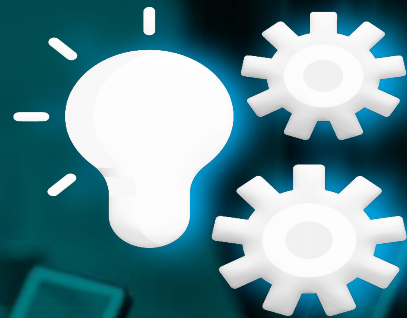


# Project Management Framework and Tools

The Absolute Basics



# What is a Project

A temporary endeavor undertaken to create a **unique result** within a *given time*

**Building a house**  
**Planning a wedding**  
**Developing a new vaccine**

# Management

Application of knowledge, skills, tools and techniques to meet goals and requirements on an **ongoing basis**

**Leading an IT team**

**Parenting a family**

**Running a company or department**

# What is Project Management

Project management is the application of processes, skills and resources to achieve project objectives and goals within the given constraints - a finite timeline and budget.



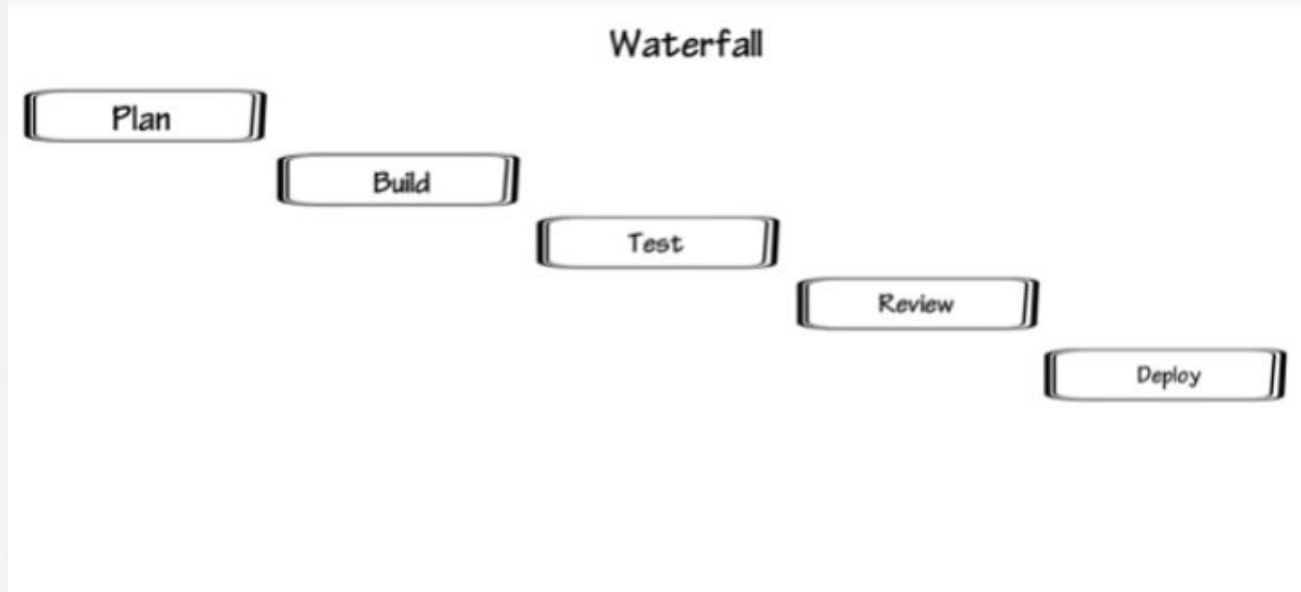
# **Some Top Methodologies**

**The Agile Method**

**The Waterfall Method**

# The Waterfall method

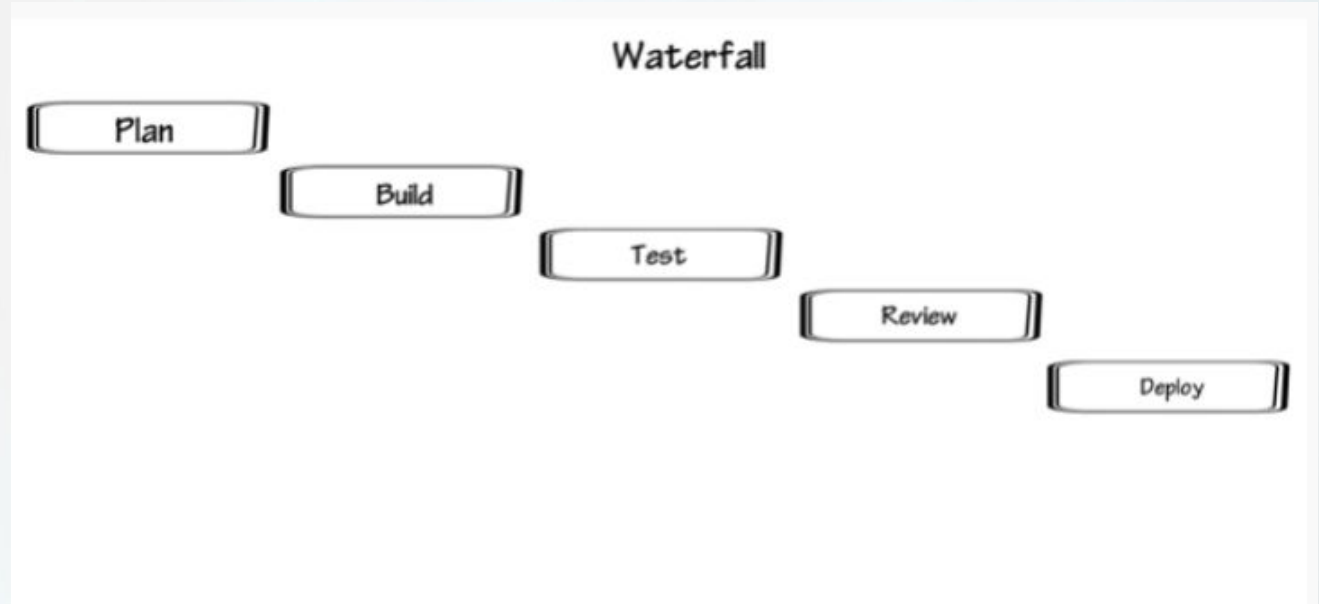
- This approach was called **Waterfall** due to its design of cascading of activities in phases, starting from planning, building, testing, reviewing and deploying



# The Waterfall method

## Advantages:

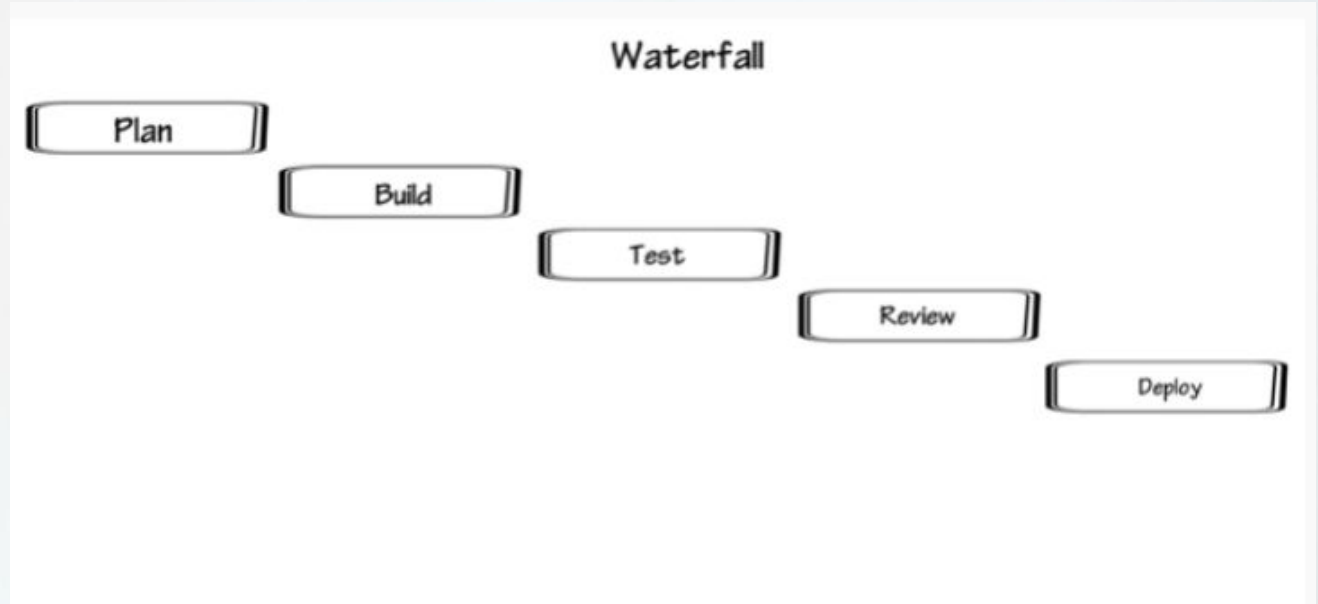
- Easy to manage
- Faster delivery
- Progress is easily measured
- Hands off approach
- Budget is set



# The Waterfall method

## Disadvantages:

- Little room for changes
- Inflexible
- Time bound
- Less customer involvement
- No product until the end





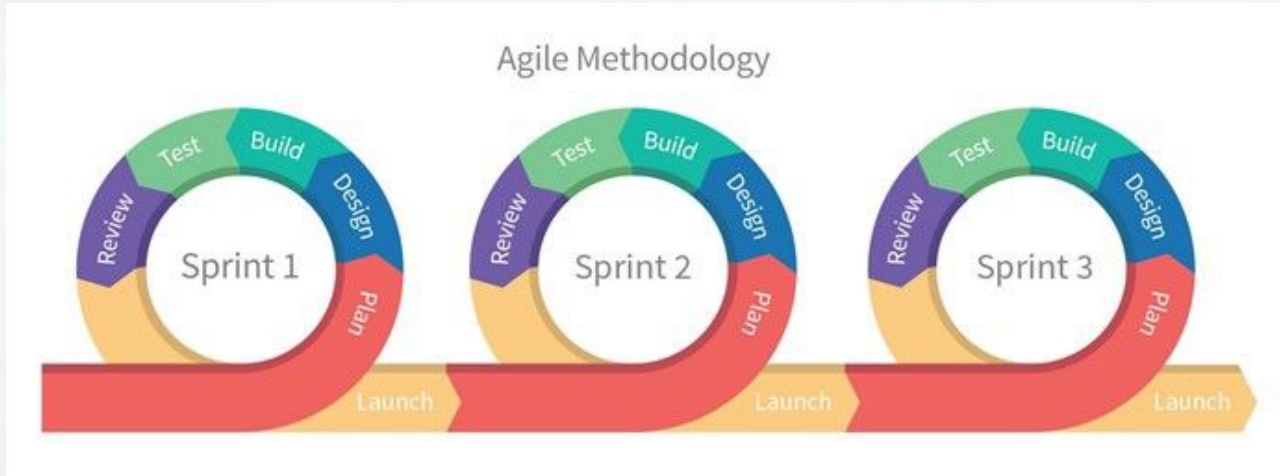
# What is Agile?

- **Agile** - The ability to create and respond to change in order to succeed in an uncertain and turbulent environment.
- **Agile methodology** is a structured and iterative approach to project management and product development, most commonly used for software.

# How Agile Works

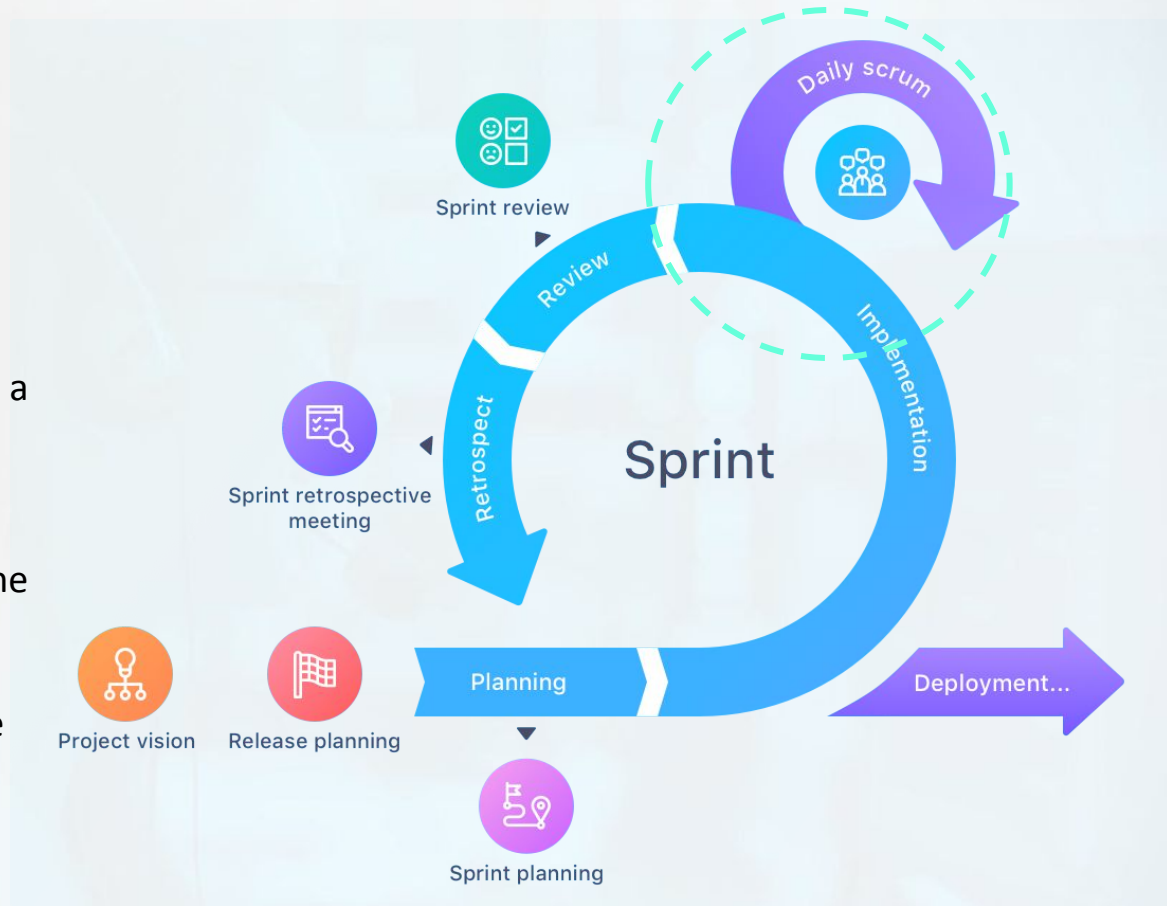
*Iteration is the repetition of a process in order to generate an outcome.*

- Unlike traditional Waterfall approach, the Agile methodologies follow an iterative approach. The agile approach basically involves a number of cycles usually called **sprints** that are designed, developed and tested individually.
- Simply, consider each **sprint** to be a miniature project having its own design, development, testing, backlog and deployment phases within the pre-defined scope of work.

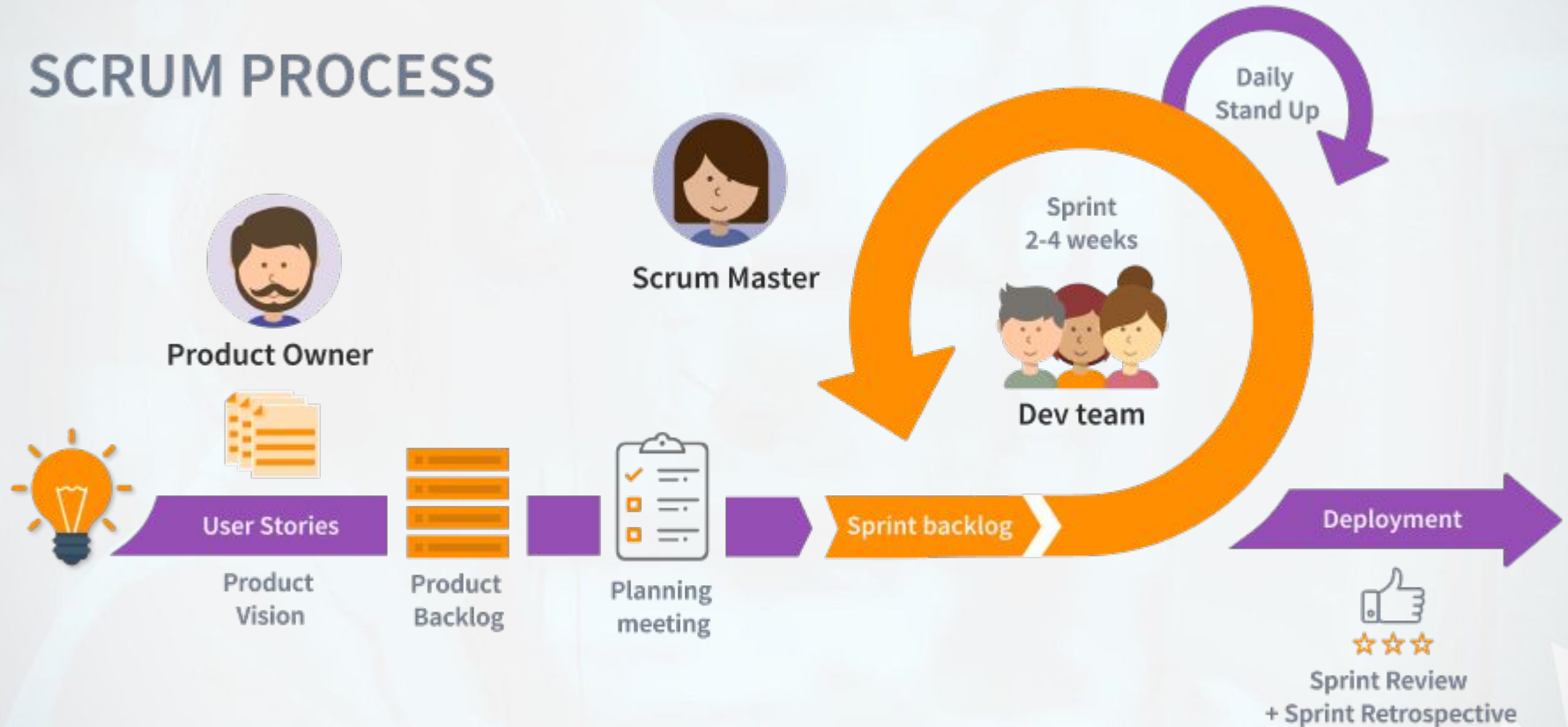


# SPRINT

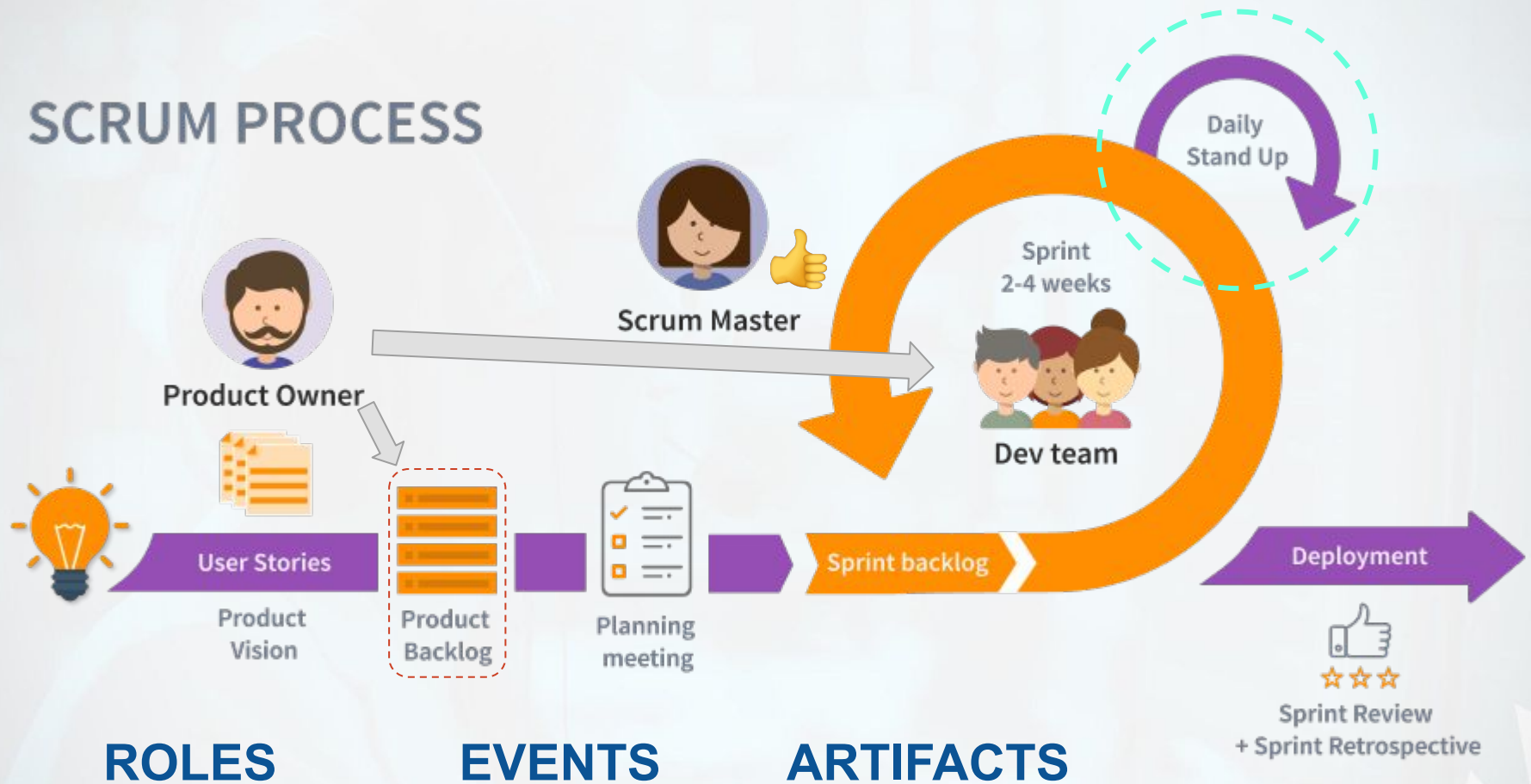
- Each **sprint** defines a time-boxed phase with a defined duration of two weeks.
- At the start of each sprint, a list of deliverables are prioritized based on customer input.
- At the end of the sprint, the team and the customer review and evaluate the work with notes for future sprints.



# SCRUM PROCESS



# SCRUM PROCESS



# Scrum Roles

The Agile Scrum method defines **3 roles**. They are all complementary and it's important to understand each one's responsibilities.

## ROLES:

- **Scrum Master**

The Scrum Master leads the daily Scrums and helps resolve issues or remove blockers so that the team can continue to perform well during the sprint.

- **Product Owner**

The person responsible for maximizing the value of the work completed by the Development Team. One way they do this is by managing the Backlog.

- **Development Team**

A small group of people who are ultimately working on **The Thing**. The team can be multidisciplinary and involve several types of people: developers, software architects, functional analysts, graphic designers, ergonomists, systems engineers, etc.



# Scrum Events and Artifacts

- **Backlog** - Prioritized features list, containing short descriptions of all functionality desired in the product.
- **Product Review Meeting** - Held at the end of each sprint. The Scrum team shows what they accomplished during the sprint. Typically this takes the form of a demo of the new features.
- **Sprint Backlog** - A list of tasks identified by the Scrum team to be completed during the Scrum sprint.
- **User Stories**
- **Planning Meeting** - Held at the beginning of every sprint to develop realistic Sprint backlog and define the highest priority tasks which need to be done during the length of each Sprint.
- **Daily Stand Up (Scrum)** - Short 15 minutes meetings which occur on daily basis. Typically held at the same time and same place every day and no longer than 15 minutes. Discussion to stay light, relevant, and quick.
- **Deployment** - Usually it is the release of the product. It can be the **final** product or the Minimum Viable Product (at the end of a Sprint)

# Key Scrum Meetings

## Daily Scrum

- The daily Scrum, also called the standup, or daily standup is a short daily meeting designed to let the team plan out its work for the day and identify any obstacles that could impact that work.
- Most teams hold these meetings in the morning and limit them to 10 or 15 minutes. They are sometimes called standups because many teams hold them standing up to keep them short and focused.

## Sprint Planning

- It is a team meeting held before the next agile sprint. During sprint planning, the team reviews its backlog and decides what items to prioritize for the next sprint.

## Sprint Retrospective

- It is a post-sprint discussion. The Scrum team reviews what happened during the sprint to determine what worked, what didn't work, and how they can improve the process during the next sprint.



# Daily Scrum

- aka Daily Stand-up
- Agile Teams of 6 to 8 people
- 10 minutes first thing in the morning
- Three questions participants should ask each other during a daily stand-up:
  1. What did I accomplish yesterday?
  2. What will I accomplish today?
  3. What obstacles are impeding my progress?



# Learning Activity #1: What is a workplace impediment?

- An **impediment** is anything that slows down or diminishes the pace of the Team.

Based on the list on the right, spend some time in your team to identify whether each statement is an impediment or not and why your team thinks it may or may not be considered one

Statement	Yes or No?
I'm unable to complete the project task because I don't understand the material	
I couldn't study because the material was too boring	
My team member is sick preventing the project from moving forward	
I'm having issues with time management	
I have been procrastinating which has prevented me from getting my tasks done	
Unplanned events (i.e site tours/guest speakers) have prevented me from getting work completed	
My laptop/computer is broken and I was unable to study	
My laptop/computer is broken and I was unable to complete the project task	
There are members of the team who are absent	

# Learning Activity #1: What is a workplace impediment?

An **impediment** is anything that slows down or diminishes the pace of the Team.

Statement	Yes or No?
I'm unable to complete the project task because I don't understand the material	✗
I couldn't study because the material was too boring	✗
My team member is sick preventing the project from moving forward	✓
I'm having issues with time management	✗
I have been procrastinating which has prevented me from getting my tasks done	✗
Unplanned events (i.e site tours/guest speakers) have prevented me from getting work completed	✓
My laptop/computer is broken and I was unable to study	✗
My laptop/computer is broken and I was unable to complete the project task	✓
There are members of the team who are absent	✓

# What Daily Scrum is NOT

- 1) The stand-up meeting is not a status or recording meeting (excluding the Scribe).
- 2) The stand-up meeting is not for micromanagement.
- 3) The stand-up meeting is not only for the Scrum Master.
- 4) The stand-up meeting is not a planning meeting.
- 5) The stand-up meeting is not a technical discussion.
- 6) The stand-up meeting must consist of the three questions.

<https://www.scrumalliance.org/community/articles/2014/july/7-mistakes-during-the-daily-stand-up-meeting>

# What is a Scrum Master?

- Not the boss but a facilitator
- Leads Daily Scrum
- Protects and encourages the team
- Removes impediments of the team
- Provides performance updates and communicates with Project Managers of any setbacks affecting team





# Kanban

Kanban is a popular framework used by teams practicing agile software development but now commonly used in varying practices.

To Do

Doing

Done

USE  
KANBAN

TRY  
KANBAN  
TOOL

LEARN  
ABOUT  
KANBAN

GET SOME  
STICKY  
NOTES!

GET A  
WHITE-  
BOARD

# Trello board

## Beginning of Term ...

Reserve Labs/Special Rooms

Set up Trello Boards

☑ 0/6

Set up dropbox folders

Web Enhance Class

Set up Google Drive

Set up Learning Management System

☑ 0/3

Set up Online Textbook

Make Semester Plan

☑ 0/4

Write Syllabus

+ Add another card



## Week 1 (copy for remaining weeks) ...

Lesson Plan

☑ 0/7

After Class

☑ 0/6

Weekly Schedule

☑ 0/6

Make Assignment 1

Correct Assignment 1

+ Add another card



## End of Term ...

Reflection Meeting

Assessments for college

Complete Curriculum Development Chart

Make Final Exam

Correct Final Exam

+ Add another card



+ Add another list

# Gantt Charts



Visual Flow of Deliverables





E

 $\overline{f_X}$ [illegible]

# The End

This course offers a very brief overview of project management which is intended to give you a basic understanding if and when confronted with the subject.

For a good video on Project Management please follow this link:

<https://www.youtube.com/watch?v=6LJLIfrfts>