

When Agile becomes an organisation's standard project delivery methodology, it changes the way projects are managed and controlled. This paper explores how to create value for your organisation by building the right capabilities, unleashing your potential and gaining confidence to deliver the best product to market, while minimising delivery risks.

Agile Project Delivery Confidence

Mitigate project risks and deliver value to your business

July 2017





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Create value for your organisation with Agile Project Delivery

The case to transition to Agile

To be competitive in today's marketplace – in any industry – organisations must deliver an exceptional customer experience.

Speed, quality, prioritisation, discipline and adaptability are all key qualities that will engage customers and other stakeholders to use products or services and build lasting relationships.

Traditional project management methodologies, especially in today's fast-paced digital world, are no longer as effective in being responsive to a customer's changing needs. To succeed in an environment with shifting demands, a business needs to be adaptive and receptive to change.

In response, many organisations are adopting various Agile Project Delivery methods, suitable for their organisation. Agile Project Delivery is a value-driven approach that can give organisations the capacity to deliver high-priority, high-quality work and create lasting meaningful relationships with their stakeholders and customers. It ensures the delivery of products through disciplined, proven practices and allows for adjustments based on continuous stakeholder and customer feedback, thereby increasing speed to market.

“Agile and DevOps will dominate... This cross-functional iterative approach to experience design and delivery will be a big shift – fraught with false starts and missteps along the way – but will successfully lay the groundwork for sustainable customer led innovation³.”

Forrester's 2017 Predictions

When Agile becomes an organisation's standard project delivery methodology, it changes the way organisations manage and control projects. Each organisation adopting Agile must consider that this is not just a software delivery method – Agile requires a significant shift in behaviours that directly affect governance, human resources, risk management, internal controls and benefits management.

Agile: providing value

Agile Project Delivery promises to provide value to organisations because it has controls that ensure the product is driven by the business, reducing the risk of building the wrong product.

One common adage in the IT industry is that 80 percent of all end users generally use only 20 percent of a software application's features. Agile addresses this by focusing on creating the minimum viable product (MVP) by delivering the minimum set of features that will deliver

perceived value to the users¹. The MVP also allows them to continuously incorporate feedback into each future iteration as more information about the product becomes available, and added to the minimum features required (by the users).

A significant percentage of companies are now using Agile Project Delivery as their approach to meet market demands. Although Agile projects are 28% more successful than traditional, they still have a level of risk that can be addressed by having the right controls in place to help realise business value, reduce the risk of building the wrong product, and increase overall development success².

If you are adopting an Agile Project Delivery approach, this paper can help. It explores how to create the best value for your organisation by building the right capabilities, unleashing your potential and gaining confidence to deliver the best product to market, while minimising risks and implementing controls early and often.



1. Rooney, Paul (2012, Oct 3). Microsoft's CEO: 80-20 Rule Applies To Bugs, Not Just Features. <http://www.crn.com/news/security/18821726/microsofts-ceo-80-20-rule-applies-to-bugs-not-just-features.htm>

2. Sweeney, Michael. (2014, Dec 4). Agile vs Traditional: Which Method is More Successful?. <http://clearcode.cc/2014/12/Agile-vs-traditional-method>

3. Guarini, Matthew, Leaver, Sharyn, Matzke Pascal. Forrester Research. (2016, Oct 31). Predictions 2017: CIOs Push For Speed Amid Volatility. <http://www.zdnet.com/article/forrester-predictions-cios-push-for-speed-amid-volatility/>



What is distinctive about Agile Project Delivery?

Agile Project Delivery is based on four values:

People

over

Processes and tools

Working prototypes

over

Excessive documentation

Customer collaboration

over

Rigid contracts

Responding to change

over

Following the plan

These four values originate from the Agile Manifesto, written in February 2001 by 17 independent-minded software practitioners. They set the tone for a successful project, especially at an organisational level.

Embedded into every facet of Agile Project Delivery, these values start with the organisation's overall cultural mindset – the most significant distinction between Agile and traditional project delivery.

Other key distinctions between traditional and Agile Project Delivery are:

- A dedicated product owner is responsible for making all decisions on any software features that should be developed. These features are chosen based on the value they deliver in meeting established Key Project Indicators. Each team is assigned an individual who comes from the business – someone with the authority, time and trust to be effective in enabling change. Without a dedicated

product owner, Agile projects will suffer from delays in the decision making process, something more common in a traditional hierarchical structure.

- Teams are 100% dedicated to the project, thereby reducing multi-tasking and creating a high level of focus. Additionally, team co-location is recommended as it creates efficiencies in communication, knowledge transfer and team building. If we consider the best teams in the world – be it a sports team or a software team – people who work together build trust and perform better than rotating teams.

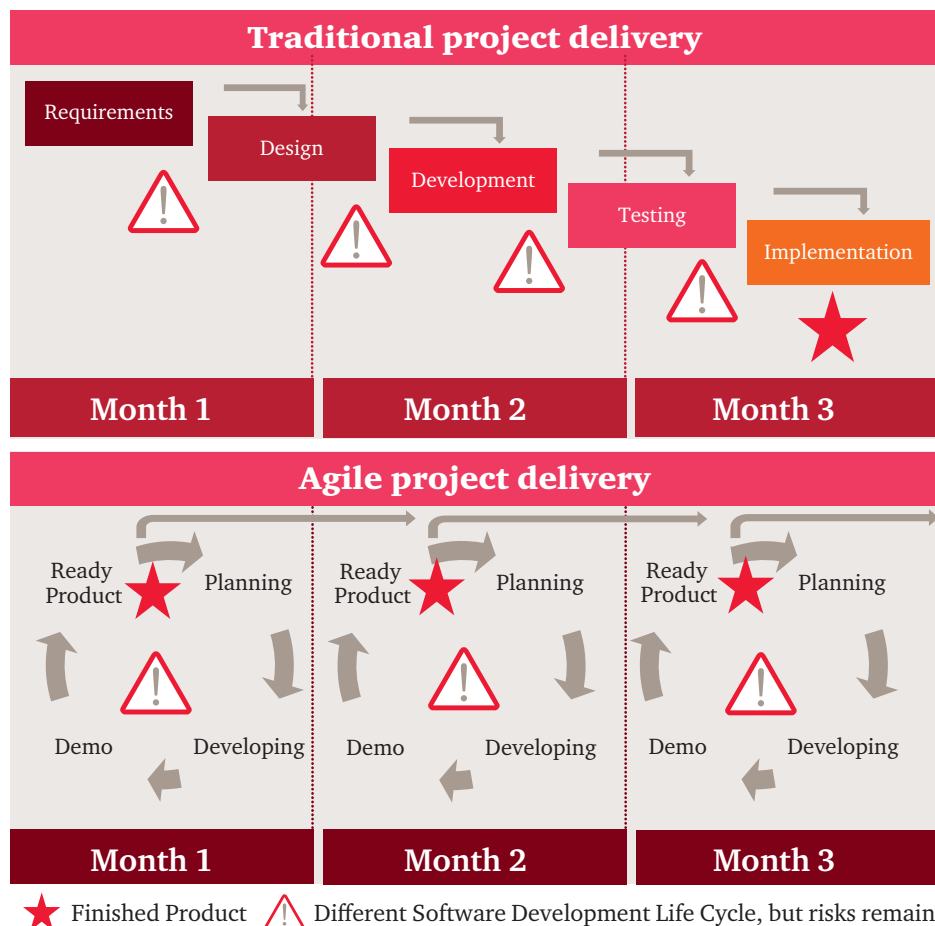
There are many other distinctions, including iterative and incremental development, short feedback loops and continuous engineering practices, all of which are designed specifically to increase delivery value and satisfy stakeholders.

Traditional vs. Agile view of project delivery

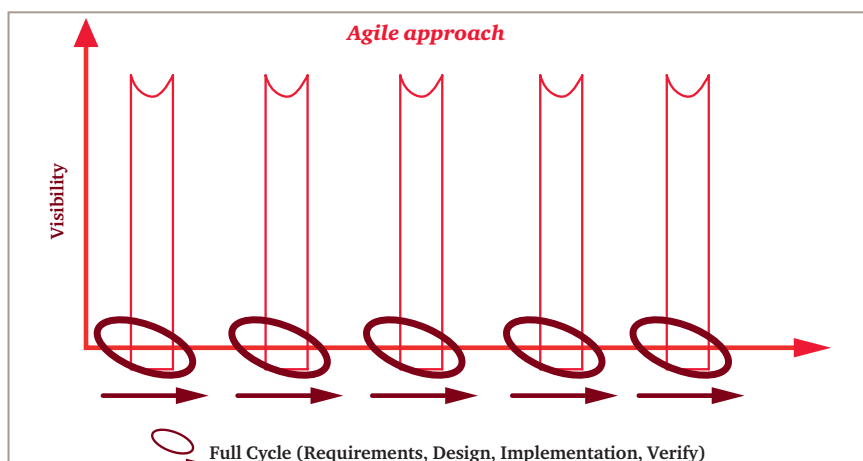
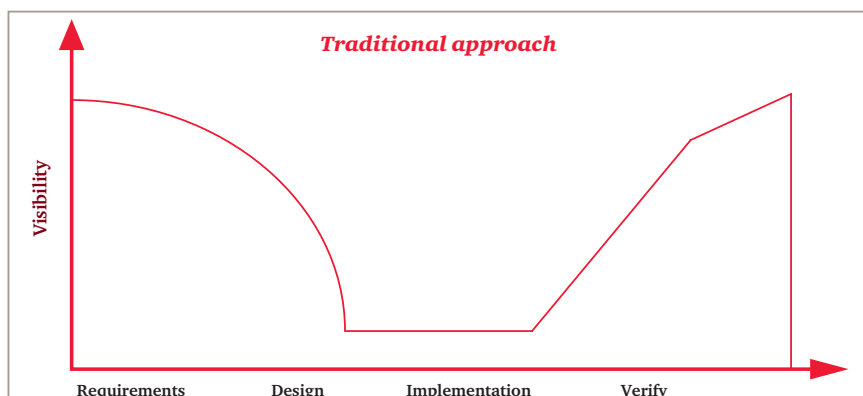
These charts show the distinction between a traditional and Agile project over the same period of time.

Agile reduces complexity by breaking down the typical long cycle of a traditional project into one to four week cycles, called iterations, containing small, user-ready segments of the final product that were developed and tested during the iteration.

Although risk still exists in both, the main outcome is that Agile Project Delivery has a working product after each iteration. This product improves throughout the release due to the continuous feedback that is incorporated at several points in the lifecycle.



Agile is designed to minimise the risk to delivery



Greater visibility = lower risk

Regardless of the delivery method used, the core underlying project tasks, dependencies and environmental sensitivities remain the same. Agile is not a silver bullet. There are still risks, but when doing Agile Project Delivery, the team has the opportunity to respond to risk earlier in the delivery lifecycle due to ongoing visibility and continuous improvement.

In these two images, traditional development has high visibility at the beginning and end. This is often why progress reports are green until the end of the project where stakeholders once again have visibility and realise that progress had not been as expected. Agile, on the other hand, mitigates this risk through iterative delivery where visibility is clear throughout the lifecycle.

Build Agile Project Delivery capability



The benefits and challenges of Agile Project Delivery

Two strengths of Agile Project Delivery include the flexibility to realign the project work and the accelerated release of incremental functionality.

For an organisation attempting to do Agile Project Delivery for the first time, the approach may appear to introduce anarchy rather than structure. Agile, being 'non-prescriptive' in nature, is open to interpretation and the implementation is only as good as how an organisation interprets and enforces it.

Organisational capabilities are multi-dimensional and embodied in the organisation's values and norms, managerial systems, skills and knowledge, and techniques and tools⁴. Changes can be expected to all of these dimensions when first embracing Agile Project Delivery.

Agile is also about embedding the following characteristics into the approach:

- Collaborative, empowered and self organising teams
- More automation to reduce waste
- Continuous code quality checks
- Visibility on progress

Without these core characteristics in place, the following may occur:

- Insufficient cultural acceptance
- Inadequate project organisation and governance
- Inappropriate use of the Agile techniques and tools
- Ineffective risk and control tracking mechanisms
- Inadequate level of change management necessary for a successful Agile transition

Be ready to mitigate risks early and often

Despite the benefits of Agile Project Delivery, organisations may find they do not have adequate or effective risk management capabilities in place. Mitigating risk upfront and continuously throughout the project is what makes Agile Project Delivery the right approach.

Agile Project Delivery is effective when particular delivery controls are in place. Becoming an Agile organisation requires top-down and bottom-up organisational change to build new capabilities to mitigate risks early and often.

Agile fosters a successful environment on many levels:

Places a strong emphasis on prioritising customer satisfaction through **early and continuous delivery** of valuable products and working software.



Supports continuous attention to **technical excellence** and good design, leading to less waste.



Reduces project delivery risk by engaging in frequent reviews with a cross-functional line of sight into product readiness, encouraging high stakeholder visibility.



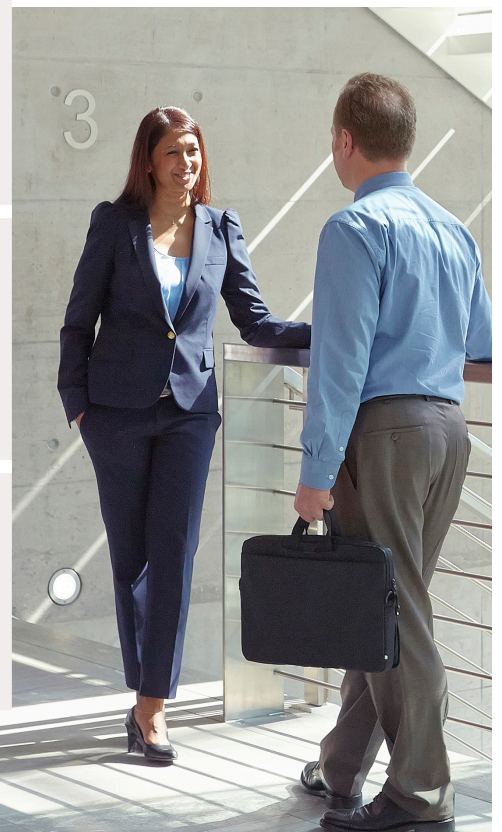
Fosters the importance of a collaborative, **self-organising team** that makes improvements, analyses problems, and adapts behaviour to become more effective along the way.



Welcomes changing requirements, which encourages rapid and flexible responses to change.



Encourages clear expectations for each cycle and a common understanding across all teams of what constitutes **done and ready for delivery**.



4. Leonard-Barton, Dorothy (1992). Core Capabilities and Core Rigidities: A Paradox in Managing New Product Development [PDF Document]. Retrieved from the Strategic Management Journal, Vol. 13: [https://business.illinois.edu/josephm/BA545_Fall%202011/S12/Leonard-Barton%20\(1992\).pdf](https://business.illinois.edu/josephm/BA545_Fall%202011/S12/Leonard-Barton%20(1992).pdf)

Adapt delivery management and governance

There is a correlation between project risk and speed of delivery. The faster a team develops a product, the more inherent the risk.

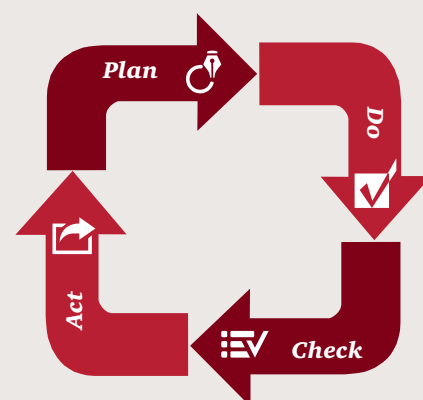
Agile requires a highly-disciplined and focused management and governance approach that provides near real time risk assurance through a range of Agile ceremonies, such as:

- **Release planning** – Planning the next set of product features to release (comprised of multiple iterations)
- **Iteration planning** – Starting each iteration where the team commits to a goal and identifies the requirements, helping them reach that goal within the iteration
- **Daily stand-ups** – A 15-minute meeting held each day in an iteration, where the development team discuss what they completed the day before, what they will complete on the current day, any dependencies, and anything standing in their way to complete a task

- **Reviews** – A meeting at the end of each iteration, where a demo to customers and stakeholders is held to preview and discuss the functionality that was built in that iteration
- **Retrospectives** – A meeting at the end of each iteration where the team discusses what went well, what they could change, and how to implement those changes into the next iteration
- **Product Backlog Refinement (Grooming)** – An optional checkpoint meeting that is held near the end of a sprint, where the product owner and the team prioritise the backlog items and adjust accordingly

Plan-Do-Check-Act

Risks are identified and discussed with the first (delivery team), second (Internal Audit) and third (external audit) lines of defence, and a mitigation plan is put in place in an iterative cycle created by W. Edwards Deming called PDCA (Plan-Do-Check-Act).



Plan – Establish objectives relevant for managing risk

Do – Implement controls to manage risk

Check – Assess and measure performance against controls

Act – Take corrective action and apply to the next iteration/release

Control the risk

Specific control mechanisms provide touch points during Agile Project Delivery. These concentrate on key aspects on the project lifecycle, as outlined in this table.

Touch point	Description	Control mechanism
1	Strategy and governance planning review	• Agile contract review • Business case review • Approach suitability review • Agile risk assessment • Stakeholder assessment
2	Requirements review (multiple reviews)	• Risk adjusted product backlog review • User story review
3	Build and test review (multiple reviews)	• Agile ceremonies/processes review • Test strategy/approach review • Test automation review
4	Readiness and release review	• Code readiness review • User readiness review (organisation and IT) • Risk, compliance and control readiness • Data conversion/migration review • Business handover review (Definition of Done)
5	Post go live review	• Post implementation review/Project retrospective
6	Overall portfolio/enterprise level	• Agile maturity assessment

Accelerate risk assurance to the speed of Agile

Although the phases that occur in traditional project delivery still occur in Agile Project Delivery, they are broken down into smaller iterations and increments. The rigour in governance and controls occurs at a more frequent rate.

In order for these controls to be effective, changes must occur top-down by leadership and bottom-up by the project team. An organisation will need to assess and revise its project delivery controls, including:

- Creating a modular approach to governance procedures to align with increment, release and roadmaps
- Updating the change management process and defect management process to align with product backlog maintenance
- Treating Agile meetings as a form of a self-organising team approval to move forward daily and weekly with project work
- Updating reporting that tracks progress for budget and schedule estimations
- Ensuring that the stakeholders and the Agile team are receiving the proper training to be effective

This table describes the types of controls across the project lifecycle:

Requirements and design	Development	Quality assessment
• Product and iteration backlog • User stories • Definition of Done • Cross competence fixed team	• Version control code repository • Definition of Done increments • Adherence to coding agreements	• Testing as part of Definition of Done • Enforced workflows • Product owner acceptance • Least viable product

Refine your risk tools and techniques

Agile Project Delivery includes many tools and techniques to help control typical risks, such as:

Probability analysis

- A list of a project's top risks, the probability of the risk occurring and the impact of that risk to project delivery

Risk burndown chart

- A graphical representation of how the total risk value changes over time

SWOT analysis (Strengths, Weaknesses, Opportunities, Threats)

- A determination of whether the risk is helpful or harmful to the project

Once risk has been identified, the team discusses what risk response strategy should be used:

- **Mitigate:** Actions to reduce the probability or impact of a risk in the future

- **Avoid:** Eliminate the risk entirely by choosing an alternate approach
- **Assume:** Accept the risk with no other action
- **Transfer:** Redistribute the risk to another area

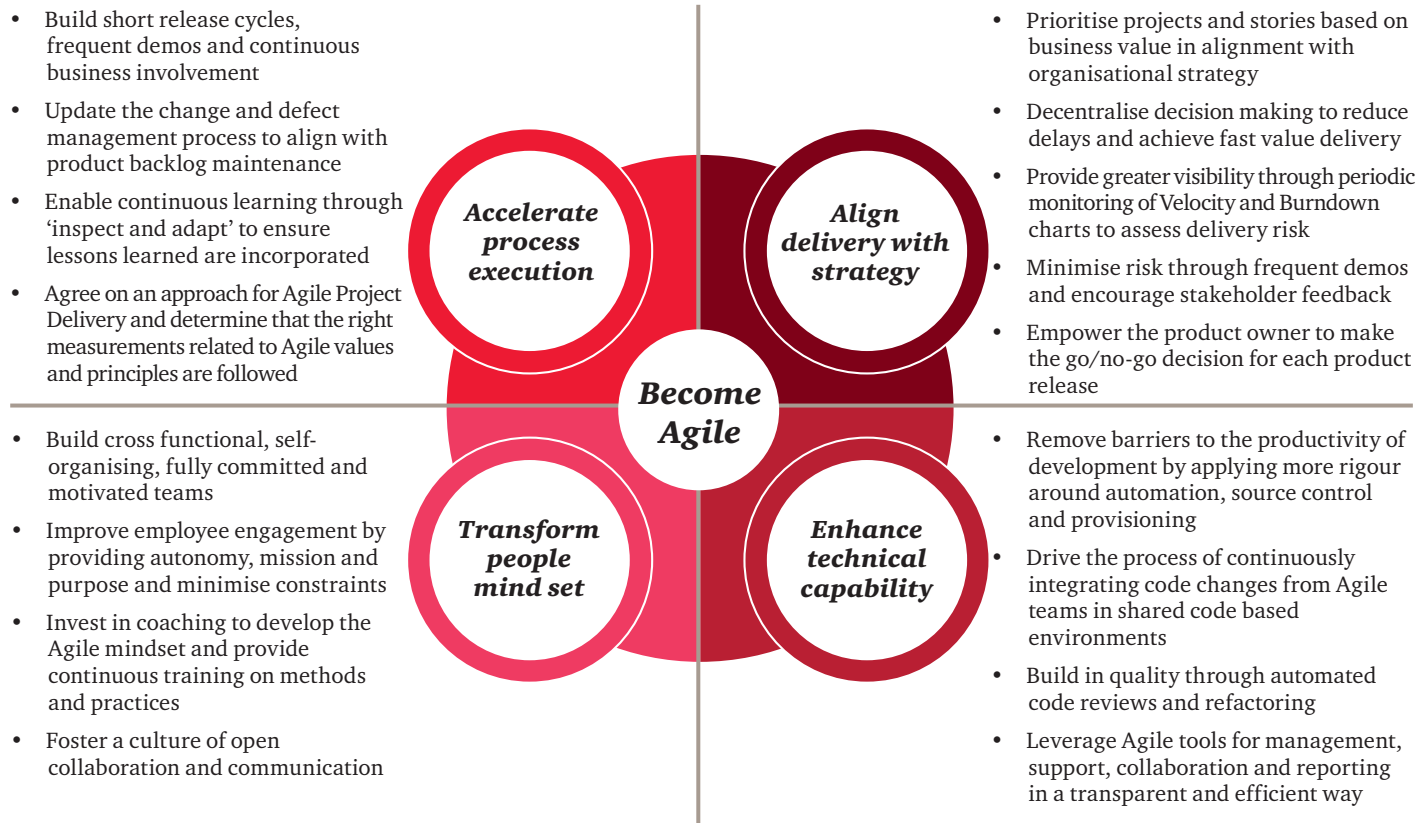
The product backlog is then reprioritised accordingly, becoming a risk adjusted backlog where the actions for the risks are documented and monitored.

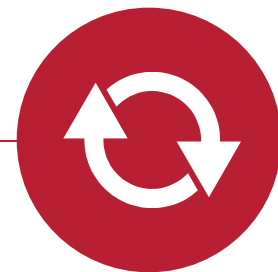


Take a top-down and bottom-up approach

Becoming Agile is achieved through aligning delivery with strategy, enhancing technical capability, transforming your peoples' mindset and accelerating the process execution.

Here are a few considerations to help you reach each objective:





Unleash your organisation's potential by becoming Agile

Points to consider on your path to Agile Project Delivery

Determine organisational readiness and culture

Is your organisation ready to embrace an Agile transformation? Does the leadership style support it? Are the delivery team and Internal Audit ready to embrace Agile?

Agile is about preparing your organisation for cross-team collaboration. Having an understanding of its readiness is an important first step.

Engage Internal Audit, Risk and Compliance and Technology teams

Agile has the capacity to fail, just like any other technology transformation. This is most likely to happen at the beginning due to Internal Audit and Risk and Compliance not being engaged at the outset.

Are you sure these teams understand what the shift from traditional to Agile means? Have your technology delivery teams reviewed and assessed the need to embed controls within Agile processes? Do both sets of teams understand the value of collaborating to drive controlled Agile Delivery? If not, your transformation may be challenged from the start.

Assess existing controls

Not all current defined controls are applicable and relevant to Agile development. Evaluating the relevance, applicability and maturity of current controls is important in understanding how they need to be redefined or implemented to drive value from the transformation.

Evaluate your Agile maturity

If you've already begun to move towards Agile, it is key to understand where the transformation may be exposing your organisation to risk. Objectively assessing and understanding Agile team maturity is a critical point to identify and resolve gaps, accelerate process improvements, and evaluate control gaps and deficiencies.

Identify Agile controls

Poorly designed or non-existent controls pose significant risk. A clear definition and application of controls to Agile development processes are needed to preserve business integrity, promote quality control and comply with regulatory and organisational statutes and requirements.

Evaluate tools and technology

Although Agile is not about technology, understanding how technology needs to be modified or implemented to support Agile and control effectiveness must be considered. Existing technology should be identified and assessed to help in understanding how they support Agile principles and controls.

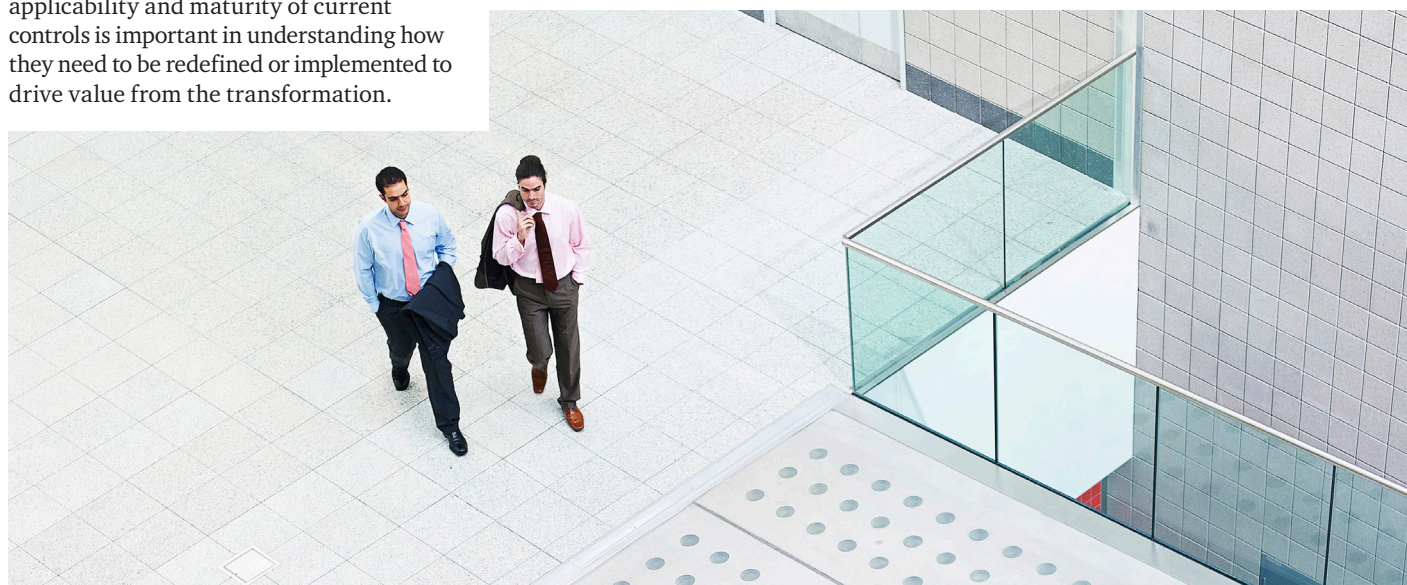
Additionally, new technologies should be acknowledged so that Internal Audit and Risk and Compliance teams can begin to understand how their review and evaluation of Agile (from a control and compliance lens) need to change.

Prepare for Development Operations (DevOps)

DevOps provide a framework to accelerate delivery of completed solution components to production. Understanding DevOps principles, tools and embedded controls is helpful as your organisation seeks to mature and automate more development, code migration, and testing activities to meet changing business needs.

Successfully adopting and optimising Agile delivery frameworks often includes a transition to DevOps. DevOps accelerates deployment by removing the traditional barrier between the development and operations activities and tools. This presents a continuous integration environment, where all code is continuously integrated and synchronised. In many cases, it also automates development builds, migrations and testing activities.

Successfully integrating Agile with DevOps practices and tools is essential to getting a product to market quickly and facilitating Internal Audit's review of Agile projects.



Develop skills and knowledge within the Agile Project Delivery team

When properly developed, the Agile Project Delivery team includes dedicated team members and stakeholders who fully understand Agile Project Delivery culture, governance, tools and techniques.

Agile teams will best deliver value when they are cross-functional, e.g. a software developer who can do testing and write technical documentation. Cross-functional teams are more resilient and increase efficiency by reducing hand-offs.

Agile Project Delivery demands a high-level of personal interaction and frequent informal communication, teams are most likely to succeed when members are co-located.

Clearly establishing roles is important. The identification of a single, dedicated product owner is key to breaking down the barriers between the development team and the organisation.

A new product owner must:

- Have the necessary time to spend with the Agile team to answer questions and refine user stories
- Have the authority to define requirements/stories, and formally accept the product as 'ready for deployment' on behalf of the organisation
- Ensure the product backlog is continuously updated and correctly prioritised based on business needs
- Actively participate in Agile ceremonies, e.g. planning meeting, demos and retrospectives
- Work with internal and external stakeholders to validate that the correct controls are in place, e.g. Legal, Compliance, Risk, Internal Audit

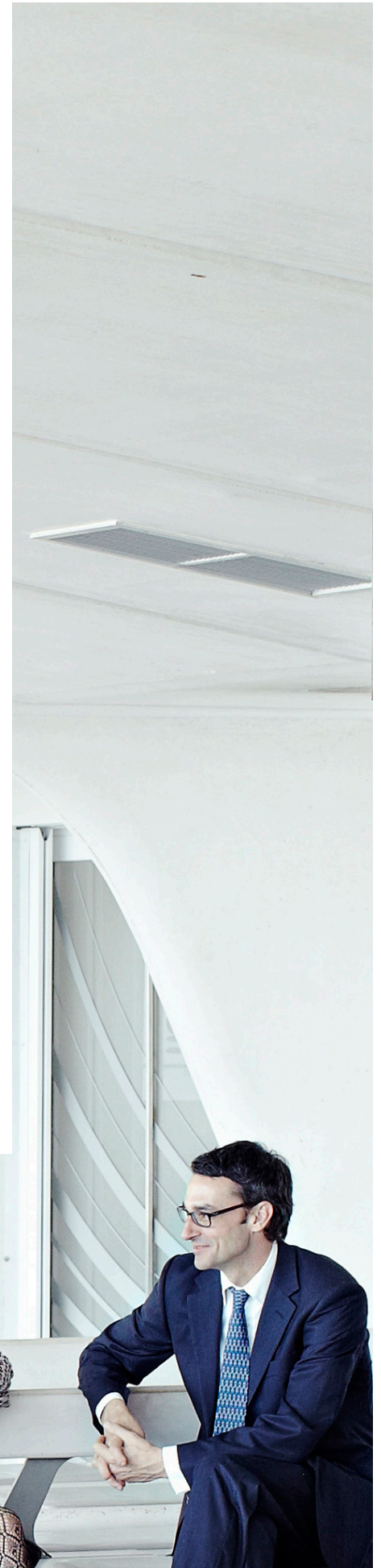
Develop Agile Project Delivery techniques and tools

Agile organisations should also incorporate tools and techniques that help open and align communication channels between stakeholders, including:

- A continuously prioritised product backlog
- A clearly defined and socialised (enterprise) 'Definition of Done'
- A set of acceptance criteria prior to the start of development
- Daily review of quality to enable expedited code deployments
- Efficient ceremonies to support and enhance Agile delivery
- Structured review, approval and prioritisation of user stories/requirements by the product owner
- Automated testing and continuous integration

This ensures that the features are developed in accordance with their priority, minimising business risk and increasing business value.

Agile Project Delivery also continuously prioritises, consumes and delivers the most valuable stories (requirements) during each iteration.





Do you have delivery confidence? What's next?

PwC's Agile Delivery Confidence Framework

We use a comprehensive framework to provide delivery confidence to Agile organisations, underpinned by our understanding of Agile and experience in global transformation projects. Fully implemented, our Agile Delivery Confidence Framework creates assurance over risk that operates at the speed of your Agile Project Delivery.

While the framework is aligned with Agile values, it assesses against the essential elements of project management, governance, cost and measurement of value delivery. We can perform different types of reviews to assess risks and identify mitigation actions across the project lifecycle.

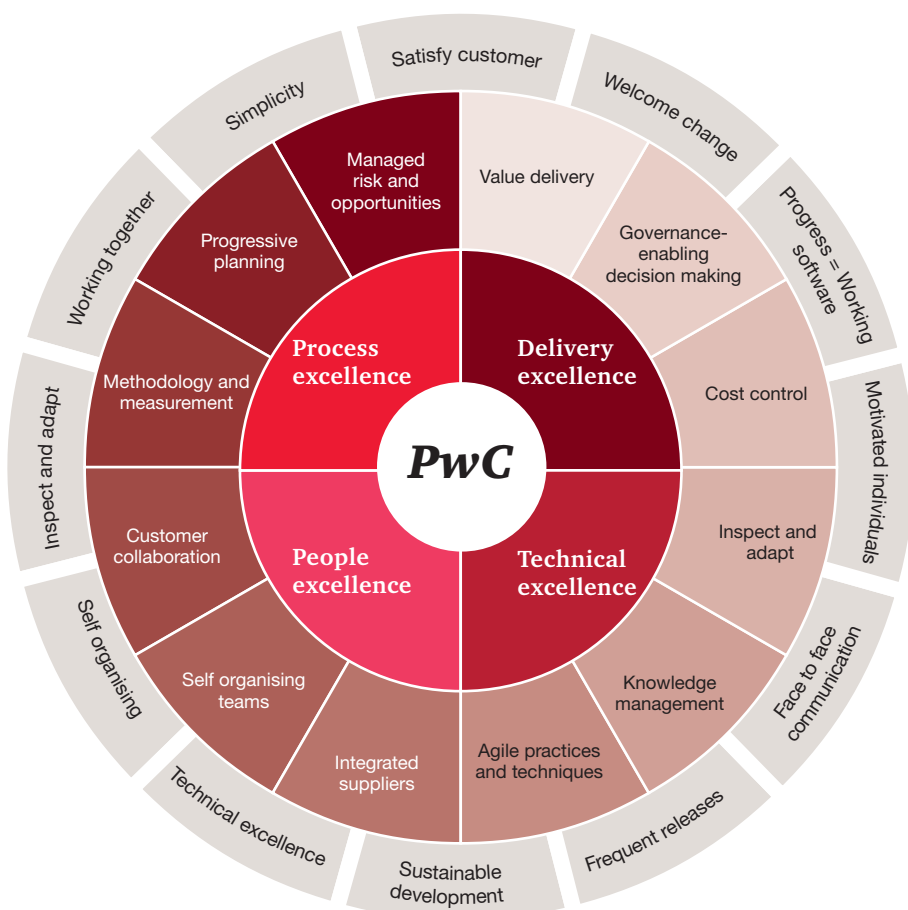
We use this framework to:

- Provide assurance to Management, Sponsors, IT, Risk, and Internal Audit on Agile governance, controls, culture and change management
- Provide safeguards to the delivery team and Internal Audit so that they can provide assurance, while being enablers of Agile
- Provide maturity assessments to understand Agile team delivery capabilities, gaps and maturity towards becoming a high performing team
- Help organisations build their Agile Centres of Excellence by creating the right governance and culture around the methodology

- Embed the core fundamentals of what it means to be Agile, through training and coaching, including steps to reduce project risks right from the start

To help an organisation navigate through a volatile risk environment, we can provide the right balance and understanding of risk, controls and expertise.

PwC's Agile Delivery Confidence Framework: assessing elements of project management, governance, cost and measurement



When done well, Agile Project Delivery has the potential to:

- ▶ Create and deliver business value
- ▶ Minimise delivery risk
- ▶ Confirm that expected benefits are realised
- ▶ Increase the level of acceptance by key stakeholders
- ▶ Better manage stakeholder expectations through demos and product reviews

How we can help

Achieving the full value from Agile Project Delivery requires continuous planning and a commitment to proactive and embedded assurance and controls as part of an Agile transformation.

How we can help you	Provide foundational and in-depth Agile training 	Develop controls frameworks for Agile projects 	Provide Agile consulting 
	Conduct Agile maturity assessments 	Help control functions to better enable Agile teams 	Perform programme/project risk assessments 
	Deliver ongoing coaching 	Assess current Software Development Life Cycle and Agile methodologies 	Assess control mechanisms 

Agile Development Operations (DevOps) Maturity

Understanding your Agile and DevOps maturity is a critical step to understanding Agile gaps that could be impacting business delivery.

Our Agile Project Delivery practitioners can help provide insight and perspective on challenges impacting Agile maturity.

Our assessments:

- Analyse team maturity using specially-designed Agile maturity assessment frameworks
- Develop or confirm existing maturity action plans for achieving the next stage of maturity
- Understand the use of the Agile/DevOps tool by delivery teams, including the availability of metrics to aid more continuous visibility into maturity level and progression

- Conduct interviews with a balanced set of select team members to further develop understanding of Agile/DevOps maturity
- Observe team ceremonies as key inputs to the execution of Agile principles and concepts

The assessment generates a detailed list of findings, as well as a tailored roadmap towards optimising and improving Agile/DevOps maturity.

The journey to Agile Project Delivery



Agile transformations are complex. Successfully designing, adopting and executing an Agile transformation requires significant planning, review and organisational readiness.

Navigating the journey to Agile success requires a level of due diligence, insight and an understanding of Agile delivery frameworks.

We have the experience and insight to help your organisation succeed on its journey. With the right Agile processes, tools, principles, mindset and willingness to innovate, your organisation will reap the rewards of stakeholder satisfaction and realise the benefits of a project modelled around continuous improvement and organisational growth and evolution.

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Contact your local Risk Assurance team to find out how we can help you achieve success with Agile Project Delivery

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