SCRUM GUIDE

2024

v.1.0

European Scrum

www.europeanscrum.org

Table of Contents

2. Introducción

2.1 Objectives of the Guide

This guide is designed to provide a deep and expert understanding of the Scrum framework, addressing both its theoretical principles and practical application. It is aimed at professionals who want to learn the basic principles of Scrum, as well as those who already possess knowledge of agile methodologies. This guide delves into the complexities and subtleties of Scrum, offering advanced insights, real-world examples, and best practices to optimize its implementation in various organizational environments. The guide and its content are designed to be used by any professional in any sector, whether it be software, engineering, legal, architecture, cultural, etc.

2.2 Origins and Evolution of Scrum

Scrum was initially conceived in the 1980s by Hirotaka Takeuchi and Ikujiro Nonaka, who introduced the term in the context of product development in their article "The New New Product Development Game." They described a holistic and integrative approach that increases speed and flexibility in product development, comparing it to a rugby team ("scrum") that advances together toward a goal.
In the 1990s, Ken Schwaber and Jeff Sutherland, recognized as the fathers of Scrum, formalized the framework and presented Scrum as a lightweight framework at the OOPSLA conference. Since then, Scrum has significantly evolved and has been widely adopted in the software development industry due to its simplicity, its ability to accommodate rapid changes, and its focus on delivering continuous value. Over time, it has evolved to be utilized in any sector.

2.3 Development and Key Contributions

Over the years, Scrum has been enriched and refined through numerous contributions from the global community. The ceremonies, roles, and artifacts of Scrum, which are now well known, were standardized and widely disseminated through materials such as the "Scrum Guide" by Schwaber and Sutherland, which is periodically updated to reflect emerging best practices and learnings from the agile community. The guide is enriched by real-world experiences in companies and their professionals, with improvements and best practices. Initially, Scrum was designed for developing technology solutions focused on software. Today, it is used in a wide range of sectors, including software, engineering, consulting, chemicals, architecture, culture, legal, etc.

3. Fundamentals of Scrum

3.1 Principles and Values of Scrum

Scrum is based on six fundamental values that guide team behavior and decision-making: Commitment, Courage, Focus, Openness, Respect, and Transparency. These values not only foster a culture of collaboration and effective communication but also help create a work environment where all team members can contribute to the fullest.

3.2 Basic Components of Scrum

The Scrum framework consists primarily of the following components: Actors, rules, events, and artifacts.

4. Roles in Scrum

Scrum clearly defines three main roles, each with specific responsibilities: Scrum Master, Product Owner, and Development Team. Together, they make up what is called the Scrum Team.

4.1 Scrum Team

Scrum defines the concept of a Scrum Team, which is responsible for developing a product, project, or service.
A Scrum Team always consists of a Product Owner, a Scrum Master, and a Development Team. It is recommended that the team size is no smaller than 5 and no larger than 11, meaning 1 SM + 1 PO + 1 Development Team.

4.2 Scrum Master

The Scrum Master is the facilitator, mentor, and coach for the Development Team and the Product Owner. They lead, facilitate, and support the entire team. Their primary objective is to build the team and ensure that it follows Scrum practices and processes effectively, helping the individuals and the Scrum Team grow. The Scrum Master is not a boss or supervisor but a servant leader and change agent whose focus is on the team's health and the project's productivity. The Scrum Master is a specific role, increasingly professionalized in people management and leadership. It is not recommended for the Product Owner or a Development Team member to take on this role simultaneously.

4.2.1 Soft Skills for a Scrum Master

- **Communication:** Ability to communicate clearly and effectively with all team members and stakeholders, including active listening skills, empathy, and the ability to facilitate constructive discussions.
- **Servant Leadership:** The Scrum Master serves the team, helping to remove obstacles and providing support where needed. This requires a humble and team-oriented approach.
- **Conflict Resolution:** Ability to identify, address, and resolve conflicts effectively, maintaining a collaborative and positive work environment.
- **Adaptability:** Flexibility to adapt to changing situations and the ability to help the team navigate changes without losing focus on project objectives.
- **Empathy and Interpersonal Understanding:** Understanding the individual and collective needs of the team, allowing the Scrum Master to foster an inclusive and motivating work environment.

4.2.2 Hard Skills for a Scrum Master

- **Sector and/or Product Knowledge:** It is advisable and necessary to have a high-level understanding of the sector and the product being developed to better assist and understand the stakeholders, whether they are clients, the Product Owner, or the Development Team. A Scrum Master in the banking sector is different from one in engineering.
- **Mastery of Scrum and Agile Methodologies:** Profound knowledge of Scrum and other agile practices, including the ability to teach and mentor others in these processes.
- **Facilitation of Scrum Events:** Ability to effectively facilitate all Scrum events (such as Sprint Planning, Daily Scrum, Sprint Review, and Sprint Retrospective) ensuring they are productive and keep the team focused on the Sprint goals.
- **Project Management:** While the Scrum Master is not a traditional project manager, they should understand project management principles to help guide the project within the Scrum framework.
- **Agile Project Management Tools:** Competence in using digital agile tools to manage the Product Backlog, track Sprint progress, and facilitate team collaboration, such as Jira, Trello, or Asana.
- **Measurement and Analysis:** Ability to use agile metrics (such as velocity, burndown charts) to measure team performance, identify areas for improvement, and adapt processes to maximize efficiency.

4.2.3 Conclusion on the Scrum Master Role

The Scrum Master role is multifaceted, requiring both exceptional interpersonal skills and diverse competencies. This role is crucial to the success of any team implementing Scrum, as it ensures the team not only follows the processes but also works cohesively, effectively, and with motivation toward their goals.

4.3 Product Owner

The Product Owner is responsible for defining the product vision and ensuring that the Scrum team's work backlog (Product Backlog) aligns with that vision. The Product Owner is the primary point of contact between the Scrum team and the stakeholders, ensuring the expected value is delivered by the product. The Product Owner is a specific and very complex role, increasingly professionalized. It is not recommended for a Scrum Master or a member of the Development Team to act as the Product Owner.

4.4 Development Team

A Development Team in Scrum is a diverse, cross-functional, self-organizing, and empowered group responsible for delivering the product or finished product increments. They are guided and mentored by the Scrum Master and oriented by the Product Owner. The Development Team does not have traditional hierarchical roles, such as team leader or supervisor; all members collaborate equally to complete the sprint tasks. The recommended team size is between 3 and 9 people.

4.4.1 Soft Skills of the Development Team

- **Collaboration and Communication:** The ability to work efficiently as a team, openly communicate progress and challenges, and cooperate with team members to solve problems.
- **Adaptability and Flexibility:** The ability to quickly adapt to changes in project priorities and new emerging technologies or methods.
- **Problem-Solving:** The capacity to face complex challenges and find effective solutions in collaboration with team members.
- **Responsibility and Commitment:** Commitment to the team’s objectives and individual and collective responsibility for completing assigned tasks.
- **Continuous Growth:** Dedication to continually improving technical and teamwork skills through learning and feedback.

4.4.2 Hard Skills of the Development Team

- **Specific Competencies:** Each team member must possess the skills necessary to perform their specific work.
- **Agile Methodologies and Scrum:** A deep understanding of Scrum and other agile methodologies to maximize development efficiency and product delivery.
- **Agile Project Management Tools:** Experience with agile project management tools that facilitate collaboration and task management.

4.4.3 Conclusion of the Development Team Role

The Development Team is the driving force behind product creation in a Scrum environment. Its effectiveness depends not only on the skills of its members but also on their ability to work in a collaborative and self-organized team environment. Through effective communication, collaboration, and a strong work ethic, the Development Team can overcome technical challenges and meet project objectives effectively.

5. Scrum Artifacts

Scrum uses several artifacts to help teams manage their work during sprints, including the **Product Backlog**, the **Sprint Backlog**, and the **Increment**.

5.1 Product Backlog

The **Product Backlog** is an ordered list of everything required to develop a product, project, or service. The Product Backlog not only includes functionality but can also include prototypes, maintenance tasks, marketing plans, bugs or issues, designs, legal planning, various components, integrations, and more.

The **Product Owner** is responsible for its content, availability, and prioritization.

The Product Backlog is one of the key artifacts in Scrum and plays a crucial role in planning and executing agile projects. It is a prioritized list of everything that might be needed for the product, and it serves as the sole source of requirements for any changes made to the product. Let’s break down what it includes, who creates it, and how it is prioritized.

5.1.1 What Does the Product Backlog Include?

The Product Backlog contains a variety of items that may include features, functions, requirements, documentation, improvements, and fixes needed to deliver a successful product. The backlog items should be

clear and detailed enough for the team to understand. Each item typically includes:

- **Description:** A brief explanation of what needs to be done.
- **Value:** The value that the item brings to the business or user.
- **Estimates:** Work estimates, often using story points, to help with sprint planning.
- **Acceptance Criteria:** Clear definitions of what it means for an item to be completed, ensuring that everyone on the team understands when the item is done.

5.1.2 Who Builds the Product Backlog?

The **Product Owner** is responsible for creating, maintaining, and prioritizing the Product Backlog, but never in isolation. They collaborate with the **Development Team** or its members. The Product Owner works with the Development Team, facilitated by the Scrum Master, to understand, create, estimate, and prioritize the Product Backlog. Building an effective backlog is a collaborative effort of the entire Scrum Team.

- **Product Owner:** Defines and prioritizes backlog items, ensuring they reflect the business's goals and priorities. These items are typically broken down into themes, epics, and user stories.
- **Development Team:** Provides details and estimates for backlog items and may suggest improvements or changes based on their expertise and experience.
- **Stakeholders:** Clients, users, and other stakeholders may provide insights and requirements that influence the backlog's composition.

5.1.3 How Is the Product Backlog Prioritized?

The Product Owner continually manages the prioritization of the Product Backlog to ensure that the most valuable work is done first. They may seek the Development Team’s help to understand the components, estimate them, and jointly prioritize with the team. Common methods for prioritizing the Product Backlog include:

- **Business Value:** Items that provide the most value to the business or end-user are prioritized higher.
- **Cost and Effort:** The effort required to complete a backlog item can also influence its priority.
- **Dependencies:** Some items may need to be completed before others due to technical or business dependencies.
- **Risk and Learning:** Items representing higher risks or significant learning opportunities may be prioritized to address them early in the project.

- **Stakeholder Feedback:** Input from stakeholders may lead to adjusting the priority of certain items to better align the product with market or user needs.

5.1.4 Tools and Techniques for Product Backlog Management

The use of digital tools such as **Jira**, **Trello**, or **Asana** can greatly aid in managing the Product Backlog, providing visibility and transparency for everyone involved. In addition, techniques such as backlog refinement are essential, where the Product Owner and development team regularly review the backlog to ensure the items are well-defined and prioritized.

5.1.5 Conclusion on the Product Backlog

The Product Backlog is critical to the success of agile development in Scrum, as it directs all activities for the Development Team during sprints. Its effective management requires clear communication, continuous collaboration between the Product Owner, the Development Team, and stakeholders, and a disciplined focus on delivering value to the business and end users.

5.2 Sprint Backlog

The **Sprint Backlog** is a set of items from the Product Backlog selected for development and delivery during the sprint, along with a plan for delivering the product increment and achieving the sprint goal. The Sprint Backlog contains the components to be implemented during the sprint, commonly referred to as **User Stories**, which are then broken down into tasks.

5.2.1 What Does the Sprint Backlog Include?

The Sprint Backlog includes:

- **Product Backlog Items:** These are the items selected during the Sprint Planning meeting that the team commits to completing during the sprint. These items are broken down into smaller tasks necessary to complete each item.
- **Sprint Plan:** It includes specific tasks, task assignments, and time estimates required to complete the selected Product Backlog items. This plan is more than just a list; it is a visual map of how the team intends to achieve the sprint goals.

5.2.2 Who Builds the Sprint Backlog?

The **Development Team** is responsible for creating the Sprint Backlog. This process occurs during the Sprint Planning meeting, with collaboration from the Product Owner and sometimes the Scrum Master. The procedure is as follows:

- **Development Team:** Chooses the Product Backlog items they believe can be completed during the upcoming sprint. They then break these items down into detailed tasks and estimate the effort required to complete each task.
- **Product Owner:** Provides clarity on the Product Backlog items and helps ensure the team's expectations are aligned with business needs.
- **Scrum Master:** Facilitates the Sprint Planning meeting, ensuring the process runs smoothly and that all participants have the opportunity to contribute.

5.2.3 How Is the Sprint Backlog Managed?

The Sprint Backlog is built during the Sprint Planning event and is typically divided into two parts. The first part defines the sprint goal, the **Definition of Done** (DoD), and which Product Backlog items will be delivered in that sprint (called **User Stories**). The second part breaks these items into tasks, detects dependencies between tasks, estimates them, and assigns them to team members.

Managing the Sprint Backlog is a dynamic process that requires constant adjustments and continuous collaboration:

- **Daily Review and Update:** During the **Daily Scrum**, the team reviews the Sprint Backlog to assess progress toward the sprint goals. Tasks can be updated, added, or removed as necessary to better reflect the actual work being done.
- **Transparency and Visibility:** The Sprint Backlog should be visible to all team members and ideally accessible to stakeholders, ensuring everyone is informed of progress and facilitating team collaboration and support.
- **Adaptability:** The team must be flexible and capable of adapting the Sprint Plan as challenges arise or new feedback is received. This is essential to maintaining momentum and ensuring the delivery of value.

Tools and Techniques for Sprint Backlog Management:
Digital tools like **Jira**, **Trello**, or **Asana** are useful for managing the Sprint Backlog, offering features that facilitate task visualization, progress tracking, and real-time collaboration. These tools can also be integrated with other software platforms for more efficient management.

The Sprint Backlog is a living component of Sprint planning and execution in Scrum, reflecting the work that the Development Team commits to completing. Its effective management is crucial for sprint success, as it provides a clear and adaptive framework that guides the team through the sprint toward the delivery of a high-quality product increment.

5.3 The Increment

The **Increment** is a central artifact in Scrum that represents the sum of all completed Product Backlog items during a sprint, plus all previous increments. It is essentially a version of the product at the end of a sprint that meets the quality criteria and is ready to be released or presented to stakeholders. Let's explore what the Increment includes, how it is formed, and its importance.

5.3.1 What Does the Increment Include?

The Increment includes:

- **Completed Features or Components:** All product backlog items (PBIs) completed and tested during the sprint that meet the defined acceptance criteria.
- **Integration of Previous Features or Components:** The increment also includes all features developed in previous sprints that remain part of the product. It must work cohesively with the newly added features.

5.3.2 How Is the Increment Formed?

The increment is formed through the work completed by the **Development Team** during a sprint. The key steps and considerations include:

- **Task Selection:** At the start of the sprint, the Development Team selects Product Backlog items they believe can be completed, forming the Sprint Backlog.
- **Development and Testing:** During the sprint, the team works on the tasks, developing and testing functionalities to ensure they meet the defined acceptance criteria and do not compromise existing functionality.
- **Continuous Integration:** Ideally, the team uses continuous integration practices to ensure that new features or components are regularly integrated with the existing product and thoroughly tested.

- **Sprint Review:** At the end of the sprint, the Development Team presents the increment during the **Sprint Review** to gather feedback from stakeholders and the Product Owner.

5.3.3 Importance of the Increment

The increment is crucial for several reasons:

- **Tangible Value:** It represents tangible progress toward the project's final goal, providing a version of the product that is closer to the final version to be released.
- **Feedback and Improvements:** It facilitates the collection of feedback from users and stakeholders, allowing for adjustments based on real market responses.Continuing from where we left off:

5.3.3 Importance of the Increment

The Increment is crucial for several reasons:

- **Tangible Value:** It represents tangible progress toward the project’s final goal, offering a version of the product that is closer to the final release.
- **Feedback and Improvements:** It facilitates gathering feedback from users and stakeholders, allowing for adjustments based on real market responses.
- **Foundation for Future Decisions:** Each Increment provides a basis for making decisions about the future direction of product development, including adjustments in product strategy and backlog prioritization.

5.3.4 How to Ensure the Quality of the Increment?

To guarantee that each Increment is potentially releasable, the Development Team must adhere to rigorous quality standards:

- **Definition of Done (DoD):** Before an Increment can be considered complete, it must meet the agreed **Definition of Done** by the team and the Product Owner. This includes specific criteria that each feature must meet to ensure quality.
- **Automated and Manual Testing:** Both automated and manual testing during development helps identify and fix bugs before they are fully integrated into the product.

5.3.5 Conclusion on the Increment

The Increment is the concrete result of each Sprint in Scrum, not only demonstrating the project’s progress but also validating the product development’s direction and strategy. By ensuring that each Increment is

of high quality and potentially releasable, the Development Team significantly contributes to the project's success and adaptability.

6. Scrum Events

In Scrum, we find various events: the **Sprint**, **Sprint Init or 0**, **Sprint Planning**, **Daily Scrum**, **Sprint Review**, **Sprint Retrospective**, and **Backlog Refinement (or Grooming)**.

6.1 Sprint

The **Sprint** is a fundamental component of Scrum, forming the heart of the development cycle. It is a fixed period during which the team develops a specific set of features from the Product Backlog, which should result in a product increment. We will explore in detail the Sprint duration, the concepts of **MVP (Minimum Viable Product)** and **MMP (Minimum Marketable Product)**, and who decides the Sprint length.

6.1.1 Sprint Duration

A Sprint in Scrum has a fixed duration, generally ranging from one to four weeks. The duration should not be modified during the Sprint. The length is decided based on several factors such as complexity, the duration of MVPs, MMPs, or the project, the team's experience, the client’s needs, etc. The most common duration is two weeks. This consistency creates a predictable work rhythm known as cadence, helping the team to plan ad deliver improvements continuously.

6.1.4 Factors Influencing the Sprint Duration Decision:

- **Project Complexity and Risk:** More complex projects may require longer Sprints to adequately handle development and testing.
- **Product Nature:** Products that need quick market feedback may benefit from shorter Sprints.
- **Team Capacity and Experience:** The experience and efficiency of the development team can also influence the Sprint duration.

6.1.3 Who Decides the Sprint Duration?

The Sprint duration is typically decided by consensus among the entire Scrum Team. This decision is made during the project's planning phase and is based on the project's needs and the team's preferences. Once established, the Sprint duration remains constant throughout the project to maintain consistency and predictability.

6.1.4 Minimum Viable Product (MVP)

Sprints can be grouped into MVPs—a product version that contains the minimum features necessary to satisfy initial users and provide feedback for future development, or often to test or validate a hypothesis. The goal of the MVP is to release a product that early users can see and use, allowing the team to learn from their experiences to improve future iterations.

6.1.5 Minimum Marketable Product (MMP)

Sprints can also be grouped into **MMPs**, which is a product version that contains the minimum features needed to make the product marketable and deliver adequate value to a broader market segment. Unlike the MVP, which focuses on learning, the MMP focuses on delivering a product that has enough features to attract and retain customers.

6.1.6 Implementing MVP and MMP in Sprints

During Scrum development, the team can use the MVP strategy to determine the most critical features to include in the first Sprints. As the product evolves and more user information is gathered, the team can start working towards an MMP, expanding the product to meet the needs of a wider market.

6.1.7 Conclusion on the Sprint

The Sprint is a critical time period during which the team strives to turn Product Backlog items into functional product increments. The choice of Sprint length, as well as the development and implementation of an MVP or MMP, are strategic decisions that depend on multiple factors and significantly impact the success and effectiveness of agile development.

Purpose: Facilitate the rapid and repetitive development of high-quality products.

6.2 Sprint 0 or Sprint Init

Sprint 0 or **Sprint Init** is a key event in Scrum and any framework or methodology. In the original guide by Dr. Sutherland, it is not explicitly mentioned, as the guide assumes that the project or product has been presented through a proposal (for instance, via **RFPs**, **RFQs**, or **RFIs**), accepted and prepared, and then the project begins with the construction of the **Product Backlog** followed by **Sprint Planning**.

Professionals often overlook that Scrum is a lightweight framework, not a method. Just because something is not in the guide does not mean it should or cannot be done.

Every project needs an initial proposal to be submitted, accepted by the internal or external client, and then the product development can begin. This initial proposal is delivered in **Sprint 0**, also known as Sprint Init.

- **Duration of Sprint 0:** The time the client gives you to prepare a project or product proposal in Scrum, or the time you deem necessary in the case of internal projects.
- **Who Participates?** The entire Scrum Team assigned by the agility office participates, and often this same team, expanded as needed, will be the one executing the project.
- **What Does It Contain?** Like any proposal, it contains at least the following: Sprint length, if there are MVPs, MMPs and their approximate costs, estimated costs for materials and the project, Scrum team composition and characteristics, contract type, billing method, risk plan (if any), marketing (if any), and a **Story Mapping** or **Product Backlog** at a high level, commonly broken down into Themes.

6.3 Sprint Planning

Sprint Planning is a key ceremony in Scrum that marks the beginning of each Sprint. During this meeting, the Development Team, along with the Product Owner and Scrum Master, plans the work to be done in the upcoming Sprint.

The Sprint Planning meeting sets the foundation for a successful Sprint by ensuring that all team members understand the objectives and have a clear action plan. Let's go into detail about how this meeting is conducted, what decisions are made, and who participates.

6.3.1 Objectives of Sprint Planning

- **Define the Sprint Goal:** The Sprint Goal is a short, clear description of what the team intends to achieve during the Sprint. This goal guides the team’s work and helps maintain focus on the important outcomes.
- **Select Backlog Items:** Determine which Product Backlog items will be addressed during the Sprint, based on the Product Owner's priority and the team's capacity.
- **Develop a Work Plan:** Break down the selected Product Backlog items into smaller tasks and estimate the time and resources needed to complete them.

6.3.2 Participants

- **Product Owner:** Defines and explains the priorities of the Product Backlog and negotiates with the team on which features will be included in the Sprint.

- **Development Team:** Selects the Product Backlog items that it believes can be completed during the Sprint, based on their knowledge of the effort required for each task.
- **Scrum Master:** Facilitates the meeting, ensuring that all participants stay focused on the objectives and that the meeting runs efficiently.

6.3.3 Sprint Planning Process

- **Meeting Duration:** The duration of the Sprint Planning meeting can vary, but it is generally proportional to the Sprint duration. For example, for a one-month Sprint, the meeting can last up to 8 hours, and for shorter Sprints, it is proportional—6, 4, or 2 hours.
- **Product Backlog Review:** The Product Owner presents the highest-priority items in the Product Backlog for discussion with the team.
- **Negotiation and Item Selection:** The Development Team and Product Owner negotiate which items will be included in the Sprint. The team asks questions and clarifies any doubts about the items to ensure they fully understand the requirements.
- **Task Breakdown:** Once the Product Backlog items are selected, the team breaks them down into specific tasks. This step is critical in Sprint Planning, as it provides a detailed view of what needs to be done.
- **Task Estimation:** The team estimates the effort required for each task, using techniques such as **Planning Poker** or any other consensus-based estimation method.
- **Team Commitment:** At the end of the Sprint Planning meeting, the team commits to completing the selected work and achieving the Sprint Goal.

6.3.4 Importance of Sprint Planning

This meeting is fundamental because it defines the scope of the team's work for the Sprint and ensures that all team members have a clear understanding of their responsibilities. It also allows the team to manage its workload effectively and fosters commitment to the project’s objectives. Additionally, it provides an opportunity for the team to collaborate closely with the Product Owner, strengthening mutual understanding and communication.

In summary, **Sprint Planning** is an essential activity that prepares the team for Sprint success, ensuring that all team members are aligned and committed to a clear and achievable plan.

- **Purpose:** Decide what will be delivered in the Sprint and how the work will be carried out.

- **Duration:** Generally, the meeting should not last more than eight hours for a one-month Sprint. For shorter Sprints, the duration is proportional (e.g., 6, 4, or 2 hours for a one-week Sprint).

6.4 The Daily Scrum or Daily Stand-Up

The **Daily Scrum**, or "Daily Stand-Up," is an essential ceremony in the Scrum framework. This daily meeting is crucial to keeping the team aligned and focused on the Sprint goals. It serves as a synchronization tool that allows team members to report on their progress and discuss any challenges or impediments. Let's explore in detail how this meeting is conducted, what is discussed, and its importance.

6.4.1 Objectives of the Daily Scrum

- **Daily Synchronization:** Helps keep the team aligned on the progress of the work during the Sprint.
- **Impediment Identification:** Provides a platform for team members to highlight and discuss any obstacles that could hinder their progress.
- **Fostering Self-Management:** Encourages the team to manage their own performance and adapt to challenges in real time.

6.4.2 Participants

- **Development Team:** The main participants in the Daily Scrum. Each member shares their updates and discusses their plans for the day.
- **Scrum Master:** Facilitates the meeting to ensure it stays within the allocated time and achieves its purpose. Although the Scrum Master participates in the meeting, they should not lead it.
- **Product Owner:** May attend but is not an active participant unless quick clarifications about Product Backlog items are needed.

6.4.3 Daily Scrum Process

- **Meeting Duration:** The meeting is typically short, limited to 15 minutes, encouraging brevity and focus.
- **Meeting Format:** Traditionally, team members stand during the meeting (hence the term "stand-up") to keep it quick and efficient.
- **Key Questions:** Each team member answers three key questions:
    - What did I do yesterday to help the team meet the Sprint Goal?
    - What will I do today to help the team meet the Sprint Goal?
    - Are there any obstacles that are preventing me from meeting my goals or the Sprint Goal?

- **Task Tracking:** The meeting often takes place in front of a task board (either physical or digital), which allows team members to visualize task progress and facilitate discussion on the progress.

6.4.4 Importance of the Daily Scrum

- **Transparency and Communication:** Promotes transparency among team members and facilitates daily communication, which is essential for quickly identifying and resolving issues.
- **Adaptability and Flexibility:** Allows the team to make daily adjustments to the work plan to respond effectively to changes or challenges that arise.
- **Commitment and Responsibility:** Fosters a sense of responsibility and personal commitment, as each team member reports their progress and plans to the rest of the team.
- **Purpose:** Enable the Development Team to synchronize activities and create a plan for the next 24 hours.
- **Duration:** No more than 15 minutes, regardless of Sprint length.

6.5 Sprint Review

The **Sprint Review** is one of the key ceremonies in Scrum, held at the end of each Sprint. Its main purpose is to inspect the product increment and adapt the **Product Backlog** if necessary, based on feedback received. This meeting is crucial because it provides an opportunity for the Scrum Team to present their work to stakeholders and gather their feedback for future development. Below, we will dive into how this meeting is conducted, what is discussed, and its importance.

6.5.1 Objectives of the Sprint Review

- **Evaluate the Product Increment:** Review and demonstrate the features or increment developed during the Sprint to ensure they meet the acceptance criteria and the expectations of stakeholders.
- **Gather Feedback:** Collect direct feedback from stakeholders to inform the next steps in product development.
- **Adapt the Product Backlog:** Based on feedback and discussions during the Sprint Review, the **Product Backlog** may be adjusted to reflect new priorities, remove obsolete items, or add new requirements.

6.5.2 Participants

- **Development Team:** Presents the work completed during the Sprint and answers questions regarding the increment.
- **Scrum Master:** Facilitates the meeting, ensuring it stays on track and that all participants have the opportunity to contribute. The

Scrum Master also helps address any issues that may arise during the meeting.
- **Product Owner:** Represents the customer and business perspective, explains how the completed Product Backlog items met or did not meet the requirements, and discusses future priorities.
- **Stakeholders:** These may include customers, investors, and other departments affected by the product. Their feedback is essential to guide the product's direction.

6.5.3 Sprint Review Process

- **Preparation:** Before the Sprint Review, the Product Owner and Development Team prepare an agenda and ensure that the product increment is ready for demonstration.
- **Meeting Duration:** The duration of the Sprint Review depends on the size of the team and the Sprint's complexity, but it generally lasts between one and three hours.
- **Demonstration of the Increment:** The Development Team demonstrates the new features and discusses what was achieved during the Sprint. This is a practical demonstration, showing how the software or product works.
- **Discussion and Feedback:** After the demonstration, a discussion opens where stakeholders can ask questions, provide feedback, and suggest changes or improvements.
- **Review of the Product Backlog:** Based on the feedback received, the Product Owner and team discuss potential changes to the Product Backlog, including re-prioritizing remaining items and adding new requirements.
- **Summary and Next Steps:** The meeting concludes with a summary of what was discussed, and the next steps for future Sprints are agreed upon.

6.5.4 Importance of the Sprint Review

- **Alignment with Business and User Needs:** The Sprint Review ensures that the product development aligns with the needs and expectations of users and the business.
- **Opportunity for Adjustment:** It provides a regular opportunity to adjust the product's development direction, which is crucial in changing environments.
- **Transparency and Collaboration:** It fosters transparency and collaboration between the development team and stakeholders, strengthening trust and mutual understanding.

6.5.5 Conclusion

The **Sprint Review** is an essential meeting that allows the Scrum Team to validate their work and continuously adjust their plans. By actively involving stakeholders and regularly reviewing progress, the Sprint Review helps ensure that the final product meets or exceeds customer and market expectations.

- **Purpose:** Present the work completed and adapt the **Product Backlog** based on the feedback received.
- **Duration:** Generally, the meeting should not last more than four hours for a one-month Sprint. For shorter Sprints, the duration is proportional—3, 2, or 1 hour for a one-week Sprint.

6.6 Sprint Retrospective

The **Sprint Retrospective** is a crucial ceremony in Scrum that takes place at the end of each Sprint, after the **Sprint Review** and before the next **Sprint Planning**. Its purpose is to allow the team to reflect on the previous Sprint and identify improvements in their processes, behaviors, work environment, or anything else the team deems necessary. The goal is to foster a continuous cycle of learning and improvement. Let's explore this meeting in more detail, what is discussed, and why it is important.

6.6.1 Objectives of the Sprint Retrospective

- **Reflection on the Process:** Analyze what went well and what could be improved in terms of processes, tools, and relationships within the team.
- **Identification of Improvements:** Identify concrete actions to improve the team's efficiency, effectiveness, and work quality in future Sprints.
- **Fostering Self-Managed Teams:** Create a safe space for the team to discuss and commit to continuous improvement, promoting self-management and responsibility.

6.6.2 Participants

- **Development Team:** All members of the team actively participate by providing feedback and suggestions for improvement.
- **Scrum Master:** Facilitates the meeting to ensure that a positive and constructive atmosphere is maintained. The Scrum Master also helps guide the discussion and keeps the focus on identifying improvement actions.
- **Product Owner:** While not always required, the Product Owner may participate to offer insights from a business perspective and better understand the team's challenges.

6.6.3 Sprint Retrospective Process

- **Preparation:** As with any important meeting, good preparation can improve the effectiveness of the retrospective. This may include gathering specific performance data from the Sprint, feedback from team members, and any relevant notes taken during the Sprint.
- **Meeting Duration:** The retrospective usually lasts between 45 minutes and three hours, depending on the team's size and the complexity of the topics discussed.
- **Meeting Structure:** The meeting is often divided into three parts:
  - **What went well and can be improved?** Identify the successes and strengths of the last Sprint.
  - **What didn’t go well and should be improved?** Discuss challenges and areas where the team encountered problems.
  - **What was not done and should be implemented?** Propose improvements in general.
- **Improvement Actions:** The team decides on concrete actions to address identified issues.
- **Tools and Techniques:** Techniques such as "start, stop, continue," "fishbone diagram," or even more playful methods like "mad, sad, glad" can help structure the discussion and make it more effective.
- **Documenting Actions:** It is crucial that the identified improvement actions are documented and assigned to responsible team members to ensure they are implemented.

6.6.4 Importance of the Sprint Retrospective

- **Continuous Improvement:** By regularly reflecting and adapting their processes, the team can continuously improve their efficiency and effectiveness.
- **Team Commitment:** The retrospective fosters a sense of ownership and commitment among team members, as they have the opportunity to actively contribute to how they work.
- **Problem Resolution:** Provides a regular forum for addressing problems before they become significant obstacles.

6.6.5 Conclusion

The **Sprint Retrospective** is a vital tool for any Scrum team, providing a regular mechanism for self-assessment, adaptation, and proactive improvement. By dedicating time to understanding what works and what doesn’t, and committing to specific improvement actions, teams can significantly enhance their performance and job satisfaction.

- **Purpose:** Reflect on the past Sprint, identify, and agree on improvements that can be implemented in the next Sprint.

- **Duration:** No more than three hours for a one-month Sprint; for shorter Sprints, the duration is proportional (e.g., 45 minutes for a one-week Sprint).

6.7 Backlog Refinement

Backlog Refinement, or "Grooming," is a critical activity in Scrum. Its goal is to review, update, and prioritize items in the **Product Backlog** to ensure they are ready for future Sprints and to manage any potential changes in the current Sprint or Product Backlog items. Let's go into detail about how this activity is conducted, what is discussed, and why it is important.

6.7.1 Objectives of Backlog Refinement

- **Clarification of Backlog Items:** Ensure that all Product Backlog items are clearly understood and defined by the team.
- **Estimation of Items:** Estimate the effort required for each backlog item to facilitate future planning.
- **Prioritization of Items:** Prioritize Product Backlog items according to their business value and urgency, helping the Product Owner keep the backlog organized and focused on current business needs.
- **Identification of Risks and Dependencies:** Identify potential risks and dependencies between backlog items to better plan and manage them.
- **Managing Changes in the Product Backlog and Sprint Backlog:** Review and address any changes in the Backlog.

6.7.2 Participants

- **Product Owner:** Responsible for maintaining the Product Backlog and ensuring that its content, priorities, and details are clear and useful. They lead the grooming activity to ensure the Backlog reflects current priorities.
- **Development Team:** Actively participates in discussing technical details, estimating effort, and determining the feasibility of backlog items.
- **Scrum Master:** Facilitates the session to keep it focused and productive, ensuring the team stays within the time limits and that the activity remains effective.

6.7.3 Types of Backlog Refinement

There are two types of Backlog Refinement that are commonly used:

- **Static Refinement:** Scheduled for a few hours within a Sprint to prepare Product Backlog items that will be worked on in upcoming Sprints and to refine the Product Backlog overall.
- **Dynamic Refinement:** Happens whenever a request is made to modify a current Sprint item or an item from the Product Backlog. The goal is to ensure that changes are addressed as soon as possible.

The amount of time spent on Backlog Refinement, whether static or dynamic, is decided by the team, as long as the total time for refinement does not exceed 5-10% of the total Sprint duration.

6.7.4 Frequency and Duration

Although not a fixed ceremony, Backlog Refinement is typically conducted once per Sprint or as necessary. The duration varies but is usually between 5-10% of the total Sprint time. For instance:

- **One-month Sprints:** Between 8 to 16 hours spent on refinement.
- **Shorter Sprints:** Proportional time allocations, such as 2 to 4 hours for a one-week Sprint.

6.7.5 Backlog Refinement Process

- **Item Review:** The Product Owner presents items that need clarification, refinement, or estimation. This could include new items added to the Backlog or existing items that need more detail.
- **Item Breakdown:** Large items might need to be broken down into smaller, more manageable items. This is a collaborative effort between the Product Owner and the Development Team.
- **Estimation:** The Development Team estimates the effort required for each item, often using techniques such as **Planning Poker** to reach a consensus on how much effort each item requires.
- **Prioritization:** The Product Owner, with input from the team, reviews and adjusts the priorities of the Backlog items. Prioritization is based on feedback, changes in the market or business strategy, and the results of the last Sprint.

6.7.6 Importance of Backlog Refinement

- **Optimizes Sprint Planning:** By keeping the Product Backlog updated and prioritized, the Sprint Planning session becomes more efficient and focused.

- **Improves Product Quality:** Ensuring that only well-defined and understood items enter the Sprint helps improve the quality of the final product.
- **Adaptability and Flexibility:** Allows the team to quickly adapt to changes in business priorities or user needs.

6.7.7 Conclusion on Backlog Refinement

Backlog Refinement is an essential ongoing process that helps ensure that the team is always ready for the next Sprint. By keeping the Product Backlog clear, prioritized, and well-defined, the team can work more efficiently, deliver higher-quality products, and adapt quickly to changes.

7. Bibliography

Below are key references and resources related to Scrum and Agile practices:

1. **Manifesto for Agile Software Development**
   - URL: Agile Manifesto
2. **The Scrum Guide (2020)**
   - Authors: Ken Schwaber and Jeff Sutherland
   - URL: Scrum Guide 2020
3. **The Spotify Model (Scaling Agile)**
   - Authors: Henrik Kniberg and Anders Ivarsson
   - URL: Spotify Scaling
4. **Kanban and Scrum - Making the Most of Both**
   - Authors: Henrik Kniberg and Mattias Skarin
   - URL: Kanban and Scrum Book
5. **Agile Contracts Primer**
   - Authors: Andreas Opelt, Boris Gloger, Wolfgang Pfarl, Ralf Mittermayr
   - URL: Agile Contracts Primer
6. **Agile Product Ownership in a Nutshell**
   - Author: Henrik Kniberg
   - URL: Agile Product Ownership
7. **Scrum Primer**
   - Authors: Pete Deemer, Gabrielle Benefield, Craig Larman, Bas Vodde
   - URL: Scrum Primer
8. **Agile Testing: A Practical Guide for Testers and Agile Teams**
   - Authors: Lisa Crispin and Janet Gregory
   - URL: Agile Testing
9. **Scrum Master Checklist**
   - Author: Michael James
   - URL: Scrum Master Checklist
10. **Definition of Done**
    - Author: Scrum Inc.
    - URL: Definition of Done

8. Acknowledgments

Special thanks to **Yvonne Agnes** & **David Martí** for fully developing this guide. For any suggestions or improvements, feel free to contact: yvonne@europeanscrum.org.