

# Introduction to Project Management

## Lesson 04—Other Agile Methodologies



# Objectives

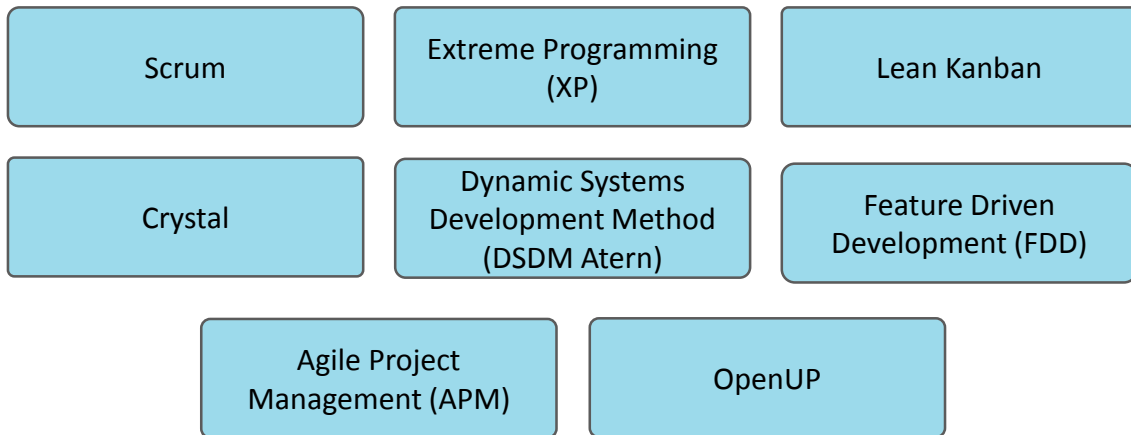
After completing this lesson, you will be able to:

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



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

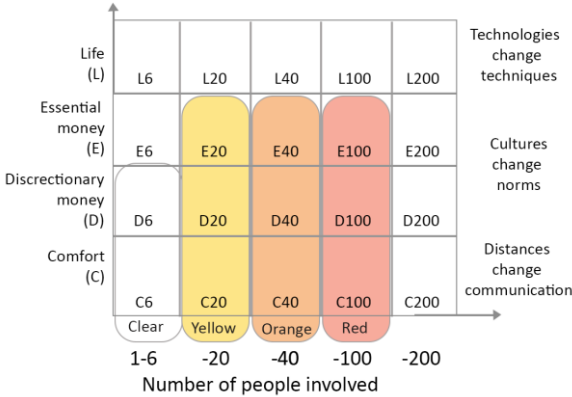
The PMI-ACP certification references several core methodologies:



# 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.

1. 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.’
2. 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.



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

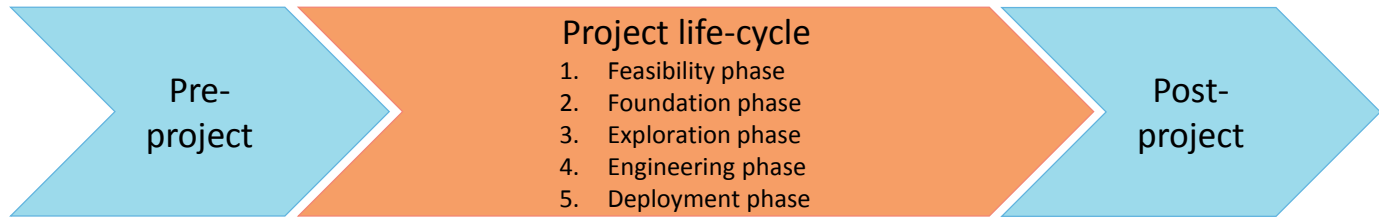
- respond to the high cost of changing requirements; and
- institute strong engineering practices to improve software quality.

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

- Test Driven Development;
- Continuous Integration;
- Iterations; and
- User Stories.

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

Following graphic represents phases of DSDM:



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 (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





## QUIZ

## 1

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

- a. Courage
- b. Fine-scale feedback
- c. Shared understanding
- d. Programmer welfare



## QUIZ

1

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

- a. Courage
- b. Fine-scale feedback
- c. Shared understanding
- d. Programmer welfare



Answer: a.

**Explanation:** Courage is not one of the XP Practices.



## QUIZ 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



## QUIZ 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



Answer: d.

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



## QUIZ

## 3

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

- a. Most
- b. Minimum
- c. Maximum
- d. Must



## QUIZ

3

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

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- b. Minimum
- c. Maximum
- d. Must



Answer: d.

**Explanation:** In the MoSCoW model, M stands for Must.



# Summary

Here is a quick recap of what was covered in this lesson:



- 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.
- 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.





# Thank You