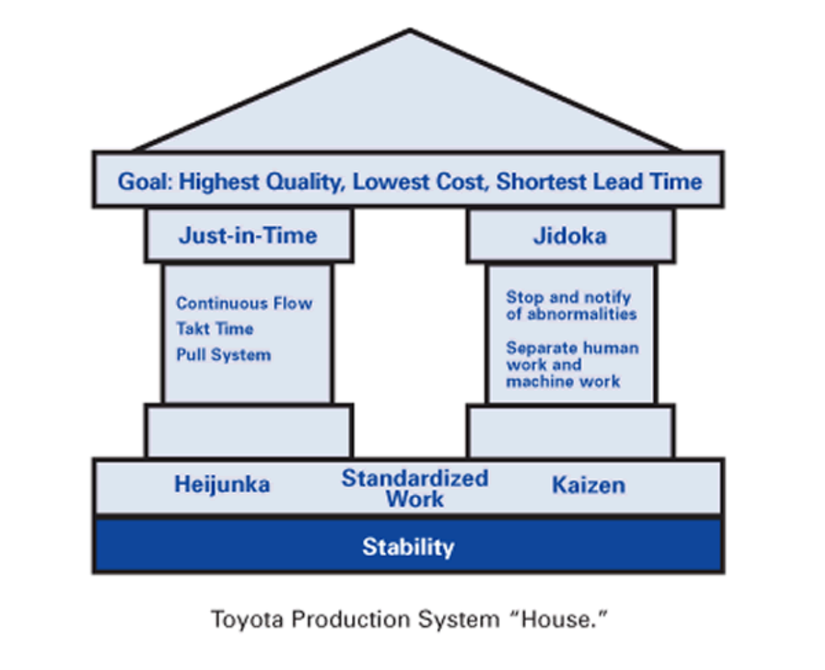
History

Lean

“Muda (waste), Muri (overburden), Mura (inconsistency).”

The production system developed by Toyota Motor Corporation to provide best quality, lowest cost, and shortest lead time through the elimination of waste.



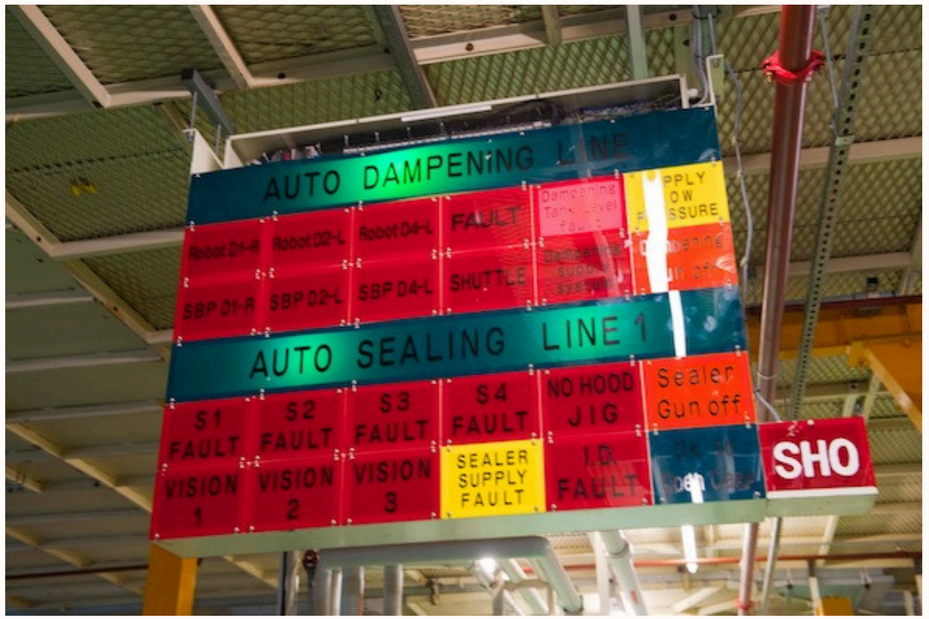
Toyota Production System “House.”

Source https://www.lean.org/lexicon-terms/toyota-production-system/

Kanban

"Visualize work, limit work in progress, and improve flow."

Kanban displays can broadcast lots of different types of information, from stock levels to production volumes.



Source : https://mag.toyota.co.uk/kanban-toyota-production-system/

Keywords

Lean

- waste identification
- waste reduction
- quality products

Kanban

- workflow visualization
- continuous delivery
- minimizing WIP

Shared

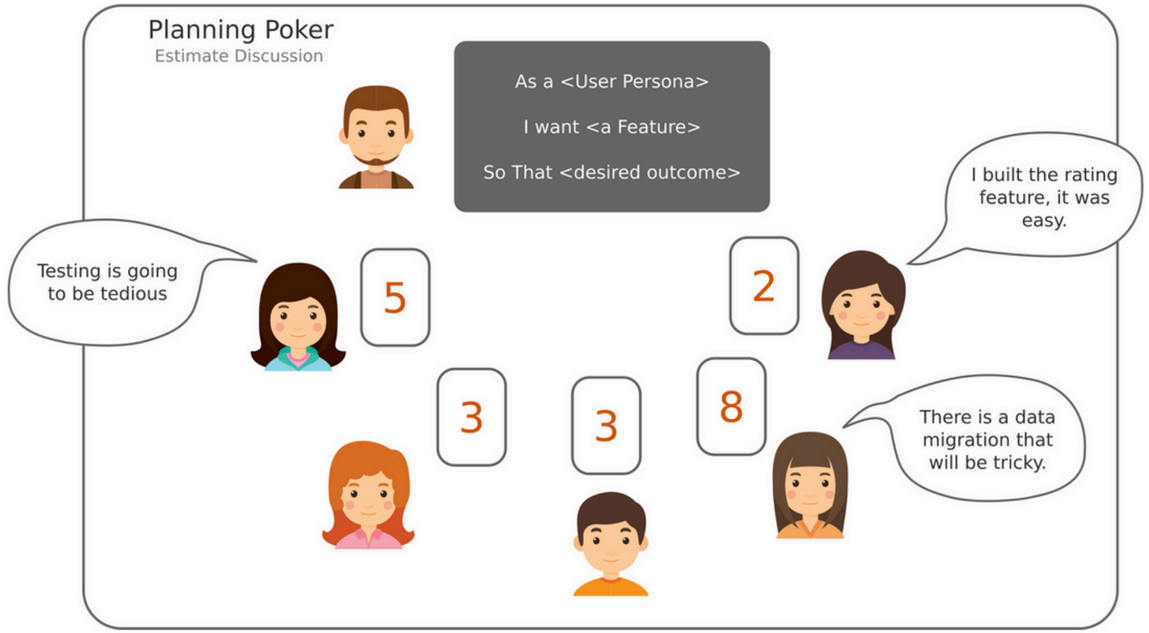
- customer focus
- flow efficiency

Flow vs Value - Planning Poker

Kanban

Focuses on ensuring tasks are appropriately sized for flow and capacity to avoid bottlenecks.

“Is this item small enough to fit into the system without causing a bottleneck?”



Lean

Focuses on ensuring tasks deliver sufficient value relative to the effort, helping eliminate waste and optimize efficiency.

"Does this task contribute sufficient value relative to its effort, ensuring it integrates smoothly into the flow without introducing inefficiency or waste?"

Both approaches use Planning Poker to support efficient decision-making but with different lenses: one on optimizing flow (Kanban) and the other on maximizing value with minimal waste (Lean).

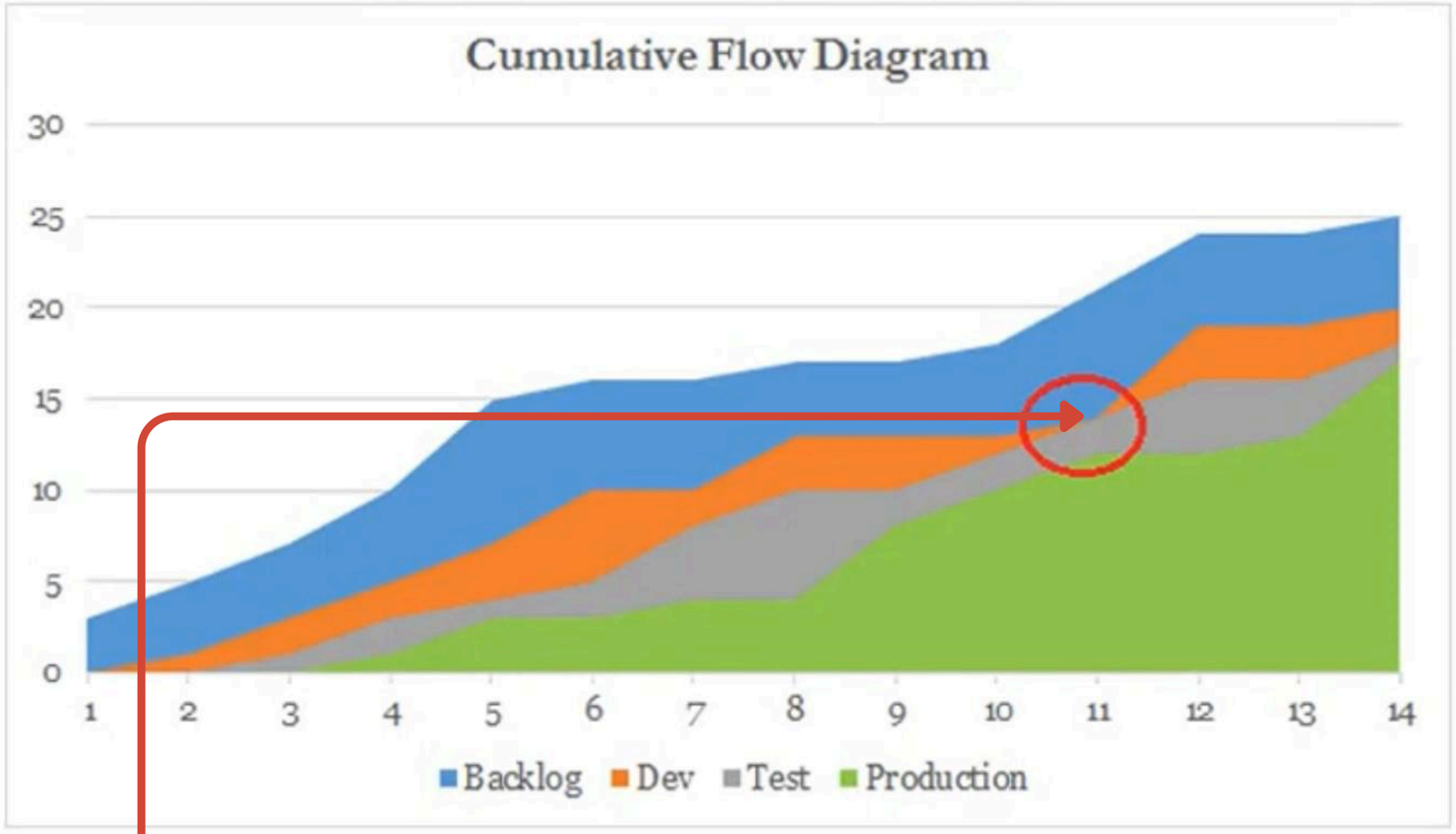
Flow vs Value - Pull principle

Kanban		Lean
Used to manage individual tasks through visual boards	Pull principle	Applied across the entire value stream, from demand to delivery
When there is available capacity, ensuring tasks move smoothly without overloading any part of the process	Work is pulled	Based on customer demand or downstream needs, minimizing waste and avoiding overproduction
WIP limits control how much work can be in progress at any given time, helping to prevent bottlenecks	Optimization	Just-in-Time (JIT) production is a key element, ensuring that work or materials are only produced when they are needed
Task-level and focuses on flow efficiency within teams	Focus is	Optimizing the value stream by delivering work only as it is needed

Both Kanban and Lean utilize the pull principle to optimize flow and reduce waste. However, Kanban is focused on managing work at the task level within teams, while Lean applies pull to the broader value stream, optimizing the entire production or delivery process based on customer demand.

Cumulative Flow Diagram (CFD) tool for Kanban

Visually **tracking** the ***movement*** of work items **through** the stages of the **workflow**



Analyzing cycle time helps **estimate** the ***effort*** of how **long** it will take to complete **similar tasks** in the **future**

Use case example:

bottleneck where the orange **Dev**elopment **area** is **reduced**

team is **unable** to ***keep up*** with the **workload**

strategy:

additional *effort* is needed to ***complete*** tasks within ***acceptable*** **timeframes**

may be:

- resources
- or
- time

Value Stream Mapping (VSM) tool for Lean

Map the **Current State** of every step in all stages

Analyze the *flow* to **identify** *waste*

Design a **Future** State **Map** proposing changes to **reduce** the waste identified

Feature A request waits in the **backlog** for 4 days before being prioritized

Improving **prioritization**

Waste Type: **waiting** time where the work is stuck

The feature B is pending the **handoff** between Development Team to Testing Team

Other types: Non-Adding-Value activities, rework, underutilization of resources

Streamlining handoffs between departments and improving **communication**