An Introduction to Total Environment Management (TEM)

Over the past few years, concerns over global warming, climate change and depletion of scarce natural resources have come to the forefront of global discussions as an intractable issue and an imminent threat to mankind’s wellbeing. The amount of carbon (Greenhouse Gas) emissions into atmosphere has grown almost exponentially over the last half a century, largely due to rapid industrialization across the globe.

Admirably, many companies and organizations in various industries across the world have started taking actions to mitigate their negative environmental impact. But a more systematic approach to reducing an organization’s Environmental Footprint would be of great benefit.

With this in mind, Kaizen Institute has sought to develop an approach that encapsulates Know-how and Do-how vis-à-vis mitigation of harmful environmental impact of an organization’s activities.
Kaizen Approach to Sustainability: (Total Environment Management)

Continuous improvement through identification, and minimization or elimination of Muda (Waste) from processes forms the basis of Kaizen approach. Philosophy, practices and tools of Kaizen have been successfully implemented by numerous organizations in a vast number of industry sectors (from manufacturing and mining to hotels and hospitals) with great effect. The cost savings, enhancement in productivity, improvement in quality, reduction in inventory (and many other benefits) from this approach are well documented.

A similar approach applicable to environmental sustainability would ensure a significant reduction in an organization’s Environmental Footprint. Thus, identification and minimization/elimination of Environmental Hazards would form the basis of Total Environment Management. We have classified these environmental hazards into five distinct categories -

1. Use of Non Renewable Energy
2. Air Emissions (from processes and through transportation)
3. Water (Water Usage and Water Pollution)
4. Use of Non Biodegradable Material (Direct Material and Disposable Waste)
5. Ecological Damage

The process of identifying and minimizing/eliminating these hazards is divided into 3 stages –

- **Realize** – Identifying, mapping and measuring environmental hazards in a value stream is the objective at this stage. Green Value Stream Mapping – developing “Current State” and “Future State” maps – are the key activities performed here.
- **Minimize** – Once the environmental hazards are identified and quantified, the focus moves to minimizing or eliminating the same. Various tools and methods such as energy conservation, use of Milk Runs in logistics, water conservation, rainwater harvesting, effluent treatment and many others are used during this stage to significantly minimize or eliminate the environmental hazards.

- **Neutralize** – Offsetting the remaining *environmental hazards* and transitioning to continual reuse of water and material after minimization is the objective at this stage with the ultimate goal of becoming a *Carbon-neutral water-positive* and *net-zero ecological damage* organization.

**Benefits of implementing Total Environment Management**

Businesses across the world have sought to *Go Green* for a variety of reasons. Chief among them are regulatory compliance, good corporate citizenship, catering to the needs to increasingly environmentally-conscious customers and improved employee morale/satisfaction. But *Going Green* need not be for regulatory or altruistic reasons alone. Significant cost savings could be realized through reduction of these environmental hazards.

One of the fundamental benefits of Kaizen approach is to attain these cost-savings with **minimal investment** (measurement and quantification is done at every stage to meet this end). Moreover, fostering the culture of looking for these hazards and minimizing them at all levels in an organization (employee engagement) is critical in the long-run and is no different in that regard from organizations that practice *Kaizen* effectively.

- Vijay Allaham
Mission Dantotsu August 2013

Kaizen Happenings
- Nairobi, Kenya
  - Hi-Tea with Jon Miller
- New Delhi
  - 'Enabling India' Conclave
- Pune
  - Consultant Training
  - Vodafone Tour
- L&G Spaces
- Volkswagen
  - 'Certified Kaizen Practitioner' In-house Training
  - Atlas Copco

New Clients on Board

Team KAI

Upcoming Events

Kaizen Story
Kaizen Happenings

New Delhi, India

- FICCI-PWC Manufacturing Barometer Report
  - 26th July, 2013
  - Attended by Mukesh Khare and Vishwesh N Dharawat

- “Enabling India” Conclave
  - 2nd August, 2013
  - Attended by Vishwanath N Dharawat

- Consultant Training
  - Lean & Green Spaces
  - 26th July to 1st August, 2013

- Vodafone Tour
  - “Best-in-Class” Benchmarking Tour
  - Lean & Green Spaces
  - Volkswagen Factory

- Atlas Copco
  - 9th to 12th July, 2013
  - Total Flow Management (TFM)
  - 12th to 14th August, 2013
  - Total Quality Management (TQM)

Nairobi, Kenya

- Safari Park Hotel
  - 10th and 11th July, 2013
  - Theme: Achieving Excellence in Quality
  - Full Details in Pages 6 & 7

- Hi - Tea with Jon Miller
  - 17th July, 2013
  - Guests: Industry Leaders in Kenya
9th Annual KAM Kaizen Event

9th Annual KAM Kaizen Event was a huge success with enthusiastic participation from 125 delegates from 35 companies!

Mr Jon Miller speaking on “Leadership for Kaizen”

Mr Vinod Grover presenting “Kaizen Teian”
Many thanks to all the participants! We look forward to seeing you again next year.

Special thanks to the 6 host companies – Ubbink, Unga, Kenafric, Kariki Farms, Synresins and ABM - for opening their doors and showcasing their excellent operations!!
Vodafone visits Lean & Green Spaces, Pune for benchmarking *gemba* visit.

“Very good space management & Very fantastic office with Lean & Green concept”

Vodafone visits Volkswagen factory, Pune for benchmarking *gemba* visit.

“It was fantastic & well systematic plant. Awesome experience!”
Team KI – AIM during consultant training and meet – July 2013

Kaizen Humor

I noticed some inefficiencies in another department, so I formed a Kaizen team to find solutions.

I asked some of the people in that department to be on the team, but they were busy being inefficient.

With any luck, my ignorance of their function will be seen as an aggressive type of objectivity.

A successful transformation requires employees to feel ownership for the change.

Change? What change?

Is there some-thing we don’t know?

It’s important that everyone has clear roles and responsibilities.

What are you trying to tell us? Should we stop working on our projects?

I’ll keep you engaged and energized with my clear communication.

And as your leader, I will role-model the desired change.

If he’s our role model, I guess we need to act like morons who can’t communicate.

I need new people.

Fuh Fuh Fuh Fuh Fuh
Indizen 2014 – 5th National Convention on Operational Excellence

If interested in participating or for further information, please write to india@kaizen.com
Kaizen Story: Unsolved Statistical Problem

George Dantzig, a great mathematician, is known for his contribution to operations research and systems engineering.

An interesting incident happened at Berkeley in 1939 when he was a PhD student. One morning, he arrived late for his statistics class and he quickly copied down the two problems on the board assuming they were homework. Assignment took him several days to work through the problem and finally he had a breakthrough and dropped the homework at the professor's desk the next day.

Six weeks later, his excited professor, announcing the acceptance of a paper based on his proof, visited George. Since George was late on that day, he didn’t know that the two problems on the board were unsolved equations. Since George was working without any limitations of impossibility, he could crack the mathematical mind-teasers that had stumped mathematicians for years.

A few lessons from the story:

1. George solved the problem because he didn’t know he couldn’t
2. We are limited only by our thoughts
3. Ignorance of something gives you a blind confidence
4. When we don’t know something is difficult or impossible, we will have a positive approach.

Please share your feedback / suggestions for improvements to vallaham@kaizen.com