



AGILE METHODOLOGY

CONCEPTS, FRAMEWORKS & BEST PRACTICES

A Comprehensive Guide to Modern Project Management

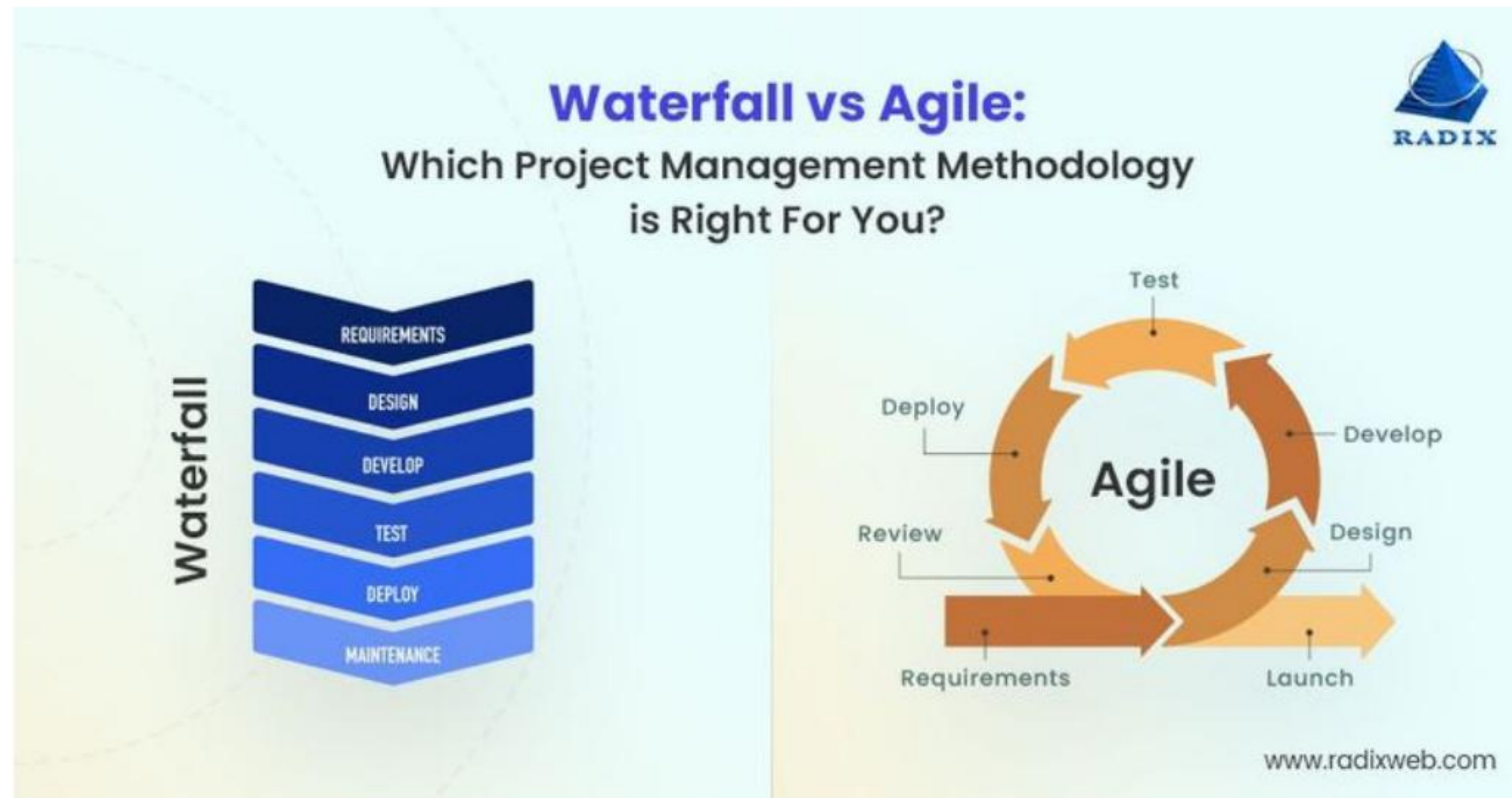
| WHAT IS AGILE?

Agile is an iterative and incremental approach to project management and software development. It helps teams deliver value to their customers faster and with fewer headaches.

Instead of betting everything on a "big bang" launch, an agile team delivers work in small, but consumable, increments. Requirements, plans, and results are evaluated continuously so teams have a natural mechanism for responding to change quickly.

 Agile iterative development cycle diagram

AGILE VS. WATERFALL



KEY DIFFERENCES

- **Flexibility:** Agile embraces change; Waterfall resists it.
- **Delivery:** Agile delivers continuously; Waterfall delivers at the end.
- **Risk:** Agile mitigates risk early; Waterfall often discovers issues late.
- **Customer:** Agile involves the customer throughout; Waterfall involves them at start/end.

THE AGILE MANIFESTO: 4 CORE VALUES



**Individuals and
interactions**
over processes and
tools



Working software
over comprehensive
documentation



Customer collaboration
over contract
negotiation



Responding to change
over following a plan

KEY AGILE PRINCIPLES

- ✓ Satisfy the customer through early delivery.
- ✓ Welcome changing requirements, even late.
- ✓ Deliver working software frequently.
- ✓ Business & developers work together daily.
- ✓ Build projects around motivated individuals.
- ✓ Face-to-face conversation is best.
- ✓ Working software is the primary measure.
- ✓ Maintain a sustainable working pace.
- ✓ Continuous attention to technical excellence.
- ✓ Simplicity (maximizing work not done) is essential.
- ✓ Self-organizing teams evolve best architectures.
- ✓ Regularly reflect and tune behavior.

POPULAR AGILE FRAMEWORKS



SCRUM

The most popular framework. Focuses on fixed-length iterations called Sprints, defined roles (PO, Scrum Master), and specific events.



KANBAN

Focuses on visualizing the workflow and limiting Work In Progress (WIP). It is a continuous flow model rather than time-boxed.



EXTREME PROGRAMMING

Focuses on engineering best practices like Pair Programming, Test-Driven Development (TDD), and Continuous Integration.

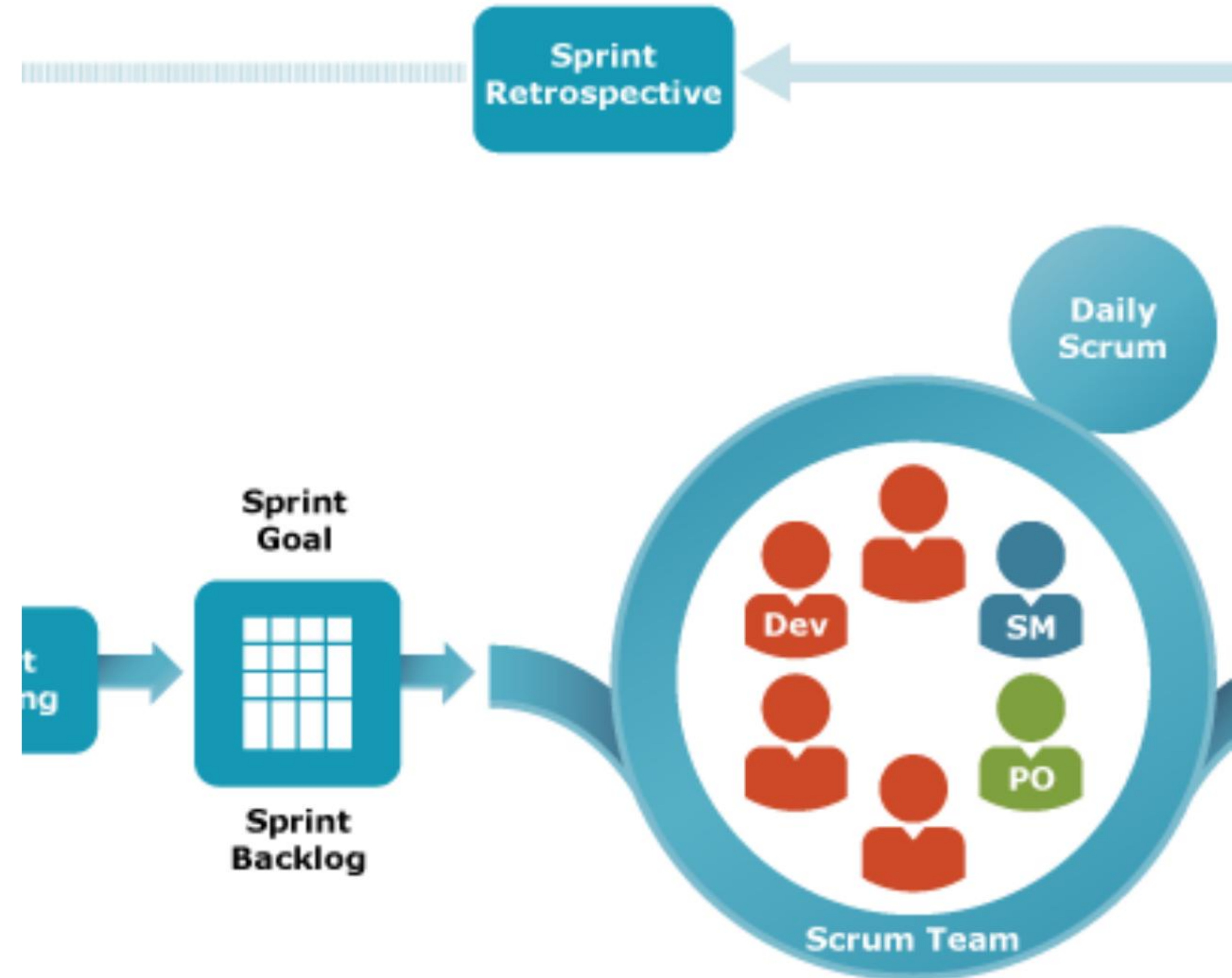
THE SCRUM FRAMEWORK

STRUCTURED AGILITY

Scrum is a lightweight framework that helps people, teams, and organizations generate value through adaptive solutions for complex problems.

It relies on transparency, inspection, and adaptation. The cycle repeats every 1-4 weeks (Sprint), delivering a usable increment of product.

WORK



SCRUM ROLES



PRODUCT OWNER

Maximizes the value of the product. Manages the Product Backlog and prioritizes work based on business value.



SCRUM MASTER

Servant-leader who coaches the team, removes impediments, and ensures the Scrum process is understood and followed.



DEVELOPERS

Cross-functional professionals (coders, testers, designers) who do the hands-on work to create the product increment.

SCRUM EVENTS (CEREMONIES)

| Event | Purpose | Outcome |
|-----------------------------|---|--------------------------------|
| The Sprint | Container for all other events. Fixed time-box (1-4 weeks). | A "Done" Increment. |
| Sprint Planning | Team decides what to work on and how to do it. | Sprint Backlog & Goal. |
| Daily Scrum | 15-min daily sync for developers to inspect progress. | Daily plan & adjusted backlog. |
| Sprint Review | Inspect the outcome with stakeholders. | Feedback & backlog updates. |
| Sprint Retrospective | Team reflects on their own process to improve. | Improvement plan. |

SCRUM ARTIFACTS



PRODUCT BACKLOG

An ordered list of everything that is known to be needed in the product. It is the single source of requirements.



SPRINT BACKLOG

The set of items selected for the Sprint, plus a plan for delivering the product Increment and realizing the Sprint Goal.



INCREMENT

The concrete stepping stone toward the Product Goal. It must be usable and meet the Definition of Done.

| THE KANBAN METHOD

VISUALIZING FLOW

Kanban is all about visualization. By mapping the workflow on a board (To Do, In Progress, Done), teams can see bottlenecks instantly.

Limit WIP (Work In Progress): A core rule is to limit how many items are active at once. This forces the team to finish work before starting new tasks, improving "flow" and reducing context switching.



AGILE ESTIMATION

USER STORIES

Work is often defined as **User Stories**: "As a [user], I want [feature], so that [benefit]." This keeps the focus on user value.

STORY POINTS & PLANNING POKER

Agile teams often estimate effort using abstract points (Fibonacci sequence: 1, 2, 3, 5, 8...) rather than hours. **Planning Poker** is a collaborative gamified technique to reach consensus on estimates.

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How Does Planning Poker Work?



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WHY CHOOSE AGILE?

1

SPEED TO MARKET

Deliver usable software early and often.

2

QUALITY

Frequent testing and reviews catch defects early.

3

SATISFACTION

Stakeholders get what they need through constant feedback.

4

ADAPTABILITY

Pivot quickly when market conditions change.

QUESTIONS?

Thank you for exploring Agile Concepts.

 contact@yourcompany.com

IMAGE SOURCES



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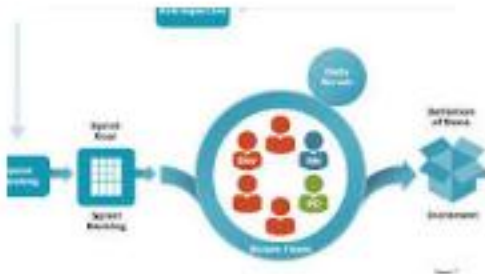
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