

The background of the top half of the page is a photograph of several ants on a piece of wood. One large ant is prominently featured in the upper left, walking across the log. Other ants are visible in the background and foreground, some on the log and some on the ground below. The image has a halftone or dot-matrix texture overlay.

White Paper

Seven Elements of Agile You Can Take Outside Software Development

Providing you with:

- ✓ An introduction to common Agile frameworks
- ✓ Advice on tailoring Agile to your needs
- ✓ Tips to maximise the impact of your initiatives



Introduction

Agile was introduced to the world, via the Agile Manifesto, back in 2001. With its focus on collaborative ways of working, iterative delivery processes and on-going feedback loops, it provided development teams across the globe with a means of getting working products to market more quickly - reducing waste and risk, and helping them maintain a crucial competitive edge in an increasingly fast-paced environment. The benefits of Agile have become so widely acknowledged in fact that 95% of software development organisations now practise the approach, and in 34% of these kinds of organisations the majority of teams do so (source: Version One).

But while Agile may have originated in the world of software development, at Box UK we've seen from experience that many elements of the methodology can also be applied to organisations working outside of this industry, and have helped companies as diverse as those from the automotive sector, educational institutions and events management companies successfully transition to Agile ways of working.

Simply shoehorning Agile techniques into existing processes is unlikely to deliver the desired results, however. Instead this white paper shows how to implement Agile in a way that works for you, by helping you identify those elements that serve the specific requirements and contexts of your organisation and industry, to ensure you remain ahead of the curve and extract the maximum value from the methodology.





Planning processes

One of the core benefits Agile offers - and one that attracts many organisations to the approach - is increased flexibility. This is facilitated in large part by Agile's iterative approach to planning - something that can be adopted by organisations across a wide range of industries, not just software development.

Rather than creating an overly-detailed blueprint at the outset of your project that is then fixed for the duration, with Agile planning is a continual process based on on-going inspection and adaptation, supported by a shared understanding that's maintained throughout the project. By building in regular review activities (more on which later), you can assess progress and plan future activities accordingly, greatly increasing the chance of project success by enabling you to evolve your approach as further details of requirements emerge, as well as respond to changing conditions, stakeholder input and user feedback.

At Box UK we demonstrate this key Agile principle using the well-known game of battleships. Once the ships are in place (as per a typical battleships game) one team is asked to mimic traditional requirements gathering by planning all their moves upfront; only knowing where they have succeeded and failed at the end of the game. The other team plays in the usual way, receiving feedback on whether they have hit or missed any ships after each move. Typically the latter team, which is allowed to change plans based on what has gone previously, will score much more highly - highlighting the benefits of an iterative approach in helping keep output as relevant and valuable as possible.

In your organisation you might find that Agile planning can be introduced to manage an on-going promotional campaign, for example - allowing you to quickly drop activities that aren't yielding results and re-invest in more productive communications channels. Alternatively, you could explore taking an Agile approach to plan for an upcoming product launch, reviewing the priority of associated tasks as new requirements come to light.



Get started

- Understand that it's often impossible to know everything about a project at the outset - meaning that detailed plans, while offering a certain level of confidence, are often impractical and even wasteful
- Consider trialling an iterative planning approach with a small, discrete project or team, so that you can learn and improve in a low-risk environment
- Ensure results are reviewed frequently as you roll out your approach, to keep stakeholders aware of progress, identify and resolve potential issues early, and allow knowledge or skills gaps to be addressed



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Delivery processes

Just as Agile planning is an iterative process, product delivery also occurs in stages - focusing on the completion of individual features and tasks so that projects can go live at virtually any point as a lightweight deliverable or Minimum Viable Product (MVP). Agile encompasses numerous different frameworks however, which support this iterative approach to project delivery in different ways. The one that suits you best will depend on your specific requirements - regarding both the way your organisation is set up and the industry in which you operate.

The Scrum framework, for example, employs short, contained periods of work known as 'sprints'. Typically lasting two weeks, working features are delivered and demonstrated to stakeholders at the end of every sprint - helping shorten feedback loops to keep the project on track, and reducing the risk of investment being poured into unproductive or unnecessary areas to support greater budgetary control. One example of this can be seen in the manufacturing industry, where initial prototypes are often created to demonstrate the eventual completed product before the full build commences; indeed many have argued that aspects of the Agile methodology are inspired by Lean Manufacturing principles (source: Martin Fowler).

Alternatively, you may wish to explore frameworks such as Kanban. Promoting the creation of a prioritised list of tasks (known as a 'backlog' in Agile terminology), this framework can be used to manage projects ranging from the delivery of a training programme to the creation of a financial forecast, and along with placing limits on work in progress helps ensure that the most important items are delivered first, and that bottlenecks are identified and resolved at an early stage. Providing you with increased flexibility, visibility and responsiveness to change - principles that are at the very heart of Agile - without necessarily committing you to the shorter timescales

of Scrum, this can be a relatively easy way in for organisations that wish to try out Agile ways of working.

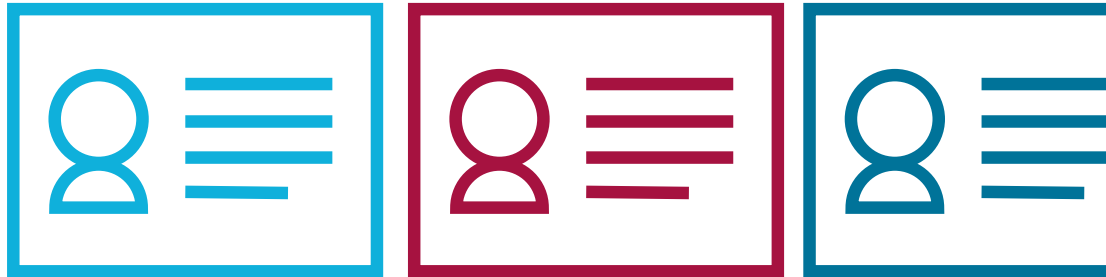
You could even adopt a hybrid approach that combines these two frameworks - retaining core Scrum activities (covered later in this guide) while adapting the sprint schedule to suit the nature of the particular products or services you provide. Whatever you decide though, it's crucially important that you apply the principles of Agile to your own implementation process - allowing for regular review periods and accepting that your initial plan may need to evolve over time.

Get started

- Analyse your existing ways of working to identify aspects that work well along with any areas where improvements could be made - using this insight to inform your eventual Agile delivery approach
- Don't be afraid to tailor Agile frameworks so they work better for you - for example, if your teams are distributed or work remotely specific solutions may be required to facilitate a suitably collaborative approach
- Collect team feedback that can be used in conjunction with business results and other key performance indicators to assess the effectiveness of your chosen approach

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User stories



Supporting Agile’s iterative processes are a number of tools and exercises. And while you may not be able to - or even want to - introduce all of these into your own ways of working, they can serve as valuable touchstones on your path to Agile adoption.

Some of these tools, such as user stories, aren’t exclusive to Agile but do align with its core principles. Taking the form “As [user], I want to [task], so that [motivation]”, user stories ensure that requirements are expressed with direct reference to the user needs that are being fulfilled (for example, “As a shopper, I want to be able to return items, so that I have time to decide whether to commit to my purchase or not”). This helps maintain a focus on the specified user as solutions are defined and produced, to maximise the value being delivered as well as provide an easy-to-understand reference that can be distributed to all relevant project stakeholders.

As user stories originated in software development projects, however, it’s possible that the format could prove challenging for organisations working outside of this industry. In these cases, any tasks that need to be achieved should still be expressed in a way that maintains the qualities of an effective user story. A good guide to use here is the INVEST mnemonic (source: Bill Wake), which succinctly captures the most important aspects of a user story:

- **Independent:** the user story should be self-contained, in a way that there is no inherent dependency on another user story
- **Negotiable:** user stories, up until they are part of an iteration, can always be changed and rewritten
- **Valuable:** the user story must deliver value to the end user
- **Estimable:** you must always be able to estimate the size of a user story
- **Small:** user stories should not be so big as to become impossible to plan/task/prioritise with a level of certainty
- **Testable:** the user story or its related description must provide the necessary information to make test development possible

Tasks could therefore be “draft an annual report”, “define the company’s maternity policy” or “present the business case for a new strategic investment” - although there is really no limit as to their potential diversity.

Get started

- Research the different user types your project plans to address, to give you greater insight into their behaviours and motivations and help ensure your stories cover all necessary requirements
- Take a collaborative approach to user story writing, as this not only helps secure stakeholder buy-in but can also open the process up to viewpoints that may not have been considered otherwise
- Keep your stories clear and concise - if a user story is getting too long or complex it may need to be broken up into several smaller stories (in accordance with the ‘Small’ element of INVEST)

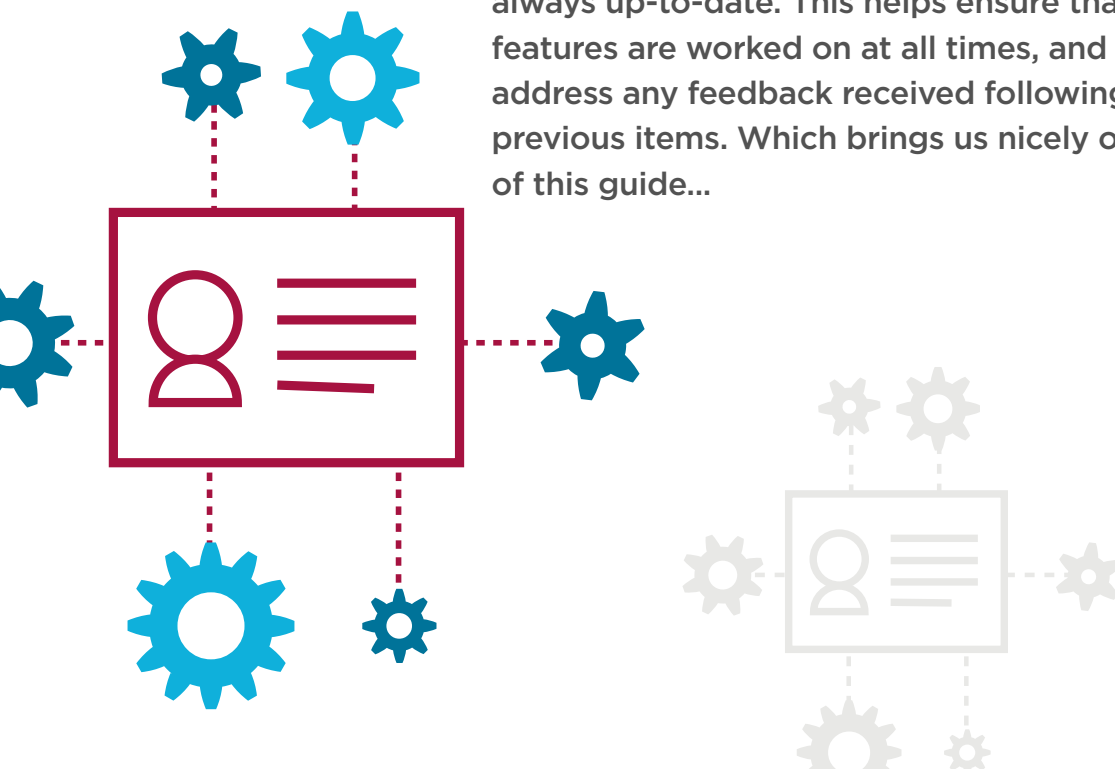
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Estimation and prioritisation

User stories play an important role in a number of other valuable Agile exercises, which again can be used by organisations working outside of the software development industry to improve project performance and drive value.

For example, with complex requirements broken down into their constituent parts it's much easier to assess how much effort is required to complete each user story - helping safeguard the relevance and accuracy of any project estimations. This could be compared to the process of getting a novel published, which will likely need to be split into sections such the drafting and proofing of individual chapters, creating the artwork etc. before it can be meaningfully estimated.

Once estimated, user stories can then be prioritised. For example, securing the delivery of core products and services may be more important to you than exploring new opportunities, or it may not be. In line with Agile's iterative process, however, this isn't done just once with the priority order then fixed, but occurs continually throughout the project to provide you with a backlog of tasks that's always up-to-date. This helps ensure that the most valuable features are worked on at all times, and enables you to address any feedback received following the delivery of previous items. Which brings us nicely onto the next section of this guide...



Get started

- Leverage historical data where possible to inform your estimation and planning processes - can user stories be compared to work you've undertaken previously?
- Don't treat estimations as firm commitments (that's why they're called estimates!) - uncertainty is inherent in all kinds of projects and it's natural that you'll learn and improve as you go
- As with the creation of user stories, it's beneficial to estimate and prioritise tasks collaboratively, as this will help stakeholders agree on an approach at the outset to mitigate conflict and aid the smooth progress of your project



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Demonstrations, retrospectives and stand-ups

Key features of the Scrum framework, demonstrations, retrospectives and stand-ups all provide team members with the chance to regularly assess project progress (whether in person or through other channels) - facilitating the high levels of communication and collaboration crucial to the success of any Agile implementation. (So crucial, in fact, that we'll return to them later in this white paper.)

Demonstrations occur at the end of every sprint, and are the point at which clients and other stakeholders who may not be involved in the day-to-day running of a project can review the outputs of the previous period of work (such as the manufacturing prototypes mentioned earlier). Not only does this offer a chance to capture feedback that can be used to inform subsequent prioritisation and sprint activities, but it also serves as a valuable checkpoint - confirming that the project remains aligned with strategic requirements and goals, and is on track for success.

Also occurring at the end of a sprint, retrospectives allow the project team to reflect on their current performance. By identifying what is working well, along with any areas that could be refined further, retrospectives support continual process improvement - something that's beneficial for all kinds of teams, not just those using Scrum. As an example, retrospectives can help you understand where common tasks could be streamlined or automated, to help improve efficiency and productivity.



These demonstrations and retrospectives are augmented by daily 'stand-ups' which take place throughout the sprint. So named because they are intended to function as short, informal catch-ups (rather than overly weighty and document-driven meetings), during stand-ups each team member shares what they achieved the previous day, what they're going to work on next, and any blockers they're facing. This allows issues such as a lack of stakeholder feedback, delays in the supply chain, or disruption from external forces to be raised and resolved - helping maintain project momentum and ensuring high levels of visibility.

Get started

- Time-box all activities and clearly communicate the proposed format/talking points in advance to maximise productivity - demonstrations and retrospectives typically last between one and two hours, while daily stand-ups should only take around 10-15 minutes
- While written documentation should be kept to a minimum, it's important to take note of any actions, along with the individuals responsible for carrying these out and the required timeframes to ensure they are followed up accordingly
- Encourage constructive feedback and discussion - these sessions should not be dominated by a single voice but instead should take into account the opinions of the whole group



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The Agile culture

One of the most common reasons for the failure of Agile transformation initiatives is that organisations ignore the cultural considerations associated with the methodology. As much as the effective adoption of key Agile processes and techniques, a successful transformation requires that communication and collaboration be built into the very fabric of your team, to provide you with the insight you need to keep activity aligned with your strategic goals and uncover solutions to real-world problems.

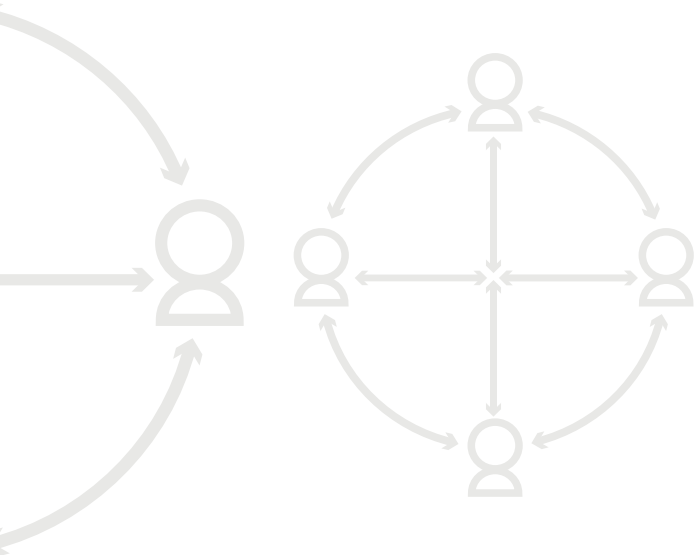
In fact, the idea of “individuals and interactions over processes and tools” is enshrined as one of the Agile Manifesto’s original pledges. The elements of the methodology we’ve discussed so far are some tools to aid this approach, but simply adopting the attitude espoused above can help improve project performance, customer satisfaction and business results in practically any environment, regardless of how strictly you adhere to the other aspects of Agile.



For example, it's only by getting everyone together at the outset of a project that you can achieve shared understanding and gain an overarching picture of your current processes - and so identify any gaps or points of disconnect that need to be addressed before you can move forward. This communication should continue through every stage of the project too, so ensure that all relevant stakeholders are included in your feedback loops. This helps keep all team members focused on the wider project vision and working towards the same end goal, minimising the risk of operational siloes and costly misunderstandings.

Get started

- How good is communication and collaboration in your organisation? You may need to put a training programme in place to provide team members with an understanding of their importance, as well as the skills needed to manage these activities.
- Explore tools that may support productive communication, such as instant messaging systems and project management solutions - but remember, face-to-face is usually the most effective channel!
- Consider incorporating the end-user into your feedback loops through the introduction of testing activities that make use of design prototypes or early working iterations of your products





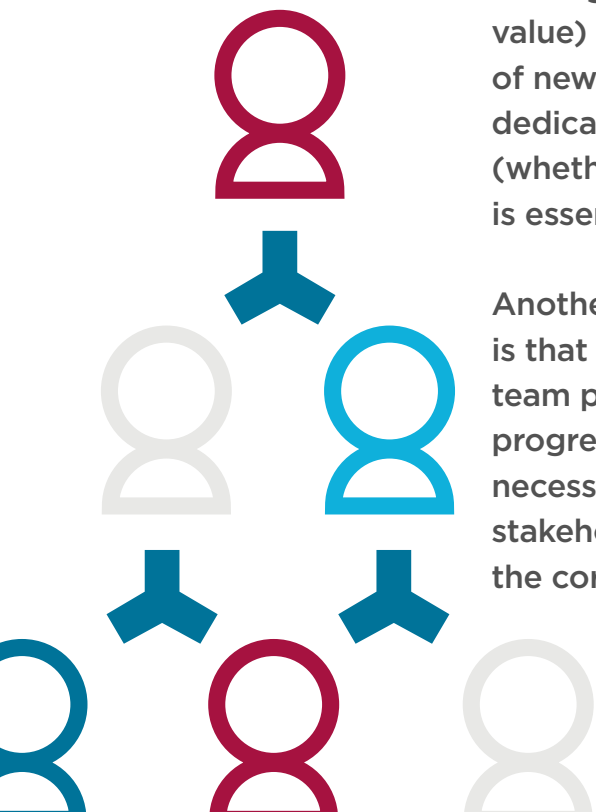
Team structures and roles

To most effectively facilitate your adoption of Agile techniques, you may want to review the way your teams are structured. It's recommended that you limit the size of your core team to between three and six - this covers the individuals who are actually delivering output, which could be anything from those creating tangible products through to salespeople making calls or HR representatives running a recruitment campaign.

However, there are also a number of additional roles and management approaches supporting the Agile methodology that it may be beneficial to consider. You don't even need to recruit new individuals to fill these roles; they can be assigned to existing team members, provided they're equipped with an understanding of what they're supposed to be doing, and why.

For example, many Agile projects feature a Product Owner who represents the voice of the user, and is responsible for making sure the right work (i.e. that which delivers greatest value) gets done at the right time. When faced with a raft of new terms and ways of working, having a team member dedicated to keeping the project focused on your users (whether they're clients, customers, students, employees) is essential.

Another key role, particularly for sprint-based approaches, is that of the Scrum Master. This individual helps optimise team performance by removing any impediments to progress identified in the daily stand-up, ensuring all necessary tasks are completed, and working with other stakeholders on the project to ensure they are supporting the core team as effectively as possible. For example,



marketing teams working in sprints may need enhanced support from the product, finance and IT departments to ensure they can maintain regular deliveries of output and respond quickly to change.

Importantly, though, the team should not be micro-managed by these individuals (or anyone else). Instead, the goal should be to build self-empowered teams that are able to take ownership of tasks and make decisions that serve the project's ultimate aims and objectives. Consequently, it's crucial that teams collaborate and communicate effectively, to foster a shared understanding of project goals among all team members and raise awareness of any issues or requirements that may need to be addressed in future periods of work.

Get started

- Clearly and collaboratively define the different roles and responsibilities within your team, to minimise internal politics and distractions, and aid in the resolution of any blockers or issues
- Consider soft skills as well as role-specific experience and expertise - with a comprehensive training programme in place you'll be able to provide individuals with the exact knowledge they need, but attitude and passion are also critically important
- Give your team the support they need to work effectively, particularly in the early stages of your Agile adoption, as it's likely that it will take time to build highly-functioning self-management processes

Next steps

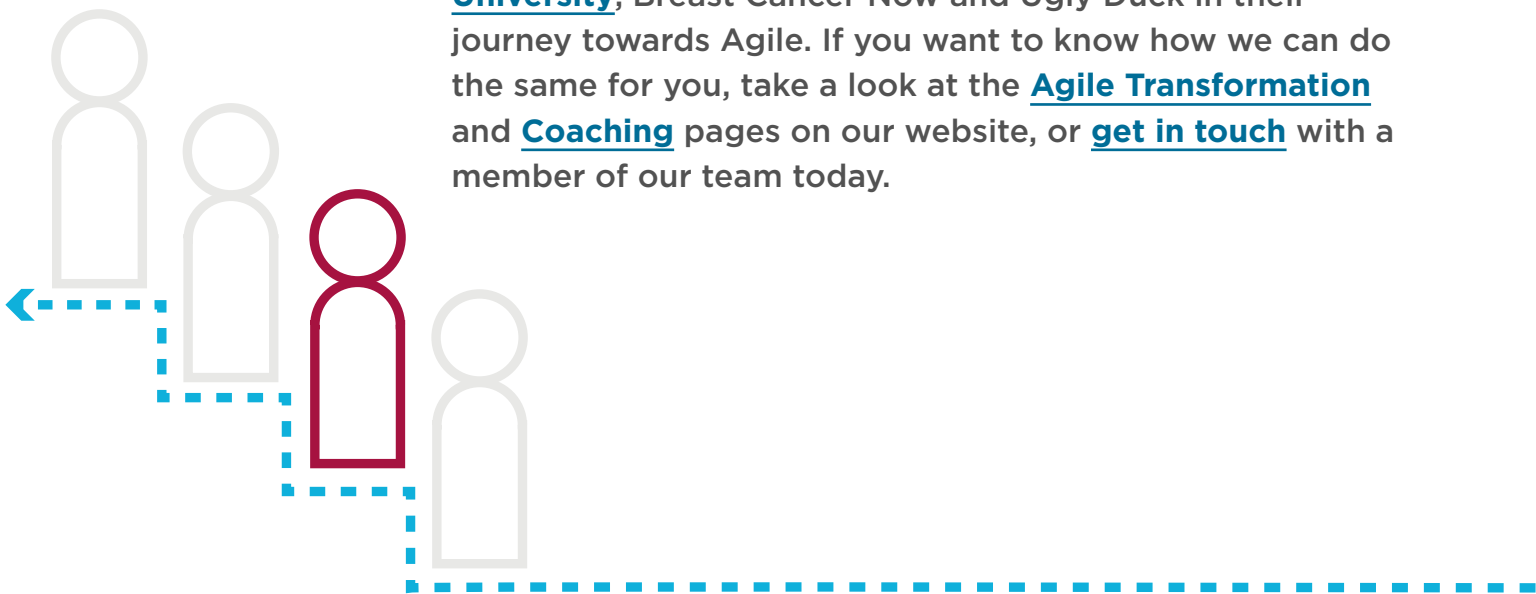
This white paper has looked at some of the elements of Agile that offer value to a huge number of organisations - regardless of the industry in which they operate or the products and services they provide. And if we've convinced you of the benefits, it may well be time to start your own adoption - however, this needs to be underpinned with a clearly-defined strategy.

To ensure the success of your initiative, then, make sure you do the following:

- Conduct an 'as-is' audit
- Define your approach
- Create a training plan
- Test and learn
- Roll it out

(To find out more, download our [separate guide covering the key stages of a strong and sustainable Agile transformation.](#))

At Box UK, we're supporting organisations such as [Cardiff University](#), Breast Cancer Now and Ugly Duck in their journey towards Agile. If you want to know how we can do the same for you, take a look at the [Agile Transformation](#) and [Coaching](#) pages on our website, or [get in touch](#) with a member of our team today.



Further Reading

[Manifesto for Agile Software Development](#)

Beck, et al.

[AgileVersusLean](#)

Martin Fowler

[Agile in a nutshell](#)

Jonathan Rasmusson

[The Biennial State of Scrum Report](#)

Scrum Alliance

[The 10th Annual State of Agile Survey](#)

Version One

[INVEST in Good Stories, and SMART Tasks](#)

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