

## Introduction to Agile and Scrum



# Learning Objectives

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

- 👁 Describe the Agile Manifesto
- 👁 Explain Agile Project Management, its life-cycle, and framework
- 👁 Define Scrum
- 👁 List the best practices of Scrum

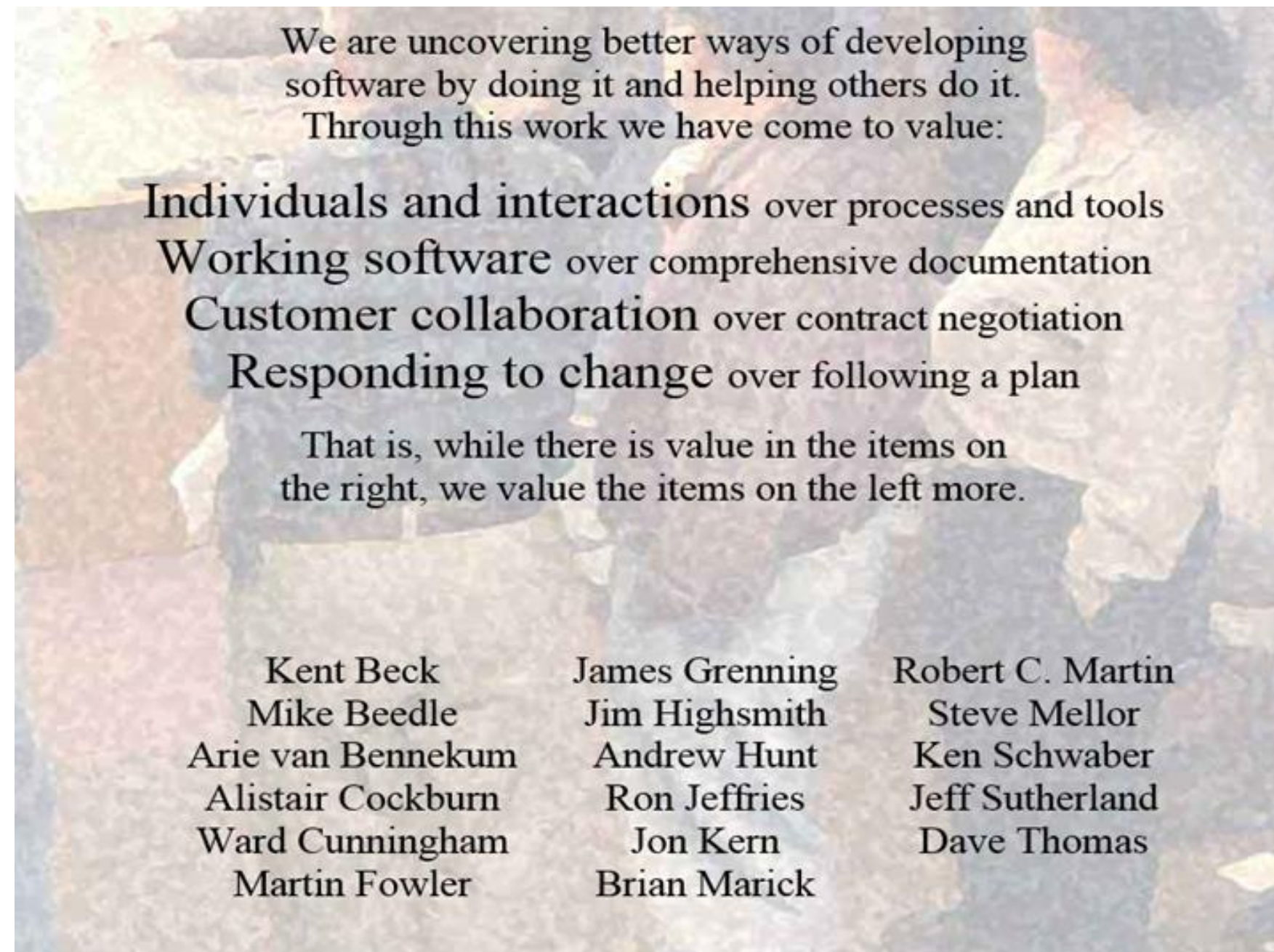




# Agile Manifesto

The Agile Manifesto was signed in February 2001 by a group of 17 leading software developers.

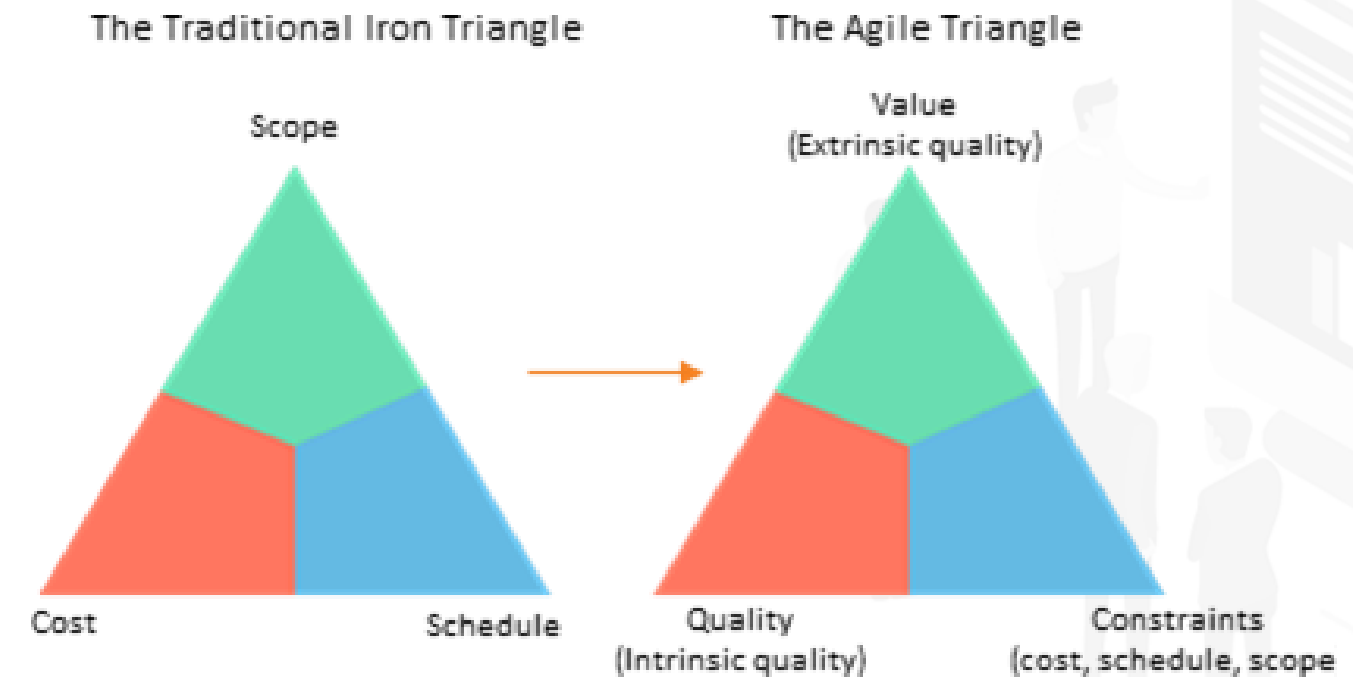
This is considered the key reference for all Agile practices.



# Agile Project Management

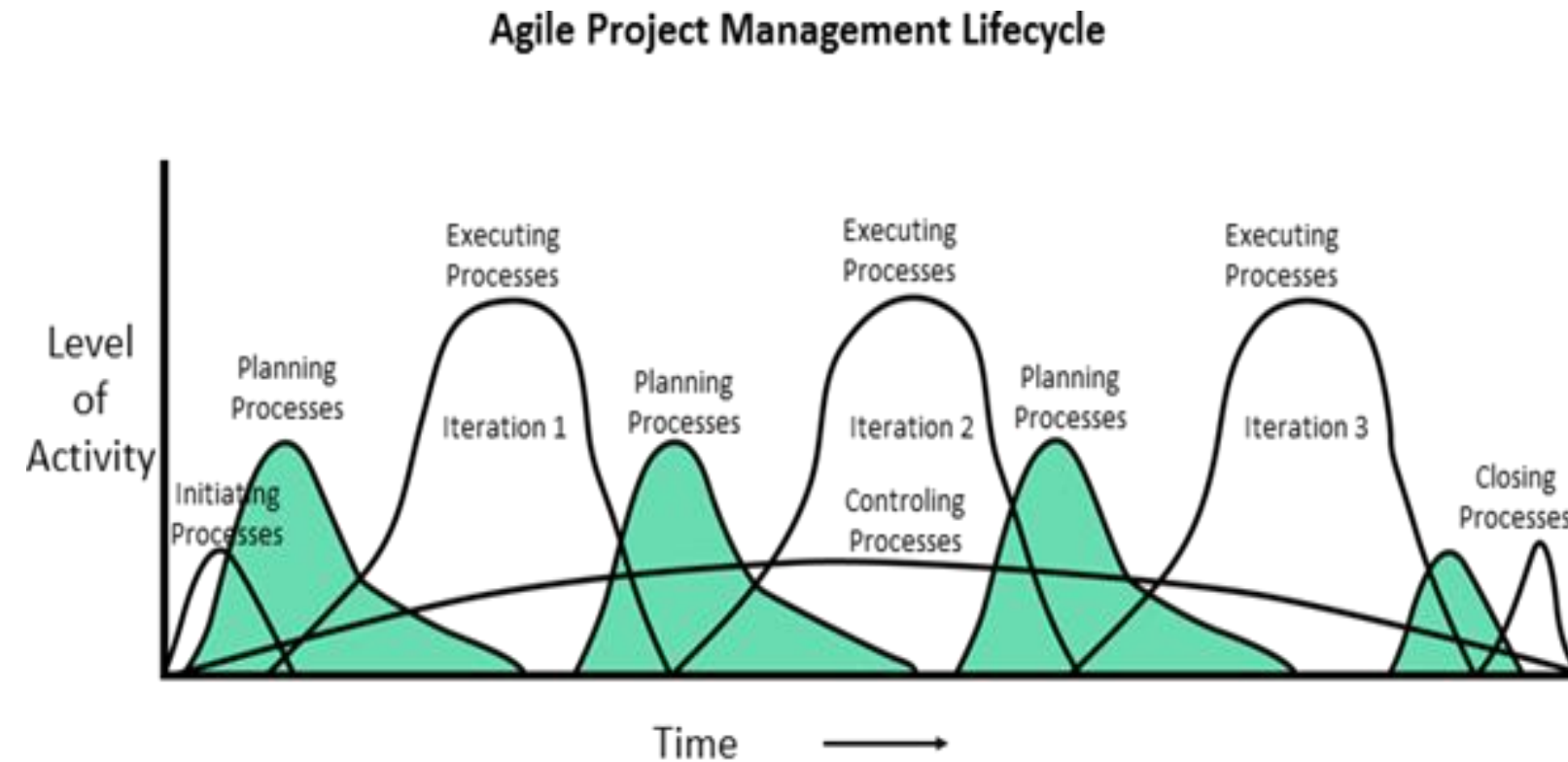
The book, Agile Project Management (APM) by Jim Highsmith was one of the first attempts to broaden Agile techniques into a more cohesive whole.

- APM introduced phases for agile projects that aligned with the PMP phases applied by the Project Management Institute.
- APM also modified the traditional “Iron Triangle” to emphasize Value and Quality and created the Agile Triangle.

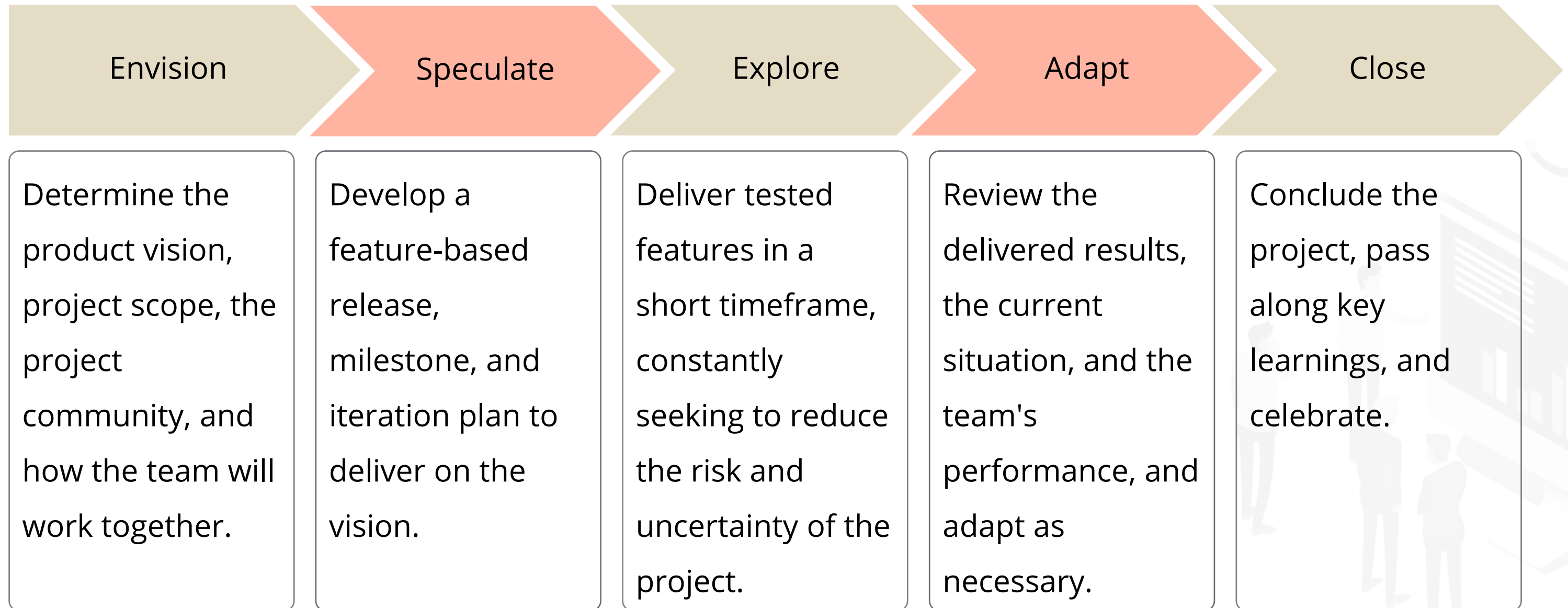


# Agile Project Management Life-cycle

In Agile Project Management, Planning is an iterative component of the project lifecycle. In the image, repeated sets of green shading are seen as planning occur throughout the project lifecycle.



# Five Phases of APM Framework



# What Is Scrum?

Scrum is one of the leading Agile techniques developed in the 1990s by Ken Schwaber and Jeff Sutherland.

Features that make Scrum popular:

- Simplicity and proven results
- Enables other agile engineering techniques
- Emphasizes small teams and team empowerment
- Welcomes changes to requirements
- Allows working from a single source of prioritized work items
- Daily status meetings
- Team commitment to a potentially shippable increment during a 'Sprint'





# Scrum History

In 1986, Hirotaka Takeuchi and Ikujiro Nonaka described a new approach to commercial product development.

In the early 1990s, Ken Schwaber used what would become Scrum at his company, Advanced Development Methods.

Jeff Sutherland, with John Scumniotales and Jeff McKenna, developed a similar approach at Easel Corporation, and were the first to refer to it using the single word Scrum.

In 2001, Schwaber and Mike Beedle described the method in the book Agile Software Development with Scrum.



# Overview of Terminologies used in Scrum

## Product Backlog

- All work to be performed in the foreseeable future, both well-defined and requiring further definition.

## Sprint

- A period of 30 days or less within which a set of work will be performed to create a deliverable.

## Sprint Backlog

- A well-defined requirement that can be worked on with relatively little change over a period of 30 days or less and will result in a tangible, potentially shippable incremental deliverable.

## Scrum

- A daily meeting at which progress and impediments to progress is reviewed.

# Overview of Scrum Roles

The Scrum roles are important features of Scrum and not using these specific terms is often referred to as *Scrum-but*. Scrum defines three roles:

## Product Owner



Responsible for the project's success by defining the project vision, requirements, and priorities.

## Scrum Master



Accountable to the team to remove impediments that will prevent them from achieving the goals of the Product Owner.

## Development Team



Team comprises people with a mix of roles and self-organizes to determine how to best meet the goals of the Product Owner.

# Best Practices of Scrum

Following are some points to be kept in mind for each Scrum role:



Product Owner

- Resists the temptation to "manage" the team and to add more important work after the sprint is already in progress.
- Be willing to make hard choices during the sprint planning meeting.



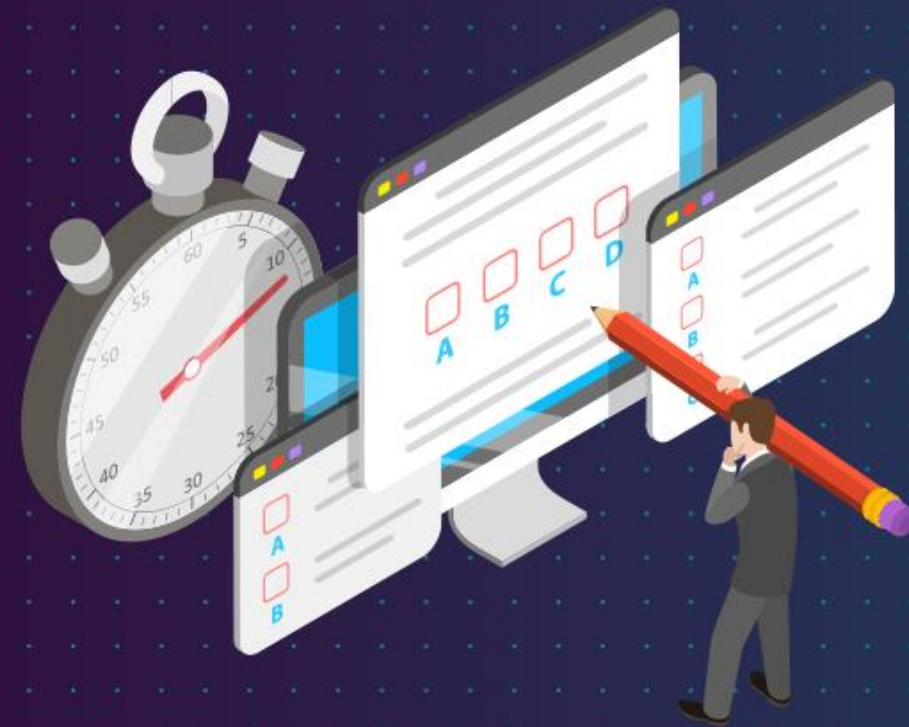
Scrum Master

- Works to assist both the team and the Product Owner.
- Guides the Product Owner how to maximize Return On Investment (ROI).
- Improves the lives of the Development Team by facilitating creativity and empowerment.



Development Team

- The team has the autonomy to choose how to best meet the goals and is held responsible for them.



## Knowledge Check



## Knowledge Check

1

How many roles are there in Scrum?

- A. None
- B. 3
- C. 12
- D.  $7 \pm 2$



## Knowledge Check

1

How many roles are there in Scrum?

- A. None
- B. 3
- C. 12
- D.  $7 \pm 2$



The correct answer is **B**

**Scrum identifies three roles: Product Owner, Scrum Master, and the Team.**

## Knowledge Check

2

### What does the Agile Triangle reflect?

- A. The difference between traditional project management and agile project management
- B. The emphasis that agile projects place on delivering value and ensuring quality
- C. The Team, Product Owner, and Scrum Master
- D. A design pattern found in Peter Coad's book "Modeling in Color and Shapes with UML"



## Knowledge Check

2

What does the Agile Triangle reflect?

- A. The difference between traditional project management and agile project management
- B. The emphasis that agile projects place on delivering value and ensuring quality
- C. The Team, Product Owner, and Scrum Master
- D. A design pattern found in Peter Coad's book "Modeling in Color and Shapes with UML"



The correct answer is **B**

**Agile projects place a strong emphasis on value and quality.**



## Knowledge Check

3

**Which of the following are the responsibilities of the Scrum Master?**

- A. Achieving initial and ongoing funding for the project
- B. Teaching the Product Owner how to maximize ROI and the objectives
- C. Being responsible for developing the functionality of the product
- D. Removing the barriers between the customer and the Product Owner



## Knowledge Check

3

Which of the following are the responsibilities of the Scrum Master?

- A. Achieving initial and ongoing funding for the project
- B. Teaching the Product Owner how to maximize ROI and the objectives
- C. Being responsible for developing the functionality of the product
- D. Removing the barriers between the customer and the Product Owner



The correct answers are **B**

**The Scrum Master is responsible for teaching the Product Owner how to maximize ROI and the objectives.**

## Key Takeaways

- The Agile Manifesto is considered the key reference for all Agile practices.
- The book, Agile Project Management (APM) by Jim Highsmith was one of the first attempts to broaden Agile techniques into a more cohesive whole.
- The five phases of APM framework are envision, speculate, explore, adapt, and close.
- Scrum is one of the leading Agile techniques developed in the 1990s by Ken Schwaber and Jeff Sutherland.
- The Scrum roles are important features of Scrum and not using these specific terms is often referred to as 'Scrum-but'.

