Scrum Roles, Events, and Artifacts

Learning Objectives

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

- Describe the key responsibilities of each Scrum role to articulate the fundamental roles within a Scrum team
- List the different types of Scrum events to grasp the key ceremonies that structure a Scrum project
- Define the Definition of Done (DoD) in Scrum to understand what constitutes the completion of a product increment and it's importance in maintaining quality
- Develop a Definition of Ready (DoR) for user stories to ensure they are ready for sprint planning
- Identify the different types of Scrum artifacts to recognize the role of each artifact in tracking progress and facilitating communication

Introduction to Scrum Roles

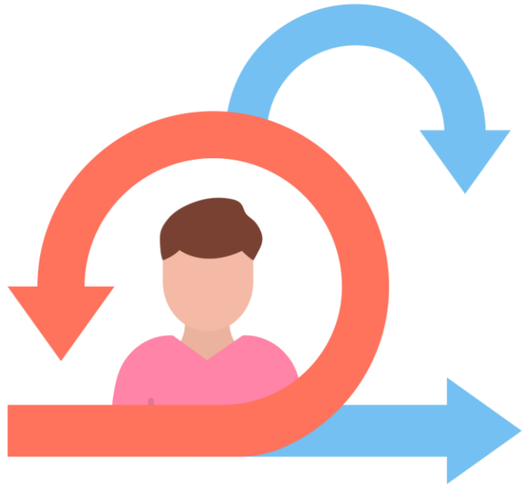
Scrum Roles

Scrum defines three primary roles within its framework:

Scrum Master

What Is Scrum Master?

A Scrum Master is a key role within the Scrum framework.



They are accountable for promoting and supporting Scrum as both a method and a process.

Scrum Master: Roles and Responsibilities

A Scrum Master has a three-part role:

Trainer

Facilitator

Coach

Scrum Master: Roles and Responsibilities

A Scrum Master can have the following responsibilities:

Shield from distractions	Acts as a buffer between the team and any distracting influences
Facilitator of communication	Enhances communication among team members and with stakeholders
Stakeholder engagement	Collaborates with Product Owners and stakeholders to manage expectations and ensure appropriate actions are taken
Reporting and metrics	Utilizes metrics and tools like burndown charts or velocity to monitor and report on the team’s progress

Skills Required to Be a Scrum Master

The essential skills required for a Scrum Master are as follows:

- Adaptability and flexibility
- Problem-solving abilities
- Organizational skills
- Conflict resolution
- Deep understanding of Agile and Scrum
- Coaching and mentoring
- Facilitation skills
- Communication skills

Scrum Master Selection: Scenarios

When considering the selection of a Scrum Master, it's important to evaluate different scenarios to ensure the best fit for the role. Here are key scenarios to consider:

Tech lead as Scrum Master

Tech leads' authority conflicts with Scrum's self-organizing nature, making them unsuitable as Scrum Masters.

Part-time Scrum Master

Initially, a full-time Scrum Master is ideal. As the team matures, the Scrum Master can take on other tasks, but their primary duties should remain the priority.

Scrum Master by rotation

Rotating the Scrum Master role each sprint is not recommended. This role requires specific skills and is vital for team success.

Activity: Role-Playing as a Scrum Master

Role-Playing as a Scrum Master

Scenario:
You have just been appointed as the Scrum Master for a new project in a mid-sized technology company. The project involves developing a complex software application for a high-profile client. The project faces several challenges that could impact the timeline and overall success, including:

- Lack of clear communication channels
- Differing levels of Scrum experience among team members
- Rapidly changing project scope due to evolving client requirements

Task:

- **Create a Plan:** Develop a detailed plan on how you will address the top three challenges your team faces, focusing on your roles and responsibilities as a Scrum Master
- **Present and Discuss:** Present your plan in a virtual meeting with your peers. Discuss potential improvements and gather feedback to refine your approach

Product Owner

What Is Product Owner?

A Product Owner provides the vision for the product and sets boundaries for projects.

Vision provider

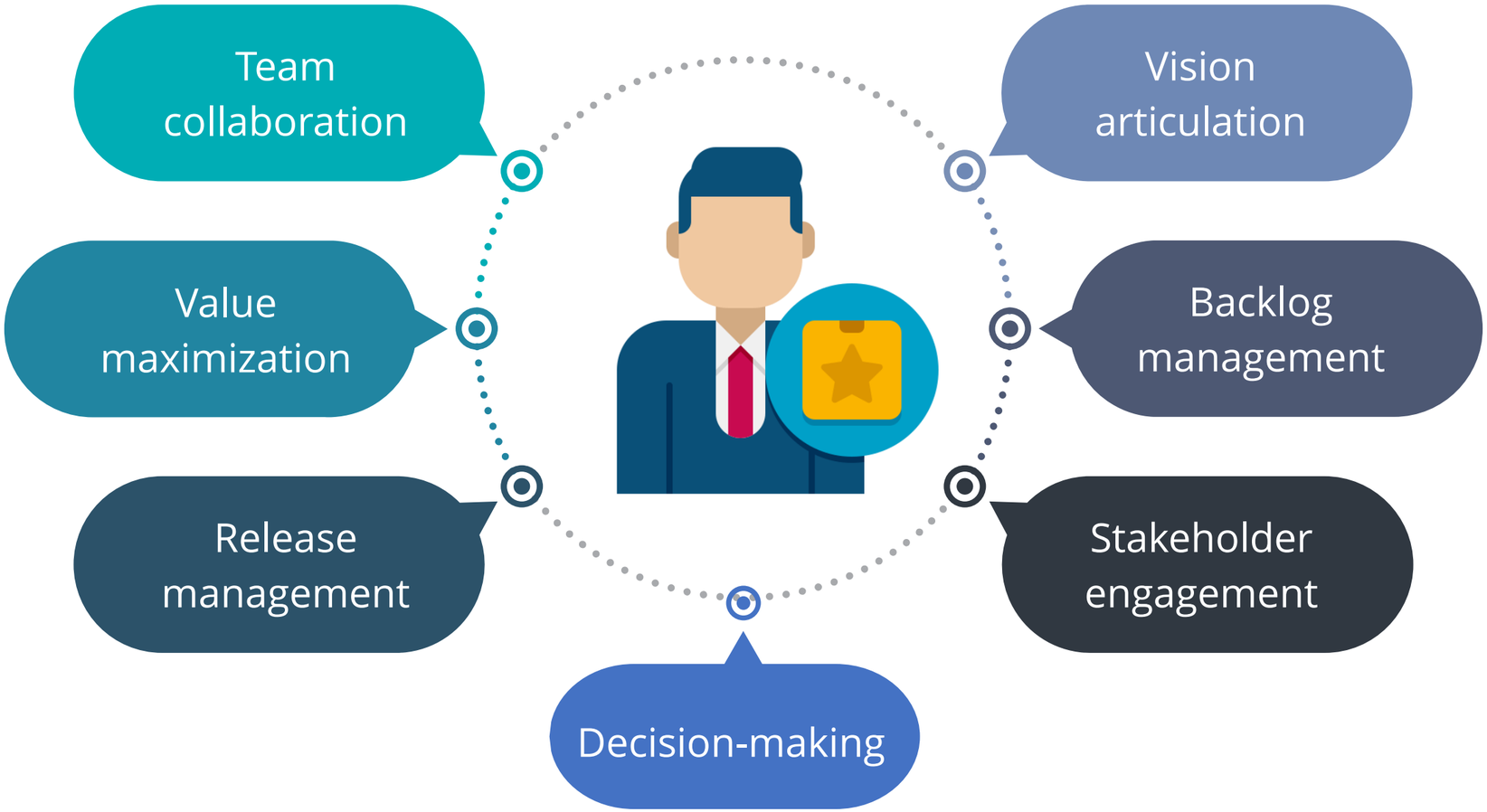
- Collects input about the product from various stakeholders
- Shares the vision and gains consensus
- Creates and maintains the product backlog

Boundary provider

- Establishes project boundaries
- Creates a release plan that aligns the roadmap with team estimates
- Sets expectations with stakeholders

Product Owner: Roles and Responsibilities

Product owner holds multiple roles and responsibilities, such as:



Skills Required to Be a Product Owner

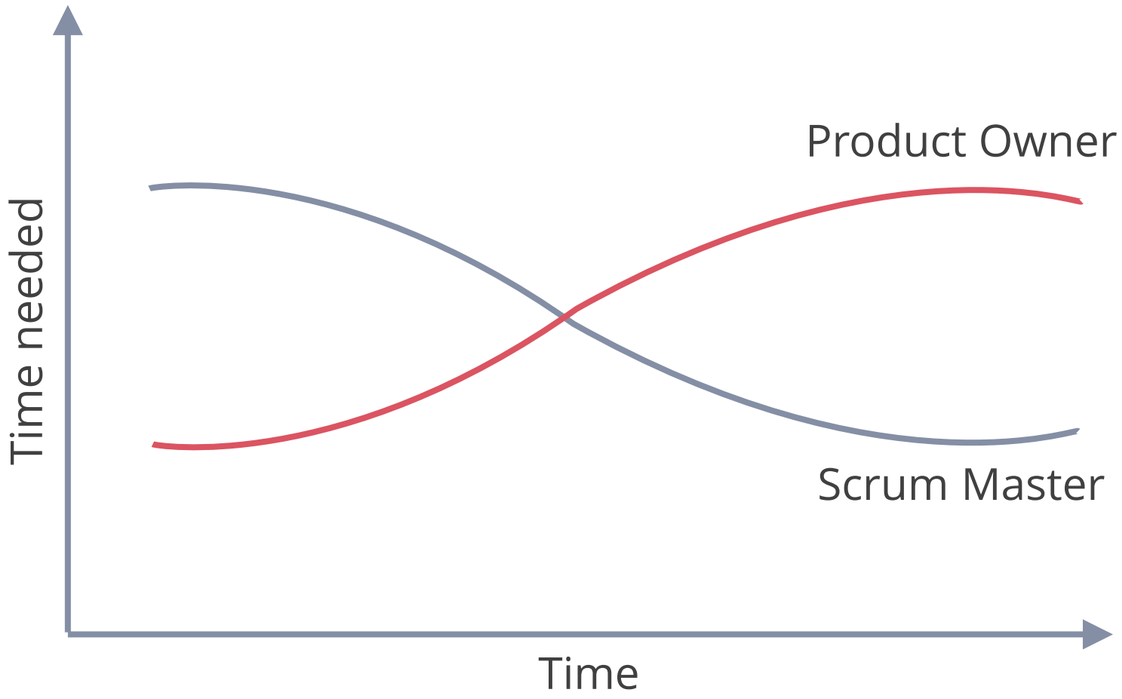
The essential skills required for a Product Owner are:

- Analytical skills
- User and customer focus
- Leadership and communication

- Product management expertise
- Business insights
- Technical proficiency

Time Commitments

Over time, the Product Owner's responsibilities increase, while the Scrum Master's workload decreases.



As the team matures, it needs less guidance and becomes less dependent on the Scrum Master.

As the product acquires more customers, the Product Owner gets busier with increasing product requirements.

Product Owner Selection: Scenarios

Consider the following scenarios while selecting a Product Owner for a team:

Part-time Product Owner

It is not recommended, as they are often too busy to manage multiple teams effectively.

Team of Product Owners

It is required for large teams to avoid misalignment and establish a clear decision-making authority.

Remote Product Owner

Global teams often have remote Product Owners. They must be available for key Scrum events to guide the team effectively.

Development Team

Development Team

They are one of the three core roles, alongside the Scrum Master and the Product Owner.

This team is cross-functional, meaning its members have all the skills necessary to create a working, tested increment of a product.

Development Team: Roles and Responsibilities

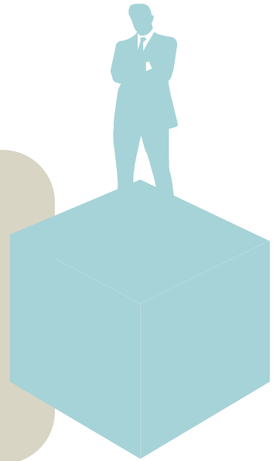
The development team can have the following roles and responsibilities:

Self-organizing

- Decide how to accomplish work
- Allocate tasks among themselves

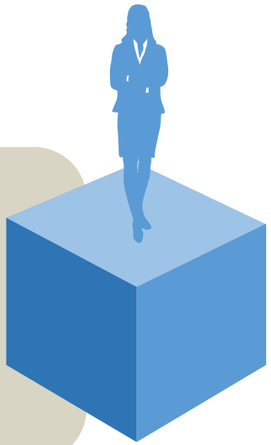
Delivery of product increments

- Create potentially shippable product increments
- Maintain quality and consistency



Cross-functional

- Possess all necessary skills
- Cover for each other



Planning and execution

- Participate in sprint planning
- Manage the sprint backlog

Development Team: Roles and Responsibilities

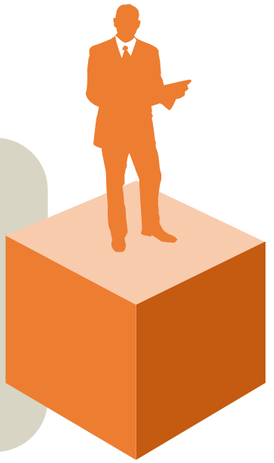
The development team can have the following roles and responsibilities:

Collaboration and communication

- Engage in daily Scrums
- Collaborate closely

Continuous improvement

- Participate in sprint retrospectives
- Refine processes



This team is pivotal in the Scrum process, responsible not only for doing the work but also for managing it, ensuring transparency, and promoting continuous improvement.

Agile Team

What Are Agile Teams?

They are small, cross-functional groups structured and empowered by the organization to manage their own work for the rapid delivery of high-quality products.

Each Scrum team can have up to 10 developers.

Smaller teams are more productive.

Multiple Scrum teams can be deployed for a huge product.

RACI Model

This model provides clarity about the roles each person plays in an Agile team.

Responsible	**A**ccountable	**C**onsulted	**I**nformed
The task performer is responsible for its execution.	This person is solely accountable for task completion and approval.	This person advises and assists, guiding the result through two-way communication.	This person is informed about decisions, progress, and results through one-way communication.

Activity: RACI Chart Creation

RACI Chart Creation

Scenario:
You have been assigned as the project manager for a digital transformation project at a mid-sized company. The project involves migrating the company's legacy systems to a cloud-based platform. This project is critical to the company’s long-term strategy, but it involves multiple stakeholders from different departments, each with their own expectations and interests. Due to the complexity of the project and the involvement of many parties, confusion has arisen about responsibilities. Misunderstandings about roles and responsibilities have already led to delays in decision-making and conflicts among team members.

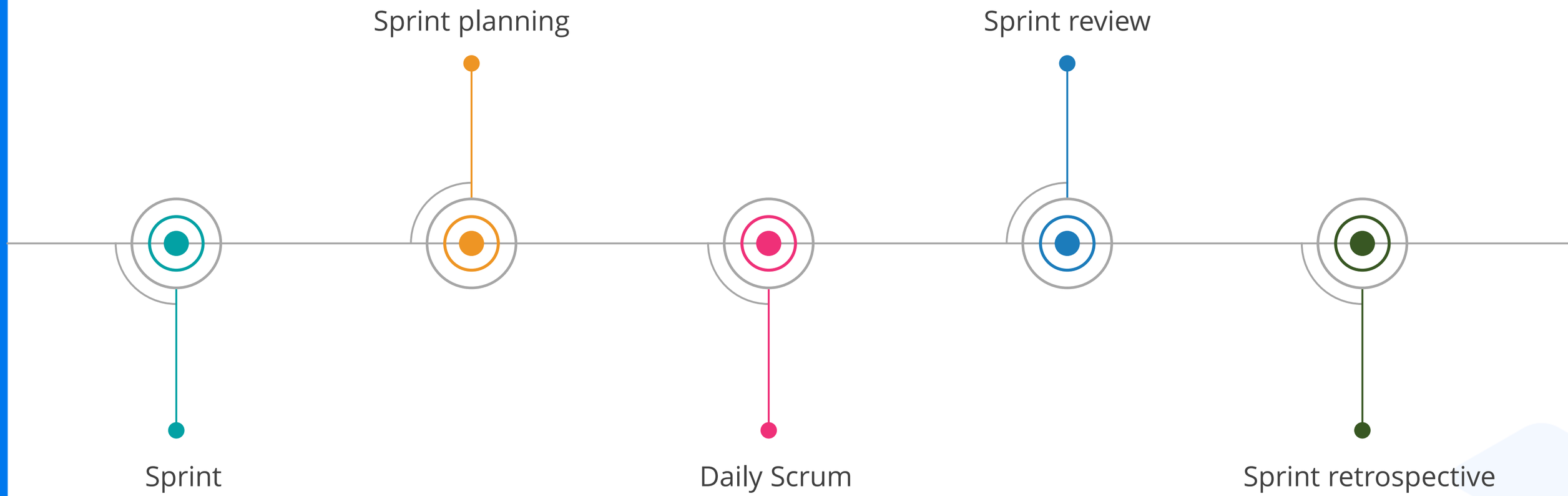
Task:

- Create a RACI chart for your project, defining who is responsible, accountable, consulted, and informed for each task
- Use a RACI chart tool (like RACI matrix) to create your chart and share it with peers for review and suggestions

Types of Scrum Events

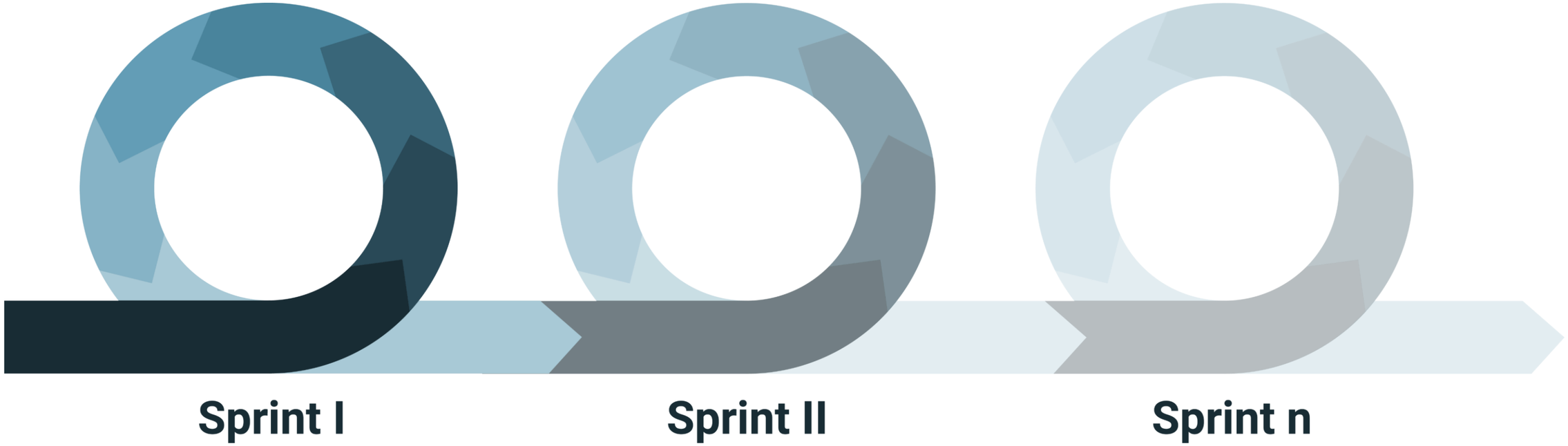
Scrum Events

They are structured meetings designed to ensure the Scrum team collaborates effectively and stays on track to meet their goals. Scrum includes five key events:



What Is a Sprint?

It is a set period during which specific work must be completed and made ready for review.



This structured approach ensures regular feedback and iterative progress in product development, which is central to Agile methodologies.

Characteristics of Sprints

Timeboxed	Sprints have a fixed duration, typically ranging from one to four weeks.
Goal-oriented	Each sprint has a specific sprint goal that defines what needs to be achieved.
Iterative and incremental	Work is done in small, manageable increments.
Fixed scope	Once a sprint begins, the scope of work is fixed.

Characteristics of Sprints

Review and adaptation	At the end of each sprint, a sprint review is conducted to inspect the product increment and gather feedback.
Potentially shippable product increment	The outcome of each sprint is a potentially shippable product increment.
Collaborative	The Scrum team collaborates closely, holding regular meetings to synchronize efforts.
Transparency	Progress and impediments are made visible through artifacts like the sprint backlog and burndown chart.

Sprint Planning

It is a meeting held at the beginning of each sprint where the team plans the work to be completed during the upcoming sprint.

It is attended by the development team, Scrum Master, and Product Owner.

It typically lasts one to two hours for a one-week sprint, with longer sprints requiring more time.

The purpose of this meeting is to define the sprint goal, select product backlog items for the sprint, and create a plan for delivering the increment.

Sprint Planning

The following are two possible approaches to sprint planning:

Commitment driven

- The team commits to a set of product backlog items they believe they can complete during the upcoming sprint.
- The focus is on the team's commitment to delivering the selected items by the end of the sprint.

Velocity driven

- The team uses historical data to estimate the work they can complete in the upcoming sprint.
- The emphasis is on using empirical data to predict workload, aiming for a more consistent and reliable delivery rate.

Daily Scrum

The daily Scrum is a forum for sharing information within the team.

Attendees

The meeting is attended by the development team and the Scrum Master.

Timebox

The meeting is timeboxed to no more than 15 minutes per day.

Agenda

The updates should be tasks done yesterday, tasks for today, and blocking issues.

Sprint Review

It is a critical meeting held at the end of each sprint, where the deliverables from the sprint are demonstrated.

Attendees

This meeting is attended by the development team, Product Owner, Scrum Master, and interested stakeholders.

Timebox

The meeting usually takes about an hour or two.

Agenda

The purpose is to showcase the achievements, generate feedback, and decide about the release.

Sprint Retrospective

It is a continuous improvement mechanism within the Scrum team. The meeting aims to make issues visible, generate improvement options, and empower the team with ownership of the resulting actions.

Attendees

The meeting is attended by the development team, Scrum Master, or an external facilitator.

Timebox

The meeting is timeboxed to no more than an hour.

Agenda

The purpose is to make issues visible, identify improvement opportunities, and give the team ownership of actions.

Activity: Sprint Essentials Practice

Sprint Essentials Practice

Scenario:
You are part of a Scrum team working on developing a new feature for an e-commerce platform. The sprint is currently in its second week, with the goal of implementing and testing the feature before the sprint ends. During the sprint, the team faces several challenges that could impact the outcome.

Task:
Below are different situations that occur during the sprint. For each situation, identify the most appropriate action you should take based on your understanding of the sprint process.

- **Situation A:** The team discovers a critical bug in the existing codebase that must be fixed before integrating the new feature. Fixing the bug was not planned for in the sprint.
- **Situation B:** Midway through the sprint, you realize that the team has overcommitted, and it's unlikely all planned tasks will be completed by the end of the sprint.
- **Situation C:** A stakeholder requests a change to the feature being developed, but this change would require significant adjustments and time.
- **Situation D:** On the last day of the sprint, the team finishes all tasks except for one crucial aspect of the feature that wasn’t completed due to unforeseen challenges.

Activity: Conducting a Sprint Retrospective

Conducting a Sprint Retrospective

Scenario:
Your Scrum team has just completed a two-week sprint aimed at developing a new payment feature for an e-commerce platform. The sprint was critical as it involved integrating multiple third-party payment gateways and ensuring the system’s security. Despite the team's hard work, there were a few hurdles along the way, such as integration issues with one of the payment gateways and delays in testing. As the Scrum Master, it's your responsibility to facilitate a sprint retrospective meeting. The goal is to help the team reflect on their work, identify areas for improvement, and set actionable steps for the next sprint.

Task:

- Bring the entire team together for the retrospective
- Explain the purpose of the retrospective
- Ask team members to share insight

Definition of Done (DoD)

Definition of Done (DoD)

It is the list of requirements that must be satisfied to consider an increment a success.

It ensures transparency and quality in the delivery of new features, enhancements, or patches.

Purpose of DoD

Supporting estimation

It assists in accurately estimating work efforts by establishing clear criteria that must be met for completion.

Ensuring quality

It sets a consistent quality standard for all deliverables, maintaining a high product quality.

Facilitating trust

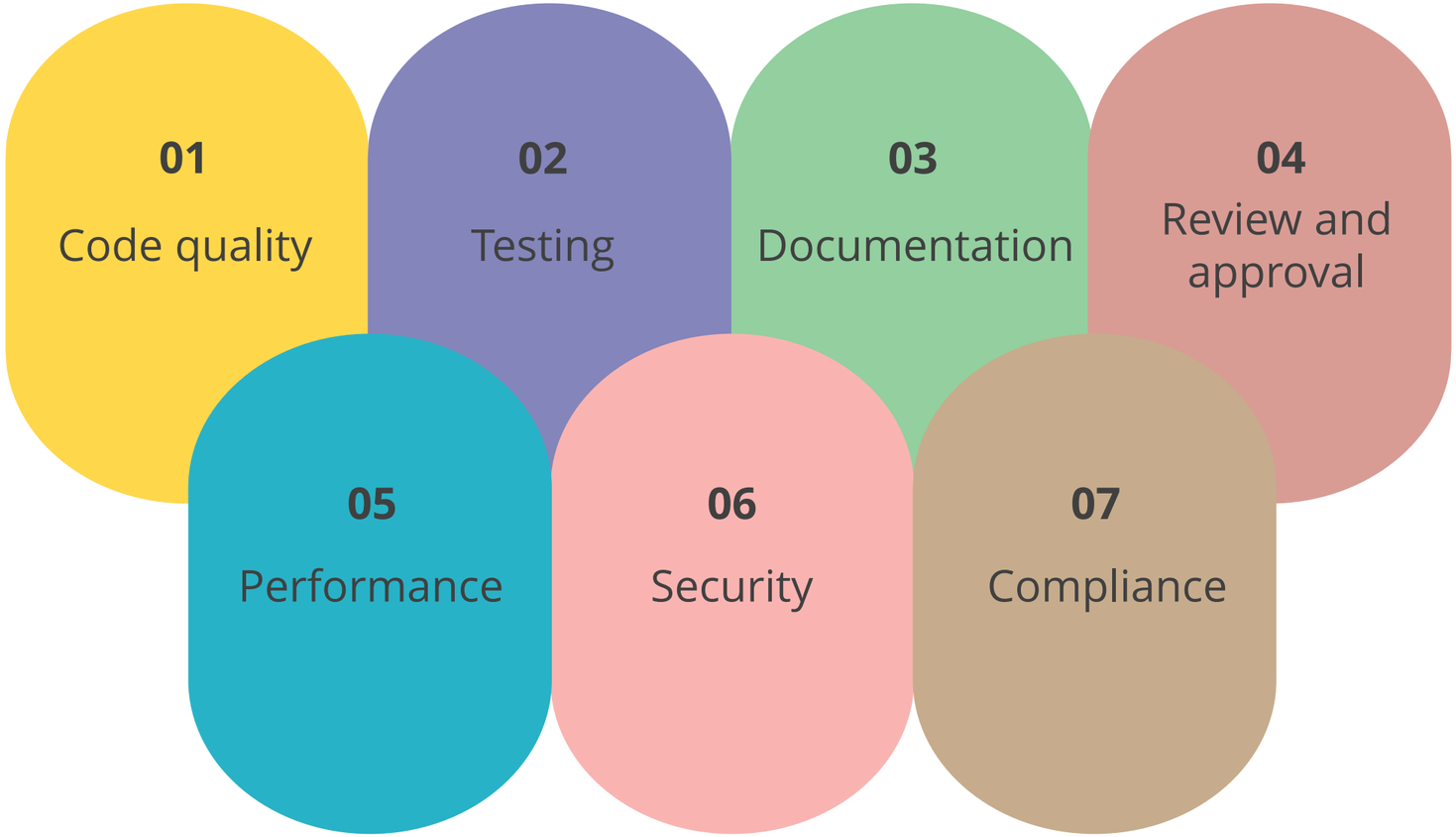
It builds trust by consistently meeting completion criteria agreed upon by the team and stakeholders.

Transparency

It ensures a clear, shared understanding of completed work, eliminating ambiguity.

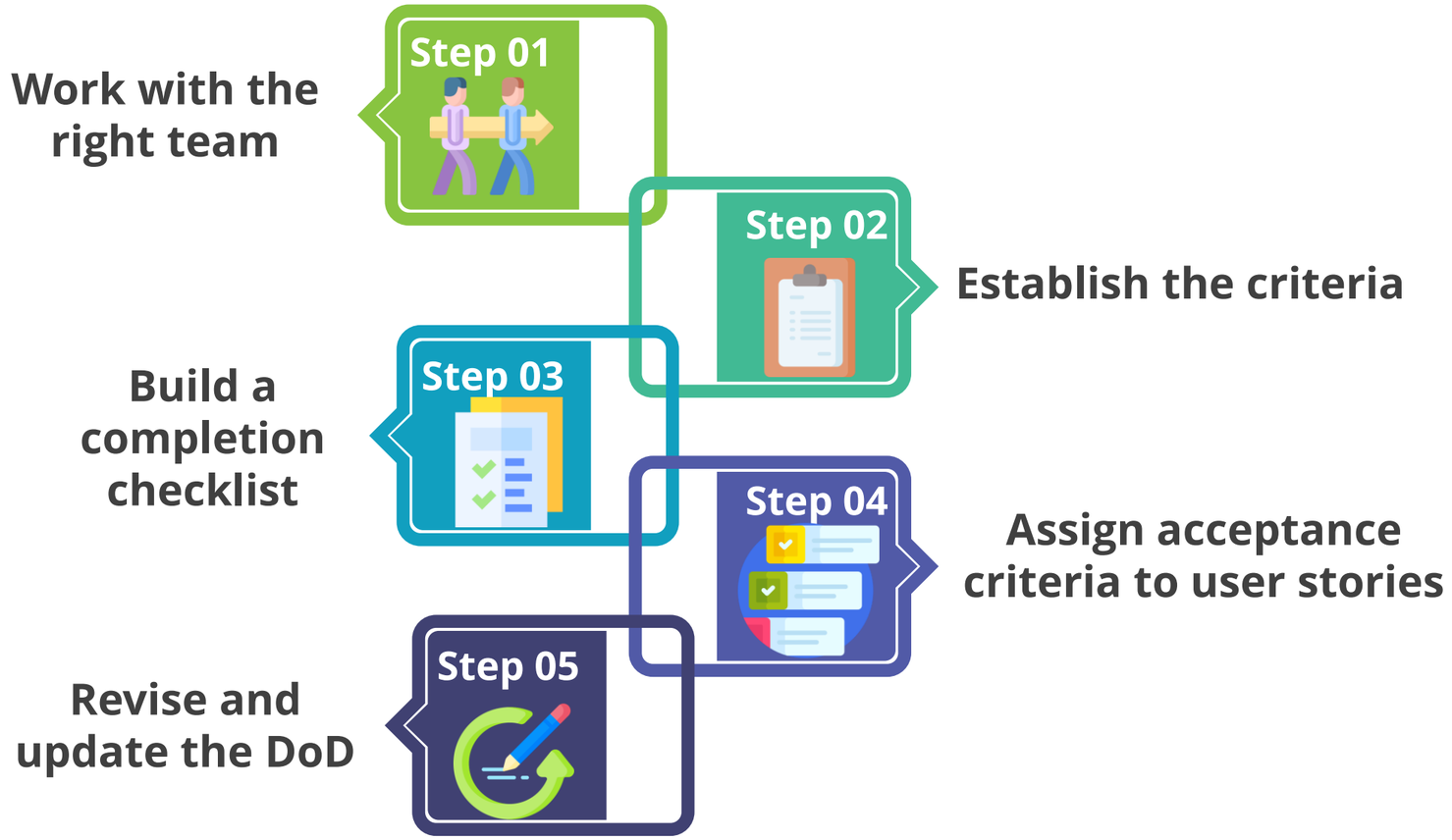
Components of DoD

The DoD may vary from one team to another or from project to project but typically includes aspects such as:



Setting Up DoD

Factors involved in setting up DoD are:



Benefits of DoD

Predictability

Reduction of rework

Continuous improvement

Definition of Ready (DoR)

Definition of Ready (DoR)

It is a checklist that outlines the prerequisites that must be met before the team can begin working on a task. An item is considered ready to be worked on if:

1. It is clear and properly understood.
2. Acceptance criteria are well-defined.
3. Necessary resources are available.
4. Dependencies are sorted out.
5. The effort required is estimated.
6. Non-functional aspects are properly understood.

Purpose of DoR

It ensures that all team members have a clear and shared understanding of what needs to be done.

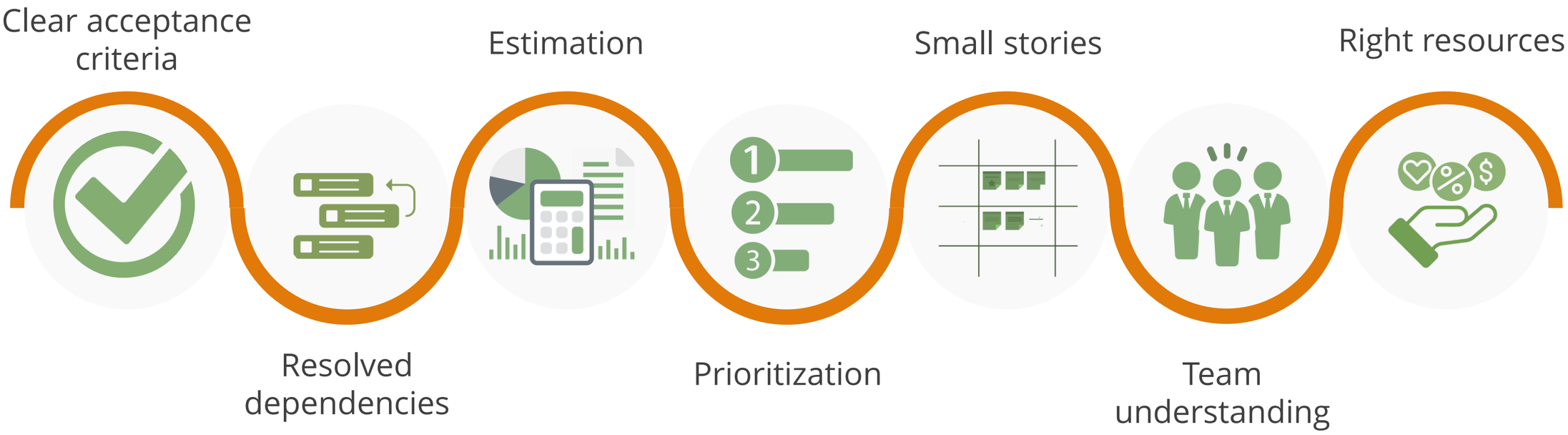
It confirms that the work can be completed within a sprint, given the team's capacity and the complexity of the task.

It prevents work from entering the sprint that isn't well defined and inefficiencies during the sprint.

It helps maintain quality by ensuring all necessary information and preparatory work are completed beforehand.

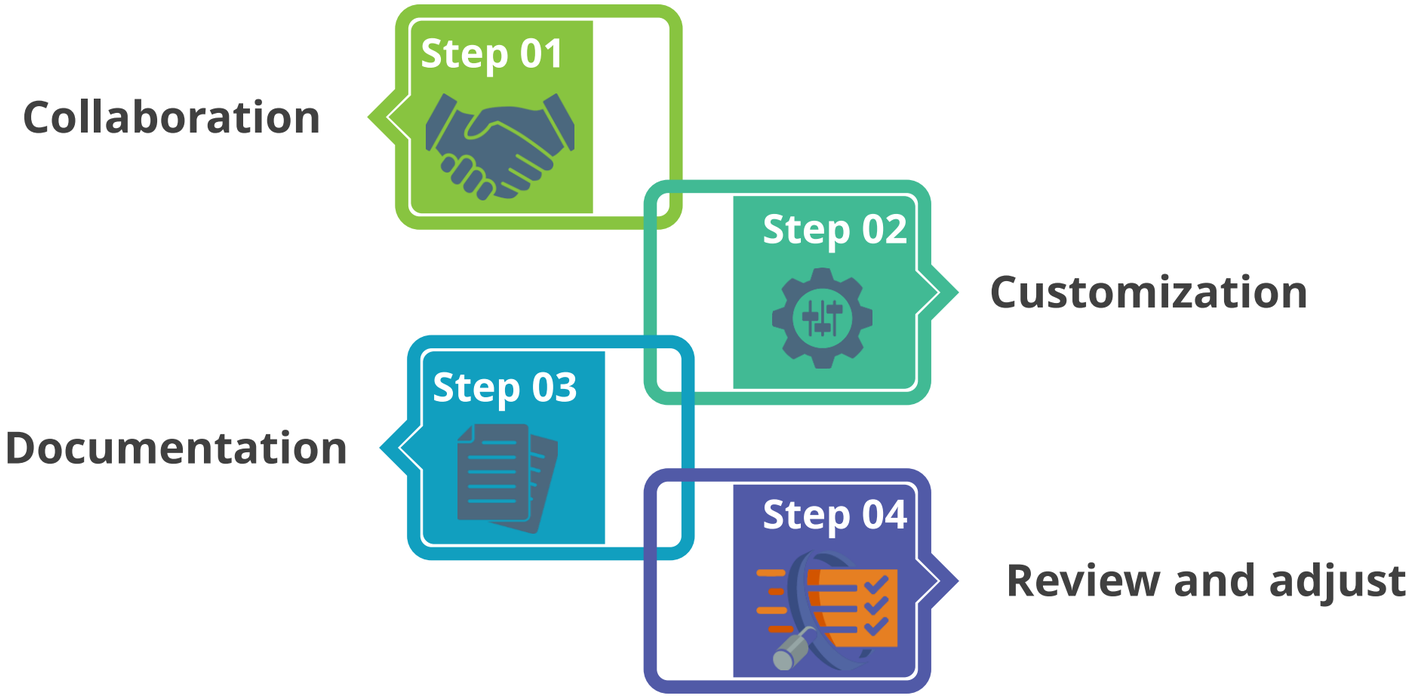
Components of DoR

While the specific items in a DoR can vary between teams or projects, common components often include:

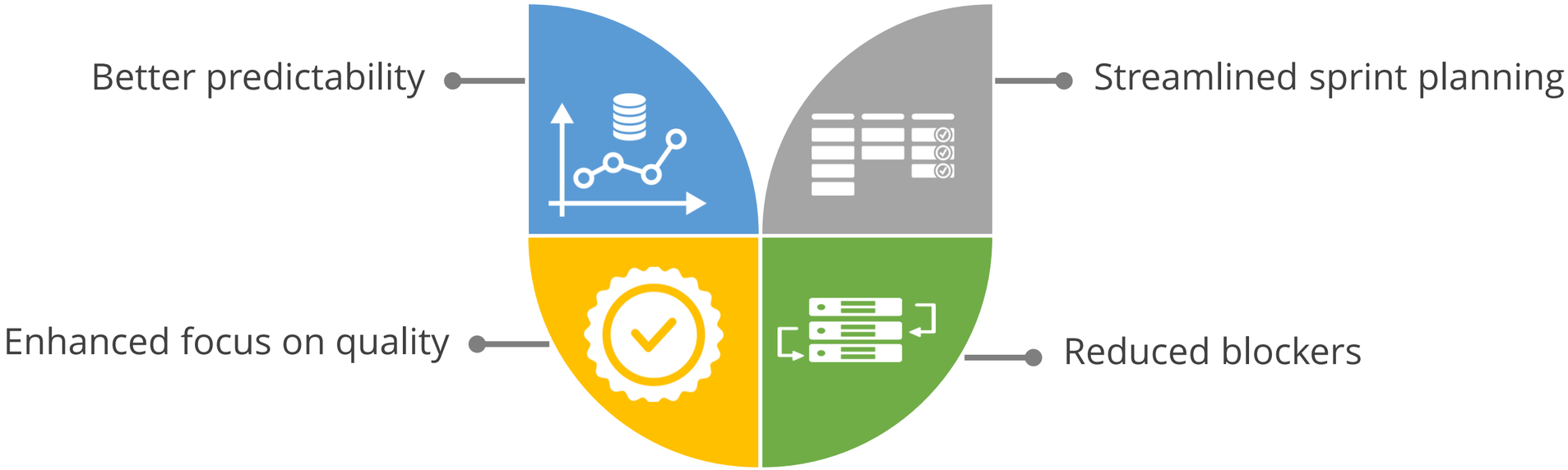


Setting Up DoR

Steps to setup an effective DoR are:



Benefits of DoR



Scrum Artifacts and Their Types

Scrum Artifacts

These are key tools in the Scrum framework that provide transparency and opportunities for inspection and adaptation. The primary Scrum artifacts are:

These artifacts are essential for both the Scrum team and stakeholders to understand the progress and direction of the project.

Backlog

It is a list of tasks or work items that need to be addressed during the project lifecycle.

This dynamic document evolves as the project progresses, with new items being added, priorities shifting, and tasks being completed.

Backlog Refinement

It is an integral part of the team’s activities, where teams should plan on performing refinement periodically throughout a project. It includes:

- Discovering and describing items
- Prioritizing the backlog
- Sizing the backlog item
- Preparing for the next sprint

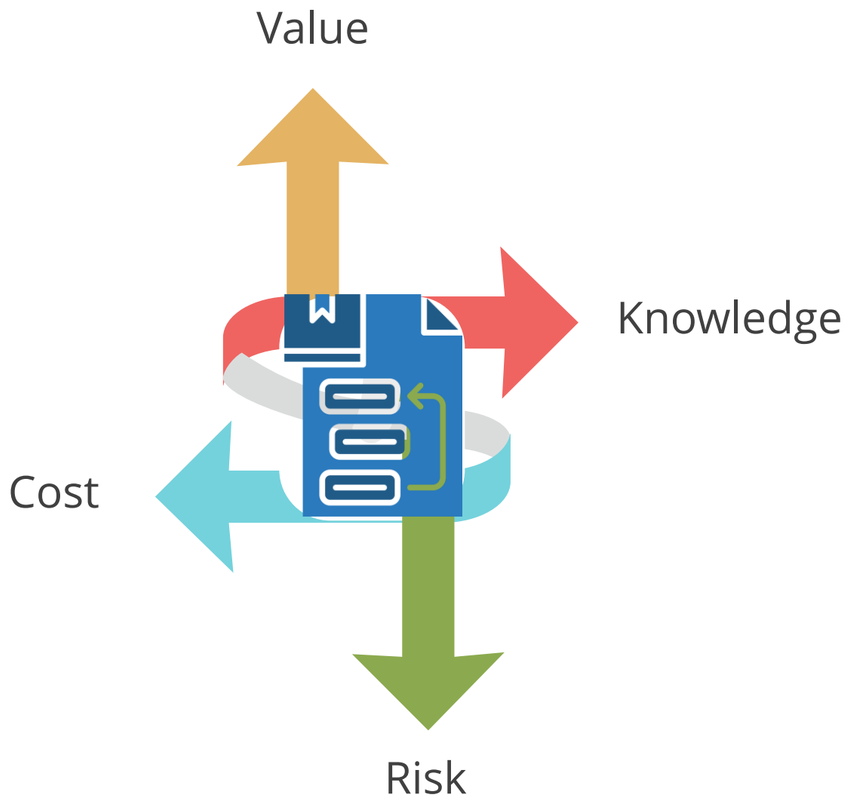
Types of Backlog

1. Product backlog
2. Sprint backlog
3. Release backlog

Product Backlog

It is a prioritized list of all requirements and work to be done on the product.

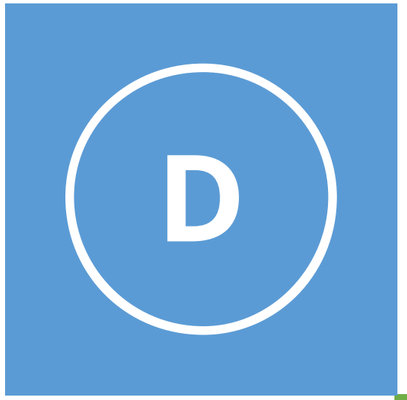
The product backlog depends on:



It serves as the single source of requirements for any changes to be made to the product.

Characteristics of Product Backlog

A good way to determine the desirable characteristics of the product backlog is the acronym **DEEP**:



Detailed appropriately

Items with higher priority are provided with more details.

Estimated

Estimates are expressed in story points or ideal days.

Emergent

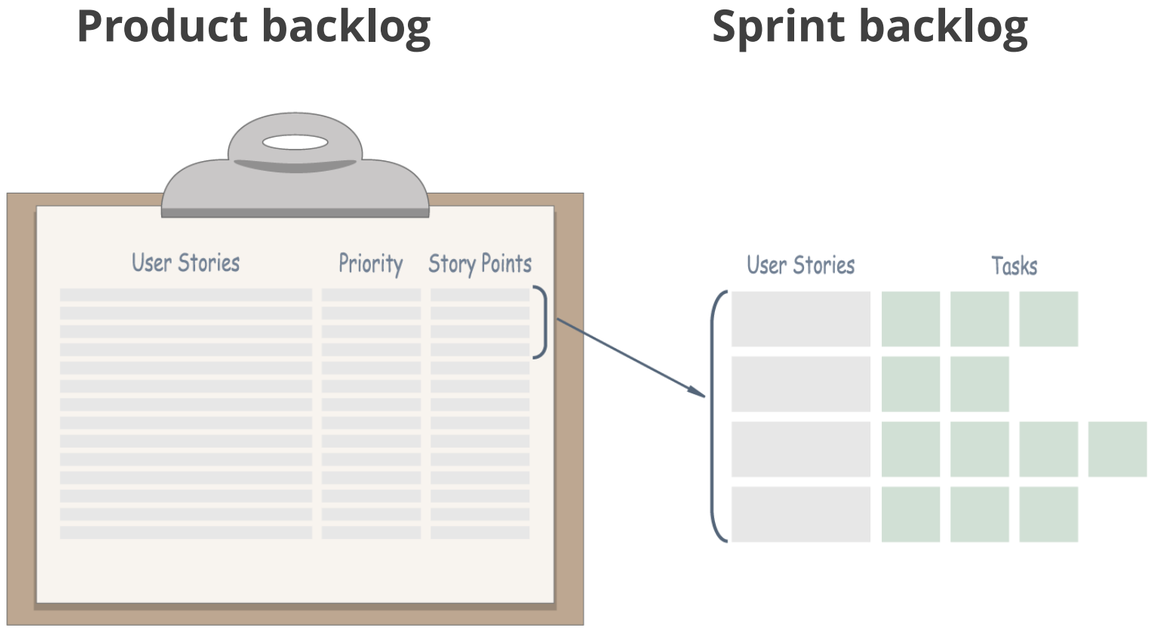
Backlog items can be added, moved, or modified, as per customer requirement.

Prioritized

Prioritization ensures that the team works on the most important items that deliver the highest value.

Sprint Backlog

It is a list of tasks identified by the Scrum team to be completed during the sprint. It is essentially a breakdown of the work to be done to meet the sprint goal.



The development team is responsible for selecting the amount of work they can commit to completing during a sprint from the product backlog, which then forms the sprint backlog.

Characteristics of Sprint Backlog

1. The development team selects items from the product backlog to include in the sprint backlog during the sprint planning meeting.

2. Each sprint backlog is aligned with a specific sprint goal, which is a short, descriptive statement of what the team plans to achieve during the sprint.

3. The team can negotiate adjustments with the Product Owner if new insights during the sprint necessitate a change in direction.

Characteristics of Sprint Backlog

4. Each sprint backlog item is broken into detailed tasks, with time estimates in hours or days to indicate the required effort.

5. It is fully visible to all team members and often to other stakeholders to ensure that everyone involved is aware of what the team is working on.

6. The progress is measurable through daily updates at the daily Scrum meetings.

7. The development team regularly inspects the sprint backlog during the daily Scrum to adapt the work plan as needed.

Release Backlog

It is a subset of the product backlog that has been designated for release but still needs to be completed and made ready for deployment.

Product backlog **Release backlog**

The Product Owner, along with the development team, decides which items from the product backlog should be included in the release backlog based on the release goals and timelines.

Characteristics of Release Backlog

1. Release backlog items are prioritized by strategic goals, aiming to deliver the most value to customers and align with business objectives.

2. Items are planned and scheduled for completion by the release date and estimated in more detail.

3. It is still dynamic and can be adjusted throughout the development cycle.

4. It is tied to specific release goals, which define the intended outcomes of the release.

Characteristics of Release Backlog

5. Transparency ensures all stakeholders understand the expected features, progress, and any challenges or changes for the release.

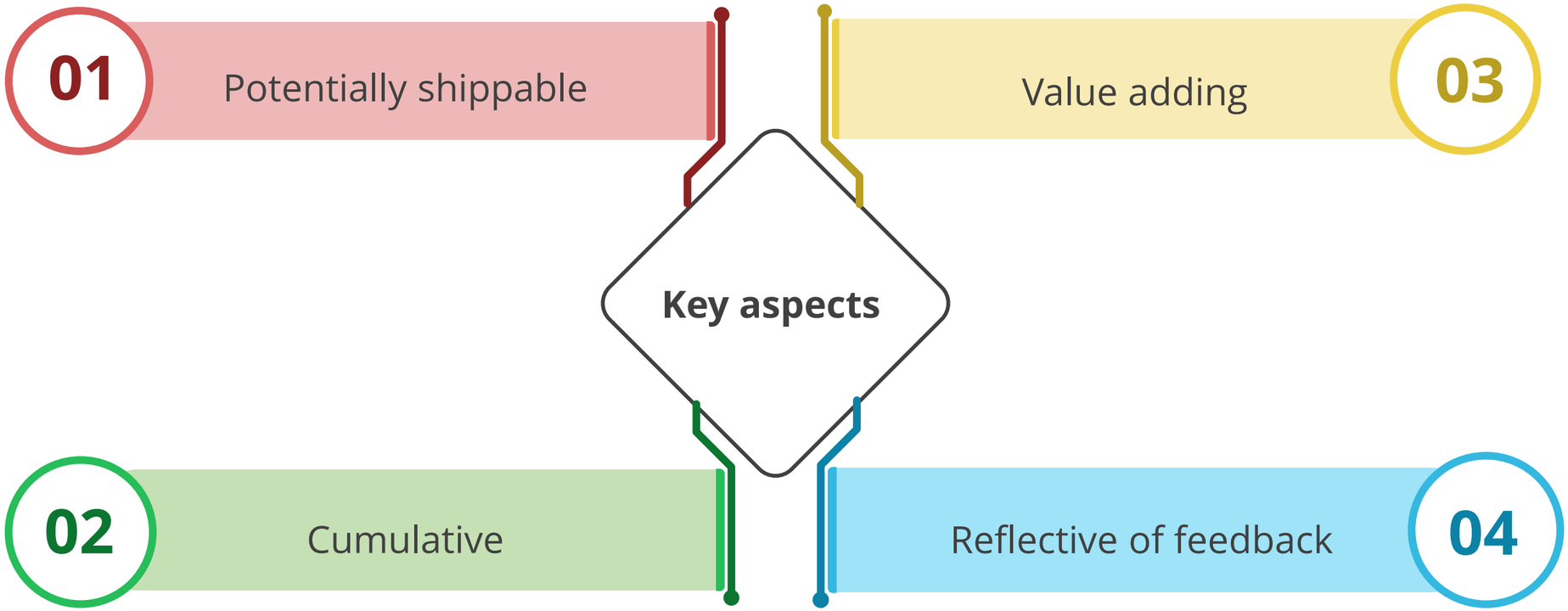
6. Progress is closely monitored through regular reviews and adjustments during release planning meetings.

7. It is well-documented, that includes specifications, designs, user stories, acceptance criteria, and other necessary details.

8. Regular review sessions are held to discuss that include assessing the status of the backlog, making necessary adjustments.

Product Increment

It is the sum of all the product backlog items completed during a sprint, combined with the value of the increments of all previous sprints.



Activity: Planning and Executing a Scrum Project

Planning and Executing a Scrum Project

Scenario:
You are the Scrum Master for a new project aimed at developing a mobile application for online grocery shopping. Your task is to plan a sprint, ensuring that all key Scrum elements are covered.

Task:

- Outline a DoD for your project
- Develop a brief DoR for user stories to ensure they are ready for sprint planning
- Create a prioritized list of five items for your product backlog
- Justify your prioritization based on business value
- Select three items from the product backlog to include in the sprint backlog
- Break these items down into tasks and estimate the effort required

Key Takeaways

- A Scrum Master is a key role within the Scrum framework.
- The Product Owner provides the vision for the product and sets boundaries for the projects.
- The development team is one of the three core roles, alongside the Scrum Master and the Product Owner.
- The RACI model provides clarity about the roles each person plays in an Agile team.
- The backlog is essentially a list of tasks or work items that need to be addressed during the project lifecycle.

Knowledge Check

Knowledge Check 1

Who is responsible for ensuring that the Scrum team adheres to Scrum practices and principles?

A. Product owner

B. Scrum Master

C. Development team

D. Project manager

Knowledge Check 1

Who is responsible for ensuring that the Scrum team adheres to Scrum practices and principles?

A. Product owner

B. Scrum Master

C. Development team

D. Project manager

The correct answer is **B**

The Scrum Master is responsible for ensuring that the Scrum team follows Scrum practices and principles.

Knowledge Check 2

Which of the following is a primary responsibility of the Product Owner?

A. Writing detailed technical specifications

B. Facilitating daily scrum meetings

C. Prioritizing the product backlog

D. Conducting code reviews

Knowledge Check 2

Which of the following is a primary responsibility of the Product Owner?

A. Writing detailed technical specifications

B. Facilitating daily scrum meetings

C. Prioritizing the product backlog

D. Conducting code reviews

The correct answer is **C**

The Product Owner prioritizes the product backlog to ensure the development team is working on the most valuable tasks that align with the product vision and goals.

Knowledge Check

3

In the RACI model, what does the *C* stand for?

A. Critical

B. Compliant

C. Consulted

D. Coordinated

Knowledge Check

3

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A. Critical

B. Compliant

C. Consulted

D. Coordinated

The correct answer is **C**

In the RACI model, *C* stands for consulted. This person advises and assists, guiding the result through two-way communication.

Knowledge Check

4

What is the main purpose of backlog refinement?

A. To assign tasks to team members

B. To detail and prioritize items in the product backlog

C. To write code for the upcoming sprint

D. To finalize the project budget

Knowledge Check

4

What is the main purpose of backlog refinement?

A. To assign tasks to team members

B. To detail and prioritize items in the product backlog

C. To write code for the upcoming sprint

D. To finalize the project budget

The correct answer is **B**

Backlog refinement is the process of detailing and prioritizing items in the product backlog to ensure they are ready for future sprints.