



Version 6.1 Updated for the 2021  
Project Management Professional (PMP)<sup>®</sup> Exam



## Crosswind Success Series: PMP<sup>®</sup> Exam Bootcamp Manual

[www.crosswindpm.com](http://www.crosswindpm.com)

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## Chapter 8

# Agile and Hybrid

**Agile** is an **adaptive, iterative approach** to projects that expects and embraces change and stresses self-organizing teams, transparent and up-to-date communication, and an intense level of participation by the product owner/customer. Agile is flexible and varies from team to team based on the team's culture, diversity, and globalization.

Like any reliable project approach, Agile starts with initiating. During this phase, the project is justified, and then the project charter is created. Planning follows initiating and includes the formation of the team and the team space, the identification of stakeholders, an analysis of the problem to be addressed, estimations, and the planning of iterations/sprints and releases. Project execution revolves around the iteration/sprint; it includes the actual work, the monitoring and control of the work, a demo, and a retrospective meeting. A release may include one or more iterations/sprints and a project may include one or more releases.

Agile project management accommodates frameworks (**Scrum and eXtreme Programming** are the two primary frameworks currently in use) that use different leadership strategies, different time frames, and different terminologies. While Agile is primarily used with software development projects, it can be adapted to any project that needs to respond to unpredictability.

Hybrid project management combines the methods and tools from traditional project management with agile processes. A hybrid project is tailored to accommodate a specific project or situation.

In this chapter, we discuss:

### **The Agile Manifesto (Ten Commandments)**

#### **Agile Framework and Terminology**

#### **The Agile Approach**

#### **Variations in Agile**

#### **Business Case Development**

#### **Project Charter**

#### **Traditional Projects**

#### **Hybrid Projects**

**Crosswind “Must Knows” for Agile Principles & Mindset**

<input type="checkbox"/>	Know the characteristics of the Agile Manifesto
<input type="checkbox"/>	Know the characteristics of Agile projects
<input type="checkbox"/>	Know the characteristics of Agile frameworks
<input type="checkbox"/>	Know the fundamentals of a successful Agile project
<input type="checkbox"/>	Know the tools and techniques of Agile projects

Although helpful, this list is not all-inclusive in regard to information needed for the exam. It is only suggested material that, if understood and memorized, may increase your exam score.

## 8.1. The Agile Manifesto

In early 2001, a meeting between software and methodology experts resulted in the Agile Manifesto and Agile Principles. Those experts were Kent Beck, Mike Beedle, Arie van Bommel, Alistair Cockburn, Ward Cunningham, Martin Fowler, James Grenning, Jim Highsmith, Andrew Hunt, Ross Jeffries, Jon Kern, Brian Marick, Robert C. Martin, Steve Mellor, Ken Schwaber, Jeff Sutherland, and Dave Thomas. Several of those experts formed the **Agile Alliance**, which promotes the adoption and expansion of Agile software development and supports those who explore and apply Agile principles and practices for the benefit of the software industry.

### 8.1.1. Manifesto for Agile Software Development

*We are uncovering better ways of developing software by doing it and helping others do it.*

*Through this work we have come to value:*

<i>Individuals and interactions</i>	<i>over</i>	<i>processes and tools</i>
<i>Working software</i>	<i>over</i>	<i>comprehensive documentation</i>
<i>Customer collaboration</i>	<i>over</i>	<i>contract negotiation</i>
<i>Responding to change</i>	<i>over</i>	<i>following a plan</i>

*That is, while there is a value in the items on the right, we value the items on the left more.*



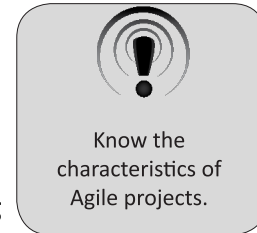
Know the characteristics of the Agile Manifesto.

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The purpose of the Agile Manifesto is to focus Agile practitioners on the items to the left of the word *over*: *individuals and interactions, working software, customer collaboration, and responding to change*. It is those items that bring value to an Agile project, even though the items to the right of the word *over* are typically present in an Agile project and are useful.

## 8.2. Agile Projects

The Agile approach to projects utilizes **adaptive product development**, which works well when the requirements are not stable. That instability often occurs with a new product or when the business process experiences rapid changes. The Agile approach **delivers**, or is ready to deliver, pieces of the product **in a series of releases, integrating at the end of each iteration**.



The Agile approach **embraces change**. Its emphasis on incremental delivery fosters responsiveness to change. Having a **rapid feedback loop** between the product owner/customer and the team results in a quality, usable product.

Agile is characterized by **transparency** and **collaboration**, making information available to everyone through such Agile tools and techniques as **information radiators, team space, and daily stand-up meetings**.

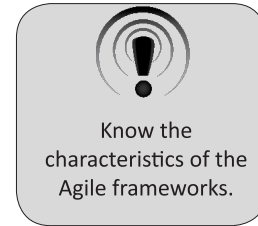
A common misconception is that Agile eliminates documentation. Agile is designed to eliminate excessive documentation by requiring an appropriate level of documentation, including such documents as user stories and acceptance criteria.

Another important Agile concept is creating a safe environment: an environment which nurtures emergent leadership and where team members feel safe to espouse new ideas, to experiment with new techniques and processes, and to try a new approach with team approval.

Agile is primarily applied to projects that create software products or products that contain embedded software. The innovative nature of software projects, with their inherent uncertainty, risk, and opportunity, demands an approach that is grounded in a structure flexible enough to respond to change.

### 8.3. Agile Frameworks

The two primary Agile frameworks currently used are Scrum and XP (eXtreme Programming). Of these, Scrum is the most popular. Other Agile frameworks include Kanban and Lean.



Agile Frameworks	
Framework	Characteristics
Scrum	<p>Scrum, generally considered the <b>most popular Agile framework</b>, is predicated on the Scrum Pillars:</p> <ul style="list-style-type: none"> <li>• Transparency</li> <li>• Inspection</li> <li>• Adaptation</li> </ul> <p>It is also predicated on values:</p> <ul style="list-style-type: none"> <li>• Focus</li> <li>• Courage</li> <li>• Openness</li> <li>• Commitment</li> <li>• Respect</li> </ul>
XP (eXtreme Programming)	<p>XP is predicated on simplicity, communication, feedback, and courage.</p> <p>It focuses on customer satisfaction and is characterized by test-driven development and continuous integration.</p> <p>It is distinguished by its premise that requirements, design, and test phases can be eliminated due to the intense face-to-face communication between the programmers and the customer.</p> <p>It is further distinguished by its practice of <b>pair programming</b>. Pair programming requires that two programmers sit at one computer. The driver codes and the navigator reviews the code in light of functionality and integration. The programmers may switch roles frequently.</p>

### 8.3.1. Roles and Responsibilities

Agile roles consist of the product owner/customer, the team, and a coach/facilitator.

Roles and Responsibilities			
Role	Agile Framework	Title	Responsibilities
<b>Product Owner/ Customer</b>	Scrum	Product Owner	<p>The product owner represents the interests of all stakeholders and is responsible for:</p> <ul style="list-style-type: none"> <li>• Funding the project</li> <li>• Creating the vision</li> <li>• Creating and continuously prioritizing the requirements (the product backlog)</li> <li>• Creating the release plans</li> <li>• Product Champion</li> </ul>
	XP (eXtreme Programming)	Customer (may also be called product owner or product manager)	<p>The customer represents the end user and those funding the project. The role is responsible for:</p> <ul style="list-style-type: none"> <li>• Giving the project direction</li> <li>• Making all business decisions</li> <li>• Creating clear and accurate user stories</li> <li>• Participating in the planning game to schedule the most valuable stories</li> <li>• Writing/running user acceptance tests</li> </ul>
<b>Team</b>	Scrum	Cross-functional, self-managing team	<p>The team is responsible for:</p> <ul style="list-style-type: none"> <li>• Placing requirements appropriately into iterations</li> <li>• The success of the iterations and the project as a whole</li> </ul>

Roles and Responsibilities			
Role	Agile Framework	Title	Responsibilities
<b>Team (Cont.)</b>	XP	Cross-functional, self-managing team	<p>The team is responsible for the success of the iterations.</p> <p>The programmers are responsible for:</p> <ul style="list-style-type: none"> <li>• Determining and explaining the way each user story will be implemented and identifying any dependencies or risks</li> <li>• Estimating relative story points</li> <li>• Developing a simple, well-tested system and implementing only what is necessary</li> <li>• Constantly communicating with the customer</li> <li>• Writing, automating, and running unit and functional tests prior to coding (unless there is a dedicated tester)</li> <li>• Integration</li> </ul> <p>The tracker is responsible for:</p> <ul style="list-style-type: none"> <li>• The schedule</li> <li>• Tracking progress metrics, such as team velocity, and presenting any critical findings to the team during daily stand-up meetings</li> </ul>
<b>Coach/ Facilitator</b>	Scrum	ScrumMaster	The ScrumMaster is responsible for protecting the team from interruptions, and removing roadblocks. The ScrumMaster must also ensure that Agile is understood and followed by everyone, is embedded in the organizational culture, and delivers expected benefits.
	XP (eXtreme Programming)	Coach or Programmer-coach	The coach/programmer-coach is responsible for ensuring that Agile is understood and followed by everyone, is embedded in the organizational culture, and delivers expected benefits. The coach/programmer-coach works with business management on behalf of the team when necessary.