

Lean Frontier

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MY START WITH LEAN

- v **1975: Dumping in Africa?**
- v **Toyota visits**
- v **Not cultural, but logical and rational**

WHAT I LEARNED WITH LEAN

- v **Once you change your paradigm, you learn to see:**
 - **Having your stocks at the right place**
 - **Never ending improvement**
 - **People and problem solving**
 - **Visual management**
 - **Automation and flexible manpower lines**

STOCKS AT THE RIGHT PLACE

- v **The stock that we saw in the Toyota plants was the total stock: no warehouses**
- v **The stock was held at the end of each process**
- v **Material stock was just what was needed to produce and supplied frequently**
- v **Which led to our paradigm shift: don't try to automate warehouses, try to suppress them**

NEVER ENDING IMPROVEMENT

- v **Ten years after the first visits, Toyota had continued to progress and, again, produced with half as many operators per car**

- v **Every improvement makes new problems appear, which in turn, are opportunities for more improvement**

- v **No complacency: to benefit from these new opportunities, results have to be challenged just as they are obtained, even if many feel this is unfair**

PEOPLE AND PROBLEM-SOLVING

- v **Many OEM offered to help Valeo with Supplier Programs:**
 - **GM PICOS team stayed two days, showed a 30% cost potential, and asked for 15% concession right away**
 - **Toyota stayed for two years, taught us continuous improvement and the line went from 10 operators to 5**

- v **The challenge is not just to solve problems, but to involve all functions in problem-solving**

- v **Problem solving is the key to true team autonomy, to release supervisors to work on standardized work and kaizen**

VISUAL MANAGEMENT

- v **Once, a Toyota sensei asked the plant manager: “what are you paid for?”**

- v **Visual management is not about management indicators on a board**

- v **It’s about seeing at a glance whether we have normal conditions:**
 - shop stock
 - production analysis board
 - red bins
 - andon, etc.

- v **Visual management requires “quick response” from management to any anomaly**

AUTOMATION AND FLEXIBLE MANPOWER LINES

- v **Flexible manpower lines are particularly relevant with our present unstable (and often falling) volumes**
- v **Automation can give you one shot productivity, but freezes the number of operators on a line to a given level of volume**
- v **If volumes fall, you are stuck with a fixed number of operators, and the capex depreciation**
- v **Flexible manpower lines require less automation (so are cheaper) and can change the number of operators to fit to takt time (maintain the pph)**

BEST WAY TO LEAN

- v **From management involvement to Lean management:**
 - **Budgets and physical indicators**
 - **Leading people to continuous improvement through problem-solving**
 - **Day to day and visual management**
 - **Use pull to create tension**

BUDGETS AND INDICATORS

- v **There are two ways to achieve budget:**
 - Cutting non-essentials: it can work, but does not improve the capability to make future budgets
 - Improving efficiency on essentials: harder, but also increases competitiveness for the future

- v **Key physical indicators are an essential tool to bridge this gap**

- v **In budget sessions, plant managers have to explain their budget numbers in terms of practical actions in the plant:**
 - reduce non-quality cost through lower internal ppms
 - eliminate a warehouse
 - take out indirect labour with a supply train
 - save a press through OEE improvements

- v **Part of the sensei's role is to challenge the plant in terms of its potential, and/or choice of projects**

LEADING PEOPLE THROUGH CONTINUOUS IMPROVEMENT

- v **“No problem is a problem”**: every improvement makes new problems appear
- v **Every problem is an opportunity for improvement**
- v **Every opportunity for improvement can be attacked with standardized work, which highlights problems to solve**
- v **Management’s challenge is to help people resolve these problems rigorously, without solving them in their stead**

DAY TO DAY AND VISUAL MANAGEMENT

- v **Plant managers are expected to fight fires**
- v **But if they don't invest in continuous improvement, they'll keep facing larger, more frequent fires**
- v **Visual management and quick response are the lean way to manage the plant day to day**
- v **While developing its people, and which leads to PDCA problem-solving**

USE PULL TO CREATE TENSIONS

- v **Pull is difficult to implement without basic stability, but pull is essential to achieve basic stability**
- v **Move to pull as quick as possible**
- v **Pull tells you when to take kanban cards and/or operators out of the process**
- v **Taking operators out should not lead to increased workload or ergonomic burden, but should be an opportunity to improve the efficiency of each workstation**

HOW TO START

- v **Forget about classroom training, but you need senseis**
- v **Workshops: 5Ss, flow and layout, SMED etc.**
- v **Senior management visits**
- v **Community of practice**

TRAINING BY DOING

- v **In the West training starts in the classroom, with poor returns**
- v **In lean, training is by doing: action on the shop floor (5S, SMED, Flow and Layout, Red Bins, etc.) is the main training method**
- v **Senseis are needed to link theory to practice in the environment of the workshop and to challenge the teams to further improvement**
- v **The plant manager's involvement is the number one success factor**

WORKSHOPS OR ELSE

- v **Two cases: either the plant manager is leading in lean, or he is reluctantly following**
- v **In the first case, the plant manager and his sensei will discuss and implement all facets of lean management through problem-solving**
- v **In the second, we will run workshops in the area (productivity, SMED, 5S, etc.) to show what can be done, until the plant manager gets interested**

SENIOR MANAGEMENT VISITS

- v **Regular senior management visits on the shop floor are essential to convey the importance and urgency of lean management**
- v **It is also a great way to involve senior managers, who are often quick to pick up what to look at in the plants**
- v **Senior managers should focus on the basic mechanisms of lean (Customer Satisfaction, JIT, Jidoka, Standard Work & Kaizen) to challenge plant managers**

COMMUNITY OF PRACTICE

- v **A key to lean implementation is to create a common lean vision for all plant managers in the group/division**

- v **To do so, they meet one day a month in a plant to run, in small teams, a number of lean analyses:**
 - **Flow and pull: are the stocks at the right place**
 - **Productivity: cycle time variation and potential**
 - **Quality: red bins, poka yoke and quick response**
 - **Jidoka: machine/process stops at the first bad part**

- v **The host plant has then to realize the action plan**

- v **Each plant manager has to duplicate the exercises in his own plant**

OPPORTUNITIES

- v **Service: hospital, bank, software**

- v **But the potential in the industrial world is still enormous:**
 - **Employment in Europe**
 - **Development of new countries**

- v **We're continuing to learn and implement lean in logistics**

- v **And our main challenge now is applying lean principles to product development processes**