

# Understanding Agile Methodologies

In this note, various Agile methodologies are explored, each offering unique approaches while sharing fundamental Agile values and principles. Beyond Scrum, several popular methodologies stand out.

## Kanban

- **Origins:** Derived from Japanese words "Kan" (sign) and "ban" (board), Kanban's visual representation via boards or charts offers transparent project progress tracking.
- **Key Features:** Kanban limits work-in-progress (WIP) to ensure sustainable team workload, fostering a focus on completing tasks before starting new ones.
- **Principle:** Emphasizes flow, striving to maximize efficiency by concentrating on fewer tasks at a time.

## Extreme Programming (XP)

- **Purpose:** Focuses on enhancing product quality and adaptability to changing customer needs by pushing traditional software development practices to the extreme.
- **Key Activities:**
  - **Designing:** Stresses simplicity and integration of product components for seamless functionality.
  - **Coding:** Demands clear, concise code for better understanding and troubleshooting.
  - **Testing:** Prioritizes extensive testing to eliminate flaws and ensure alignment with customer requirements.
  - **Listening:** Values customer collaboration and feedback integration into the product development process.
- **Innovative Practices:** Embraces pair programming, continuous integration, continuous refactoring, and minimal upfront design.

## Lean Methodology

- **Core Principles:** Comprising five key principles for enhancing project outcomes:
  - **Define Value:** Identifying and focusing on customer needs.
  - **Map Value Stream:** Analyzing and optimizing the process, eliminating wasteful steps.
  - **Create Flow:** Ensuring smooth and efficient product movement.
  - **Establish Pull:** Aligning with customer demands for incremental deliveries.
  - **Pursue Perfection:** Continuously improving the process steps.

# Agile and Lean Relationship

- **Inspiration:** Agile methodologies emerged after Lean, drawing inspiration from Lean manufacturing principles for software development.
- **Alignment:** Both Agile and Lean share a value system and principles, with minor differences primarily in terminology.

These methodologies represent a subset of Agile practices. Teams often blend methodologies to tailor processes that best suit their needs, emphasizing adaptability and evolution.