**Introduction to Lean**

Lean is a business strategy and way of working in the company on creating value for customers in all processes. If we focus on the customer, we can create maximum value for customers with less effort, which improves the quality and reduce costs

In the Netherlands there are many companies successfully started with Lean. The different companies who has started with Lean are banks and insurance companies, Telecom & Utilities, Energy, Trade, Transport & Logistics, Care, Government, Business services etc.

**People & Partners**

Lean works not only on the operational level, but also the (changing) behavior of both managers and employees is very important. Strive for empowerment is central. Employees must learn to see the difference between waste and adding value and are encouraged to contribute and implement improvements. There is a lot of training, and there is plenty of attention to efficiency. There is an open atmosphere in which staff are very inclined to do improvement. A Lean company also invests in suppliers. If a supplier is a mistake to make, it helps a Lean company by finding and correcting the cause.

**Problem Solving**

Problem Solving (troubleshooting) is an important part of Lean. Is taken extensive time to find causes and solutions. Production can be stopped immediately and if there is a problem, and made ​​extensive use of visual management for optimum transparency.

**Transitioning to Lean**

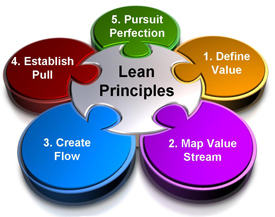
There are five stages to be gone through in order to achieve a Lean company Value (value) Value stream (process), Flow, Pull, Perfection (pursuit of perfection).

**What is Lean Management?**

Lean is a management philosophy that focus on waste. Lean focuses on reducing the turnaround time of the sand to customer. Lean management focuses on facilitating the successful implementation of "Lean technology" so that a substantial improvement in operating profit can be realized.

**The main principles of Lean Management**

Lean Management is based on five key principles. Five Principles of Lean Management are;



The five-step thought process for guiding the implementation of lean techniques is easy to remember, but not always easy to achieve:

1. Specify value from the standpoint of the end customer by product family.
2. Identify all the steps in the value stream for each product family, eliminating whenever possible those steps that do not create value.
3. Make the value-creating steps occur in tight sequence so the product will flow smoothly toward the customer.
4. As flow is introduced, let customers pull value from the next upstream activity.
5. As value is specified, value streams are identified, wasted steps are removed, and flow and pull are introduced, begin the process again and continue it until a state of perfection is reached in which perfect value is created with no waste.

**Lean Management Implementation**

The basic principles of Lean Management are fairly easy to understand. Therefore, the implementation of Lean Management may at first sight no technical masterpiece. Because to change the thinking of the organization and because the organization must have the ability to be engaged in change management, it certainly asks in the beginning to a solid training and professional guidance. The management and employees must understand and speak the same language. Many change initiatives fail because there is too little attention to the cultural change that is needed to really be an organization that improves itself "naturally" continuously.

**What is Lean Manufacturing?**

Lean manufacturing is a management philosophy aimed at creating maximum value for customers by reducing waste wherever possible. Lean Manufacturing aims to "lean" manufacturing where costs are reduced and the operating result improved. Lean Manufacturing is a proven effective tool for businesses that flow -based and produce separately. Experience has shown that the more processing steps, the more sources of waste identified in a process, and can be eliminated.

**Lean Manufacturing by Ford**

What many do not know is that Henry Ford Early 20th century has devised a number of techniques and principles that are still used daily in Lean, such as the production line. The interpretation and optimization by Toyota are best known. The Japanese carmaker transformed the thoughts and ideas of people like Henry Ford and Deming to a successful and broad-based management philosophy. Where Lean Manufacturing location was used for process line is strongly developed in recent years and it is now used daily in service administrative environments and non-profit organizations.

**Lean Manufacturing and the three Mu's.**

Lean Manufacturing identifies the so-called third Mu's. They are Muda, Mura and Muri. These three Japanese terms are forms of waste and are arguably the most important Lean Manufacturing. Mu Each has its own form of waste, namely:

**Muda**

Muda includes laying activities batter add to the resources but no value, such as:

* Overproduction
* Stock
* Defects
* Transport
* Motion
* Waiting times
* Untapped Talent

**Mura**

Mura are inequalities within a production process in which tempo changes are the most common. Mura can be prevented by controlling production times and thus to ensure that production is evenly distributed over time.

**Muri**

Muri deals with mechanical and / or man capacity. There is within Lean Management case of Muri when a man or machine over capacity produces. A good example is an employee who must perform too much work, so he finds himself in an unhealthy work environment.

**Lean Manufacturing Toyota made a lean organization**

As described previously Lean Manufacturing has its origins in Japan. Sakichi Toyoda and Shigeo Shingo at Toyota succeeded to transform the organization into a Lean organization in order to reduce costs and optimize quality. The story of Toyota describes catchy way in the book, The Toyota Way by Jeffrey Liker. For a more practical approach to Lean Manufacturing at Toyota we recommend Toyota Kata by Mike Rother.

Resources:

<http://leanmanufacturingtools.org/34/lean-manufacturing-definition-2/>

<http://www.lean.org/WhatsLean/Principles.cfm>