

Guest Lecture: Innovation & Project Management

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Innovation

“Creativity is thinking up new things. Innovation is doing new things.”— *Theodore Levitt (Harvard Business School)*

What is Innovation?

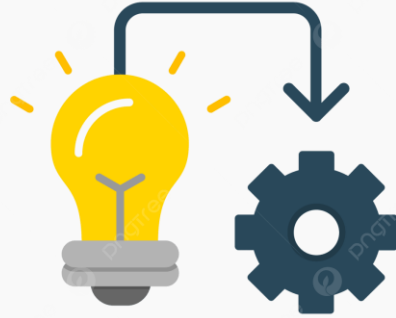
- “Innovation is the specific instrument of entrepreneurship... the act that endows resources with a **new** capacity to create **wealth**.” — Peter Drucker
- “The creation and implementation of **new** processes, products, services, and methods of delivery which result in significant improvements in **outcomes**, **efficiency**, **effectiveness**, or **quality**.” — UK Government
- “Innovation in the public sector is the process of generating and implementing **new** ideas to create **value** for society.” — *Organisation for Economic Co-operation and Development (OECD)*

Doing something **new** that adds **value** – *Williams and Jones*



Novelty

New or significantly improved.



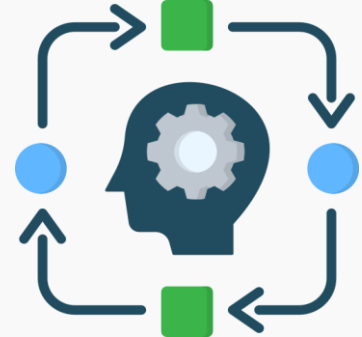
Implementation

Not just ideas
- action and execution.



Value Creation

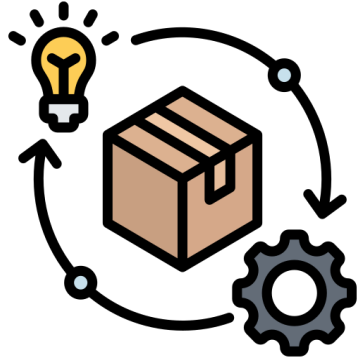
For citizens,
institutions,
or society.



Adaptability

Responsive to
changing needs
or contexts.

Types of Innovation



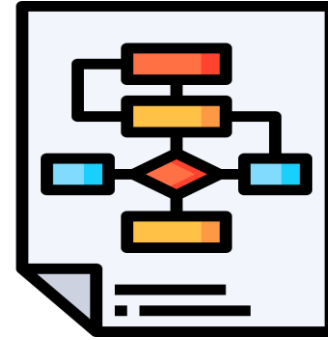
Sustaining Innovation

Improving existing products and services, to bring better value to existing markets.



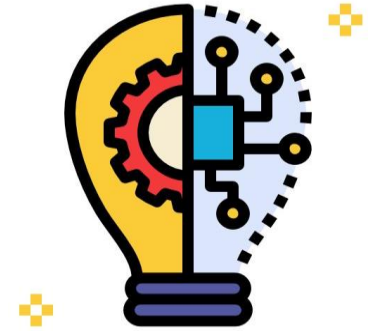
Incremental Improvements

Small improvements to existing products and services to boost efficiency, productivity and competitiveness.



Radical Innovation

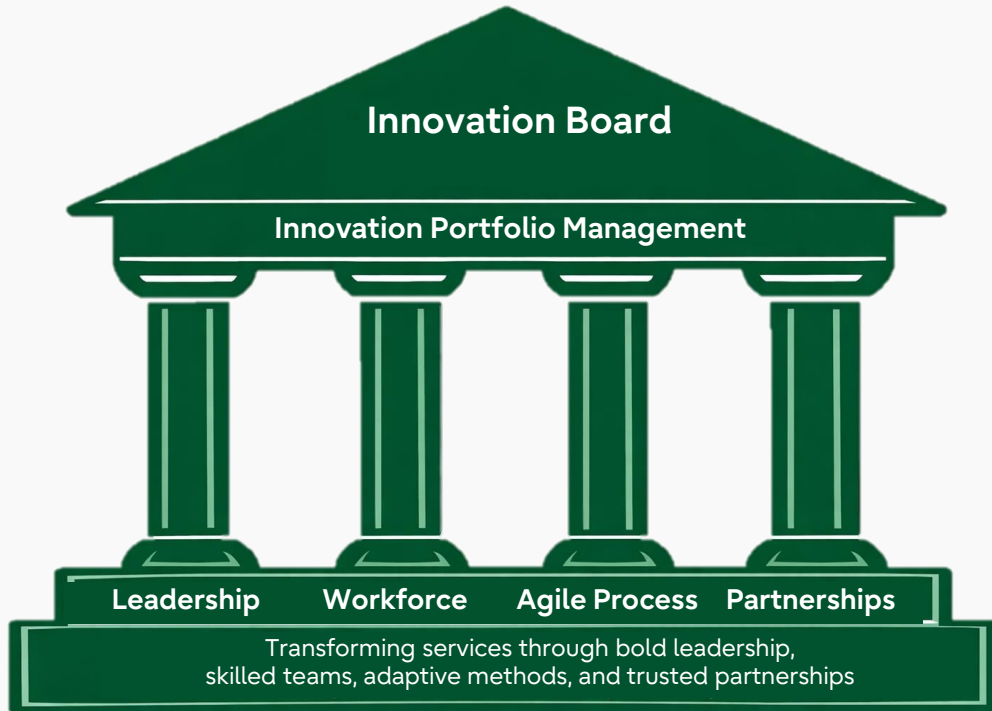
Breakthrough innovations creating new products, models or processes.



Disruptive Innovation

Reinvents technology to create unexpected new markets.

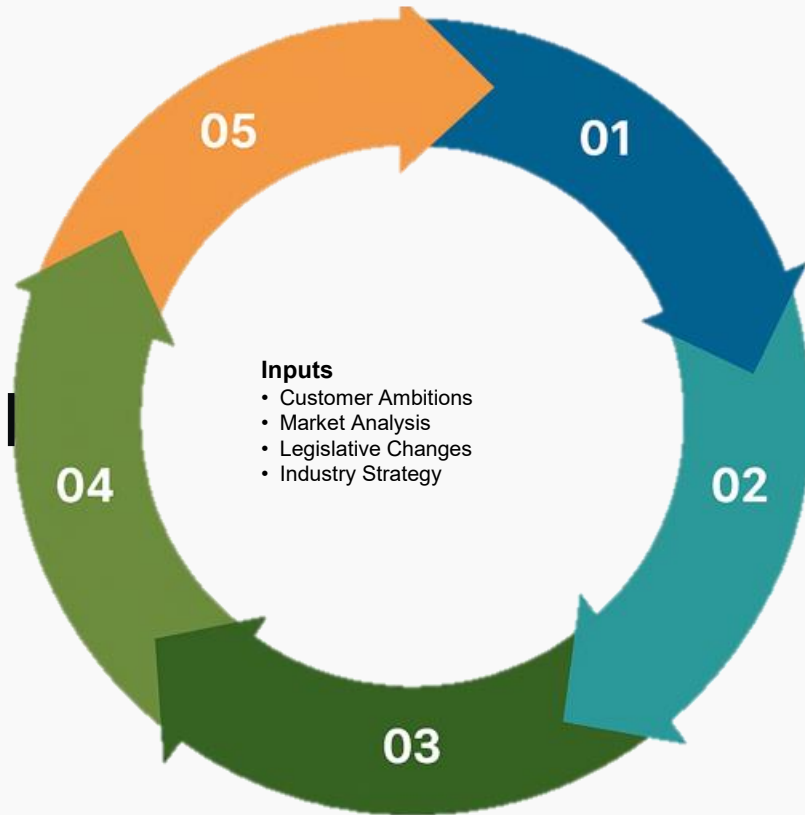
Driving innovation through a culture of insight, teamwork, and bold execution ...



A sustainable innovation culture is built on four pillars:

- **Leadership:** Champions who model and reward innovation.
- **Workforce:** Skilled, diverse, and empowered employees.
- **Process:** Agile, user-centered, and iterative methods.
- **Partnerships:** Collaboration with academia, industry, and civil society (e.g. charities, NGO's think tanks etc).

Innovation Lifecycle



01 Identify Future Opportunities

- Scan emerging technologies and policy trends
- Engage with stakeholders across industry
- Use analytics for trend identification and decision-making

02 Co-Creation (Design Thinking)

- Understand customer needs through effective collaboration
- Co-create with customers during ideation
- Implement continuous feedback loops

03 Develop a Solution

- Translate co-created concepts into scalable digital prototypes
- Leverage existing platforms and open standards
- Ensure compliance with sector regulations

04 Prove the Value

- Run controlled proof-of-concept trials to demonstrate effectiveness
- Collect qualitative and quantitative feedback
- Refine the solution iteratively

05 Measure Success

- Benchmark ROI against baseline metrics and strategic goals
- Pilot and scale successful initiatives
- Measure benefits realisation & quantify outcomes

Project Management

“Project management is the art of creating order out of chaos.”— *Peter Drucker (management theorist)*

What is Waterfall?

- Waterfall is a **linear, sequential** project management methodology where work flows in one direction—like a waterfall—from one phase to the next.
- **How it works** - A project moves through a fixed set of stages:
 - **Requirements** – everything is documented upfront
 - **Design** – how the solution will be built
 - **Build** – development or construction
 - **Test** – verification and validation
 - **Deploy** – delivery to users
 - **Maintain** – ongoing support
- Each phase must be completed before the next begins, with little scope for revisiting earlier steps.

When Waterfall is useful

- Stable, well-defined requirements
- Projects where change is costly
- Environments needing strong documentation, audit trail, and governance

Strengths

- Predictable cost, scope, and timelines
- Clear structure and role separation
- Strong documentation and accountability

Limitations

- Difficult to adapt once work has started
- Risk of discovering issues late
- Value delivered only at the end

What is a Agile?

- Formally launched in **2001**, Agile refers to the iterative approach to project management and software development. It is a **belief system**, with a focus on delivering work in small, but consumable, increments.
- The values associated with this way of working are detailed in the **Agile Manifesto**. They include:
 - **Individuals and Interactions** over Processes and Tools (Scrum, standups reviews retrospectives)
 - **Working software** over comprehensive documentation
 - **Customer/Stakeholder Collaboration** over contract negotiations
 - **Responding to Change** rather than following a set plan (Self sufficient and adapts to changing priorities)

When Agile is useful

- Projects with **evolving** or **uncertain** requirements
- Work that benefits from **rapid iteration** and **frequent user feedback**
- Environments needing **flexibility** and close, **ongoing collaboration**

Strengths

- Delivers value **early** and **continuously**
- Adapts quickly to **change** and **new insights**
- Encourages **strong teamwork** and **stakeholder engagement**

Limitations

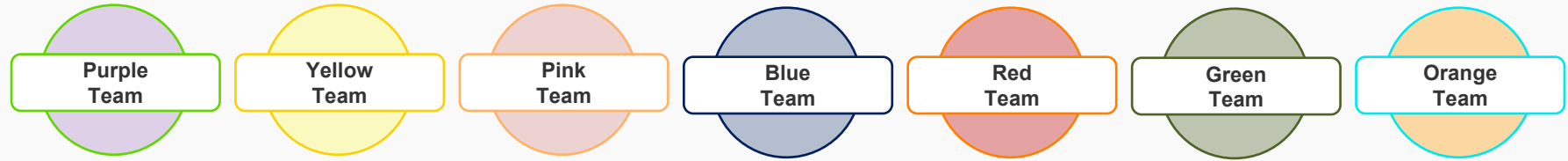
- Less suited to **fixed-scope, fixed-budget** projects
- Requires sustained stakeholder **availability** and **quick decisions**
- Can lose focus without disciplined **backlog management**

Agile Ways of Working

A Deeper Dive ...

The SCRUM Framework

Using the Scrum framework to structure Agile ways of working.



- Scrum is all about **continuously delivering work** (and realising benefits) to our stakeholders; it's all about **getting work done**.
- The Team is **self organised**; as who knows their own skills better than the team itself.
- Emphasis on a **Team over an Individual**. The **whole** deliver, not a single person.
- The Scope is **FLEXIBLE**, meaning as the scrum progresses and the team learns of new ideas and challenges, changes can be made.
- Scrum details a set of **meeting, guidelines and roles**.

The Canvas

When starting a new **Agile Project**, we first begin with the creation of a **Canvas**. The template below allows us to clearly present our ideas and aims upon a page. As the work progresses we often refer back to this document to make sure that we are meeting our **definition of done**.

DELIVERY		TBC		BUSINESS CASE REQUIRED? NO	
PLAN WHAT ARE OUR KEY DELIVERABLES-MILESTONES? • TBC		VALUE WHY IS IT IMPORTANT TO US? • TBC		DEFINITION OF DONE HOW DO WE KNOW WHEN WE HAVE SUCCEEDED? TBC	
ENABLERS WHAT ARE OUR DEPENDENCIES FOR SUCCESS? • TBC		GOAL WHAT IS OUR BUSINESS OBJECTIVE? TBC			
		STAKEHOLDERS WHO NEEDS TO BE INVOLVED? ACCOUNTABLE TBC RESPONSIBLE TBC SUPPORTING TBC		BLOCKERS WHAT ARE OUR RISKS & ISSUES IN EPIC DELIVERY? • TBC	
DRAFT <u>DD-MMM-YY</u> → PROPOSED <u>DD-MMM-YY</u> → APPROVED <u>DD-MMM-YY</u> → START <u>DD-MMM-YY</u>					

- The Canvas is reviewed and agreed to by the **Sponsor**. It is then scored before work begins.
- The Canvas highlights the **Value, Goals, Blockers** and **Definition of Done** for the initiative.
- Once authorised by the Business Sponsor, work begins on creating **User Stories**.

We use User Stories to build our **Sprint Backlog**. These are short requirements or requests written from the perspective of the end user. We create these through **Knowledge workshops** in collaboration with the Stakeholders. Once complete the **Scrum Teams** can begin their development work.

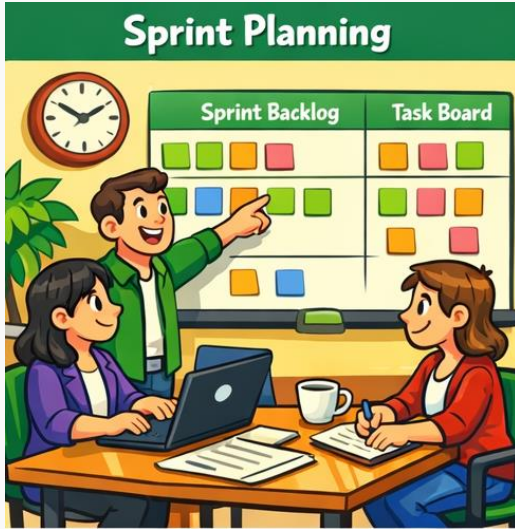
- **Focus on the user** – its all about solving the problem rather than solely completing a task.
- **Collaboration** – With the end goal defined, Sprint teams can work together to find a resolution.
- **Creative Thinking** – Stories encourage the team to think outside the box.

Stories are written in the following format....



As a... **I want to...** **So that...**
'As a Operations Specialist I want to leverage an AI-driven automation engine so that I can reduce manual effort, improve speed of delivery and accuracy of my workflows

End User or Customer



- Sprint Goal
- Estimate Story Points
- Confirm availability
- Create the sprint backlog



- KanBan or Sprint Board
- 15 Min Max Meeting
- Three Key Questions
- Discuss Blockers



- Review what was done
- Identify successes
- Stop, Start, Continue
- Improvements

The most senior stakeholder with the power to overrule any item or decision

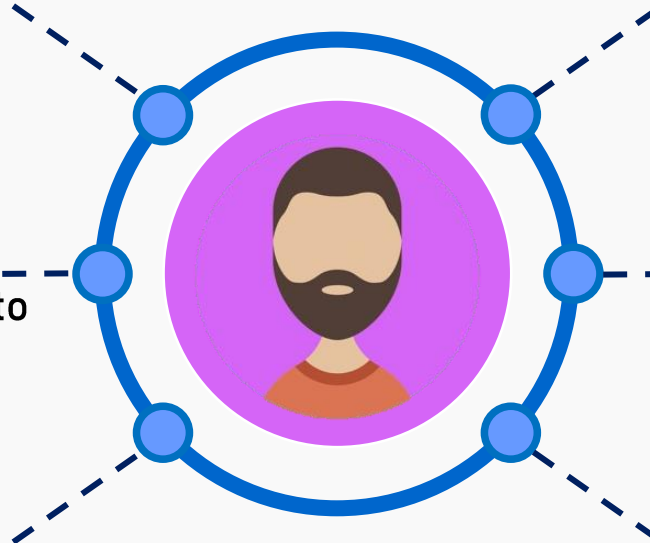
Authorises the Canvas and signs it off once an EPIC is complete (based on the 'definition of Done')

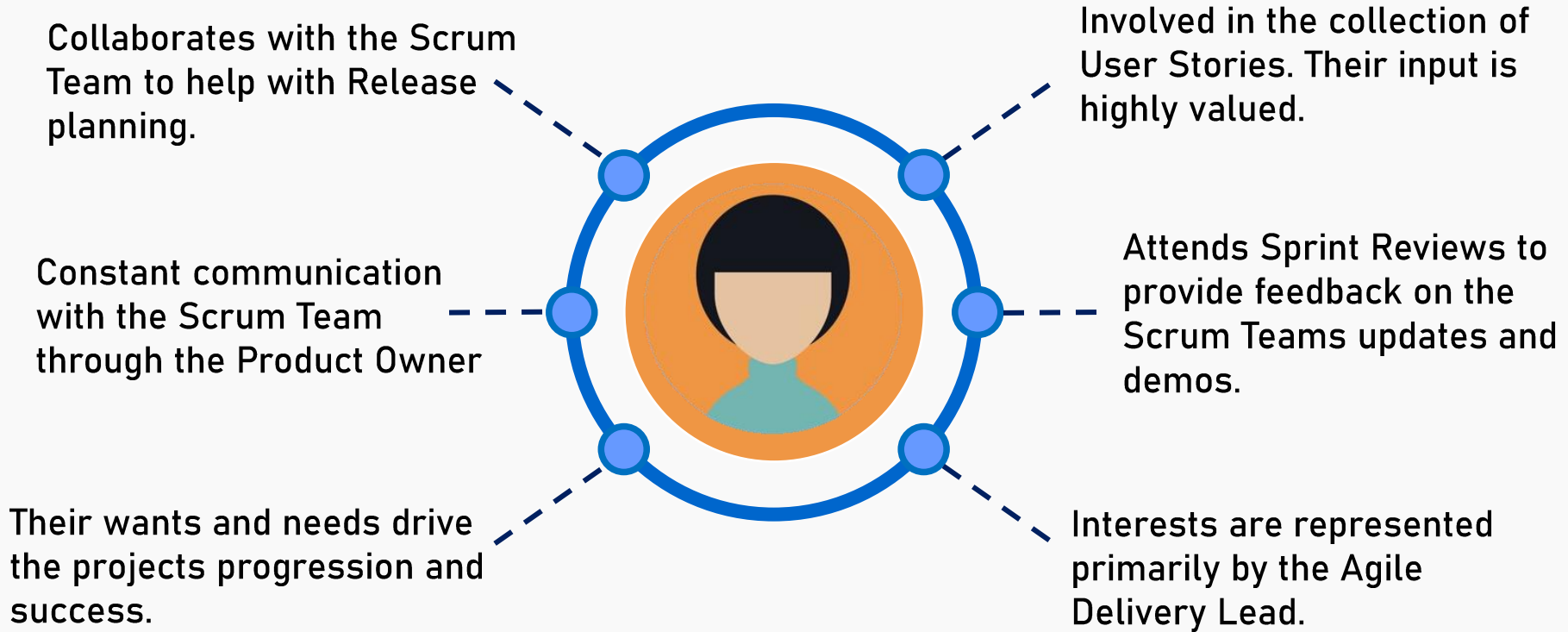
Must dedicate time to attend every single Sprint Review session to provide feedback

Usually a Delivery Executive or member of the Sales Team

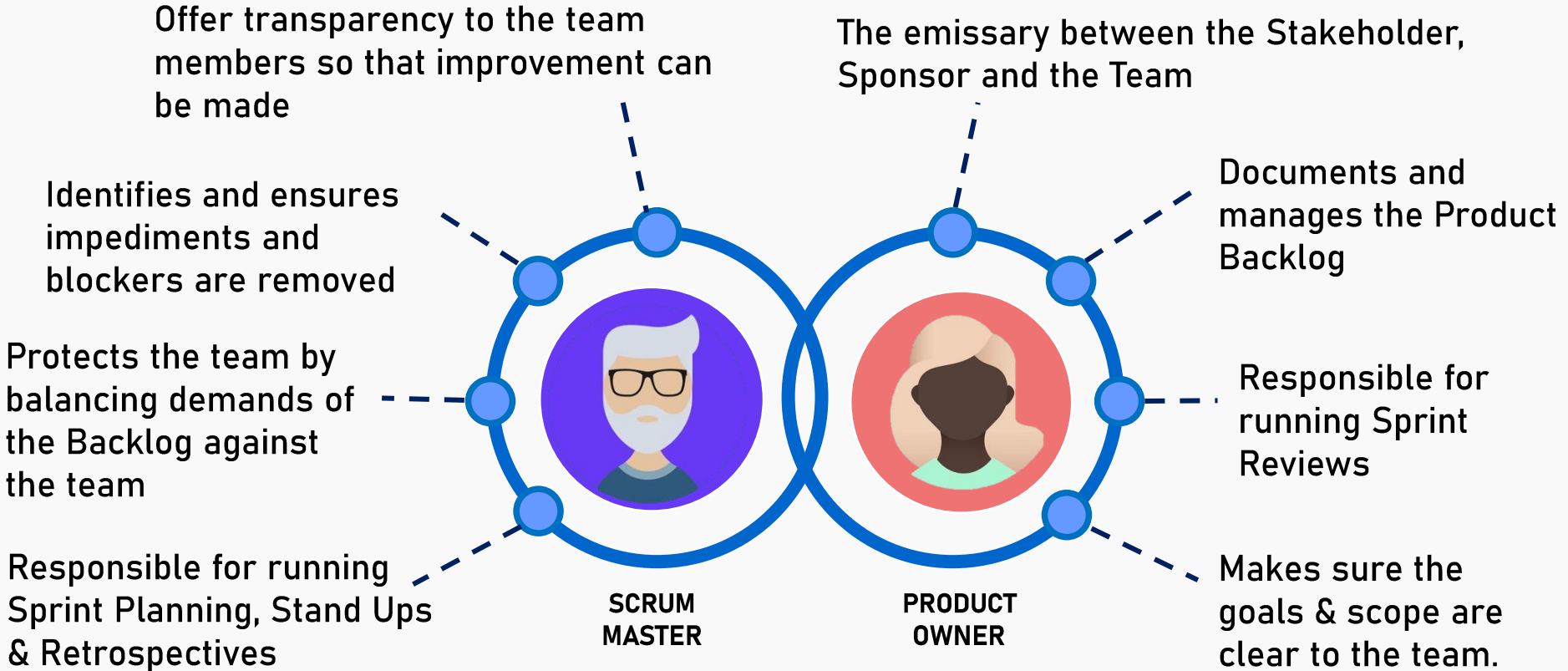
Similar to the Product Owner, but without the 'paperwork'

The person the Scrum Team are doing the work for. They make all final decisions





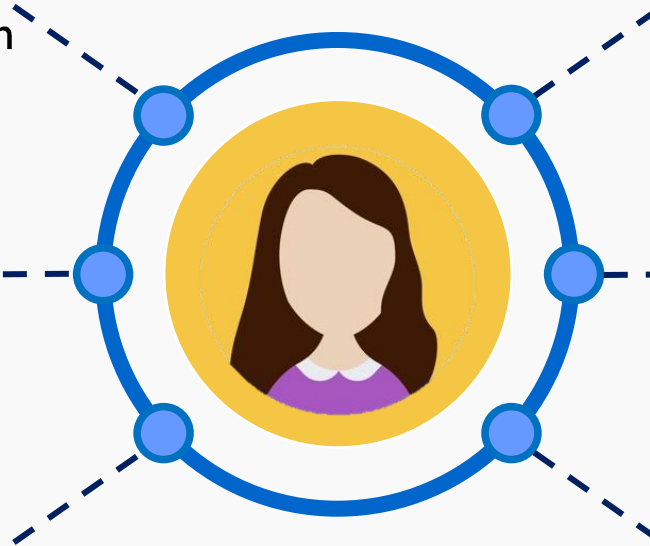
Scrum Master and Product Owner



Comprised of a variety of roles. Designers, Writers, Programmers etc. They can be acquired from multiple areas across the account.

Ideally a T Shaped Skill set, with their skills adaptable to a variety of work.

They contribute to Daily Stand-Ups and Sprint Sessions to ensure issues are escalated.



They are the workers. The most important part of the Agile team.

Self-managing where they schedule and understand the work that needs completing.

Offer important insights into how long each activity takes.

Case Studies

Waterfall and Agile



Waterfall Example

Large Re-Platforming Project

Large Re-platforming Project

My Role: Applications Development Manager



The Case For Change

- Large legacy system
- Out of date technology stack
- Not performant compared to new tech
- Needed to be physically re-located



The Approach

- Capturing requirements
- Identifying what needed to change
- Scaling the new system
- Making sure everything still worked!



The Challenge

- Size, scale and complexity
- Moving large amounts of data
- Impact of failure
- Minimal downtime

Agile Delivery Example

AIOPS & Machine
Learning

Exploiting Machine Learning & AI to...

1. **Harness** and embrace the power of Artificial Intelligence and Machine Learning to improve a targeted range of **IT Operational processes** and tasks e.g. availability and performance monitoring, event correlation and analysis, IT Service Management and automation
2. **Exploiting technological advances** and applying them to improve operational services
3. **Develop** new ways of working. Following COVID-19 working styles changed forever and **remote working & collaboration** became a key business requirement

- Automated Identification of recurring issues
- Tribal and SME knowledge automatically captured and proactively presented
- Incident data is readily available

Improving Root Cause Analysis



- Reduce False Positives
- Automated Ticket Creation and population
- Reduce Wasted effort closing tickets

Reducing the Noise



- Incident Knowledge capture and predictions used to build intelligent knowledge base
- Virtual incident keeping all parties in sync at all times

Remote Work Collaboration



- Identify EM tooling for replacement or redundancy
- Testing functionality of application

Rationalising EM tools



Use Cases

Stretch

Our PoC Journey



Thank You