WHAT IS AGILE

OVERALL COURSE OBJECTIVES

Understand and explore the following topics

1. What is Agile?
2. Agile Scrum
3. Agile Sprint
4. Agile Project Roles
5. User Stories
6. Agile Scrum Workflow
7. Agile Acceptance Criteria
8. Sprint Planning Meeting
9. The Sprint
10. The Sprint Review
11. The Sprint Retrospective

OBJECTIVES OF THIS SESSION

Understand What Agile is

Why you would want to use Agile for your Software Development Project

Appreciate the concept of the Agile Manifesto

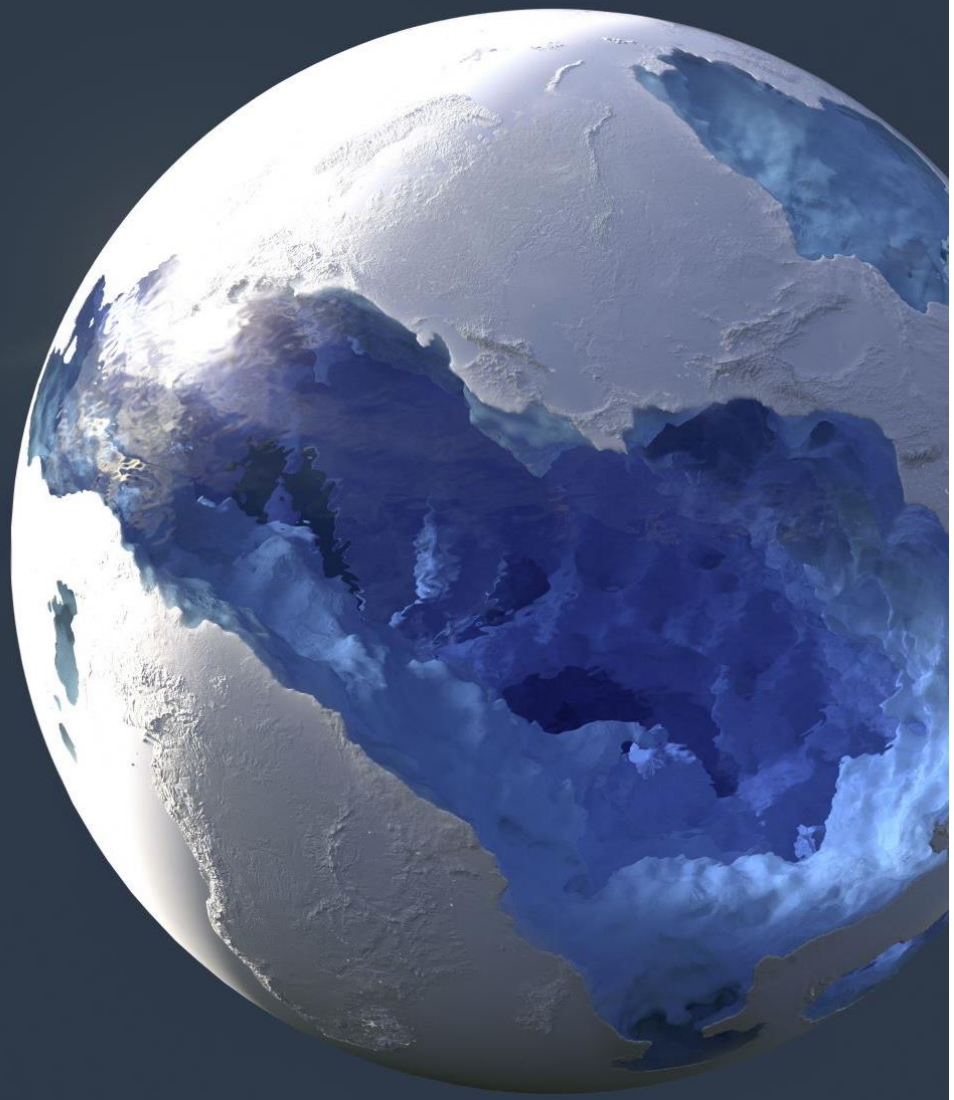
Understand and use the 12 Agile Principles to support the Agile Manifesto and the Agile Framework.

BEFORE AGILE

WATERFALL

- **Tons of documentation up front**
  - Business requirements, Application's architecture
  - Data structures, Functional designs
  - User interfaces, non-functional requirements
- **No coding before all design docs are complete**
  - Then Tests and eventually deploy
- **Large teams needed, even for a small project**
- **But it worked!**
  - Systems were large, monolithic, clear outcome
  - Requirements changed slowly
- **We now require speed, flexibility in a changing world**

Can you think of a project where this model would be suitable?



Why Agile?

- The dynamic and fast-moving nature of the world today:

- **V**olatility
- **U**ncertainty
- **C**omplexity
- **A**mbiguity

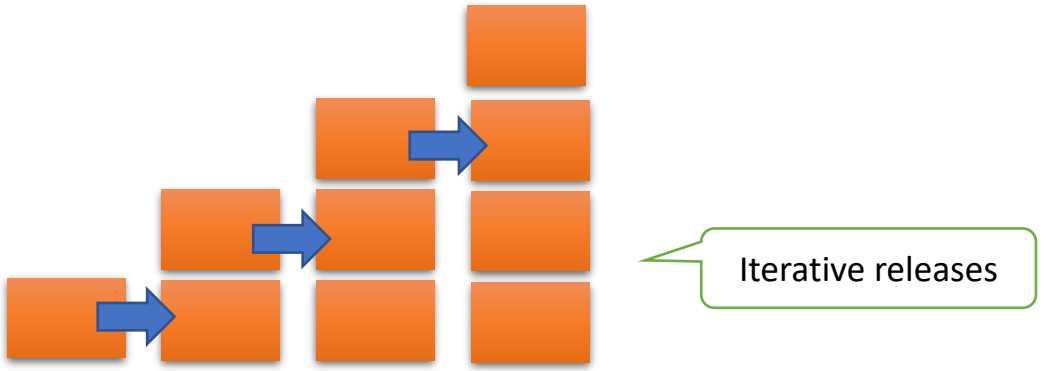
- In this environment, the assumption that a solution can be designed in detail up-front does not reflect reality.

WHAT IS AGILE

Agile is the most common software development methodology

It is an evolutionary methodology

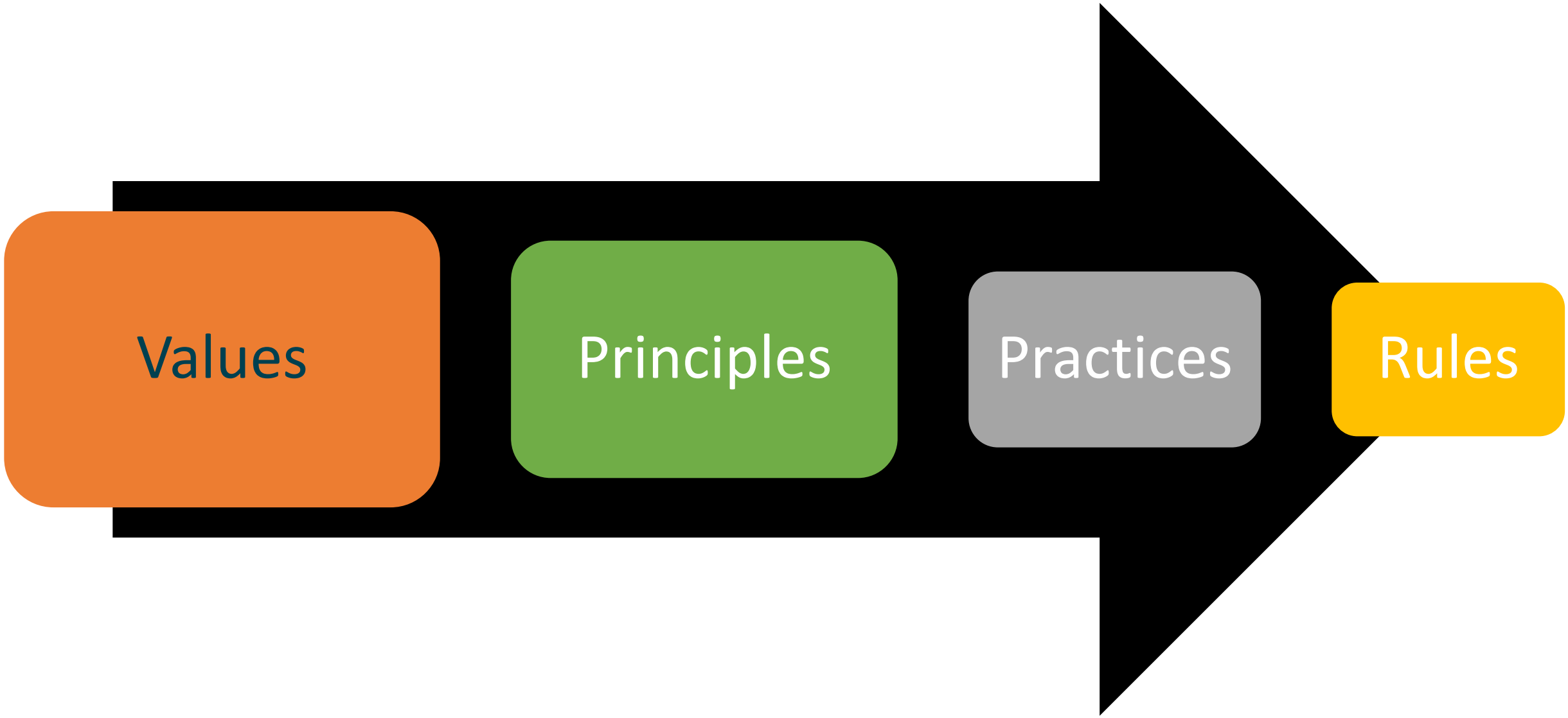
The software solution is developed through early prototype or iteration releases



EVOLUTIONARY AND WATERFALL COMPARISON

by blog.fastmonkeys.com

What is important in Agile?



WHY USE AGILE?

WHEN TO USE AGILE?

- Requirements not well understood
- Difficult to define and express what needed
- Iterations uncover understanding
- Demo working software to gather feedback
- Early delivery more important than completeness
- Early benefits – Justify funding £
- Quick to market – High value features first
- High business/technical risk. If not feasible stop!

AGILE

Agile was Launched in **2001**

17 technologists formally drafted the **Agile Manifesto**

Devised 4 principles for agile software production

THE AGILE MANIFESTO

A software development framework is said to be agile if it abides by the **agile manifesto**.

"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

AGILE PRINCIPLES 1-6

We follow these principles:

1. Our highest priority is to satisfy the customer through early and continuous delivery of valuable software
2. Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage
3. Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale
4. Business people and developers must work together daily throughout the project
5. Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done
6. The most efficient and effective method of conveying information to and within a development team is face-to-face conversation

AGILE PRINCIPLES 7 - 12

7. Working software is the primary measure of progress
8. Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely
9. Continuous attention to technical excellence and good design enhances agility
10. Simplicity – the art of maximising the amount of work not done – is essential
11. The best architectures, requirements, and designs emerge from self-organising teams
12. At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behaviour accordingly

Reasons for adopting Agile

Source: VersionOne 11th Annual State of Agile Report

Respondents were able to make multiple selections.

REVIEW

You now

- Understand What Agile is
- Can decide if Agile is a go fit for your Software Development Project
- Appreciate the concept of the Agile Manifesto
- Understand how the 12 Agile Principles to support the Agile Manifesto and the Agile Software Development Framework.

LAB

In Groups, complete Lab1.

Duration 20 minutes