From KAIZEN™ to LEAN to GREEN

2016

Kaizen Institute
Masaaki Imai
Kaleidoscope of Terms

- Toyota Production System
- 5S
- Kanban
- Gemba
- Efficiency
- Supermarket
- Six Sigma
- Baldrige
- TQM
- Flow
- Juran
- TPM
- Deming
- ISO
- Ohno
- Lean
- Jidohka
- 5S
- 5S
- Six Sigma
- Balance
- Push-Pull
- Kanban
- Efficiency
- Takt Time
- Supply Chain
- Ford
- Productivity
KAIZEN™ (Original Definition)

KAI = Change

ZEN = Good (for the better)

KAIZEN™ = Continual Improvement
KAIZEN™ (new Definition)

- Everyday improvement
- Everybody improvement
- Everywhere improvement
- From small incremental improvement to dramatic strategic improvement
Two Operational Systems

Traditional

Employs maximum resources for minimum output

Lean

Employs minimum resources for maximum output
KAIZEN™ Spirit (1)

1. Discard conventional fixed idea for operations.

2. Think of how to do it, and not why it cannot be done.

3. Do not make excuses. Start by questioning current practices.

4. Do not seek perfection. Do it right away even if for only 50% of target.

5. Correct mistakes at once.
KAIZEN™ Spirit (2)

6. Do not spend money for KAIZEN™.

7. Wisdom is brought out when faced with hardship.


9. Seek the wisdom of ten people rather than the knowledge of one.

10. KAIZEN™ ideas are infinite.
What is Management

- Top management
- Innovation
- KAIZEN™
- Maintenance
- Middle management
- Supervisors
- Employees
Organisation for KAIZEN™

Customer Expectations

Gemba

Organization to support

Customer Satisfaction
The 5 Gemba Principles

1. When an abnormality occurs, go to Gemba first
2. Check with Gembutsu (machine, material, failures, rejects, unsafe conditions etc.)
3. Take temporary countermeasures on the spot
4. Remove root cause
5. Standardize to prevent trouble
House of Gemba Management

- Profit management
- Quality & safety management
- Cost management
- Logistic management

- Workers' operations
- Information
- Equipment
- Products & materials

- Standardization
  - 5S (Good housekeeping)
  - Muda Elimination

- Team-work self-discipline
- Morale enhancement
  - QC circles
- Suggestions
Everything in Gemba deteriorates if left alone.

That is the reason why Gemba needs to be sustained and improved.

Management means to maintain and improve standards.
7 Types of Muda

1. Muda of over-production
2. Muda of waiting
3. Muda of transport
4. Muda of processing
5. Muda of inventory
6. Muda of motion
7. Muda of repair/rejects
Five S’s

1. SEIRI-Sort
2. SEITON-Straighten
3. SEISO-Scrub
4. SEIKETSU- Systematize
5. SHITSUKE- Standardize

The goal of Five S’s is to make a shortest flow. If it does not, its benefits are not fully gained.
Standardization (1)

➢ Simple, clear & conspicuous
➢ Best, easiest, safest way
    - - - - - - - > should only have one at a time
➢ Preservation of know-how
➢ Guide-lines that enable performance measurement of tasks delegated
➢ Assure Quality, Cost, Delivery and Safety
➢ Show relationship between cause and effect
Standardization (2)

➢ It makes management possible (maintenance and improvement)
➢ Basis for training
➢ Basis for audit or diagnosis
➢ Recurrence prevention and control of variability

Remember: “The standard used today is the worst way of doing the job.”
Disneyland
Disneyland (1)
Behavioral standards

➢ Make Eye contact and Smile
➢ Greet and welcome Each and Every Guests
➢ Seek out Guest Contact
➢ Provide Immediate Service Recovery
➢ Display appropriate Body Language
➢ Preserve the “Magical” Guest Experience
➢ Thank Each and Every Guest
The FLOW

Basic difference between Traditional and Lean System

FLOW

(Realization of minimum cost)
Conditions for making the FLOW

- 5S
- Standardization
- Visual Management
- MUDA Elimination
- Reorganizing Management Structure
- Building KAIZEN™ Culture
When the FLOW is shortened

- Quality automatically improves
- Delivery automatically improves
- Cost automatically goes down

and brings

- Big Profit!
3 Conditions to Create a Pull System

Flow

Synchronization

Leveling
Synchronization & Leveling (1)

Takt Time - The pulse of the market

Level out product variety and volume to daily production

One-piece-flow
Synchronization and Leveling (2)

Next process goes to previous process to get materials (super-market)

Cross-functional Coordination (Design- Production- Logistics- Sales)

Flexibility to meet diversified orders
Management of the Baratsuki (1)

1. Ohno’s Experience
2. From Monthly Plans to Daily Plan
3. The Latest Experience
4. Day Plans to Daily Plans
Management of the Baratsuki (2)

1. Do not interrupt the Flow
2. Visual Management
3. Standardize Operations
Management of the Baratsuki (3)

4. Anyone can recognize normal/abnormal conditions

5. Supervisor can take immediate actions in case of abnormality

6. Set up Production Control Board
Christopher Columbus` School of Management

- When he set out, he didn’t know where he was going
- When he got there, he didn’t know where he was
- When he returned, he didn’t know where he had been
- He did it all with borrowed capital
Mr. Oh, no!
Who manages the Flow?

…Let the flow manage the processes, and not let management manage the flow.

(Taiichi Ohno)
KAIZEN™ is Layman’s Common Sense (1)

X High Technology

X Rocket Science

X Sophisticated Problem Solving Tools
KAIZEN™ is Layman`s Common Sense (2)

- Everyday Improvement
- Gemba Oriented
- Customer Oriented
- 5S
- MUDA Elimination
- Standardization
- FLOW, Synchronization & Leveling
The Merit of Lean Companies (1)

- Employs minimum resources
- Short Production Lead Time
- High Quality and Low Cost
- Flexibility to meet diverse market requirements
- Customer driven approach
The Merit of Lean Companies (2)

- Cross functional collaboration among Stake-holders
- KAIZEN™ Spirit and High Morale of Employees
- Operation oriented approach
- Long-term perspective
The *CURSE* of Traditional Companies (1)

- Employs maximum resources
- Long Production Lead Time
- Many Quality Problems
- High Cost Operations
- No Flexibility to meet diverse market requirements
- Money driven approach
The *CURSE* of Traditional Companies (2)

- Lack of cross functional coordination
- Conflict among Stake-holders
- Low Morale of Employees
- Financial oriented approach
- Short-term perspective
Winning over the CURSE

- Commitment to Lean by CEO & the Board
- Establishing Long-term Lean Budget
- Setting up “Lean War Room”
- Internal Audit based on FSL
- Visual Management (Genchi Genbutsu)
- Lean Expert
Where do we go from here?

• One day FSL assessment
• Top management involvement
• Setup kaizen war room
• Budget for long term kaizen strategy
• Train internal FSL experts
Common Misconceptions by Management (1)

- Proprietary technology vs managerial Technology
- Set policy and results will follow
- Train employees and Gemba improves
- Rely on sophisticated tools instead of common sense
- Believes Gemba will ask “What is in it for me?”
Common Misconceptions by Management (2)

- Quality is quality manager's job
- Efficiency is industrial engineer's job
- Cost cutting, not cost management
- KAIZEN™ without focus and targets
- Do not go to gemba
Tools & Problems

Tools come first and problems second?

or

Problems come first and tools second?
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Europe - Americas - Asia-Pacific - Middle East - Africa

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The Toyota Way 1

- The learning organization
- Respect for people
- Education & training
- Challenging spirit
- Challenging management (Oh, NO! - System)
- KAIZEN™, Toyota’s DNA
The Toyota Way 2

- Team work
- Quality First
- Long term perspective
- Genchi (Gemba) Gembutsu
- Do it right away
- Muda elimination
The Hierarchy of Strategies

KAIZEN™ → LEAN → GREEN

TQC – Deming Prize
TPM – PM Prize
Standardization – ISO Certifications

Operations – Shingo Prize
Operations – Baldrige Award
Operations – EFQM Excellence Model
Pros and Cons between Traditional and Lean Management (1)

- Shareholder-first vs Customer-first
- Employ abundant resources vs Minimum resources
- Long production Lead Time vs Short Lead Time
Pros and Cons between Traditional and Lean Management (2)

• High Inventory vs Minimum Inventory
• High Quality Problems vs Low Quality Problems
• High Cost of Operations vs Low Cost of Operations
Pros and Cons between Traditional and Lean Management (3)

• Low Flexibility vs High Flexibility to meet changing market
• Machine Productivity vs Employee Productivity
• Financial Improvement vs Operational Improvement
Pros and Cons between Traditional and Lean Management (4)

- Low Employee Morale vs High Employee Morale
- Short-Term Perspective vs Long-Term Perspective
THANK YOU!

Kaizen Institute  Chairman Masaaki Imai
2016
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