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Introduction to Scrum-Agile Methodology

- **Scrum-Agile** is an iterative, team-based approach to software development
- Focuses on collaboration, customer feedback, and adaptability
- Key components: product backlog, sprints, user stories, daily stand-ups
- Emphasizes **working software** over comprehensive documentation

"Agile is the ability to adapt and respond to change. Agile organizations view change as an opportunity, not a threat." — Jim Highsmith

Scrum-Agile Team Roles

- **Product Owner:** Defines product vision, prioritizes backlog, represents stakeholders
 - **Scrum Master:** Facilitates meetings, removes blockers, protects the team from scope creep
 - **Development Team:** Self-organizing team that delivers product increments
- Collaboration across roles ensures fast feedback and high-qu



Agile SDLC Phases

1. **Concept/Initiation:** Product Owner defines vision and high-level features
2. **Planning:** User stories are prioritized and estimated
3. **Design & Development:** In short sprints, features are built and tested
4. **Testing:** Continuous testing with each sprint (includes unit and acceptance tests)
5. **Deployment:** Delivered in working increments
6. **Review & Feedback:** Sprint Review and Retrospective improve future work

Waterfall vs. Agile - Process Comparison



"Agile leads the way in flexibility and adaptability. Waterfall struggles with change."

Highlight your team's ability to pivot quickly during the SNHU Travel project using Agile.

80%

Of Agile projects show improved team collaboration

(Source: HBR, 2016)

"Using Agile, we adapted mid-sprint when priorities changed — without missing deadlines."
– CS 250 Project Reflection

Agile recognized for improving time-to-market by up to 50%
(Source: Highsmith, 2019)

Agile ranks as the top SDLC methodology for fast-changing environments

When to Choose Waterfall vs. Agile

1

- **Choose Waterfall When:**
 - Requirements are fixed and fully known
 - **Project scope is simple or highly regulated**
 - **Changes are minimal**

2

Choose Agile When:

- Project scope is dynamic or unclear
- Frequent feedback and iteration are needed
- Rapid delivery and adaptation are key

3 **References**

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