Kaizen 改善

Continuous improvement, Small changes, and Modern Agile Development

Kaizen aims to thrive under **existing rules, consistently** following one goal, with several small changes made in between

Kakushin is a chain of disruptive technologies changing old rules following rapid growth

Kaizen and Kakushin working together is similar to Kaikaku Reform, which changes old ways with new methods

>>> By implementing small adjustments over time, Kaizen minimizes the risk of disruption to ongoing operations

>>>There is no dependence on innovation and improvement is continual

>>>Therefore, we will focus on Kaizen

Avoiding Waste

Kaizen uses the 3 Mu framework to identify types of waste that should be avoided

Muda
Traditional view of waste: resources and time

Muri
Overworking/ overloading of people/ machines

Mura
Irregularity in methods used

By focusing on these three types of waste there is a clear target of what to avoid so they won't go unnoticed

Organising the Workspace

Seiri
Place things where they belong

Seiton
Arrange things ergonomically

Seiso
Clean the workspace

Seiketsu
Standardise things to prevent unnecessary clutter

Shitsuke
Maintain the previous standards

Kaizen uses the 5 S framework to maintain an organised workspace, improving efficiency

Ishikawa's Fishbone Diagram

> Root-Cause Analysis

Kaizen implements a Tree Algorithm into Management to identify the sources of potential problems

> Divide and Conquer Strategy

Breaking down a huge complex problem into small pieces

> Systematic Thinking

Thinking recursively and exhaust all possible approaches

Kaizen in Agile Software Development

Although less known, Kaizen is a cornerstone of Agile

Kaizen motivates Agile teams to continuously adapt, reflect, and improve, fostering teamwork and regular feedback for constant refinement. It impacts the workflows of all Agile methodologies. Two examples of such methodologies are provided below.

SCRUM

Scrum uses **iterative cycles** called sprints and regular meetings like **daily stand-ups** and **sprint reviews** to foster continuous improvement and adaptation in projects.

Scrum embodies Kaizen in ceremonies like the **Sprint Retrospective**, where teams **assess and fine-tune** process efficiency and effectiveness.

Lean Software Development

Lean Software Development (**LSD**), inspired by Toyota's Lean manufacturing, focuses on maximizing customer value while **emphasizing waste reduction**, **empowering teams**, and ensuring efficient, swift software production.

In LSD, **teams are encouraged to reflect on their processes** and implement changes incrementally. This approach aligns with Kaizen's philosophy of **small**, **incremental improvements** leading to better productivity.

Key Takeaways

>>> Kaizen's philosophy of continuous small improvements is crucial to remain a top performer.

>>> Kaizen uses three tools. The Fishbone Diagram emphasizes causal, recursive analysis of problems. **The 3 Mus** illustrate what to target to avoid waste. **The 5 Ss** provide a complete workflow to organise the workspace to maximize efficiency.

>>> Kaizen is **a significant influence on Agile Software Development.**