

A Breakthrough in Performance

The Total Flow Management Model

From Euclides Coimbra

Many people talk about a lean transformation where flow is created and pulled by the customer. In fact this is described in a number of "Lean" books and is known to many people as the Toyota Lean Model or The Toyota Production Model. Many Lean Projects and Lean Transformations are done following the Christopher Columbus Syndrome as Masaaki Imai says: "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 and he did it all with borrowed capital".



Euclides Coimbra,
CEO, KAIZEN Institute
Consulting Group Ltd.

Unfortunately many lean transformation projects are done this way, and only a very limited number have the luck of Columbus of developing a really sustainable new system that represents a breakthrough in results.

Based on Kaizen Institute's 25 years of experience implementing KAIZEN and Lean we developed what we call the TFM Total Flow Management model, a detailed model that allows the smooth implementation of the Toyota Production System, not only inside manufacturing plants but over complete supply chains. TFM is then defined as an integrated concept to increase Process Flow and Effectiveness (Pull) across the Totality of a Supply Chain. The Scope is the Supply Chain with you in the middle. The targets are the reduction of the total lead time in the SC. Reducing lead time also

eliminates muda of waiting and really means creating a material flow. The systems, processes and standards necessary to create and maintain this flow, require a high level of rigor and bring about very important results in terms of: Cost Reduction; Increased Productivity; Increased Quality; Increased Customer Service and Satisfaction. This is achieved by creating a flow across the entire supply chain, starting with the customer. Physically it is necessary to create one piece flows, one container flows and one pallet flows and to accelerate this flow by using the concept of milk run loops in transportation. Forecasts will not be used for creating production or

distribution orders but they will serve the purpose of Capacity Management.

The TFM Model is based on the muda elimination concept. For most people it is really easy to accept and truly believe in the mudas of defects, people waiting, people moving and over processing. This is something quite obvious that represents big opportunities for improvement. But when we start talking about material waiting (another way of saying inventory), over production

Topics

The TFM Management Model

Electrolux Italy: Creating the flow for Competitiveness

Siteco: Success is a Question of Strategy and Priorities

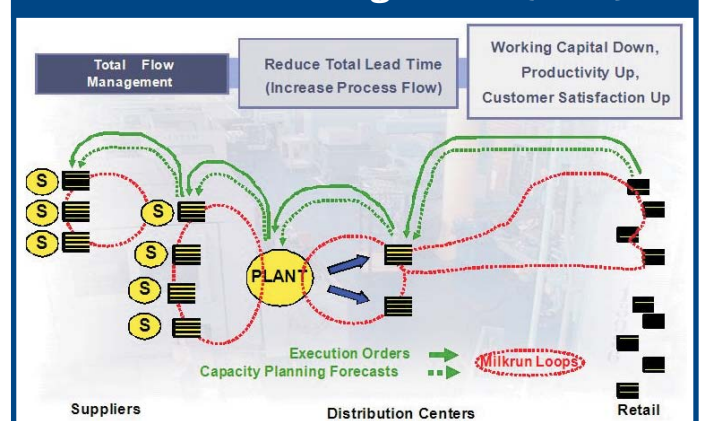
Masaaki Imai: The Flow is Essential to Become Lean

KAIZEN College India

Introduction: Paul Xanthopoulos

International KAIZEN Congress

Total Flow Management (TFM)

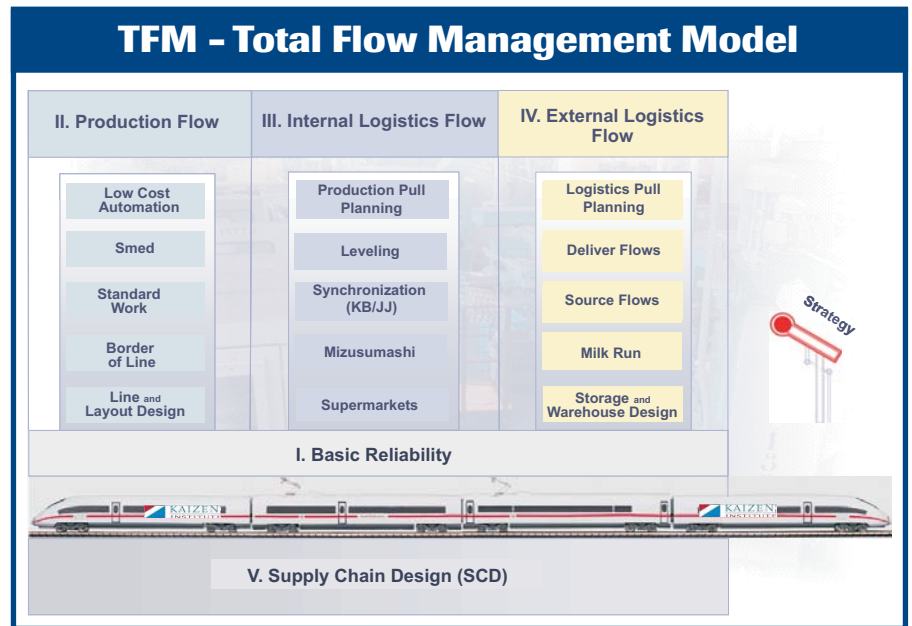


(probably transformed in material waiting or work in process inventory) and material moving, then we enter the realm of the paradox (something that looks impossible).

So most of the concepts we use in TFM to eliminate muda of material waiting, too much production and material moving look like paradoxes. Concepts like one piece flow, elimination of forklifts, frequent transportation using milk runs and many others are really difficult to accept and at first sight they look impossible.

One of the goals of the TFM Model is to demystify the words and to make what looks a paradox seem like a workable concept that will boost company performance.

The TFM Model is composed of the following Pillars: Basic Reliability, Production Flow, Internal Logistics Flow, External Logistics Flow and Supply Chain Design. The Supply Chain Design is



based on Value Stream Mapping and Value Stream Design.

Each company has its own unique features and requirements, hence why it is so important to design the Pull Flow Supply Chain. Just like an architect who designs a property suited to the

requirements of the owner. TFM is a model that can trigger a breakthrough in the performance of any Supply Chain and that embodies the power of a complete lean transformation. Get more information from your local Kaizen Office. ■

KAIZEN Team Italy at Electrolux

Creating the flow to increase competitiveness

Carlo Ratto and his colleagues from KAIZEN Institute Italy have been supporting the Electrolux Company in Pordenone. By working with the Electrolux representatives, Waldo Pagani and Andrea Bet, they developed the Electrolux Production System (EPS). The company's Food Service department produces approximately 7000 different

products. However, due to increased competition, pricing pressure, quality issues and the short life cycle of products, they needed to speed up product development whilst reducing costs and lead time, increasing profit and reducing delivery time.

Targets were based on the main products and the 'KAIZEN building site' was opened with the common goal of eliminating muda (waste). 5S and standardisation built a solid foundation to create a flow. Most importantly

people were involved at every step in the process through training, motivation, communication and teamwork. The progress achieved by the improvements was measured by audits and the results speak for themselves.

Response time to market was reduced from 21 days to 8 days, the production line was shortened from 80/90 meters to 20/30 meters, inventory at the line reduced from 2-3 weeks to 4-8 hours and the supply at the line decreased from one week to two hours. The next step will be a reduction in time for the products to reach the market from 8 days to 3 days. The number of KAIZEN activities being undertaken is continually increasing and was recently extended to include administration and the whole supply chain.

Personal experiences of the consultants: The devil is in the detail. To understand always go to 'gemba'. Do not demand a complete solution - a 70 % instant solution is better than a 100 % approach which will never be implemented. ■

Less Inventory of Material at the Line

Before Electrolux started implementing KAIZEN the inventory of material at the line was for 1 to 2 days (left). Now, after creating the flow, it is for 1 to 2 hours (right).

Success Is a Question of Strategy and Priorities

Siteco Beleuchtungstechnik GmbH is an international manufacturer of professional indoor and outdoor lighting solutions which has its headquarters in Traunreut/ Germany. In accordance with their motto 'success is a question of strategy and priorities' the company has wholeheartedly adopted the KAIZEN philosophy. Manfred Pfeiffer, KAIZEN Consultant and flow expert, assisted the company with the ergonomic design of a manufacturing island for tunnel lights. They decided to run a four day workshop to simultaneously train people and make improvements.

Prior to implementing Kaizen, the tunnel lights were assembled in a warehouse on different work tables. The shopfloor had no specific design features and few standards for the flow of material. The workshop began by gathering and presenting data regarding the layout, work in progress, packaging systems, machines, production equipment and excess motion, so the employees understood the current situation. On the second day they developed an improvement plan, this included designing a new layout, a to do list and plan for 5S activities. The third day was spent on 5S activities, changing the configuration of

Basic Elements for creating the One Piece Flow



Continually changing things one step at a time for the better ... that's KAIZEN. One improvement made by Siteco GmbH was to design a new manufacturing island for tunnel lights. Ergonomics and standards form the basis for introducing one piece flow. The goal is to eliminate inventory and to create the pull flow. It is a prerequisite that management promotes and supports continuous improvement and gives people opportunities to learn the skills and the time to practice them.

Company information: www.siteco.com

worktables, creating a new manufacturing island and implementing ergonomically designed work stations. The fourth day was used to create standards, marking places for material, creating one point lessons and training team members to measure and estimate the successes.

Finally the workers presented their achievements to management, this occurred at 'gemba' to best demonstrate the results in situ. This short workshop provided remarkable results: The team removed 15 machines, 3 worktables, 1 switch cabinet, 1 packaging table, leftover materials and antiquated papers. A lot of the suggested improvements could be implemented; such as,

clearly marked places for tools and materials, ergonomic workplace design, one point lessons, transparency of processes, definition of min/max quantities, space for a kanban shelf and standards for packaging. The production area was reduced from 291 m² to 200 m², set-up time was reduced from 60 minutes per day to 30 minutes per day, walking distance for machine setters was reduced by 25 %, productivity increased by 15 % and leadtime was reduced by 20 %. Now flexible island mounting and one piece flow is achievable.

The workshop was a huge success and strengthened the business relationship between the customer and KAIZEN Institute Germany. ■

Masaaki Imai: The Flow is Essential for a Company Becoming Lean

The flow is an integral part of making products and services. Whenever a smooth flow is maintained across an entire system, the process is under control. Whenever an abnormality occurs in the flow, it is easy to detect the problem if we go to gemba and look at the flow. It's easy because it is visual and immediate countermeasures can be employed to bring it back to normality. Hence, the axiom: "Go to gemba whenever abnormality occurs". Materials and services pass through various stages before reaching the customer. Once the



Masaaki Imai, founder of KAIZEN Institute

flow has been established by connecting separate processes, the next task is to minimize the flow. Minimizing the flow has significant benefits: The product or service can be delivered more promptly to the customer providing a competitive advantage. Since minimal resources are used, such as manpower, mate-

rials, utilities, space and time, the cost of making the product or providing the service will also be minimized. Most importantly, quality improves when the flow is minimized and minimal resources are employed, in particular, when less people are involved fewer mistakes occur. Standardization and 5S activities are the foundation of good flow management. The management structure should also be revised cross-functionally to manage the entire flow of products and services.

A successful start for KAIZEN College India



KAIZEN Institute India has founded its own KAIZEN College with the support of Carsten Otto and Euclides Coimbra from the International KAIZEN team. The new College is led by Mr. Vijay Rai, assisted by the India Business Unit Leader Ashok Puri. KAIZEN College India has two initial locations in Khandala and Delhi. During 2008 KAIZEN College India will offer 4 seminars and the first two ('JIT Basics' held in Khandala in May and 'KAIZEN Basics' held in New Delhi in June) have been very successful. At both seminars Carsten Otto shared his Kaizen experience with the participants through theoretical discussions and practical activities. Feedback from the first seminar participants has been very positive for the new College.

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Service Excellence

Customer Centered Culture and Flow

As Kaizen Institute Consulting Group (KICG) strives to provide a consistent world class level of consulting services, many world travelers also expect world class service excellence. The service sector and in particular the hospitality industry, continues to grow rapidly, regardless of the geographic location. A new member of the KICG team is Paul Xanthopoulos, coming from a Service and Hospitality background, bringing tremendous 'value-add' to all of our clients in the service sector. Paul spent 10 years with Destination Hotels and Resorts (DH&R), specifically the Royal

Palms Resort and Spa in Scottsdale, Arizona, USA, and was instrumental in providing and maintaining consistent and measurable actions in guest relations training. Paul believes in creating a deeply ingrained awareness that becomes second nature, realizing that the only way to "embrace the opportunity" given to us by the guest/customer is through teamwork and mutual respect. He believes that every person we meet can enrich our lives ... if we allow them the opportunity and that is the way we capture the relationship. This is our philosophy of



human interaction, which is the secret success factor within any service oriented business; hotels/resorts, banks, hospitals, sales, retails, call centers, or wherever human interaction occurs. Of course, Paul does not forget the importance of "Flow" in the service operation. He says the lack of client satisfaction can be easily improved, if the management focuses on two aspects of improvements; 1) Intense Training of Guest Relations: which is designed to attain the customer-centered culture, and 2) Seamless Flow and Lean Processes: to take all variances and defects out of the system to realize the perfect experience for all clients ... and by default, their guests! ■

IMPRESSUM

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KAIZEN Congress with Masaaki Imai in Prague

On October 1 and 2, 2008 there will be an International KAIZEN Congress in Prague. The key note speaker is Masaaki Imai. The range of KAIZEN experts will discuss the way to world class performance with effective and sustainable practices. For registration and more information please contact



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