Introduction to Agile Project Management

March 20, 2023
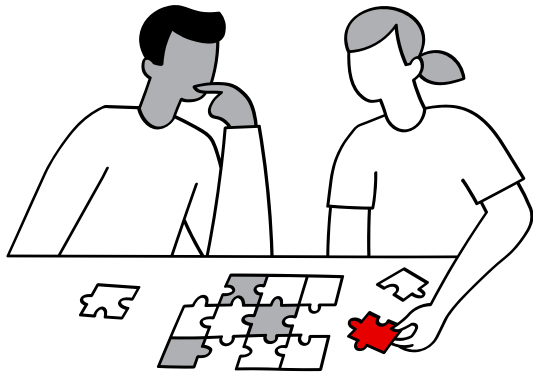
Lecture Structure

Introduction

Session goal: Provide an overview of the fundamental principles, methodologies, roles and responsibilities, and practises and techniques of agile project management.

Expectation: By the end of the lecture, attendees should have a solid understanding of the basic concepts of agile project management, including the Agile Manifesto and common practises. They should also be able to appreciate the importance of embracing an agile mindset.

Introduction

Project management is the use of specific knowledge, skills, tools and techniques to deliver something of value to people. The development of software for an improved business process, the construction of a building, the relief effort after a natural disaster, the expansion of sales into a new geographic market—these are all examples of projects.

Project Management Institute (https://www.pmi.org/)

Agile project management is an iterative and incremental approach to managing project that emphasizes flexibility, collaboration, and customer satisfaction. It involves breaking down a project into smaller, manageable chunks called sprints or iterations, and continuously delivering working software or products to the customer.

The agile methodology is based on a series of four core development values that are part of the Agile Manifesto.

agilemanifesto.org

Agile Principles

An agile organization comprises **a dense network of empowered teams** that operate with high standards of **alignment, accountability, expertise, transparency, and collaboration**. The company must also have a stable ecosystem in place to ensure that these teams are able to operate effectively.
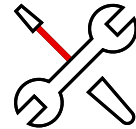
McKinsey & Company

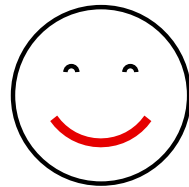*„The five trademarks of agile organizations"*

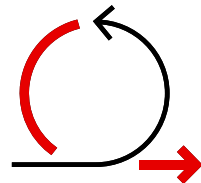## Four core values of Agile by the Agile Manifesto (2001)

Individuals and interactions over processes and tools

Working software over comprehensive documentation

Customer collaboration over contract negotiations

Responding to change over following a plan

Agile Methodologies

Scrum

Iterative, incremental, self-organizing, sprints, product backlog, daily stand-up meetings.

Kanban

Continus delivery, flow of work, visual board, work-in-progress (WIP) limits, lean pronciples.

Lean Software Development

Elimination of waste, continuous improvement, value stream mapping, kaizen, customer focus.

Extreme Programming (XP)

Software development, continuous integration, automated testing, pair programming, small releases, user stories.

Crystal

Flexibility, tailored process, lighweight.

Feature-Driven Development (FDD)

Feature-driven, iterative, incremental, short iterations, feature list.

FDD   Scrum

Crystal   **Agile**   Kanban

XP   Lean
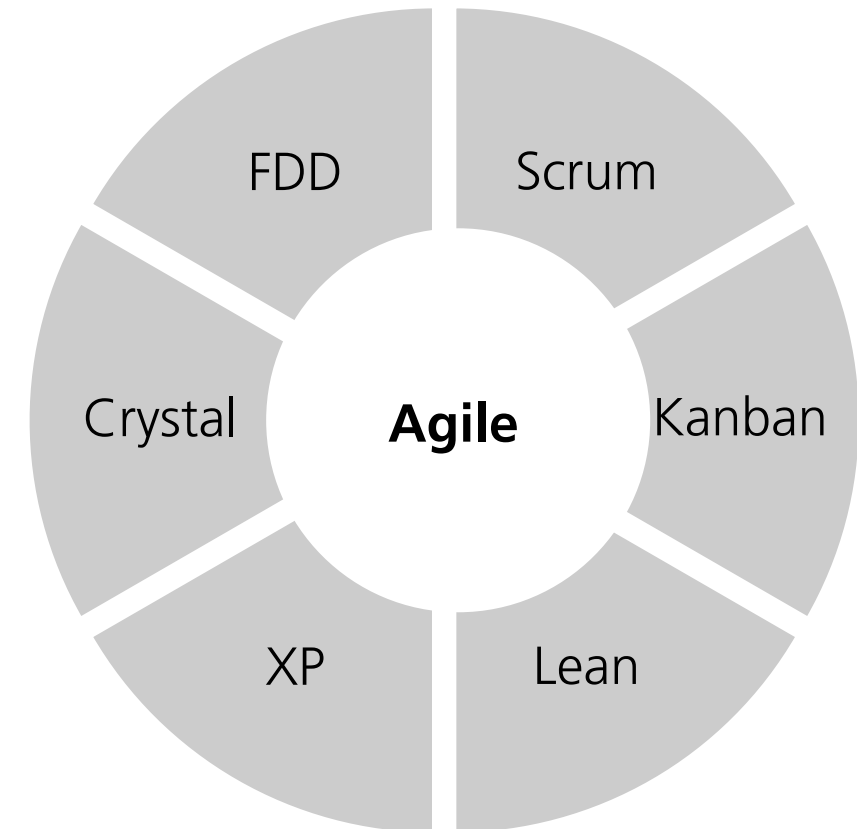
Agile Frameworks

SAFe (Scaled AgileFramework) guidance for implementint agile practices at scale.

Key elements:

- Agile Teams: small, cross-functional teams that work together to deliver value incrementally
- Agile Release Trains (ARTs): long-lived teams of agile teams tat deliver value in a regular, predictable cadence.
- Portfolio: the collection of programs, products, and projects that make up the organization's value stream.

SAFe provides a set of best practices and guidelines for each of these elements.
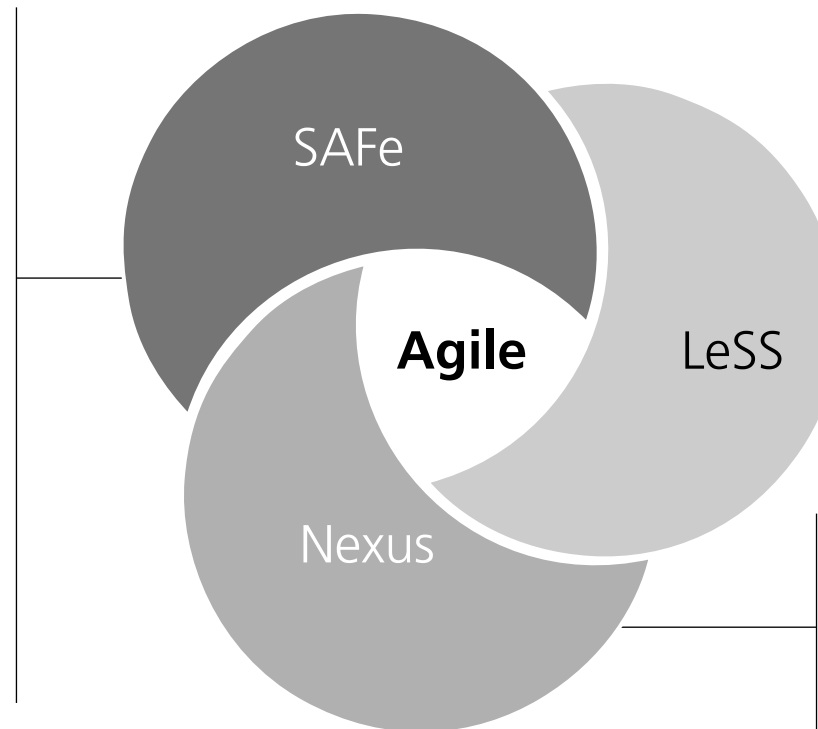
LeSS (Large Scale Scrum) is designed to help organizations improve their agility by allowing multiple teams to work together on a single product or service.

Key elements:

- A single Product Backlog
- Coordinated Sprints
- Area Product Owners
- Overall Retrospective

LeSS is designed to be flexible and adaptable.

Nexus is designed to help organizations coordinate and integrate the work of multiple Scrum teams working on a single product or service.

Key elements:

- A single Product Backlog
- Nexus Sprint: a regular sprint in which all teams work together to produce an integrated increment of the product or service.
- Nexus Integration Team
- Nexus Daily Scrum: a daily meeting involving representatives from each team

Agile Roles And Responsibilities

Product Owner
The person responsible for defining and prioritizating the product backlog, that the product meets the business and customer needs.

Scrum team
A self-organizing and cross-functional group of individuals who are responsibl for delivering the product increment in each sprint.
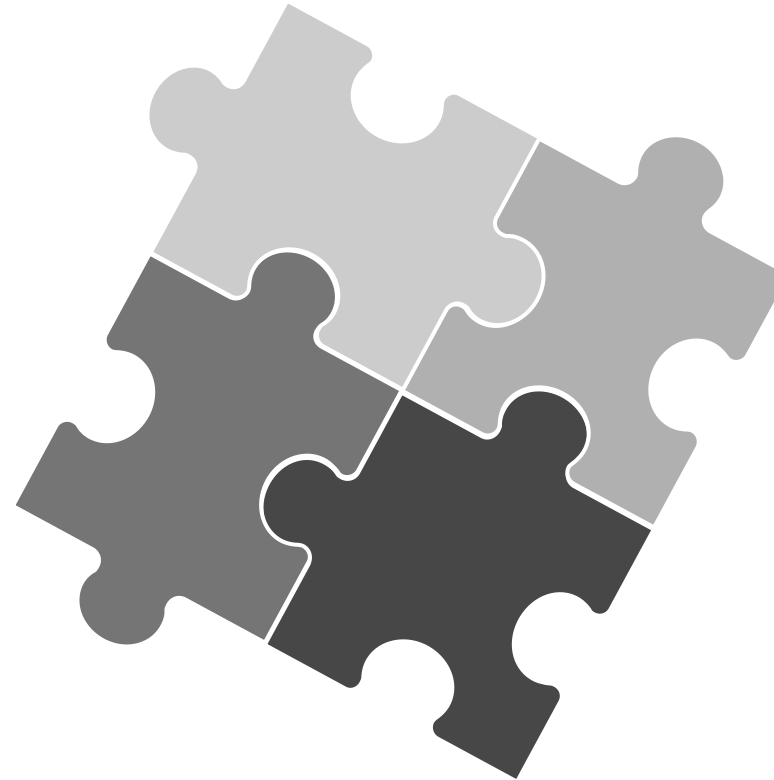
Scrum Master
The facilitator of the Scrum process, ensuring that the team follows the Scrum framework and removes any impediments are preventing the team form delivering value.
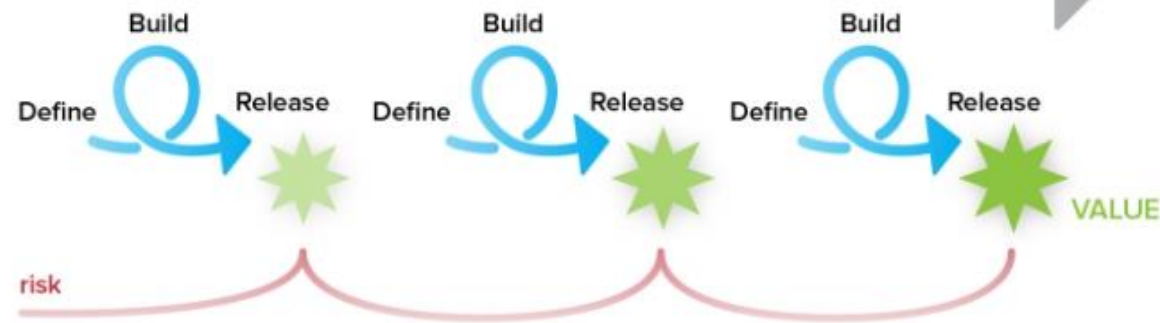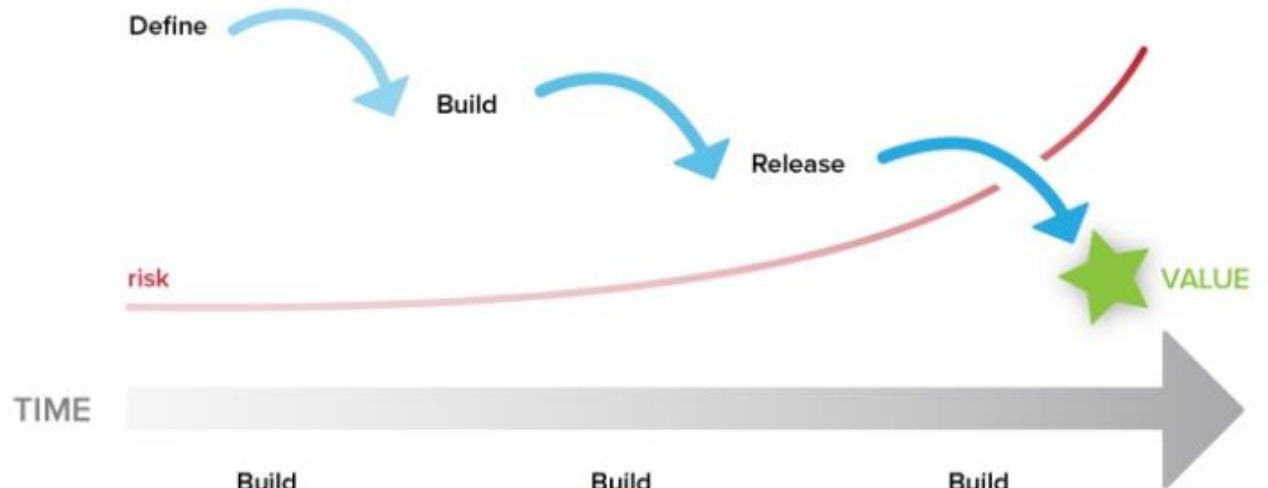
Stakeholders
Any individual or group with an interest in the product or project, including customers, users, sponsors, and any others who may influence the product or its development.

Agile Practises and Techniques
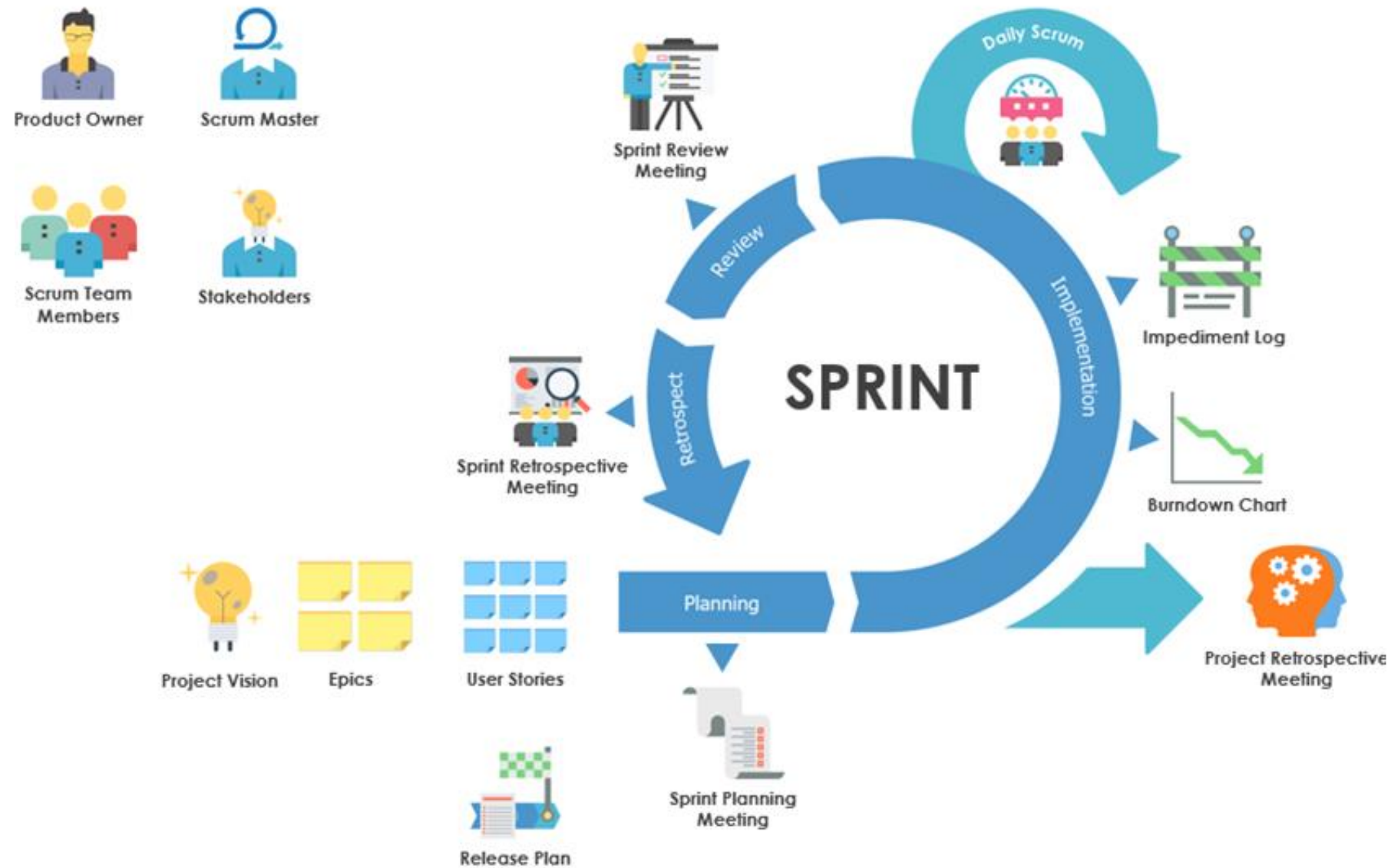
Agile vs Waterfall

	Agile	Waterfall
Approach	Frequent stakeholder interaction	Hands-off; goals and outcome established from the beginning
Flexibility	High as built-in to the Agile Method	Low as phases needs to be completed
Requires	Team initiative and short-term deadlines	Completing deliverables to progress to the next phase
Timeline	Flexible/experimental/adapting	Fixed with mapped stages
Client involvement	Fundamental at every stage accordingly to Agile Manifesto saying: [...] highest priority is to satisfy the customer [...]	Only on specific check-ins and then end goal is stablished
Budget	Flexible, open to adaptation	Fixed, less room for changes to budget during the project

Questions?

Thank you