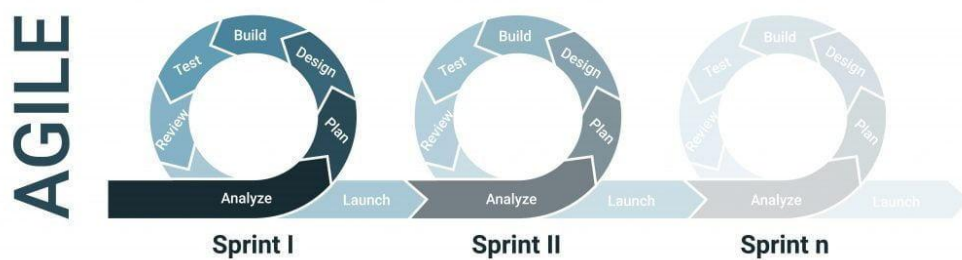# AGILE

- Agile methodologies are a set of principles and practices used in software development and project management that emphasize flexibility, collaboration, customer satisfaction, and iterative progress.

- Unlike traditional methods such as the Waterfall model, Agile focuses on adaptive planning, rapid delivery of functional components, continuous feedback, and the ability to quickly respond to changing requirements.

- It breaks down projects into smaller, manageable parts, allowing for continuous feedback and adaptation throughout the process.

- In Agile a sprint is a short, time-boxed period during which a team works to complete a defined set of tasks or deliverables.

- Sprints usually last 1 to 4 weeks, with 2 weeks being the most common. The purpose of a sprint is to deliver a working, usable increment of the product that provides value to the customer.

- Sprints break down a big project into smaller, manageable cycles, allowing teams to deliver quickly, gather feedback, and make improvements in the next sprint.

SCRUM

- Scrum is one of the most popular Agile frameworks used for managing and completing complex projects. It is lightweight, flexible, and emphasizes teamwork, accountability, and delivering value in short iterations called sprints.
- Scrum is not a process or a tool—it's a framework that provides guidelines, roles, events, and artifacts to help teams work more effectively.
- It is especially common in software development, but also widely applied in product management, marketing, and other industries.
- **Principles of Scrum :**

  - Transparency: All aspects of the process should be visible to the team and stakeholders.
  - Inspection: Regular checks on progress help identify deviations or challenges.
  - Adaptation: Plans and processes are adjusted based on feedback and changing requirements.
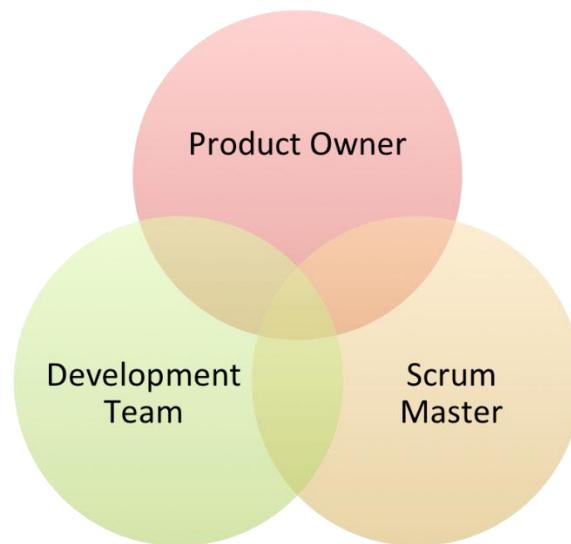
SCRUM ROLES :
- Product Owner
- Scrum Master
- Development Team

Product Owner

- The Product Owner represents the voice of the customer and the stakeholders, ensuring that the development team always works on the highest-value features.
- They are primarily responsible for managing the Product Backlog, which is a dynamic list of features, requirements, and improvements needed in the product.
- The Product Owner continuously refines and prioritizes this backlog so that the most valuable items are addressed first.
- By gathering feedback, analyzing requirements, and making tough prioritization decisions, the Product Owner ensures that the product evolves in a way that maximizes value.

Scrum Master

- The Scrum Master is often described as a servant-leader and coach for the Scrum Team. Unlike a traditional project manager, the Scrum Master does not command or control the team.
- Instead, their role is to facilitate the Scrum process, ensuring that the team understands and follows Scrum principles and practices.
- The Scrum Master removes obstacles that hinder progress, whether these are technical issues, organizational barriers, or communication gaps.
- Scrum Master also collaborates with stakeholders outside the Scrum Team, guiding the organization in adopting Agile thinking.

Development Team (Developers)
- The Development Team, often referred to as Developers, is a cross-functional and self-organizing group of professionals responsible for delivering a usable, working product increment at the end of each sprint.
- Developers in Scrum take full ownership of their work. They decide how to turn backlog items into valuable increments, plan their daily activities during the Daily Scrum, and continuously adapt their work to meet the sprint goal.