



# Agile and Scrum

*Chapter 3 (Sommerville)*

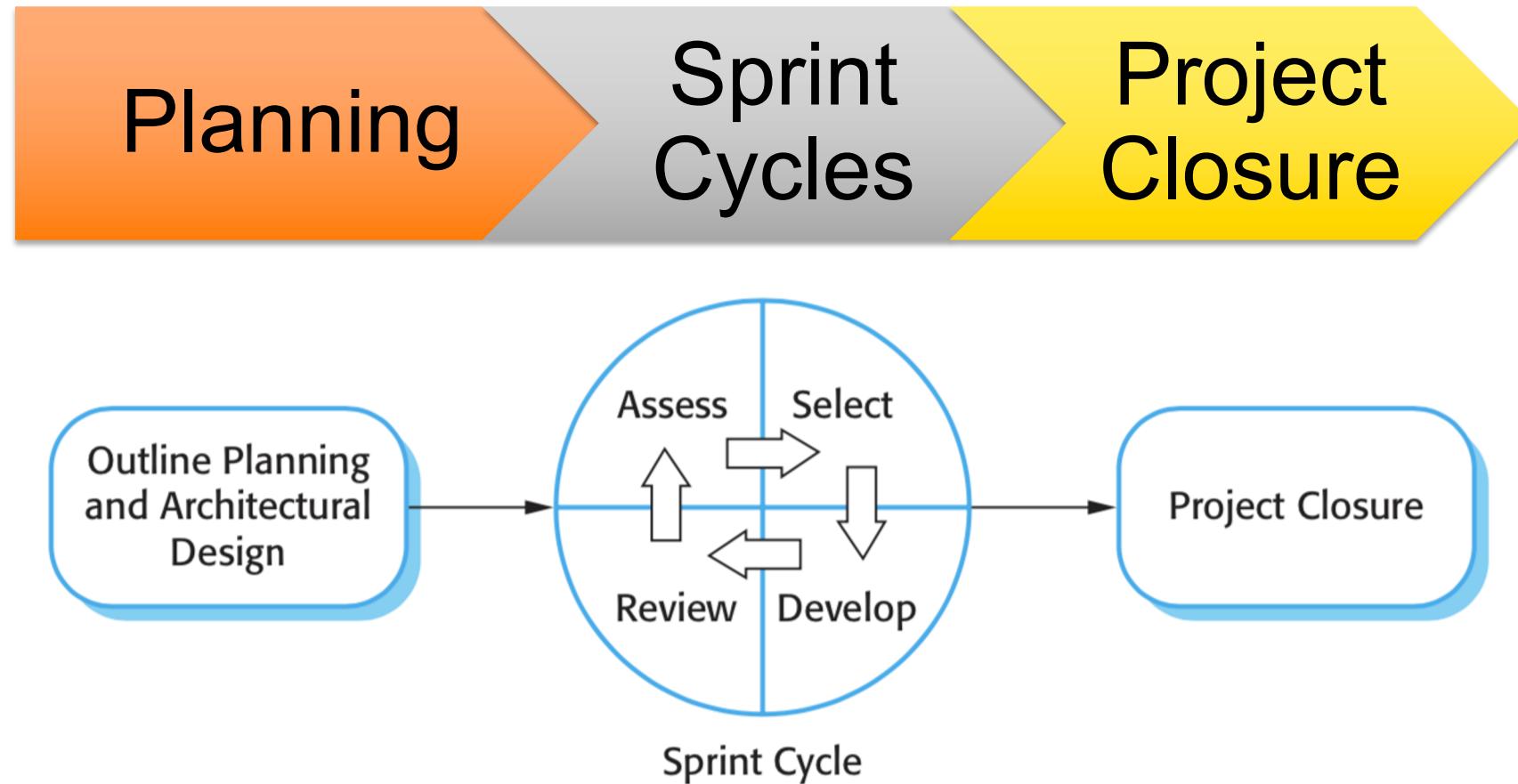
Fall Semester 2021  
1st Semester 1443 H

# The Scrum Practice

## What is Scrum?

- Scrum is a general agile practice focused on *managing iterative and incremental development*
- It is one of the most commonly used agile practices.

# The Scrum Management Process



# The Scrum Management Process



Establish the general objectives for the project and design the software architecture.

Each cycle develops an increment of the system.

Wraps up the project, completes required documentation such as system help frames and user manuals, and assesses the lessons learned from the project.

# Scrum Events (5 Events)

Sprint

Sprint  
Planning

Daily Scrum

Sprint Review

Sprint  
Retrospective

# Scrum Artifacts (3 Artifacts)

The **Product Backlog** is a prioritized list of features, defects, or technical work that has yet to be worked on.

## Product Backlog

A Product **Increment** is the sum of product work completed during a Sprint, combined with all work completed during previous Sprints.

## Sprint Backlog

## Product Increment

The **Sprint Backlog** is a list of all items from the Product Backlog to be worked on during a Sprint. This list is put together by prioritizing items from the Product Backlog until the team feels they've reached their capacity for the Sprint.

# Scrum Roles (3 Roles)

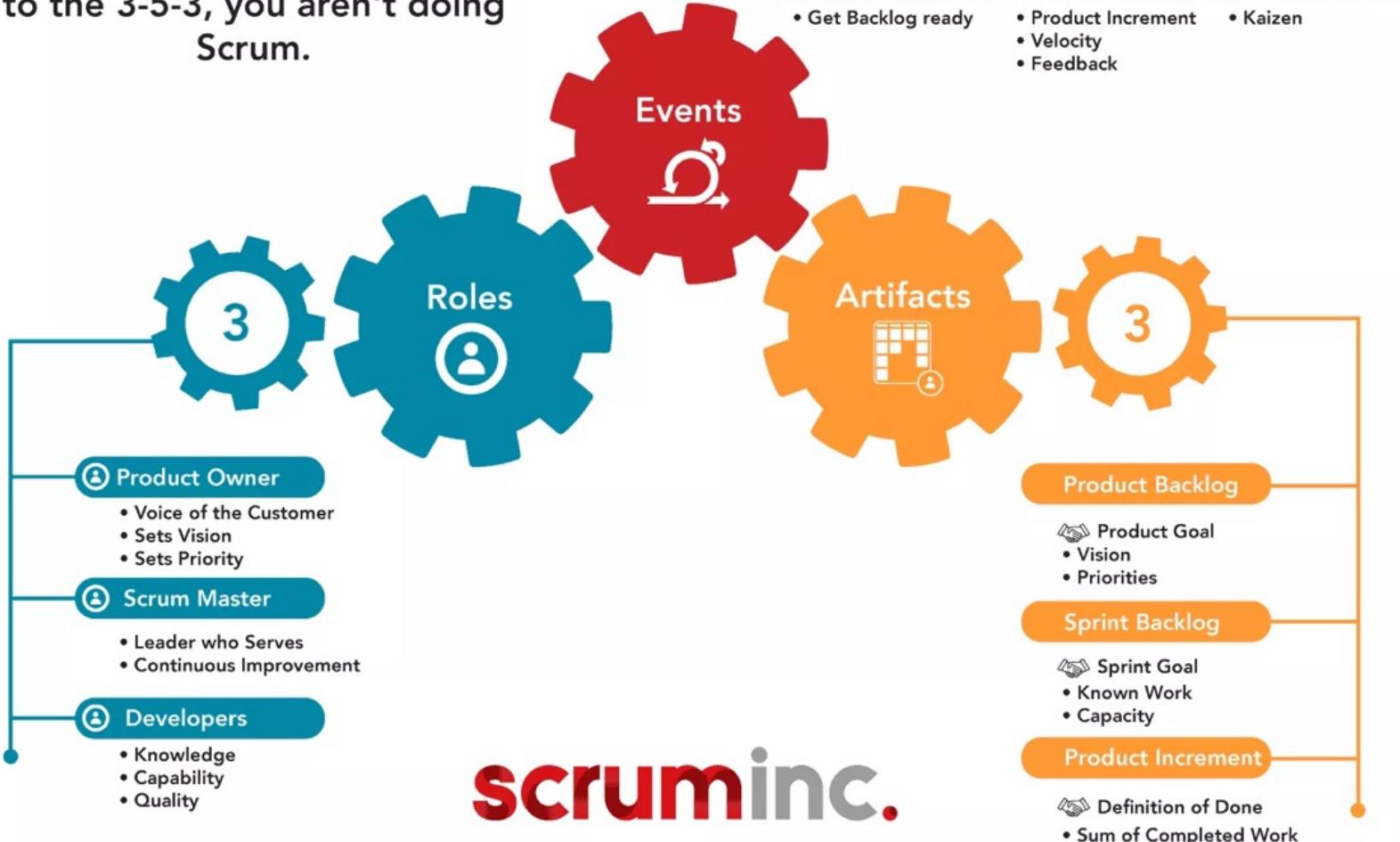


Image source: <https://medium.com/generation-agile/know-your-role-infographic-28403ae230e6>

# Scrum's Simple Rules

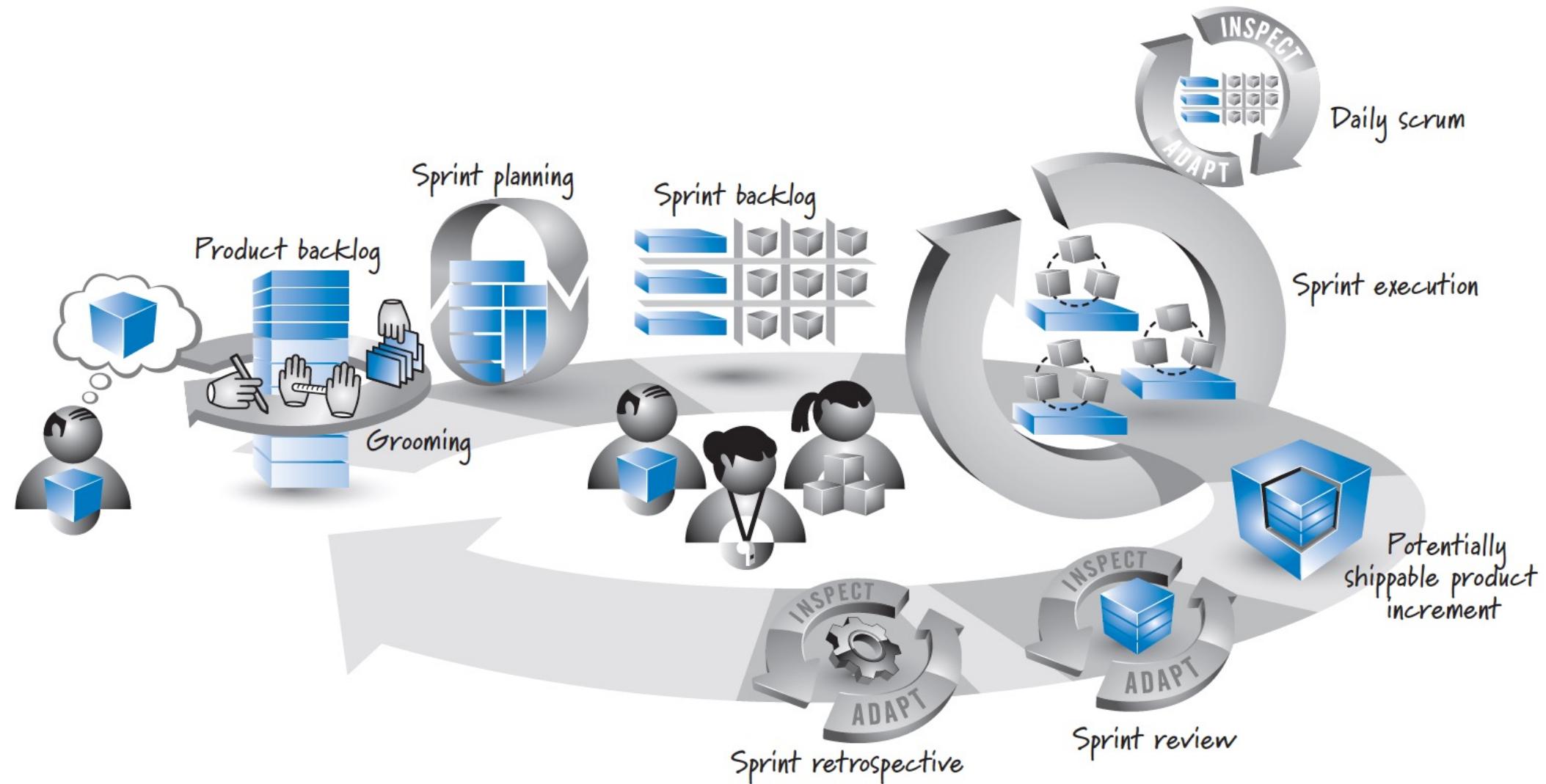
3 Roles • 5 Events • 3 Artifacts

Without embracing the Scrum values and operating according to the 3-5-3, you aren't doing Scrum.

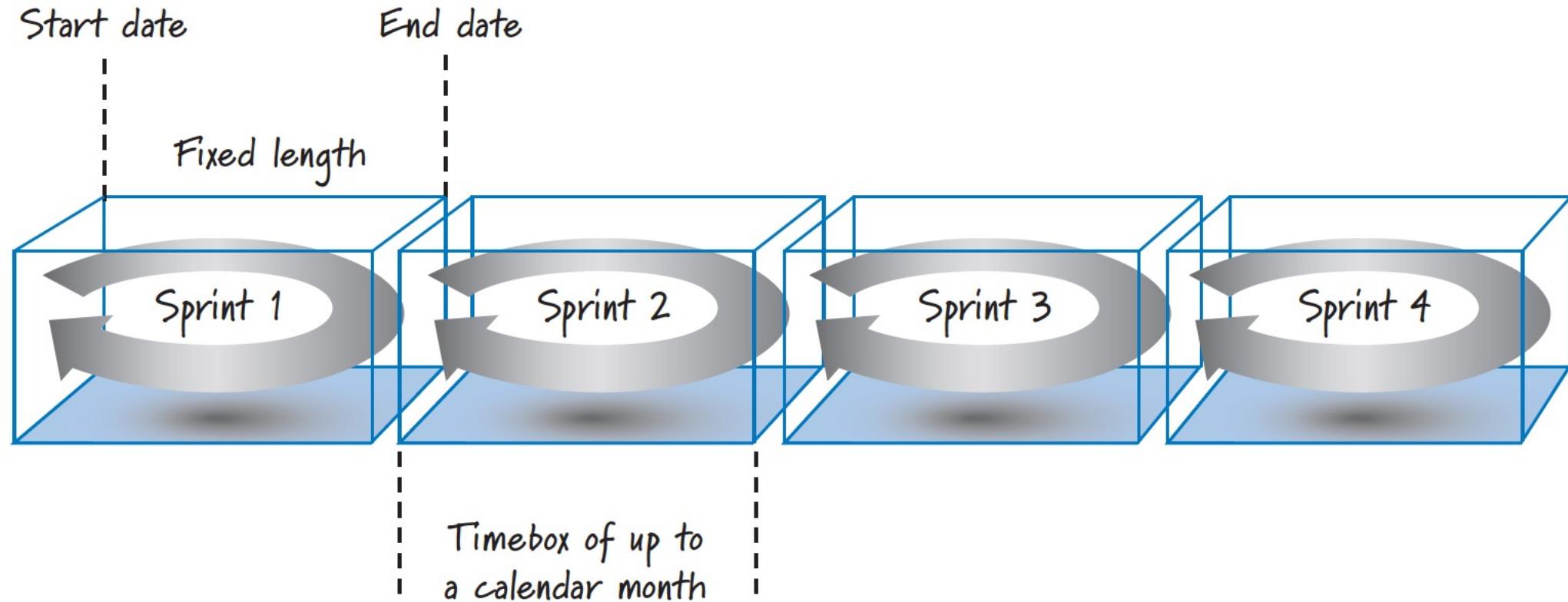


The  
3X5X3  
rule of  
Scrum

Image source: <https://www.scruminc.com/the-3-5-3-of-scrum/>



Essential Scrum a practical guide to the most popular agile process by Rubin, Kenneth S



# Scrum Pillars

1. **Transparency:** The emergent process and work must be visible to those performing the work as well as those receiving the work.
2. **Inspection:** The Scrum artifacts and the progress toward agreed goals must be inspected frequently to detect potentially undesirable problems.
3. **Adaptation:** If any aspects of a process deviate outside acceptable limits or if the resulting product is unacceptable, the process being applied or the materials being produced must be adjusted as soon as possible.

# Scrum Roles and Responsibilities

Source:

<https://medium.com/generation-agile/know-your-role-infographic-28403ae230e6>

<https://www.toolsqa.com/agile/agile-methodology/>

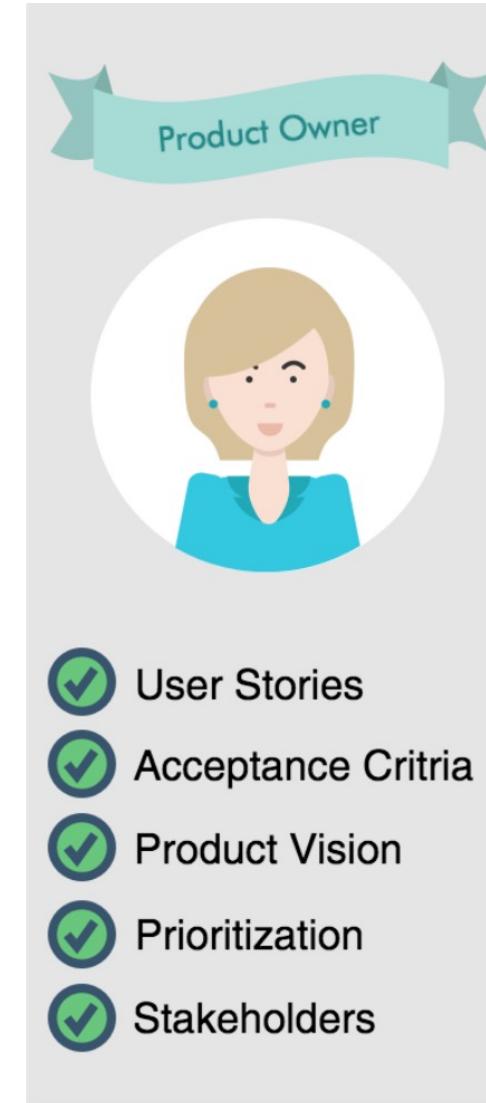


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# Product Owner

- The product owner is often referred to as the ***voice of the business/customer.***
- The product owner is responsible for converting requests from the customer into actionable user stories.

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# The Product Owner Key Responsibilities

**User Stories** — the product owner takes the requests from the business and translate them into user stories that can be interpreted by the team and transformed into working software.

**Acceptance Criteria** — the product owner refines the user stories and works with the team to add acceptance criteria. Essentially, acceptance criteria are the conditions that must be met for the user story to fulfill the definition of 'Done'. .. *Checklist*

**Product Vision** — The product owner works with stakeholders to create a product vision that the scrum team can work towards and maintain. This product vision guides decisions made about the product.

**Prioritization** — The product owner works with the team to order the work in the backlog based on stakeholder expectations, technical dependencies, and the release plan among a multitude of other factors.

**Stakeholders** — The product owner works with the customers to understand their needs and wants and organize the work to satisfy said needs. *⇒ Working with customer*

# The Definition of Done

The result of each sprint should be a potentially shippable product increment.

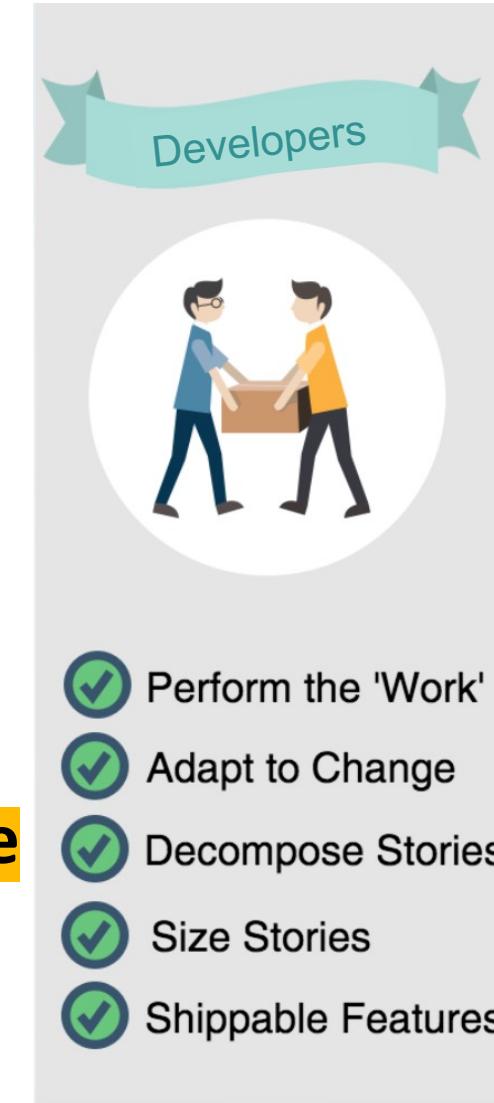
**Definition of Done** is a checklist of the types of work that the team is expected to successfully complete before it can declare its work to be potentially shippable.

Definition of Done	
<input type="checkbox"/>	Design reviewed
<input type="checkbox"/>	Code completed
<input type="checkbox"/>	Code refactored <input checked="" type="checkbox"/>
<input type="checkbox"/>	Code in standard format <input checked="" type="checkbox"/>
<input type="checkbox"/>	Code is commented <input checked="" type="checkbox"/>
<input type="checkbox"/>	Code checked in <input checked="" type="checkbox"/>
<input type="checkbox"/>	Code inspected <input checked="" type="checkbox"/>
<input type="checkbox"/>	End-user documentation updated
<input type="checkbox"/>	Tested
<input type="checkbox"/>	Unit tested
<input type="checkbox"/>	Integration tested
<input type="checkbox"/>	Regression tested
<input type="checkbox"/>	Platform tested
<input type="checkbox"/>	Language tested
<input type="checkbox"/>	Zero known defects
<input type="checkbox"/>	Acceptance tested
<input type="checkbox"/>	Live on production servers

## Example of the *Definition of Done* Checklist

# The Role of the Developers

- The team is what makes SCRUM work.
- The team is where the tangible value is delivered in the form of product increments.
- The team works together to do what is necessary to satisfy the product vision.
- According to the Scrum Guide, the scrum team should be **between three to nine people** and should have all the skills necessary to deliver the product.



# Team Key Responsibilities

**Perform the 'Work'** — the team is the foundation of scrum. They are responsible for getting the work done (i.e. the programming, testing, analysis, and deployment activities).

**Adapt to Change** — A new scrum team is prone to lots of change and fast pace. It is imperative that the team is constantly adapting and improving their processes. The scrum team is always maturing, and all team members need to be open to adapting new tools and processes.

**Decompose Stories** — The team are the experts in the product. Therefore, it is the teams responsibility to ensure that the requested user stories are small enough that the team can deliver each user story in an allotted sprint. If a story is too large that it cant be completed and delivered to production within a sprint it should be broken down into more smaller stories. ➡

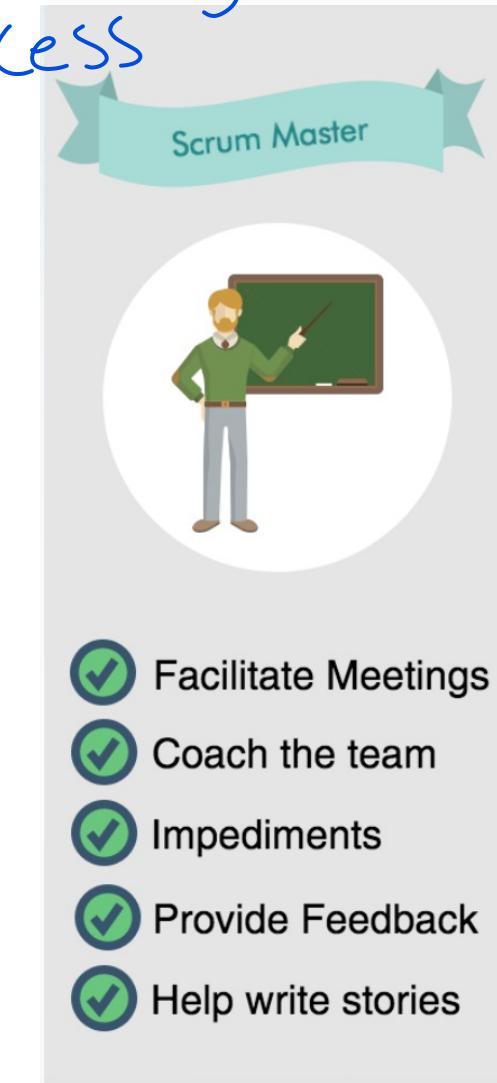
**Size Stories** — Again, the team is the expert on the product. The team is required to determine with the product owner, the size of the stories during backlog refinement meetings. This activity should be performed by the TEAM and not a single advocate.

**Shippable Features** — The team must always be shipping. A primary reason companies switch to Agile framework is due to the hype around rapid delivery of software. Its the teams duty to ship working software at the end of each development sprint. ➡

# The Role of the Scrum Master

responsible of follow agile plan  
and the right process

- The Scrum Master is the sticky stuff that holds the team together. The Scrum Master is the glue. Super Glue.
- The **Scrum Master** is responsible for making sure that the **Scrum Team** adheres to the values and principles of Agile methodology. Additionally, the scrum master ensures the adherence to the processes and practices that the team agreed they would use.



# The Scrum Master Key Responsibilities

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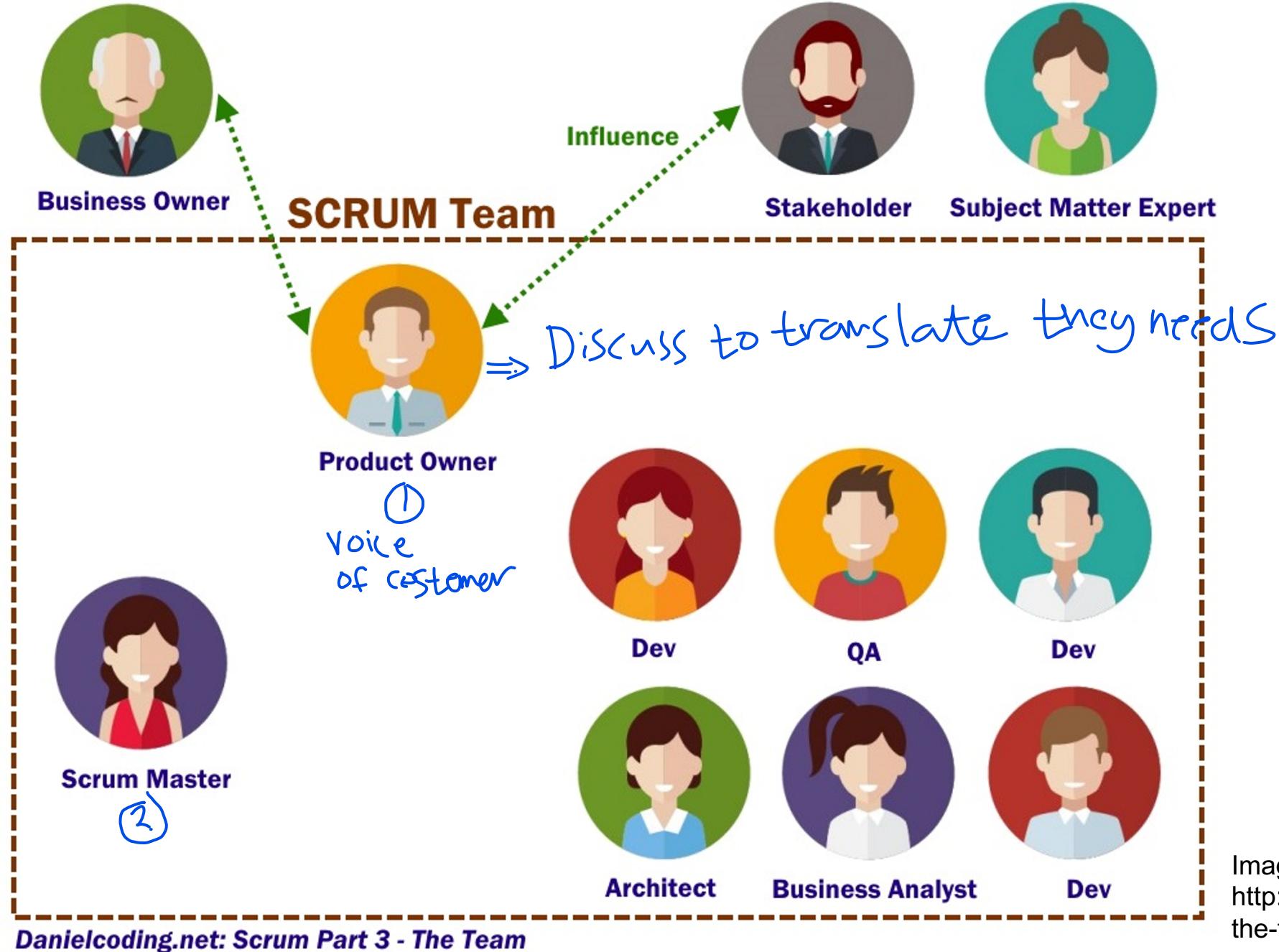
**Facilitate Meetings** — The Scrum Masters are supposed to be the experts of their domain, and should have a great understanding of the framework. Thus, the Scrum Master should be able to walk the team and Product Owner through the sprint ceremonies (i.e. Sprint Planning, Daily Standup, Backlog Refinement, Retrospective, and at times sprint Reviews).

**Coach the Team** — The Scrum Master needs to be able to coach the team and facilitate self organization within the scrum team. Each team is unique, and the Scrum Master should be able to manipulate the Scrum framework to suit the needs of the team.

**Impediments** — During the sprint it is paramount that the team identifies any impediments early and often. It is the job of the Scrum Master to ensure that any road blocks are resolved swiftly. If the Scrum Master can't directly resolve the issue himself, he needs to empower the right person to do so.

**Provide Feedback** — The Scrum Master facilitates the sprint retrospective meeting. In this meeting, the team measures the success of the sprint and trades feedback with one another on how the team can improve in the next. It's the role of the scrum master to document this feedback and to work with the team to make sure the team is improving.

**Help Write Stories** — The scrum master should know the product. This knowledge of the product will allow the Scrum Master step in during times of need, to help the product owner or team fulfill their responsibilities. The scrum master should be able to coach the product owner in how to write effective and consistent user stories.



Danielcoding.net: Scrum Part 3 - The Team

Image source:  
<http://danielcoding.net/scrum-part-3-the-team/>

# Key points

- Agile Manifesto and principles.
- What is Scrum?
- The Scrum process
- Scrum Events
- Scrum Artifacts
- Scrum Roles and Responsibilities

# Thank you!