Introduction to Agile and Scrum





Topics

- Introduction to Agility
 - Agile Values and Principles
 - Agile Frameworks
 - Law of Accelerating Returns
- Introduction to Scrum
 - Core Values
 - Roles
 - Events
 - Artifacts







Introduction to Agility

1941

Alan Turing's team in England create a tape-driven computer to decode Nazi wartime transmissions.

1970

"Managing the
Development of
Large Software
Systems," introduces
the WATERFALL
approach to software
development.

1995

Waterfall begins to fail; Scrum created (1992) and introduced publicly (1995)

2010

There are more "agile" projects than there are waterfall projects

1940 1950 1960 1970 1980 1990 1995 2000 2005 2010 2015 2020

1950

The US Department of Defense begins heavily using computers.

1981

IBM introduces the IBM 5150 PC (1981), Apple introduces the Apple I, II, and III (1976-1983)

2001

DSDM and Prince (1995), FDD and XP (1997); The Agile Manifesto is written (2001); Agile Alliance founded (2001); Scrum Alliance founded (2002)

2015

Agile Alliance holds its largest conference – 5 days, 2300 attendees.





Agile Frameworks and Methodologies

- Scrum (1992)
- Dynamic Systems Development Method (1995)
- Productivity in a Controlled Environment (1995)
- Feature-Driven Development (1997)
- Extreme Programming (1997)
- Lean Software Development (1999)
- Kanban (2002)





The Agile Manifesto of Software Development

We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:

- Individuals and interactions over processes and tools
- Working software over comprehensive documentation
- Customer collaboration over contract negotiation
- Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more.











As humankind discovers new technologies, those technologies create more technologies in a reinforcing feedback loop





There have been 26 recorded discovery events in the 12,000 years of recorded human history.

Eight (30%) of them have occurred in the last 110 years!





Class Activity (10 minutes)

• In small groups, discuss

Why are industries like finance and healthcare so quick to implement an agile approach to working? What problems are they so desperately trying to fix by abandoning waterfall?





Introduction to Scrum

Agile values fulfilled by Scrum

Individuals and Interactions

Scrum Teams - cross-functional, self-managing

Working Software

Increment - working, potentially shippable every sprint

Customer Collaboration

Stakeholder Involvement – through product owner and directly with developers

Responding to Change

Product Backlog – in continuous state of change as more is learned.





Scrum Has Values Too!

Commitment

Courage

Focus

Openness

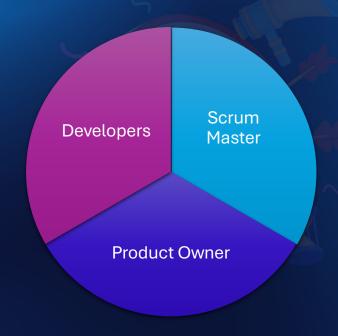
Respect





The Roles

- Not jobs, they are accountabilities.
- 1 person can play multiple roles
- Multiple people can play 1 role
- People can change roles as appropriate
- Understand a role before taking it on







Scrum Master

- Accountable for
 - Effectiveness of the Scrum Team
 - Supporting the Organization
- Challenges
 - Coaching
 - Facilitation
 - Continuous Improvement
 - Looking to the Future







Product Owner

- Accountable for effective Product Backlog Management
 - Product Goal
 - Product Backlog Items
- Challenges
 - Stakeholder management
 - Communication and alignment
 - Maximize value

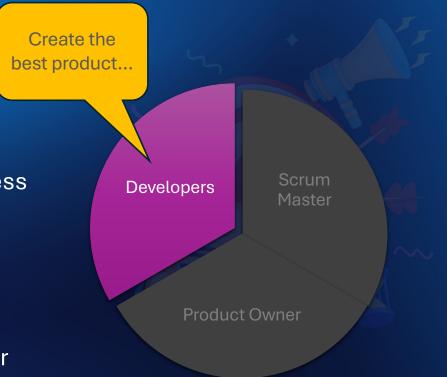






Developers

- Accountable for
 - The sprint plan
 - Instilling quality through DONEness
 - Adapting the plan daily
 - Accountability
- Challenges
 - Skills (having enough)
 - Locked in old patterns of behavior

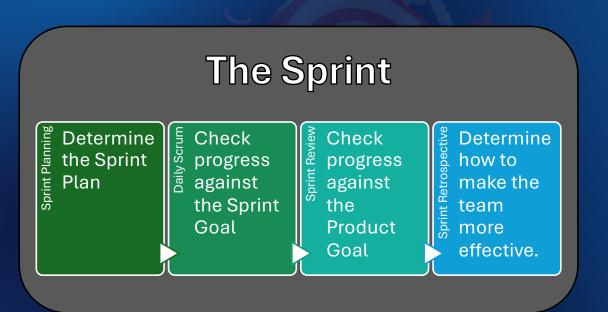






Events

- Every event has
 - Purpose
 - Attendees
 - Timebox







Sprint

- Purpose ensure inspection and adaptation
- Attendees
 - Scrum Team
- Timebox 1 month







Sprint Planning

- Purpose to determine the sprint plan
 - Sprint Goal
 - Backlog Items
 - Solutions/Tasks
- Attendees
 - Scrum Team
 - Stakeholders as needed
- Timebox 8 hours







Daily Scrum

- Purpose check progress against the sprint goal
- Attendees
 - Developers
- Timebox 15 minutes







Sprint Review

- Purpose check progress against the product goal
 - Where are we (demo)?
 - Where do we go next?
- Attendees
 - Scrum Team
 - Stakeholders as needed
- Timebox 4 hours

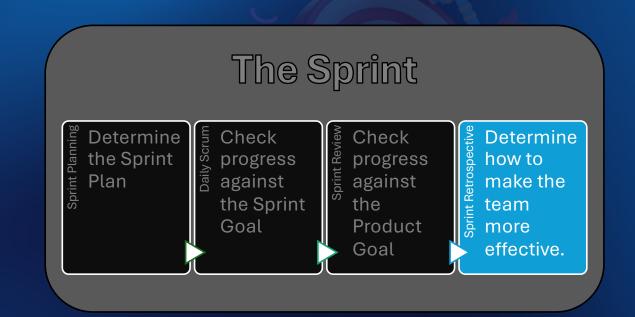






Sprint Retrospective

- Purpose how to improve team effectiveness
- Attendees
 - Scrum Team
- Timebox 3 hours

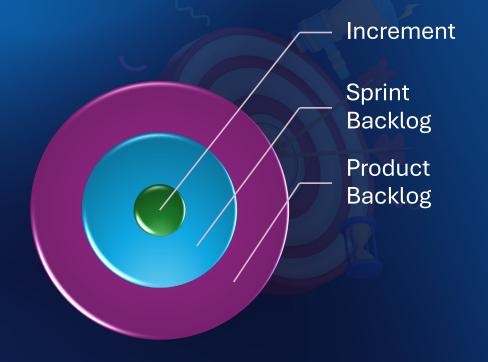






Artifacts

- Every artifact
 - Has an owner (a Scrum role)
 - Contained by a commitment
 - Maximizes transparency

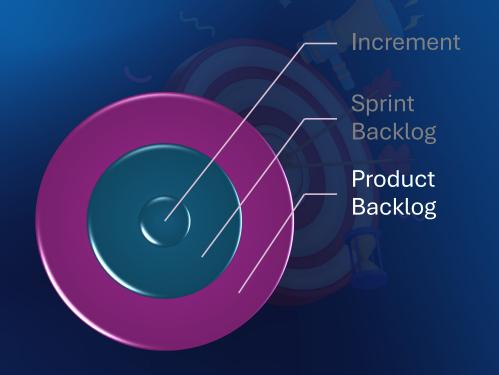






Product Backlog

- Owned by Product Owner
- Committed by Product Goal
- Makes transparent
 - Stakeholder needs
 - Technical needs
 - Relative order of completion
 - Value
 - Size

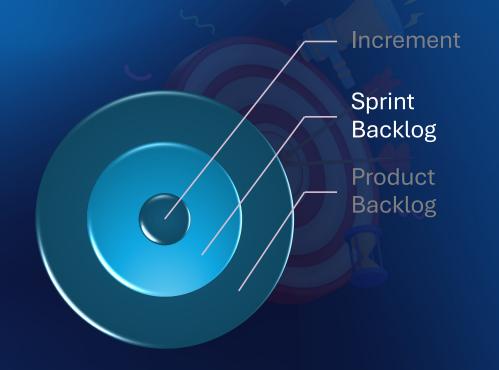






Sprint Backlog

- Owned by Developers
- Committed by Sprint Goal
- Makes transparent
 - The Sprint Plan
 - Progress to the Sprint Goal
 - Accountability

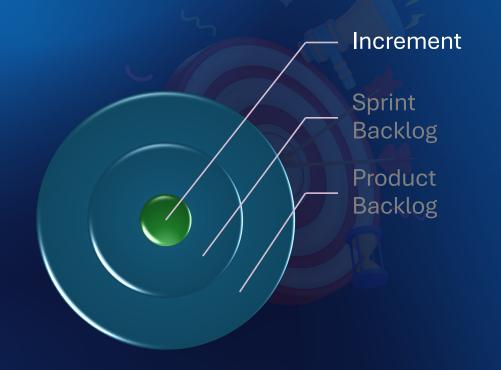






The Increment

- Owned by Scrum Team
- Committed by DONEness Definition
- Makes transparent
 - Functionality
 - Quality
 - Progress to the Product Goal







Class Activity (15 minutes)

• In small groups, discuss

Compare Scrum to traditional project management practices. What are Scrum's strengths and weaknesses against traditional? Are there times you would use traditional project management instead of Scrum?

