large expectations.

There is often seemingly compelling arguments why early delivery is not possible and it is the waterfall solution - or nothing.

5. Incumbent systems integrators often don't have Agile experience.

It is not in their interest to be efficient and yet they are telling their public sector clients they are Agile to keep up with the trend (dangerous).

6. The project will be measured by waterfall typical milestones, not working software. In traditional waterfall terms a project may be judged to be 40% complete if 40% of the overall effort has been expended. This may only amount to definition of requirements and analysis. The client may have no code or development at all. With Agile, completeness is measured by working software. If a project is 40% complete, 40% of the software has actually been delivered successfully. The National Audit office still use this measure of progress.

7. Security requirements will be super-high: Government departments almost inevitably hold sensitive personal information and have strict rules about how that data can be accessed.

8. There's bureaucracy (oh boy, is there bureaucracy). There will be a lot of 'red tape' to negotiate. Getting sign-off on a simple change may take a lot of paper pushing up through the department hierarchy.

9. Policy and protocol will stand in the way. The large scale procurement and internal processes mean getting the right equipment is a challenge

10. There will be lots of Project Managers and Business Analysts who have made a career of public sector projects, trained in Prince2. They fear the threat to their core skill.

The good news: Agile can help Agile succeed

Here's how...



The reasons which make it hard to do Agile well in the public sector are changing and diminishing as time goes on. What was true of the environment even five years ago is now an extreme or unusual example.

But what does a product owner need to have and do to succeed in this environment?

Firstly, if we remember what makes a typical product owner great, it's passion. Where is that going to come from? Agile is here to help. Drafting requirements

and getting spreadsheets full of them signed off by committee over weeks and months before they are finally approved months later is hardly going to inspire a talented Would Be Product Owner.

Alan thinks back to how different his experience at e-petitions was:

"I remember one morning we were asked by Peter to work on a new feature. He had a clear idea of what was required. We planned it and started work on it almost straight away.

A few hours later, we had built and tested it, he had signed it off and we had deployed it to production. He was happy. Once it was up and running, as people passed his desk, he'd call them over:

"Hey, hey! Come look at this! What do you think of my new shiny? Pretty cool, huh?"

He was drawing on the sense of achievement that Agile can bring, delivering working software fast. It is a lot easier to find the passion when you have got a feeling of having achieved something.

"It is a lot easier to find the passion when you have got a feeling of having achieved something."

The other things to note from that anecdote are:

Clear understanding, delivered the Agile way

Although, Peter had only spent a short time with us telling the team about the new feature, he had clearly done his research and had gathered the requirements together himself. He may have had to go through the old school way of doing things, but he delivered that

to the development team in the Agile way: enough data to complete the feature and show us what success would look like.

Empowerment, within a traditional framework

Though Peter operates within a large, traditional structure, his department had been given the permission to let him get it done and deployed without the red-tape.



The Agile success story

e-petitions enables members of the public to create and sign petitions online to influence government and parliament in the UK; those that receive more than 100,000 in signatures will be considered for debate in the House of Commons.

As part of the public sector focused technology collaboration, ADN, Unboxed Consulting developed the e-petitions site in 2011.

Visit the e-petitions site:
epetitions.direct.gov.uk

Read about the e-petitions development process, from Product Owner Peter Herlihy's blog:
<http://digital.cabinetoffice.gov.uk/2012/05/29/e-petitions-open-source-open-data-and-getting-trendy/>

Product Owners: Made or Born?

Can you train anyone to be a great Product Owner - or are they born with it?

Let's look at some of the abilities a great product owner might possess.



Fluent translator:

as well as technical skills, a Product Owner needs to be able to translate what the stakeholder wants into technical speak and back again. We have met a few developers who have tried to explain something to a 'normal person' and just bamboozled them with jargon. Which is clearly not helpful. A Product Owner needs to be able to translate freely and clearly between 'normal people' and the developer.

Decision maker:

Peter Herlihy of GDS and Product Owner of e-petitions explains, "If you do something that doesn't work, it does not matter. There are no bad decisions, only failing forward. The only bad decision is not to make a decision."

Robust technical skills:

all the great product owners that we have have worked with at Unboxed Consulting have had a good technical understanding of development. They have understood what is and is not possible, what might be difficult and why. Their technical ability has also given them a sophisticated enough understanding of how their product is going to fit together. Technical skills can obviously be trained, but what is important here is a willingness to learn, and more importantly keep on learning.

"There are no bad decisions, only failing forward."

“To grow your own, we recommend you second existing technical leads/project managers to great Agile projects (external to the public sector, if needed).”



Direct experience:

we have found that great Product Owners have invariably personally experienced and contributed to a previous highly successful Agile project. They have seen it in action first hand. This is clearly learnable. It also makes the case for bringing in Product Owners from outside public sector where there are more successful examples. To grow your own, we recommend you second existing technical leads/project managers to great Agile projects (external to the public sector, if needed), or bring in a Unboxed Consulting Agile coach to help them gain the experience. They need to know what good looks like, and be prepared to proceed at risk. Failure, early on, is acceptable and should be encouraged as it magnifies learning and is far cheaper and less risky than failure later on.

Fearless influencer:

if one thing links together great Product Owner's we have worked with it is their ability to stick to their guns and say 'No, Minister'. They are prepared to go to Parliament or a select committee and argue why they've chosen a priority. They negotiate the environment they need. Can you learn this? Perhaps not. This is a mindset that's likely to be durable. But we can all improve...!

The man behind e-petitions: Peter Herlihy



Meet Peter Herlihy. He is a rare breed. He is responsible for the lifetime of crucial government sector web apps which achieve results he is passionate about. And he uses Agile methodology.

Where Peter gets his passion and motivation:

- “As a public sector Product Owner, everything you do affects millions of people. These high profile projects fire my imagination.”
- “I’m not trying to find a way of making more money which is a refreshing challenge. It’s about improving something for lots of people.”
- “I used to work in banking and actually these projects don’t make the headlines. They are not really meaningful or tangible for ‘real people’.”

He describes his Agile philosophy as being simple: it is about empowerment.


“I know exactly when I can make calls and what you need to talk to someone about. And usually I can make 95% of decisions myself, either on the spot or with some reflection time. My view is that a Product Owner should only need to defer 5% of decisions otherwise they are not truly in charge of the outcome. In the public sector these deferments can go up through the layers to people who don’t understand the project let alone the technology. So it’s crucial only a few require this route.

“Each project is stamped with my vision - it’s my baby, my brainchild. That way I know instinctively if it’s deviating from what it was designed to achieve.

Agile doesn’t work unless you have good people. I’m reliant on everyone in the team; each has a role to play. If developers just say ‘yes’ to everyone, we won’t have as good a product. They need to question, understand the value. If they just wait to be given tasks, they will just produce the first thing they thought of which is rarely the best option. They need to be willing to fail forward.”

Agile in public sector ‘brownfield’ projects

Callum Foster of the Office for National Statistics carves an Agile path through modernisation, legacy systems and an inherently long development pathway.

 allum Foster, 41, has worked for the Office for National Statistics for 19 years. Before coming to his current role he led a team responsible for managing the Neighbourhood Statistics website for a number of years, also contributing to ONS’s longer-term web strategy.

As part of a broader shift towards greater accessibility and transparency, ONS is moving away from publishing its findings solely in the form of Excel spreadsheets to producing data in more open, user-friendly ways so that it can

be used and reused. Callum’s broad experience and understanding of product outputs and expertise in web strategy, as well as familiarity with Prince2, made him the obvious choice to project manage a critical stage of this transition. This was the release of a set of website changes and an API that would allow users to find and explore data from the 2011 census, enabling them to download, customise and interact with data sets and encourage collaboration.

The project went out to tender. When BT bid successfully and wanted to use Agile

“Callum’s broad experience and understanding made him the obvious choice to project manage a critical stage of this transition.”

methodology, Callum found himself in the role of Product Owner for the first time. ONS had used Agile for one other project in the past, but nothing like the scope and complexity of this one.

“There was a good deal of optimism, but also some worries and concerns – mainly because we had little experience of Agile. This isn’t something that we’re doing across the board.”

One of the complicating factors was that this was a brownfield project. The developers were not starting with a clean slate (as they had been with the e-petitions site): they had to work within the framework of the existing ONS website and systems. They were also some way behind the curve on the way to modernisation; ONS is a more rigid environment, with older machines and standard software rather

than the freedom, flexibility and adoption of Macbook Airs enjoyed by a department like the Government Digital Service.

Then there were some external constraints. Statistics is a specialist area and there are many stakeholders both internal and external who would typically be involved in a project like this, and they can be vocal if things are done in a way they are not familiar of happy with.

There is a pressure to bring in these experts, but that does not always fit well with Agile - expecting them to drop everything and come in to fit the requirements of the current sprint is not realistic. Another inherent tension was the documentation process the ONS used, which was designed to work with waterfall and which threatened to bog down the developers – who reasoned that the code itself could be the documentation.

This is the situation into which Callum stepped: the key bridge between the development team (most of them with BT), the ONS and the other internal and external stakeholders. All with no first-hand experience of being a Product Owner.



“There was a good deal of optimism, but also some worries and concerns – mainly because we had little experience of Agile. This isn’t something that we’re doing across the board.”

Callum on... Product Owner success

Agile is still a comparative rarity in the Public Sector, so Callum was brought up to speed in a series of sessions that would enable him to make the most of its different stages and processes. Two of the key characteristics of a Product Owner are passion for the project and a strong technical grasp of it.

“You need a great understanding of the project’s requirements, and really buy in to what we’re trying to do.”

Fortunately, there was no shortage of these in Callum’s case. Another vital skill is the ability to look both ways – inwards towards the development team and outwards to the other stakeholders. That is not always easy.

“I had to make sure I was going out and engaging with external stakeholders and users so that I could represent their needs and requirements. It was easy to get



“There is a lot that government can learn from Agile, but a lot of resistance. Government is risk averse and unwilling to make far-reaching changes at a stroke. The way to go about it is to take small steps; limited, self-contained projects like the ONS API – and to learn lessons from them.”

caught 100% in the here and now, pushing stories through the sprint process. But it should be more like 75% on the here and now and 25% on engagement and comms. I was not always doing that – more like 90/10 most of the time.”

This is particularly important for government organisations, since they

cannot afford to lose the confidence of the public who fund them.

“It should be higher in the Public Sector. After all, we are a service provider, we are spending tax payers’ money. That’s who we’re producing these numbers for – our users, not for ourselves. Our reputation is based on delivering what they need, and it can’t be done behind closed doors.”

Additionally, maintaining communication with other providers is necessary to avoid snags further down the line, since their timetables - and flexibility - are often different to those of the Agile development team. The infrastructure provided one notable example.

“There were some issues there, because infrastructure needs long lead times to change. It was not a big problem, but it was something we had to keep an eye on. If we had to react quickly, it wasn’t always easy to make it happen.”

The bottom line is, a project is only as strong as its Product Owner. ONS is a complex department, but Agile still worked quickly and effectively for the ONS where waterfall might only have resulted in ballooning timescales and budgets. As a new Product Owner, what enabled Callum to make this happen?

“We’d been given a lot of empowerment. It meant we didn’t need to push things

“The key thing is giving your Product Owner the authority and space to make decisions, but still making sure that internal and external stakeholders have an ongoing way to feel involved. That is the trick”

up the chain to a project board every time we needed to make a decision. We established the framework within which we were going to work, and to a large extent we were left to deliver the outcomes within that.”



“The key thing is giving your Product Owner the authority and space to make decisions, but still making sure that internal and external stakeholders have an ongoing way to feel involved. That’s the trick.”

What Next?

If you are responsible for appointing or managing a Product Owner in the public sector, here are our recommendations for how to create success.



1. Find a private sector digital agency willing to second one of your Product Owners to a private sector project to see what good looks like.

2. Invest in a coach to help your Product Owners navigate, influence, steer and create vision.

3. Train the team, and inform the stakeholders

4. Evaluate the environment – is it possible to succeed? What must change?

5. Look at the principles on the Agile manifesto. Be honest with yourself: are your Product Owners capable of succeeding? If not, don't risk an Agile project. The biggest risk is the risk of not setting it up for success.

6. Do not just appoint anyone in as a Product Owner. Choose wisely and empower them richly. Make selection, induction and development a top priority for that particular role.

7. Look at how you're measuring success. Be able to absorb change as it emerges. In a Lean Start Up, the primary measure of progress is learning. In Agile, the primary measure of progress is working software.

8. Take a risk – experiment and learn to reduce risk. Remember Agile projects start red and then go green. Traditional projects start green and then go red.

Where does Unboxed Consulting fit?

Rock solid development for big digital ambitions

We take your most exciting and complex digital ideas and turn them into reality. We are Agile veterans, and have a ISO 9001 certified Agile delivery process: *The Unboxed Way*. It is specifically designed to start delivering business benefits immediately. It is so well respected, we teach other companies how to use it to leverage Agile. We offer coaches, mentors, Scrum Masters, Product Owner proxies, training courses and facilitators.



What this means for you...

Software benefits delivered immediately, using Agile techniques so that risk is reduced, waste is eliminated and ROI is increased.

The ability to steer the course as you go resulting in the outcome you need, on time and in budget.

Quality is embedded into the software from Day One.