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Project Management Professional (PMP)[®] Exam



Crosswind Success Series: PMP[®] Exam Bootcamp Manual

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Flow

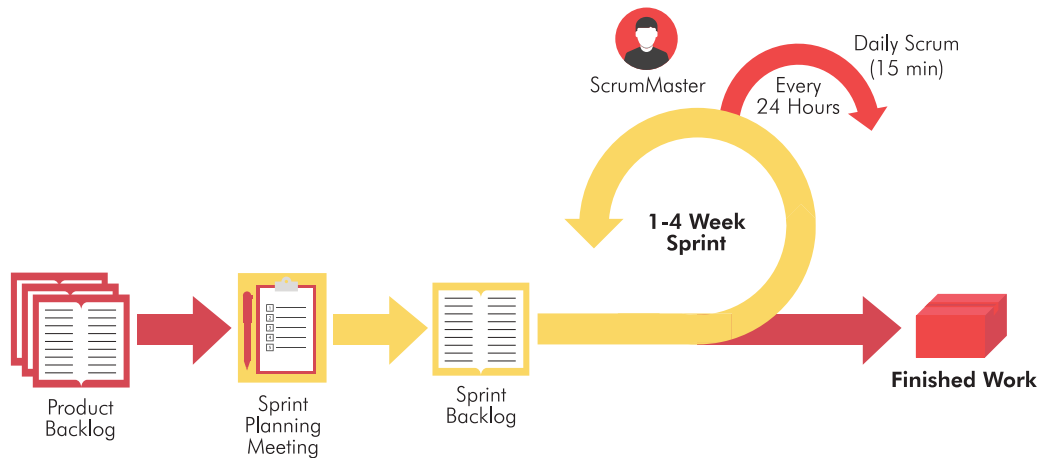


Figure 8-1: Scrum Workflow

The Agile workflow is **comprised of releases**, which typically occur on a quarterly basis and are decomposed into iterations. Note that the Scrum framework designates an iteration as a sprint. A Scrum sprint is comprised of requirements and an XP (eXtreme Programming) iteration is comprised of user stories. Both requirements and user stories are decomposed into tasks.

The Kickoff Meeting

An Agile project begins with a kickoff meeting that presents a **vision statement** and **product roadmap**.

The **vision statement**, which describes the overall scope and constraints of the project, is written and presented by the product owner/customer. The team clarifies the vision through discussion.

The **product roadmap** depicts the planned evolution of the product over the upcoming three or four releases, or designated unit of calendar time, and typically lists the features and business value to be delivered, the targeted product owner/customer, and the supporting architecture. The product owner/customer creates the roadmap in collaboration with the coach/facilitator, architect, and executive management. The product owner/customer owns the roadmap and meets with the coach/facilitator and executive management at designated intervals, typically quarterly or semi-annually, for its revision and further development.

The result of the kickoff meeting is the prioritized product backlog, which is owned and maintained by the product owner/customer. The product backlog lists the requirements/user stories that will be developed and contains columns for size estimates, planned sprints/iterations, and completed sprints/iterations.

The Release Planning Meeting

The coach/facilitator facilitates the release planning meeting which is attended by the team and the product owner/customer. The team selects the requirements/user stories to be included in the release from the product backlog which the product owner/customer has ordered/prioritized. Scrum uses the term “ordered” rather than “prioritized” to indicate that the entire product backlog must be considered to optimize value. Prioritization is just one approach to ordering the backlog. In Scrum, the team makes the final selection decision.

The team typically places the selected requirements/user stories, listed on sticky notes, on a white board. The team then divides the release, or designated unit of calendar time, into sprints/iterations.

It is very important that all team members, even those that are not co-located, participate in this meeting.

The Sprint/Iteration Planning Meeting

Typically, the team uses a flip chart or software (such as Jira, Rally, or TFS) for the sprint/iteration list, one page per sprint/iteration. For Scrum, the team lists the requirements that will fit into the sprints. For XP (eXtreme Programming), after estimating the relative size of the stories, the team lists the stories that will fit into the iterations. The team also lists the assumptions, constraints, dependencies, and risks, as well as decisions and issues that can impact the iteration.

For Scrum, the team identifies the tasks and estimates the time needed to complete those tasks for the current sprint only. For XP, the team elaborates the stories, identifies the tasks, and estimates the time needed to complete the tasks for the current iteration only. The team also performs any necessary negotiations with the product owner/customer.

Iteration 0 (zero)

Prior to the first iteration, iteration 0 sets the stage for iteration 1 and beyond by **ensuring that the vision statements for the project and release have been prepared**, the features in the product backlog have been prioritized and estimated; the stories have been decomposed, the length of the iteration has been set, the team is adequately staffed, the team is co-located, the definition of done is established, the team environment is acceptable, and the architecture has been determined.

Sprint Review

The coach/facilitator facilitates release and project reviews which may include, in addition to the team, people from across the organization. These meetings are conducted to showcase work and usually include a demo. Since the work is continuously integrated, usually on a daily basis, release and end of project integration are not issues.

Sprint Retrospective

The coach/facilitator facilitates a sprint retrospective at the end of each sprint/iteration to determine what went well and what needs to be improved so that the next sprint/iteration will be more efficient and effective.

The Scrum/Daily Stand-up Meeting

Each day begins with a short scrum/daily stand-up meeting so that team members can inspect and adapt the work plan, also known as the sprint/iteration backlog. Team members are expected to state **what they have done** since the last scrum/daily stand-up, **what they will do** until the next scrum/daily stand-up, and **what impediments stand in their way**. Anyone can attend the scrum/daily stand-up, but only team members can speak.

The team then codes, tests, and integrates its work.

Flow Concepts		
Concept	Agile Framework	Details
Release	Scrum	Releases are organized by timeline and are decomposed into iterations, called sprints, of 1 month or less
	XP (eXtreme Programming)	Releases are typically every three months and are decomposed into iterations of 1-4 weeks
Sprint/Iteration	Scrum	Scrum iterations are known as sprints , which are typically 1 month or less
	XP (eXtreme Programming)	Iterations are typically 1-4 weeks
Requirements/ User Stories (unit of functionality written in business language)	Scrum	Scrum typically obtains requirements from the product owner rather than user stories
	XP (eXtreme Programming)	XP typically obtains user stories from the product owner
Scrum/Daily Stand-up Meeting	Scrum	Scrum daily stand-up meetings are known as scrums and are limited to 15 minutes
	XP (eXtreme Programming)	Daily stand-up meetings are limited to 15 minutes
Backlog	Scrum, XP (eXtreme Programming)	A constantly evolving list of requirements/user stories that have not been completed and are available for selection to include in a sprint/iteration or release
Backlog Refinement	Scrum, XP (eXtreme Programming)	Typically, after receiving user feedback, the team and the product owner/customer meet to update the backlog by removing items that are no longer appropriate, reordering or re-prioritizing existing items in terms of business value, and refining user stories, if applicable, for planning and execution

8.3.2. Lean-Agile

Lean-Agile applies a value-stream approach to projects by blending complimentary methodologies that emphasize:

- Inspection and adaptation
- The **elimination of waste**
- The incorporation of quality
- The creation of knowledge

Lean-Agile lends itself to an empowered cross-functional team. The overall approach of a Lean-Agile project is to maximize the work not yet done.

8.3.3. Kanban (Workflow)

Kanban is an evolutionary, incremental process improvement approach. It is distinct from:

- The Kanban Method, which is an approach to change and uses the kanban system to encourage change
- The kanban system, a pull system that **limits WIP** based on the quantity of kanban cards in circulation (physical signal cards are used in manufacturing and virtual cards are used in software projects)
- kanban, physical signal cards used in manufacturing to assist flow

The primary goal of Kanban is to optimize existing processes. The Theory of Constraints (also called Goldratt's Theory of Constraints), Lean, and Six Sigma can also be used to accomplish this.

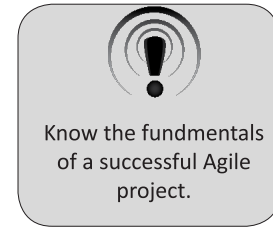
The secondary goals of Kanban are to:

- Deliver with **high quality**
- Improve lead time predictability
- Improve **employee satisfaction**
- Provide slack
- Simplify **prioritization**
- Provide transparency
- Enable the emergence of a high-maturity organization (level four, the second highest level, on CMMI's scale of capability and maturity)

8.4. Fundamentals of a Successful Agile Project

A successful Agile project is predicated on **the coach/facilitator**:

- Advocating for Agile principles by modeling those principles and discussing Agile values in order to develop a shared mindset across the team as well as between the product owner/customer and the team
- **Helping to ensure that everyone has a common understanding of the values and principles of Agile** and a common knowledge of the Agile practices and terminology that are employed in order to work more effectively
- **Supporting change at the system or organization level** by educating the organization and influencing processes, behaviors, and people in order to make the organization more effective and efficient
- Practicing visualization by **maintaining highly visible information radiators** showing real progress and real team performance in order to enhance transparency and trust
- **Contributing to a safe and trustful team environment** by allowing everyone to experiment and make mistakes so that team members can learn and continuously improve the way they work
- **Protecting the team from interruptions** and removing roadblocks
- **Enhancing creativity by allowing the team to experiment** with new technologies and process ideas in order to discover more efficient and effective ways of working
- **Encouraging team members to share knowledge** by collaborating and working together in order to lower risks around knowledge silos and to reduce bottlenecks
- **Encouraging emergent leadership** by establishing a safe and respectful environment in which new approaches can be tried in order to make improvements and foster self-organization and empowerment
- **Practicing servant leadership** by supporting and encouraging others in their endeavors so that they can perform at their highest level and continue to improve



8.5. Tools and Techniques

While Agile utilizes some traditional project management tools and techniques, it relies heavily on tools and techniques specifically created for use with the Agile approach.

8.5.1. Team Space

Innovation is the result of the effect that creative individuals have on each other.

The team space, sometimes referred to as a “**war room**,” is the area where the Agile team can work in an atmosphere that promotes collaboration, productivity, and innovation. Furnishings, lighting, and ventilation should be carefully selected to ensure this atmosphere. The information radiators should be visible to all.

