

Other Agile Methodologies



Learning Objectives

By the end of this lesson, you will be able to:

- Describe the Agile methodologies and Crystal
- Explaining Extreme Programming, DSDM, and Feature-Driven Development
- Explain the concept of Agile Unified Process



Overview of Agile Methodologies

Several core Agile methodologies share the same philosophy expressed in the Agile Manifesto, however, there are different implementations with their own practices, processes, and techniques.

The PMI-ACP certification references several core methodologies:

Scrum

Extreme Programming
(XP)

Lean Kanban

Crystal

Dynamic Systems
Development Method
(DSDM Atern)

Feature Driven
Development (FDD)

Agile Project Management
(APM)

OpenUP

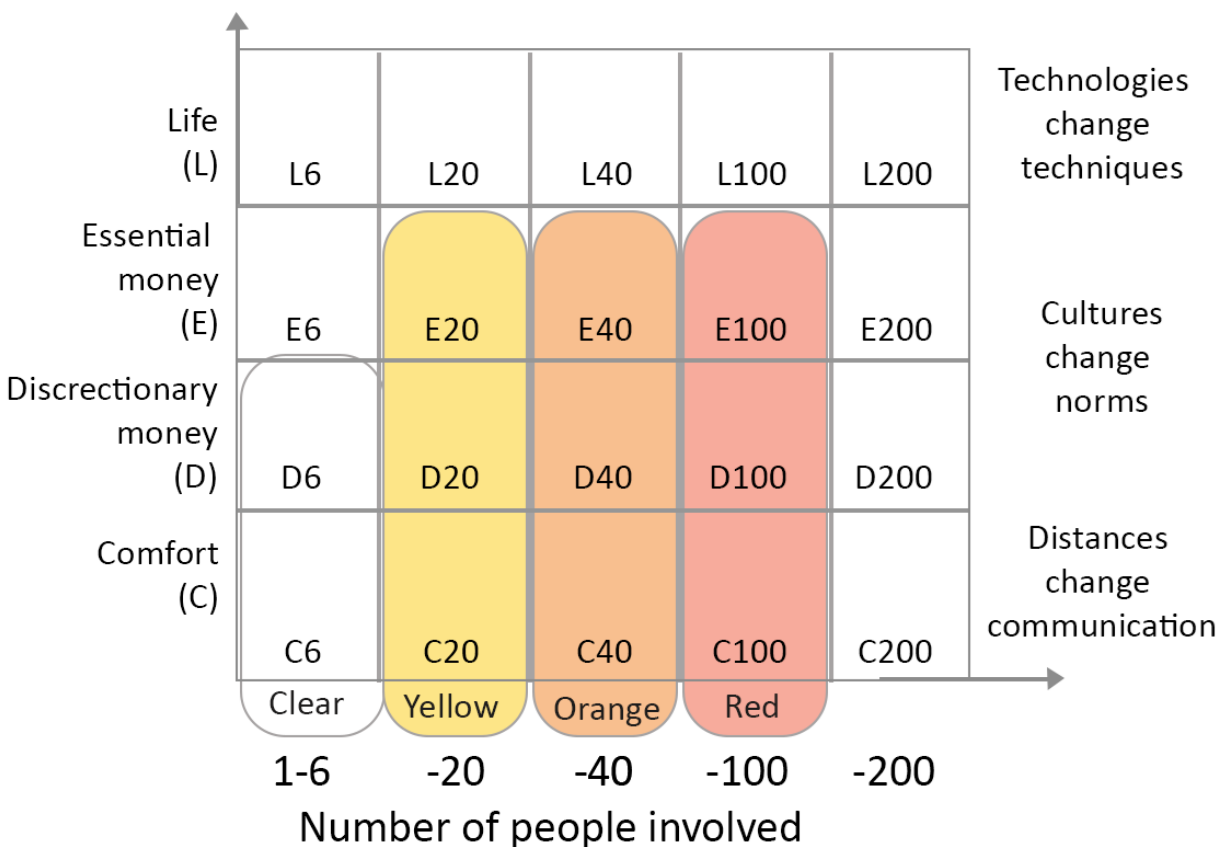
Overview of Crystal

The Crystal family of methodologies was propagated by Alistair Cockburn. The fundamental or core practices are small teams, frequent delivery, and osmotic communication.

Different levels of governance and visibility were required based on the *type* of project.

Crystal Clear

- For small teams working on projects with low risk to life and using discretionary monies. In the graph, the projects that fall on the far left belong to the category of **Crystal Clear**.



Crystal Red

- For a larger project dealing with life and death implications which would have more governance, documentation, and control gates. The projects on the far right belong to the category of **Crystal Red**, in the graph.

Introduction to Extreme Programming

Extreme Programming (XP) was developed by Kent Beck and Ward Cunningham in the 1990s to:

- Respond to the high cost of changing requirements; and
- Institute strong engineering practices to improve software quality.



Introduction to Extreme Programming

XP introduced many revolutionary concepts to software development that have now become standard practices:

Test Driven
Development

Iteration

Continuous Integration

User Stories



Introduction to Dynamic Systems Development Method

Dynamic Systems Development Method (DSDM) was developed in the 1990s to provide more discipline to Rapid Application Development (RAD). The latest version is called Atern.

DSDM was first published.

1990s

2007

Atern, a revised version of DSDM, was published.

Introduction to Dynamic Systems Development Method

DSDM uses a prioritization technique called MoSCoW (Must, Should, Could and Won't) to determine which requirements should be included in a release or iteration.

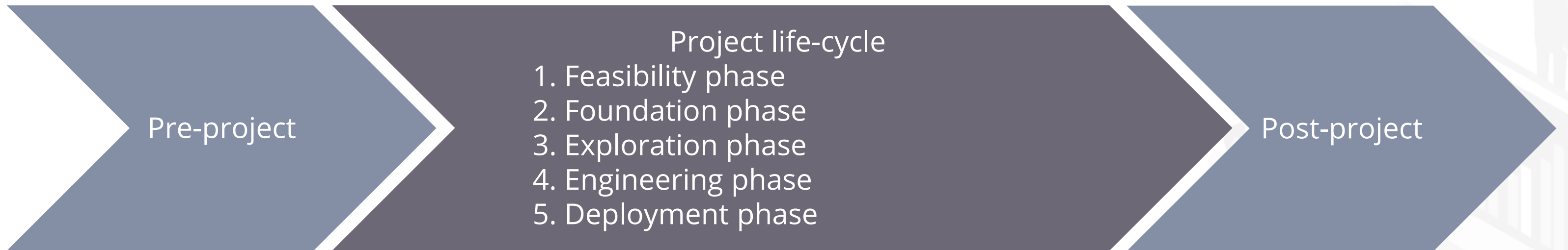


MoSCoW Prioritization



Introduction to Dynamic Systems Development Method

Following graphic represents phases of DSDM:



Overview of Feature Driven Development

Feature Driven Development (FDD) is an iterative and incremental approach to software development that was developed in the late 1990s by Jeff DeLuca and Peter Coad.

Features are small pieces of client-valued functions expressed in the form "<action> <result> <object>"

Through decomposition domain models are broken down into subject areas which are then expressed as business activities.

Each step in a business activity is a feature.

Features should not take more than two weeks to complete, or they should be broken down into smaller pieces.

Agile Unified Process

Agile Unified Process (AUP) is based on the Rational Unified Process (RUP), which is a method of managing Object Oriented Software. It is developed, based on the following best practices:

Develop iteratively: risk being the primary driver

Manage requirements

Employ component-based architecture

Model software visually

Continuously verify quality

Control changes





Knowledge Check

Knowledge Check

1

Which of the following is not one of the XP Practices ?

- A. Courage
- B. Fine-scale feedback
- C. Shared understanding
- D. Programmer welfare



Knowledge Check

1

Which of the following is not one of the XP Practices ?

- A. Courage
- B. Fine-scale feedback
- C. Shared understanding
- D. Programmer welfare



The correct answer is **A**

Courage is not one of the XP Practices.

**Knowledge
Check**

2

Which of the following is a core practice in Crystal Agile methodologies?

- A. Pair programming
- B. Working on one feature at a time
- C. Four phases of software development—Inception, Elaboration, Construction, and Transition
- D. Osmotic communication



Knowledge Check

2

Which of the following is a core practice in Crystal Agile methodologies?

- A. Pair programming
- B. Working on one feature at a time
- C. Four phases of software development—Inception, Elaboration, Construction, and Transition
- D. Osmotic communication



The correct answer is **D**

Alistair Cockburn propagated the Crystal family of methodologies. The 3 fundamental (core) practices are small teams, frequent delivery, and osmotic communication.

Knowledge Check

3

In the MoSCoW model of prioritization, what does M stand for?

- A. Most
- B. Minimum
- C. Maximum
- D. Must



**Knowledge
Check**

3

In the MoSCoW model of prioritization, what does M stand for?

- A. Most
- B. Minimum
- C. Maximum
- D. Must



The correct answer is **D**

In the MoSCoW model, M stands for Must.

Key Takeaways

- The PMI-ACP certification references several core methodologies like, Scrum, Extreme Programming (XP), Lean Kanban, Crystal, Dynamic Systems Development Method (DSDM Atern), Feature Driven Development (FDD), Agile Project Management (APM), and OpenUP.
- Extreme Programming (XP) was developed by Kent Beck and Ward Cunningham in the 1990s to respond to the high cost of changing requirements, and institute strong engineering practices to improve software quality.
- DSDM was developed in the 1990s to provide more discipline to Rapid Application Development (RAD). The latest version is called Atern.



Key Takeaways

- Feature Driven Development (FDD) is an iterative and incremental approach to software development that was developed in the late 1990s by Jeff DeLuca and Peter Coad.
- Agile Unified Process (AUP) is based on the Rational Unified Process (RUP), which is a method of managing Object Oriented Software.

