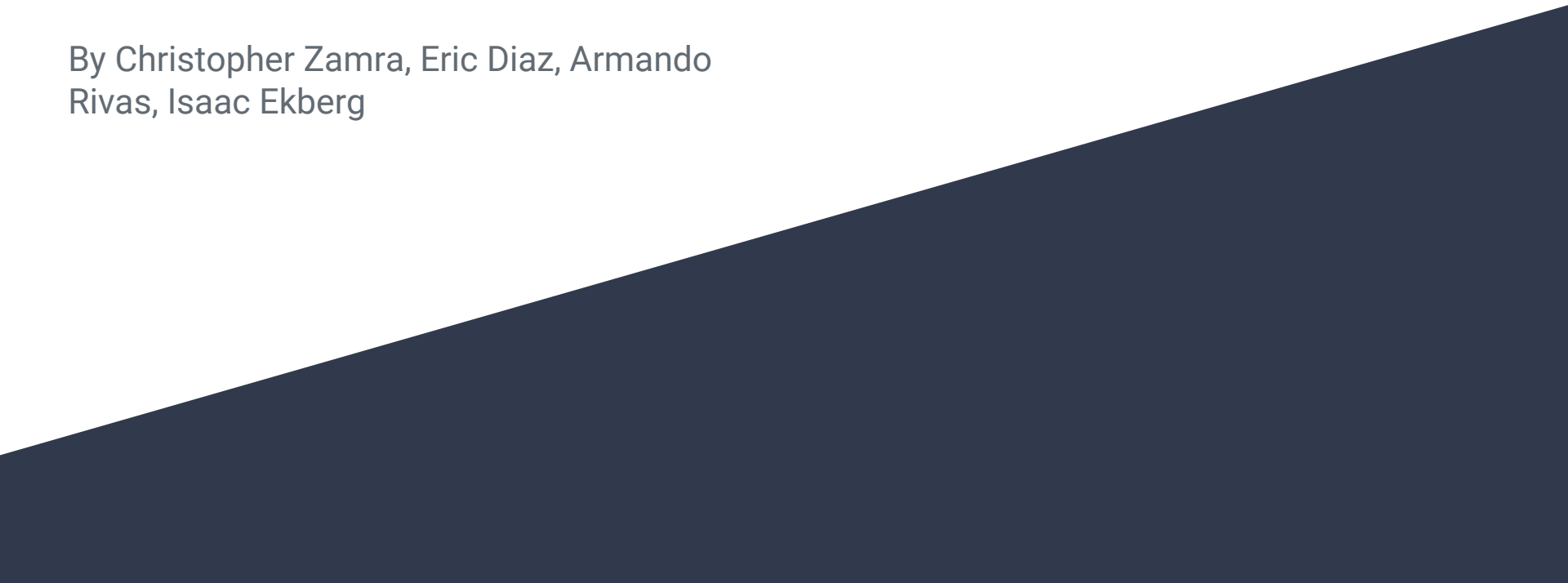


Komatsu Limited

By Christopher Zamra, Eric Diaz, Armando
Rivas, Isaac Ekberg

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Introduction – History



Komatsu Bulldozer

- Komatsu Limited was founded in 1921 in the city of Komatsu, Ishikawa, Japan.
- Komatsu limited is a multinational corporation that focuses on mining, forestry, military equipment, and industrial equipment.
 - Second behind Caterpillar
- Post World War II Komatsu ventured outside of military equipment (1949).
 - Demand for Bulldozers increased.

History cont'd



- In 1964 the president, Rioichi Kawai, proposed to change perception of Japanese products.
 - Cheap and made poorly.
 - Disprove misconception by venturing into U.S.
 - Take on major competitor, Caterpillar (CAT).
- Entered U.S. with company slogan "Maru-C"
 - Comes from Asian board game "Go"
 - Maru-C translates as encircle caterpillar.

Services



- Success of Komatsu Limited has allowed them to create services within the United States.
 - Komatsu America Corporation is a subsidiary of Komatsu Limited.
 - Offers Komatsu Financial
- Komatsu Financial
 - A lender that offers support in new and used equipment financing
 - Komatsu creates its own product
 - Allows direct purchase with competitive prices and rates.
- “Komatsu has a vested interest in the success of every customer”
 - Illustrates their desire to achieve quality and exceed customer expectations.

Mission: Komatsu Way

- Set of values that all workers in Komatsu Limited, even upper management, should adopt



1. Commitment to Quality and Reliability.
2. Customer Oriented
3. Defining the Root Cause
4. Workplace Philosophy (Gemba)
5. Policy Development
6. Collaborations with Business Partners
7. Human Resource Development

Komatsu Limited Today

<https://youtu.be/OVoaCifGVfg>

Masaaki Imai

<https://www.youtube.com/watch?v=WqKMIRJUAJk>

- Annual Report
 - Operating Net Sales
 - \$22 billion
 - Operating Income
 - \$2 billion
- In our interview we learned that Komatsu Limited was not performing well.
 - However, that has began to change as of 2017.
 - A lot of their business comes from Komatsu Financial

Method – What is Kaizen?

- Also known as continuous improvement
- Strategy where all employees work together to achieve incremental achievements to the manufacturing process
- Kaizen is part action plan and part philosophy
 - Action Plan: Organizing events that are focused on helping the company improve
 - Philosophy: Kaizen is about building a culture where all employees are engaged

History of Kaizen

- Kaizen began after WWII when Toyota first implemented quality circles
- A quality circle is a group of workers who perform the same or similar work and meet regularly
- Kaizen became popular in Japan in the 1950s
- The term Kaizen itself became famous around the world through Masaaki Isai
- He is a Japanese organizational theorist and management consultant

Kaizen Event

- A focused development project that can accomplish major improvements in a short amount of time
- Takes about 2-10 days
- Must have a clear, concise objective along with immediately available resources and rapid results
- It is extremely important that all employees maintain a high morale

Kaizen Event 8 Steps

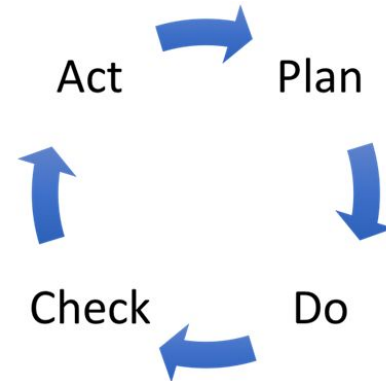
1. Defining the problem/goal
2. Documenting the current state
3. Brainstorming and developing a future state
4. Implementation
5. Training
6. Developing a follow-up plan
7. Presenting results
8. Celebrating success

How is Kaizen divided in a Workplace?

- Kaizen is broken up so that different levels of a business can have their own responsibilities
- Top Management
 - Responsible for introducing the concept of Kaizen as a corporate strategy and building systems, procedures, and structures related to Kaizen
- Middle Management
 - Implement Kaizen goals and help employees develop skills for problem solving
- Supervisor's
 - Improve communication with workers and make sure they keep a high morale
- Workers
 - They engage in Kaizen through the suggestion system and engage in self-development

Kaizen and PDCA

- The PDCA process supports the principles and practices of Kaizen
- The PDCA cycle is a four stage process
 - Plan
 - Do
 - Check
 - Act
- This is beneficial for Kaizen because it provides a framework and structure for identifying improvement opportunities



Kaizen Nine Tips

“We don’t have much money, but you still have to make improvements. Use your brain. And if you can’t do that, sweat it out...Using money to make the change is the easiest solution. In Japan, every time you want to spend money we say use Kaizen instead” (Howell 37).

1. Discard conventional/fixed ideas.
2. Think of how to do something, not why it can’t be done.
3. Don’t seek perfection.
4. Don’t make excuses but question current practices.
5. Seek the knowledge of ten people rather than one.
6. If you make a mistake, correct it right away.
7. Throw wisdom at a problem, not money.
8. Ask why 5 times and seek root cause.
9. Improve yourself first.

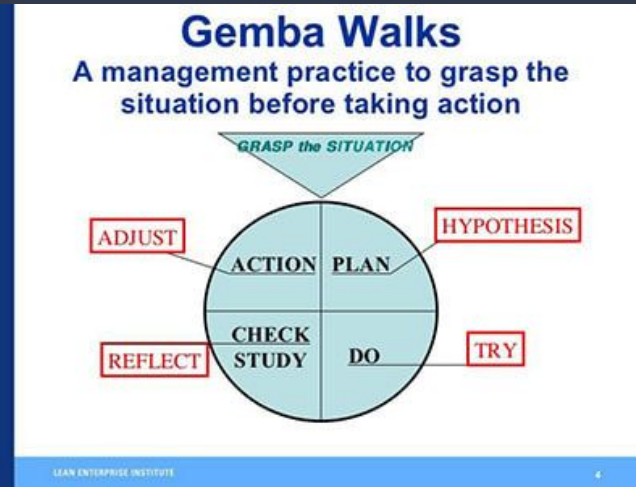
Background on Interviewee (Joseph Kennedy)

- Conducted Interview with Joseph Kennedy
- Joseph is the Finance Operations Manager of Komatsu
- Responsibilities as Finance Operations Manager
 - Leads the finance and accounting team
 - Provides strategic direction and oversight of front-end revenue cycle of work based on Komatsu's processes and outcomes
 - Provides solutions in areas of high risk in the revenue cycle
 - Oversees revenue policies and procedures, including billing for customers
 - Helps out with developing a budget for projects
 - Looks at processes to improve efficiency and meets Komatsu's goals
 - A facilitator for Kaizen Events
 - "The Komatsu Way Expert"
- Conducted interview via conference call

Why Kaizen Events are used in Komatsu

- Komatsu was the leading manufacturer for construction, mining, forestry, and military equipment in Japan
- Caterpillar penetrated the market with its line of products so Komatsu needed to find a way to gain a competitive advantage.
- Kaizen events were then implemented in Komatsu as a result
- Komatsu penetrated the North American market and implemented Kaizen events as well
- Kaizen events still used to today at Komatsu

Preparing for a Kaizen Event at Komatsu



- Kaizen events are mostly used for bigger projects but are also implemented in every day operations
- Someone finds something wrong with a process or activity
- They evaluate the process by conducting a Gemba Walk
- The facilitator first identifies everyone who is part of the process or activity in order to conduct kaizen event
- Looks at process and records observations
- Use past data to collect certain information

Kaizen Events at Komatsu

- Once they figure out what the problem is, the Kaizen team conducts a root cause analysis of the process
- Komatsu also utilizes their 4 key principles during Kaizen events
 - Cleanliness in your workspace
 - Organization in your workspace
 - Continuous improvement
 - Continuous maintenance
- Management helps the team boil down possible solutions to the process
- All done within a 6 week to 6 month period based on scope of the project
- A lot of documentation goes along with the event so management can receive information on possible solutions

After Kaizen Event

- Test each solution at the manufacturing plant
- When testing solution management utilizes PDCA cycle
 - Plan
 - Do
 - Check
 - Act
- Keep turning the wheel while planning the activity, implement the change, you check it, you verify
- May be done more than once depending on how many possible solutions there are.
- Choose best solution
- Implement the solution

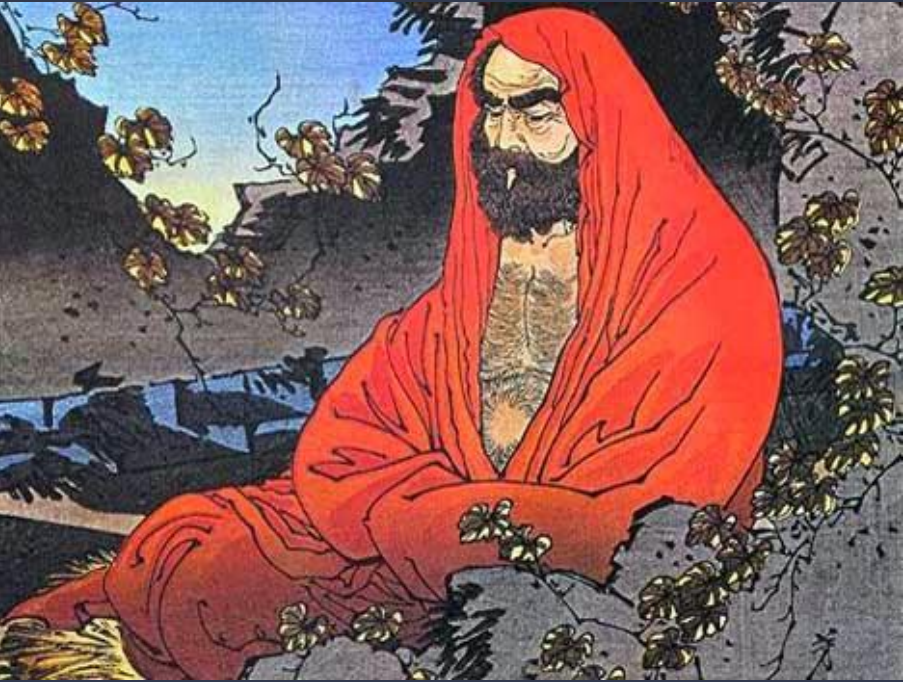
Time management



Running on Komatsu time

Kyle Glenn

Zen



Bodhidharma

“The Flexible will be preserved, unbroken.”

Zen Meditation

The Tea Ceremony

KaiZen Group Meditation

Musashi's 5 Rings



Musashi was indisputably the best Samurai that
ever lived

Sasaki Kojiro

“If you have no use for your sheath you are already
dead”

Earth



Overcoming the Opponent by identification

Overcoming the process by identification

Water

Winning through a single cut



Manipulating resistance

Fire



Changing the rhythm of an opponent

Changing the rhythm of a process

Wind

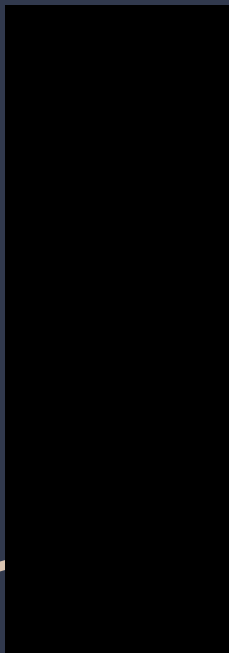


Keep focused

Do not be distracted by unnatural Strategies

Ergonomics

Void



Void is where there is nothing.

Void is the key to zen.



The Komatsu way

Thank you.