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A Guide to Assurance
of **Agile Delivery**

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Introduction

1.1 Executive summary

APM's *Body of Knowledge 6th edition* defines assurance as 'the process of providing confidence to stakeholders that projects, programmes and portfolios will achieve their scope, time, cost and quality objectives, and realise their benefits'.

Previous best practice and guidance for effective assurance approaches have focused on traditional waterfall-type project delivery. The increasing use of agile development methods have introduced rapid, value-driven, iterative change cycles along with the introduction of new working practices and cultures within organisations to support this new way of working. The role of assurance also needs to adapt as it assumes heightened importance in this fast-moving environment; not only evaluating individual agile projects but also looking at whether the wider organisational landscape supports the agile approach.

Any project can be managed in an agile way, regardless of whether it contains any agile development. Assurers should keep this in mind when approaching a new assurance review. Understanding the context is all important as there is no single prescribed definition of agile project management. Therefore it is essential that the assurer understands the methodology and principles specific to the organisation and the project being assured.

This guide has been produced to provide you, as an established assurance reviewer, with key background information and tools. This will support you in understanding the interplay of agile principles, processes, practices, responsibilities and behaviours to allow you to provide a considered opinion on the governance of a project and the likelihood of achieving the stated outcomes.

The guide reflects the 12 principles of the *Agile Manifesto* (see web link in References and further reading). Whilst the *Manifesto* was created for agile software development, its principles are adaptable to the agile management of any project or programme. As the most current common usage of agile is for software development, most examples used within this guide reflect this.

A Guide to Assurance of Agile Delivery

It is not the intention of this guide to go into specifics in relation to agile development methods, e.g. Scrum and extreme programming, or more holistic methods such as DSDM or SAFe which aim to provide agile project frameworks (further information is provided in the References and further reading section). Simply using a method to deliver a product or to organise a single project does not indicate an organisation is adopting an agile project management culture.

1.2 Overview

The objective of this guide is to provide an easy to follow reference guide to the key fundamentals of agile (including workflows, jargon and culture). This will provide a basic level of knowledge to enable the reader to plan and undertake the successful assurance of agile projects in addition to helping the reader conduct their review in an agile way. This is supported by appropriate hints, tips and checklists to help identify areas of good and bad practice in agile delivery that may be encountered during assurance reviews. To accelerate upskilling of the assurance team it would be of significant benefit to have an experienced agile practitioner within the team.

This guide has been developed by APM using the knowledge and experience of project management and assurance reviewers from across UK industry, the public sector and also draws on wider academic research. The guide recognises that organisations are likely to be at different maturity levels in their adoption of agile and therefore the key content communicates at a high level and is generic in content.

This guide is aimed primarily at assurance reviewers, but could provide some level of support towards project audits. Those responsible for projects, programmes and portfolios, including project sponsors where agile development and organisational structures are being (or have been) introduced, should also find the content useful.

The guide is consistent with and based on descriptions of agile assurance practices contained in the UK government's Cabinet Office Infrastructure and Projects Authority's guide to agile assurance and Scrum methodology. To support the reader's understanding of agile, this document references other sources of guidance and information to provide deeper insight into agile project management and agile development approaches.

1.3 Assumptions

We have assumed:

- the reader already has a sound working knowledge of key assurance activities and has previous experience of undertaking assurance reviews, but not necessarily of agile projects. We recommend that, where this is not the case, reference is made beforehand to key APM assurance literature (e.g. APM's *A Guide to Integrated Assurance*);
- the reader already has knowledge of typical organisational structures, so that any changes required to accommodate agile is understood against a traditional baseline;
- that the guide is applicable to all, hence our reference to the 'organisation' rather than 'the company';
- the reader has an understanding of the *Agile Manifesto*.

1.4 Scope and structure of the guide

This guide addresses assurance in relation to the areas that are considered the fundamental aspects (and key differences from the traditional waterfall approach) of agile project management and assurance:

1. **Approaching reviews in an agile way** – ensuring early and ongoing engagement to support effective assurance planning to add maximum value to the project under review.
2. **Environments** – differing methods of working and delivery, project roles, physical locations and, critically, individual and organisational behaviours and cultures are all likely to differ with agile organisations and their associated change projects.
3. **Governance** – although traditional governance structures may be in place, additional characteristics to support agile delivery should also exist, particularly organisational structures and active leadership to support agile delivery.
4. **Risk** – active risk management is still appropriate for agile. However, the adoption of agile can introduce different organisational and project-related risks that need to be recognised and managed.

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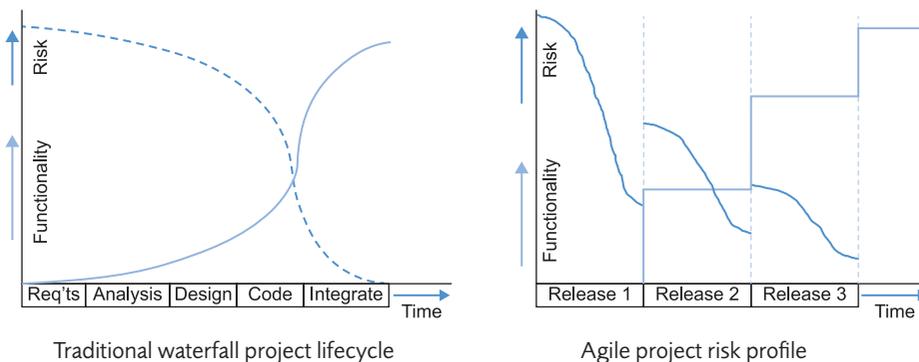
Overview of agile risk

5.1 Introduction

Assurance reviews always consider how the project identifies, assesses, logs, tracks, mitigates and escalates risks. However, there are some differences in the agile approach that the assurance reviewer must take into consideration.

5.2 Risk management mechanisms

Assurance reviewers may find that the mechanisms for risk management are leaner in agile than for traditional projects and that agile allows for greater delegation to the agile team. The theory is that delivering the agile project in smaller increments reduces the potential impact of any failure. It is critical that assurance reviewers always test how risks are identified, assessed, managed and reported, noting that although delivery teams may not use traditional, detailed risk registers, they will still have their own effective processes in place for risk management. The risk profile over time will therefore be quite different for an agile compared to traditional project, for example:



'Failing early' (as mentioned in Section 3) means that agile projects should be able to demonstrate a reduction in uncertainty by empowering agile teams to

tackle the largest/highest risks immediately based on lessons learned from earlier iterations, but there still needs to be clearly defined boundaries within which the agile team is empowered to mitigate risks, without escalation to the appropriate authorisation body.

Time should be allocated in daily stand-up meetings for team members to raise concerns about risks and issues. Having a regular slot at retrospectives to consider how these have been dealt with, and whether there are any lessons to be learned for future iterations is the easiest method for capturing this.

Ideally, risk mitigations should be included in product backlogs, for example as specific user stories, acceptance criteria or non-functional requirements. Interestingly, user stories may include 'abuser' or 'misuser' stories, where the risk of inadequate testing could be expressed: "As a hacker I want there to be inadequate testing of access vulnerabilities so that I can gain access to the new system." These can be added to the project backlog and assessed in the same way as other project user stories.

Particularly for larger projects or programmes, the responsibility lies with the programme management office (PMO) to ensure that strategic risks are being considered and addressed, or risks are escalated to the appropriate authorisation body. The PMO should ensure that risk management is being undertaken in accordance with the risk and compliance appetite of the organisation.

5.3 Types of risk to be considered

Specific risks that assurance reviewers should look out for on agile projects include:

1. cost overruns;
2. time overruns;
3. shortfall of functionality;
4. other agile risks:
 - lack of agility – the project fails to adapt to the changing needs of the business;
 - insufficient resource provision;
 - an un-collaborative approach;
 - an unsupportive landscape.

Although the first three are common to all projects, their nature is slightly different for agile.

5.3.1 Cost overruns

For traditional projects the total costs often increase as the project progresses, but with agile the costs are theoretically fixed and any new or changed functionality should only be accommodated if unbuilt functionality with a lower priority or benefit is removed from the project. Assurance reviewers should look for indications of cost overruns in early individual iterations, leading to fewer resources then being available for later iterations, testing that the authorisation body is fully aware of the real costs of the project.

Again, ideally in agile, budgets should be set and costs actively monitored based on either releases or iterations. There should also be clear accountability for cost management. Assurance reviewers may wish to enquire about the following as part of their reviews:

- delegation of budgets and costs;
- mechanisms for reviewing costs to date and estimated costs to completion;
- frequency, adequacy and accuracy of financial estimation and reporting;
- lessons learned about actual versus forecast costs to date and the impact on subsequent iterations.

5.3.2 Time overruns

Within a traditional project there is always a significant risk that the project will not deliver on time. In an agile project the number of iterations planned and how long each will last is already known. What is not known at this stage is how much the planned resources will actually deliver. Time therefore needs to be actively controlled given common risks in agile include:

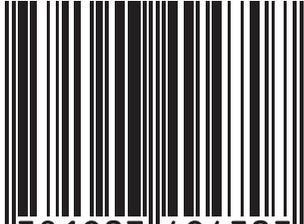
- the product is not available at the stated time for demonstration and subsequent deployment into the organisation;
- resources earmarked for the project are not available when required, in particular stakeholder or product owner resources required from the organisation;
- early estimations of time and resource requirements based on untested, high level design are overly optimistic and misleading.

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