

# Kaizen 改善

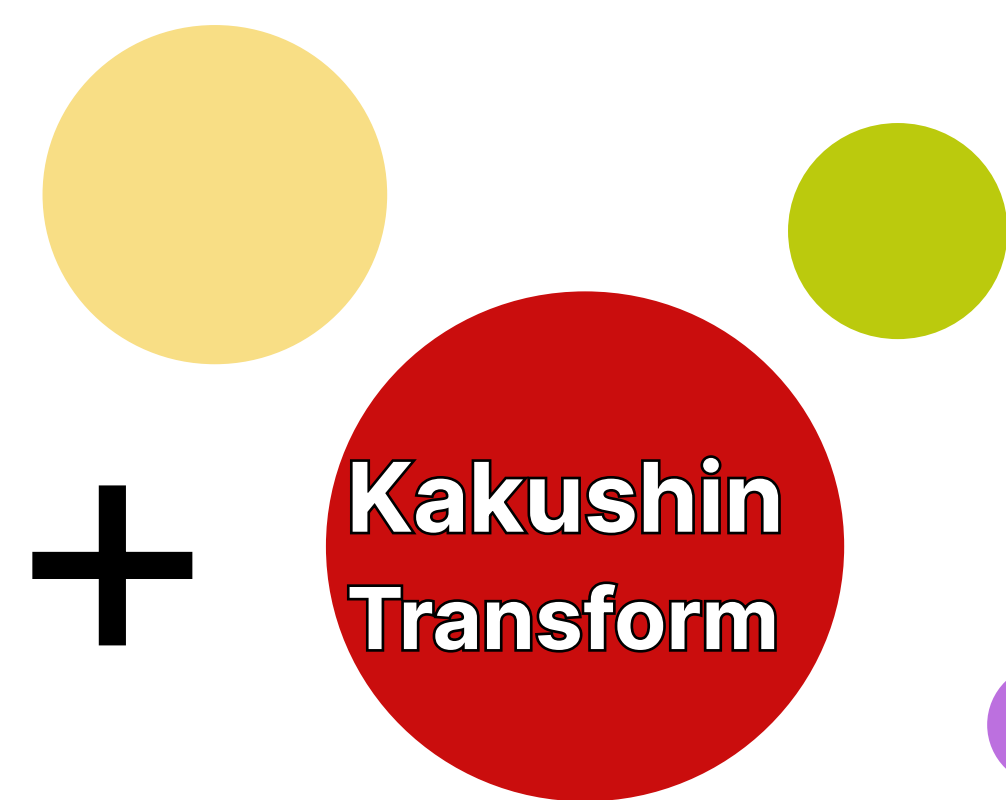
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## Continuous improvement, Small changes, and Modern Agile Development

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



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

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**Kaikaku Reform**

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

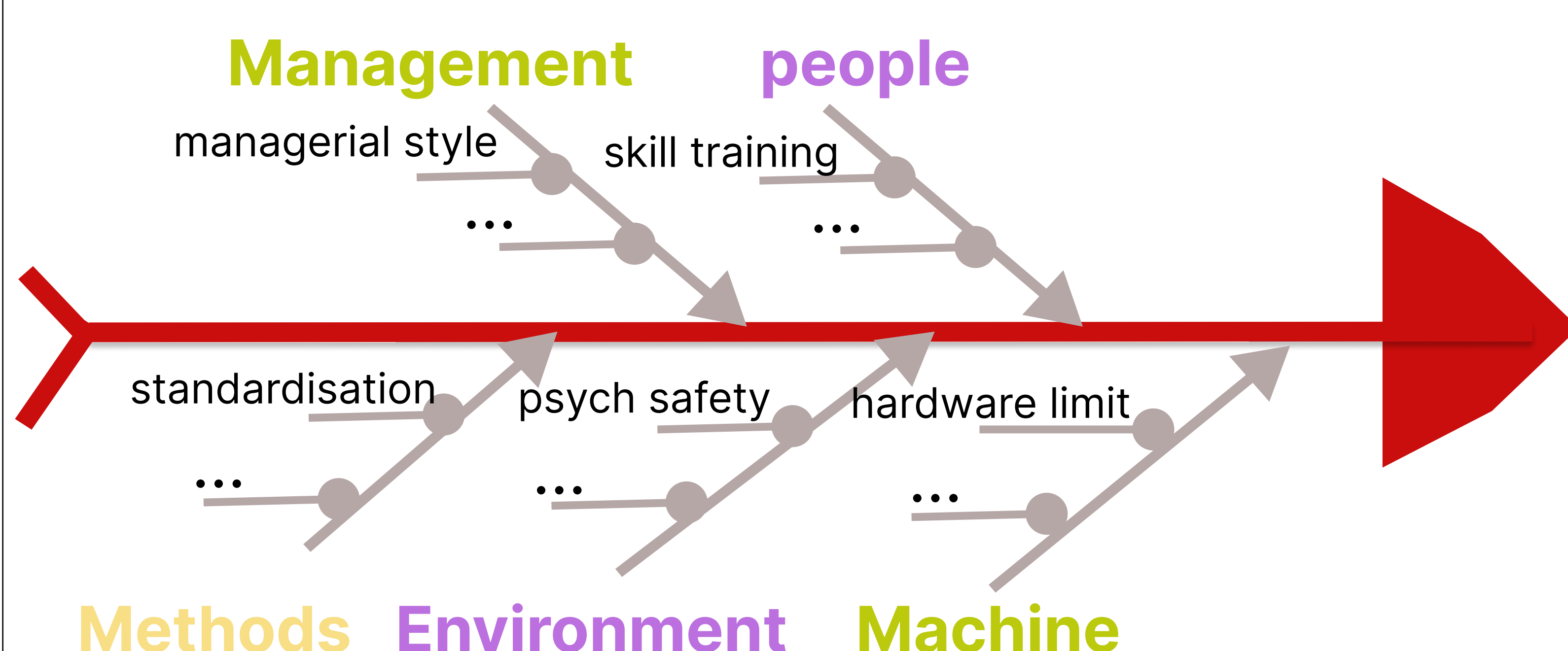
Overworking/overloading of people/machines

#### 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



### 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.**