Kaizen

Key of Toyota management success

By Yi Jiang
What is Kaizen?

Kaizen

改善

Change Better

Make it better
(to improve)
What’s the **difference** between Kaizen and improve?

**Continuity**
Why do we need kaizen?
Need Lean process

Expectations

Reality

Unnecessary effort
What is **lean** process

- Lean process is the most **efficient** and the most **effective** way to reach expectations.
- Lean process contains zero **waste** and zero **abnormality**
- It is a perfect value creation process
What is waste? (MUDA)

Waste is the use of any material or resource beyond what the customer requires and is willing to pay for.

Defined by Taiichi Ohno
Type of waste

- Inventory
- Defects
- Overproduction
- Complexity
- Waiting
- Excess Motion
- Moving Items
• All the wastes result in loss of time, money, human resources, etc
• Waste is any work added NO value.
Ultimate goal is to eliminate the NVA work
Other abnormalities in organization

• Except Muda, there are two other type of wastes:
  – Muri (overburden)
  – Mura (uneveness)
Muda, Mura & Muri

Muri = overburdened

Mura = unevenness, fluctuation, variation

Muda = waste

No Muri, Mura, or Muda
How to avoid Muri and Mura

- Identify each process operator’s capacity
- Define each position with clear responsibility
- Eliminate / reduce the gap between them through training
- Procedure and Standards
Importance of Procedure and standard

• A process without procedure, you may get:

• A process with procedure, the result will be:

• If you have standard, you will get:
Examples of no standard
Benefit of Kaizen

• Benefit to the organization:
  – eliminate the abnormalities and waste
  – Improve the quality of the output to the customer

• Benefit to the individual:
  – Improve personal competence
  – Reach your personal expectations / target with efficiency.
Part II.

*How to kaizen??*

Main instruments in Toyota practice
Toyota Way

- Long term thinking
- One piece flow
- Pull system
- No overload
- Solve problem in time
- Standardization
- Visual control
- Safe technology
- Genchi Genbutsu
- Think carefully, act quickly
- Reflection and improve
- People development
- Share experience
- Team work

- « Philosophy »
- « Process »
- « learn through Problem solving »
- « Develop and respect for People »

11/2/2015
Philosophy: Long term thinking

- Never let the near-hand benefit disturb long term strategy
Philosophy: Common target

• Difference between expectation and target
• Reasonable and variable
• Concrete and clear
Philosophy: Common target

- Management of target
  - Set organizational target based on Cooperate target (Hoshin)
  - Set short term target based on long term target
  - Set **personal target** and monitor the progress
  - Key Performance Indicator (KPI)
  - Each target need a careful planning with milestones
Philosophy: Value and Culture

• Corporate values

• Corporate culture

Culture should have strong character which motivate the employees and create a positive environment for the organization.

Toyota culture is respect for people, Kaizen and learning from problems.
Process: Jikotei Kanketsu (JKK)

• It means « Built in quality within ownership ». 
• It requires persistent consistent detection, prevention, correction and elimination of abnormalities.
• Its objective is to assure the quality work delivered to the next process
Customer First

• Who is your customer?
  – Direct, indirect customers

• What do they need?
  – Nemawashi (communication)

• Provide them what they expected / required without fault. (JKK)

• Only customer can tell what are non value added (NVA) work
Process: « make it lean »

- Simplify and clarify the steps
- Clear definition of each step's responsibility
Process: 5 S

• **Sort** keeping only what's needed
• **Straighten** - a place for everything and everything in it's place.
• **Shine** - cleanliness
• **Standardize** - Develop systems and procedures to maintain and monitor the first three S's.
• **Sustain** the new level of performance
5 S in Factory

TOOL SHADOW BOARDS

BEFORE

AFTER
5 S in office
5 S at home
• Advantages of 5 S
• 5 S is a way of life.

Marie Konto (近藤 麻理恵)
SORT
Clearly distinguish needed items from unneeded and eliminate the latter

STRAIGHTEN
Keep needed items in the correct place to allow for easy and immediate retrieval

SUSTAIN
Maintain established procedures

SHINE
Keep the workplace neat and clean

STANDARDIZE
The method by which “Sort,” “Straighten” and “Shine” are made habitual
People and Partners

• Improve together with partners
• Respect for people
  – Training and guidance → on job training
  – Respect people’s competence → right people for right position
  – Assist individual development desire → career development
Problem solving: Genchi Genbutsu

- Get the current situation, identify the problem (Genchi Genbutsu)
- Breakdown the problem if it is big
- Select priority
Problem solving: Root Cause Analysis

Symptom of the problem.
“The Weed”
Above the surface
(obvious)

The Underlying Causes
“The Root”
Below the surface
(not obvious)

The word root, in root cause analysis, refers to the underlying causes, not the one cause.

Tracing a problem to its origins

11/2/2015
Problem solving: teamwork

• Responsible parties / stakeholders
Problem solving: Propose solutions

• Propose final possible solutions
Problem solving: A3 Report

• 1- Background
• 2- Current issue
• 3- Target and Gap analysis (why)
• 4- Root cause analysis (why)
• 5- Counter measures (what, how, who, where)
• 6- Timing (when)
• 7- Next actions or next steps
• signatures
PDCA

- Act
  - Continual improvement
  - Preventive actions
  - Corrective actions
- Check
  - Audits
  - Validations
  - Verifications
- Plan
  - Policy
  - Resources
  - Objectives
- Do
  - Processes
  - Indicators
  - Product realization

A → P → C → D
PDCA is a powerful tool of Kaizen
Management of Meeting

• Purpose of meeting
• Time and location
• Involved parties
• Expectations from other parties
• Meeting material attachments (optional)
• **Meeting minutes** (within 2-3 days after the meeting, signed and circulated)
What does Kaizen need?

- Patience
- Persistance
- Overall involvement
- Monitoring
  - A group of people in each function who manage the target setting, planning, people’s management...
Lean Government

Lean government approaches typically have the following characteristics

• Take a customer service perspective that seeks to optimize value delivered to the public, the regulated community, and/or other stakeholders;

• Involve employees and external stakeholders in continual improvements and problem-solving activities;
• Deploy a rapid continuous improvement framework that emphasizes implementation over prolonged planning;
• Seek to reduce the complexity of processes and the variation in process outputs;
• Use performance metrics and visual controls to provide rapid feedback to improve real-time decision-making and problem-solving; and
• Approach improvement activities using **systems thinking**
Discussions

Email: yi.jiang.tretton@gmail.com
Recommended readings

• « One Small Step Can Change Your life: The Kaizen Way » by Anthony Robbins
• « Toyota Way » by Jeffrey Liker (optional)
• « Root Cause Analysis: A Tool for Total Quality Management »
KAIZEN
(CONTINUOUS IMPROVEMENT)
IS OUR WAY OF LIFE
Japanese expressions

• Kaizen: to improve continuously
• Muda: the waste (generally waste of time, of energy, loss of efficiency...)
• Muri: Uneveness, unbalance
• Mura: Overburden
• Nemawashi: prepare the ground before plant a tree
• Jikotei kanketsu (JKK): in process quality, build in quality with ownership
• Genchi Genbutsu: go to the spot and check (solving problems at the source instead of behind desks)
• Hoshin: directions