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Chief Internal Auditor Conference 2017
Providing Effective Assurance in an Agile World

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Agenda
Providing Effective Assurance in an Agile World

Agenda points:

1. Understanding the Scale of Agile Programme Change

2. The Need for Agile Programme Change Assurance

3. The Role of Internal Audit in a Continuous Lifecycle Environment

4. Questions & Experience from the floor

Understanding the Scale of Agile Programme Change

Understanding the Scale of Agile Programme Change
What is Agile and why does it matter?

Agile development methodologies differ significantly from a traditional Waterfall development lifecycle, with more emphasis on:

- Individuals and Interactions

- Early prototypes, working solutions

- Iterative requirements with customer collaboration

- Flexibility, speed and responsiveness to change

Inputs	Methods and Tools	Outcomes
Business Need	Development Methodologies	User Engagement
Technical Requirements	Programme Managements Frameworks	Relevant Solutions
Functional Requirements		Managed Costs
Organisational Culture	Knowledge and Skills	Embedded Knowledge
		Ready to go

Understanding the Scale of Agile Programme Change
The transformation approach is a function of scale & experience

A modern Agile portfolio will consist of a range of projects, programmes and small changes to solve business issues. The success or failure of any one project can have a significant impact on the change organisation's reputation and confidence of its stakeholders.

Business Need		Development Methods and Skills	Transformation Approach
Resources and Capabilities			
Organizational Culture			
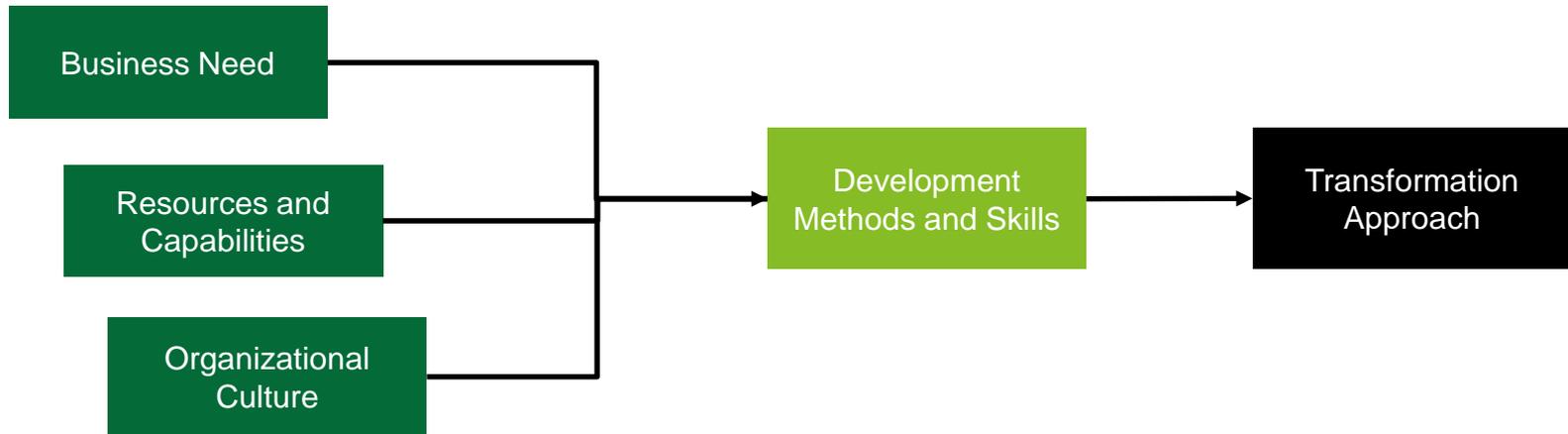
Adopting the "best" method will not be a simple decision:

- Sizing a programme is an art, not a precise science. It is highly dependent on past experience of the Change function, project managers and the business.

- In an Agile or "continuous lifecycle" environment Governance should mirror the philosophy of Agile methods – Only carry out tasks that add value to the business or governance.

Proactive assurance approaches cannot rely on historic records of change approval, and we must change the approach if we are to perform our role effectively, based on true understanding and appropriate project involvement from all three lines of defence.

The Need for Agile Programme Change Assurance

The need for Agile Change Assurance
Establishing the roles of the three lines of defence

Leveraging the relevant governance and assurance functions to review specific aspects of the project or programme at the right time can provide early visibility of risks and enable proactive response before issues materialise.

There is a dependence on the three lines of defence to work in alignment to the overall goal for any project or programme, but for Agile projects this means a change to our traditional Internal Audit approach.

First line of defence **(Embedded in the business)**	• Responsibility for the day to day management, control and reporting of risk exposures • Play a role in educating the business / steering committee non-IT users • Engaged on all key change programmes to manage the associated risk and embed programme and risk governance practices
Second line of defence **(Dedicated Risk Management)**	• On-going oversight, challenge and support in regard to risk around change • Independent function monitoring the scope and methodology that the first line has adopted and followed
Third line of defence **(Internal Audit, Independent Assurance)**	• The Audit Committee supported by the Internal Audit function provides independent assurance over the management of risk and the internal controls embedded and followed in key programme management activities. • Regardless of the programme delivery mechanism, assurance fundamentals should not be compromised

The need for Agile Change Assurance
Ensuring the Effectiveness of the First and Second Lines

Building a strong and trusted relationship with the change stakeholder group, including the customer and vendor, is essential to an engaged assurance methodology.

Establishing confidence in the people, processes and governance early on will reduce the assurance burden, allowing a more targeted assurance approach.

The first and second line Agile governance controls should consider, as a minimum:

- Agile delivery teams should undertake a comprehensive risk assessment and decide on the empirical performance metrics they will use and self monitor;

- Senior management, risk management, business users and the delivery team should be partners in quality, and this collaborative approach is an essential change in mind-set; and

- Reviews of Agile delivery should focus on the teams behaviours and not just processes and documentation.

Determine Business Issue and fit of Agile	Examine Organizational Culture and Values (Skills)	Assess Deployment Strategy and Readiness to Change	Project Delivery Approach Tailored to a Continuous Improvement Model

The need for Agile Change Assurance
Audit Approaches and Planning Ahead

Independent Assurance, typically provided by Internal Audit, should be proactively engaged throughout the change lifecycle, and seek out upcoming programme details.

The assurance approach to change should be planned into the audit cycle at the beginning of the audit calendar, and ahead of any major Agile transformation initiatives.

| 1. Annual Audit Planning: Portfolio Risk Assessment and Key Project Identification | 2. Planning, scoping and executing the review: A tailored approach | 3. Reporting: Appropriate escalation and reporting mechanisms | 4. Ongoing Monitoring |

An effective initial programme or portfolio assessment should:

- Establish a baseline view of programme governance arrangements for the initiative(s);
- Assessment of Agile methods as the appropriate delivery mechanism for a given change initiative;
- Mobilise the assurance team and get them familiar with the programme change approach; and
- Review change delivery issues and risks and provide a more detailed assurance plan.

The need for Agile Change Assurance
Keeping Close to Evolving Scope

By not placing reliance solely on historic programme team artefacts after the event the auditor will enrich the reporting and insights.

The assurance teams should agree ways of working and engage with stakeholders, and if needed, the assurance plan should consider a series of deep dives into emerging risk areas and business priorities:

- Investigate the underlying cause of risk areas and identify issues early;

- Obtain insight from technical / implementation experts and compare against 'common practice' and implementation experience; and

- Provide the change initiative with an external perspective through timely, practical and actionable recommendations.

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The need for Agile Change Assurance
Reflect and Improve the approach

As the audit plan evolves, the following considerations should be reassessed regularly:

- Continual monitoring of programme governance arrangements for changes and 'fatigue';

- Attendance at strategically important programme board and group meetings to observe upcoming decisions; and

- Ongoing review of programme plans, progress, risks and issues, and achievement of key deliverables and milestones.

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In a Continuous Improvement Environment a proactive but independent view of programme and non-routine change is more important than ever.

The Role of Internal Audit in a Continuous Lifecycle Environment

The role of Internal Audit in a Continuous Lifecycle Environment
What on earth is "DevOps?"

Continuous Lifecycle Management, commonly known as "DevOps" is an emerging trend in the technology sphere to apply Agile programme management and development disciplines to day to day operational support, maintenance and small change activity.

The fundamentals of Continuous Lifecycle Management are strongly aligned to the Agile and Lean principles, therefore the assurance approach for Agile can be carried over, with some minor modifications.

The key focus of the assurance provider should be on:

Inputs	Methods and Tools	Outcomes
Operational Priority	*Service and Maintenance Methodologies*	*User Awareness*
Technical Requirements		Relevant Solutions
Functional Requirements	*Consistent Management Frameworks*	Managed Costs
		Embedded Knowledge
Organisational Culture	Knowledge and Skills	*Keep it Going!*

The role of Internal Audit in a Continuous Lifecycle Environment
Why DevOps differs from traditional programme governance

A continuous lifecycle of change result in less opportunity to stop and reflect on emerging risks. Areas that commonly lead to programme distress can be seen in early indicators by an independent eye, but may be lost to the immediate programme team in the rush to deliver:

Area	Lessons for the Project	Things to Consider in the Governance and Assurance approach
Inform Stakeholders	Show me…	• Change should emphasize results. The team will get buy-in from showing success.
	Communication is key	• Look for buy-in from stakeholders to proceed on a risk based or capacity basis, factoring dependencies.
	Time is money	• Stakeholders should make quality and timely decisions on scope and requirements.
Share the Plan	Facilitate	• Empowered individuals and teams can creatively solve development challenges.
	Estimate and Re-evaluate	• Assess accuracy of estimates. When an estimate is wrong, investigate the reason and evaluate priorities.
	Face time is key	• Agile teams derive benefits from the Agile methods if co-located or can collaborate in realtime. Assurance will mirror this.

The role of Internal Audit in a Continuous Lifecycle Environment
Learning lessons in DevOps can be hard!

Loss of the overall vision in the rush to build "something" is a common sign of control breakdown. Reflecting on mistakes and ensuring feedback is taken aboard is a key role for the second and third lines.

Area	Lessons for the Project	Things to Consider in the Governance and Assurance approach
Agree a Basic Design	Design for the customer, but designs may "emerge"	• Are the activities satisfying the customer through early and continuous delivery. • The overall system design will take shape over time, adapting to fulfill new requirements.
	Good enough is enough	• Agile project designs do not need to document every detail but key user requirements must be captured and be traceable through to test plan and signoff.
	Feedback is your friend	• Every team member should expect to receive feedback about their work, actively seek it, and act upon performance issues accordingly.
Did they Build what was asked for?	Quickly test and deploy functionality	• Automation of testing and deployment of new functionality can help to provide the speed needed for successful development, but makes evidencing harder.
	Continuous integration	• Continuous integration is not just a set of procedures and processes but a mindset. Building quality solutions is an end to end process.

Auditors must adapt the assurance approach to reflect that of the change landscape, focusing on the foundations of effective programme delivery, traceability of requirements to delivered solution and controlled deployment.

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