

Course Learning Outcomes for Unit VIII

Upon completion of this unit, students should be able to:

1. Explain the relationship between the technical and sociocultural sides of a project.
 - 1.1 Identify the technical side and sociocultural side of a Scrum project.
 - 1.2 Determine how a Scrum master can be in charge of the technical and sociocultural sides of a project.

7. Distinguish the differences between traditional project management and agile project management.
 - 7.1 Identify core agile principles.
 - 7.2 Examine the basic methodology used in Scrum.

Course/Unit Learning Outcomes	Learning Activity
1.1	Chapter 1 Unit VIII Case Study
1.2	Chapter 1 Unit VIII Case Study
7	Unit Lesson Chapter 16 Unit VIII Case Study
7.1	Unit Lesson Chapter 16 Unit VIII Case Study
7.2	Unit Lesson Chapter 16 Unit VIII Case Study

Reading Assignment

Chapter 1: Modern Project Management, pp. 17–18

Chapter 16: An Introduction to Agile Project Management, pp. 579–595, 599–602

Unit Lesson

The traditional project management approach relies heavily on up-front planning. The rationale is that if you create a plan, execute the plan, and take corrective action on the plan, then the project will be successful. Planning requires a reasonable degree of predictability, both in terms of project scope and technology. If you do not know what you are trying to achieve or how to achieve it, then it is impossible to come up with a detailed plan to manage the project. The plan would constantly have to be reformulated as questions regarding scope and technology are resolved.

Traditional project management includes an up-front design, a fixed project scope, deliverables, the need to freeze the design as soon as possible, low uncertainty, resistance to change, low customer interaction, and conventional project teams (Larson & Gray, 2018). Agile project management includes continuous design, a flexible project scope, features instead of deliverables, an unfrozen design until the last possible moment, high uncertainty, embracement of change, high customer interaction, and self-organized project teams (Larson & Gray, 2018).

Agile project management represents a fundamental shift away from the traditional plan-driven project management approach by adopting a more experimental and adaptive approach to managing projects (Larson & Gray, 2018). The final project design is not known in detail and is continuously developed through a series of incremental iterations over time.

Agile project management is not one set method, but a family of methods designed to respond to the challenges of unpredictable projects. A few of the more popular ones are listed below.

- Scrum
- Extreme programming (XP)
- Agile modeling
- Lean development
- Crystal clear
- Rational unified process (RUP)
- Rapid product development (RPD)
- Dynamic systems development method (DSDM) (Larson & Gray, 2018)

Scrum

For the purpose of this unit, we are going to focus on Scrum. Scrum is a framework that is used to complete complex projects (Scrum Alliance, n.d.). Usually, these projects result in some type of product. Scrum begins with the development of a scope definition and estimates of time and money required to complete the project (Larson & Gray, 2018). However, instead of developing a work breakdown structure (WBS) for the completion of the entire project, the team works on small features of the project that will ultimately result in the final product that the project was developed for.

The Scrum framework is comprised of various people. The first of these people is the *product owner*. He or she determines what actually goes into the final project, and he or she develops the list of tasks that need to be performed to complete the project and prioritizes them (Littlefield, 2016). The *development team* is responsible for completing the project in the form of *sprints*, which consist of the time needed to keep each of the tasks on the list created by the product owner (Larson & Gray, 2018; Littlefield, 2016;). Throughout the project timeline, the development team members hold *daily Scrums*, which are meetings done every day to give an update on the sprint in which they are currently involved (Littlefield, 2016). At the end of each sprint, a *retrospective* is held, in which the team members discuss the work they have completed and ways they can improve in the next sprint (Littlefield, 2016).

The final individual involved in the Scrum process is the Scrum master (project manager). He or she is there to ensure that the process runs smoothly by resolving issues that may develop between team members or within the organization (Larson & Gray, 2018). He or she is not considered the leader of the team but handles any problems from outside of the team and keeps these problems from affecting the work of the team. In addition, the Scrum master's main job is to make sure that the Scrum process is adhered to throughout the life of the project (Larson & Gray, 2018).

Differences between the traditional project manager and Scrum master are pronounced. The Scrum master role is limited to making sure that rules are adhered to and serving as a coach, helping the development team solve problems. The project manager role on a project is much more dominant. The project manager formulates the project plan and typically has direct authority over the work being accomplished. The project manager is responsible for making trade-off decisions between time, cost, and scope as well as taking corrective action when progress deviates from the plan. It should be noted that many of traditional responsibilities of a project manager, such as representing the interests of the customer, prioritizing deliverables, and making cost/scope trade-offs, are the responsibility of the product manager in Scrum. Similarities are less discernable. One would be that both Scrum master and project manager serve to buffer the project team from external distractions.

The Scrum process has four phases: analysis, design, build, and test (Larson & Gray, 2018). During the analysis phase, the team determines the requirements needed to complete the sprint they are about to begin. Following this is the design phase, which is when determinations are made about exactly how the work will be done. In the build phase, team members actually complete the work, and in the testing phase, they ensure that the feature they have been working on is actually functional.

What organizational, group, individual, and project factors do you think would promote the successful adoption of agile project management methodologies like Scrum?

Organizational:

- The organization has a history of poor project performance, so there is a great need for change.
- An organization's top management does not demand firm schedules and budgets which agile project management cannot provide.
- An organization's management is comfortable relinquishing control and empowering development teams to manage themselves.

Group:

- The team is mature and capable of self-management.
- The team shares a common goal and a strong commitment to excellence.
- The team values transparency and the open sharing of good and bad news.

Individual:

- The individual has a reasonably high tolerance for uncertainty.
- The individual excels with autonomy.
- The individual has a high level of self-discipline and a commitment to learning.

Project:

- The project contains a high degree of uncertainty regarding either scope and/or technology.
- The project can be easily chunked into small pieces/features.
- The project easily represents customer interests.
- The project can be done by a small project team.

A Closer Look

You have just taken over a project from another project manager and have come back from a very uncomfortable meeting with your business sponsor. In the meeting, the sponsor told you how dissatisfied he or she is with the project's performance to date and that he or she is getting ready to pull the plug on the project entirely. Deadlines keep slipping, the application is not complete, and the sponsor feels like he or she cannot get in touch with anyone to give an update on the project's status and progress.

Your project team meets to talk about the issues described below.

- There is no communication plan for stakeholders, especially the sponsor. Make one.
- Get the requirement issue satisfied. Complete and set requirements again. Once set, have the sponsor prioritize the requirements.
- The team seems to be working on things in which they are interested. With requirements prioritized, the team will have guidance on scheduling their tasks.
- When the sponsor sets priorities, have the team quickly demonstrate functionality of a few new features to gain the sponsor's confidence.
- Since the project is time imposed, will scope have to be reduced? Will resources need to be added?

What Actually Happened

The new project manager instituted a more robust, consistent communication strategy that kept the business sponsor informed about the project's progress and status. The project manager also arranged for an immediate demonstration of the application to the business, with a focus on the parts of the project where requirements had not been fully defined. The outcome of that meeting was a list of scope activities still to be completed.

The conversation with the business sponsor turned to a look at the schedule remaining against that scope and, together, they prioritized the scope, which the project team then worked toward. As the project team

completed the scope, the project manager and the business sponsor met regularly to walk through the application and confirm that the direction was correct.

The business sponsor ultimately accepted the application on schedule and began discussions for enhancements.

Impact to Cost on the Project

Cost on the project rose because the new project management spent more time working on the project than the previous one did. Performance went down because less scope than originally anticipated was actually completed. Schedule was maintained because that was set outside the project manager's control.

Advantages and Disadvantages of Agile Project Management

Agile project management does have some advantages and disadvantages. The key advantage of agile project management is that it is a more flexible approach for completing projects. It simply works better for these kinds of projects than traditional project management. Specific advantages are listed below.

- Work is divided into smaller and smaller chunks that are more easily scheduled and controlled.
- Collaboration between the customer and design team is increased, leading to solid change control.
- Agile methods demand that features be tested and functional when completed (Larson & Gray, 2018).

At first glance, the disadvantages of agile project management are readily apparent for predictable projects in which the scope and technology are well defined. Here, flexibility can lead to excessive scope creep and costly delays. Other disadvantages are listed below.

- It is difficult to apply agile project management on large, complex projects involving many groups of professionals. (It should be noted that this is likely to be true for any project management approach.)
- Agile project management does not provide firm schedules and cost estimates.
- Agile project management is incongruent with many organizational cultures.
- Agile project management may suffer from inadequate customer involvement (Larson & Gray, 2018).

References

Larson, E. W., & Gray, C. F. (2018). *Project management: The managerial process*. (7th ed.). New York, NY: McGraw-Hill Education.

Littlefield, A. (2016). The beginner's guide to Scrum and agile project management. Retrieved from <https://blog.trello.com/beginners-guide-scrum-and-agile-project-management>

Scrum Alliance. (n.d.). Learn about Scrum. Retrieved from <https://www.scrumalliance.org/why-scrum>