

LEAN THINKING

THE CRISIS OF SYSTEMS AND CONCEPTS IN MANUFACTURING ACTIVITIES

Italy is going through the more intense industrial economic/manufacturing crisis, since the end of the second World War.

Manufacturing industry is the economic sector where production decline has been among the strongest, creating substantial economic and social hardships to the whole community.

This deep crisis is linked to several factors: financial factors, political factors, the credibility of our Country System, excessive costs of services, lack of innovation, competition to the limit of legal, business internationalization, lack of continuous training, the growing of the economies of the Far-East, higher volatility and instability of the demand and, last but not least, the increased attention of consumers.

Small and medium-sized Italian companies, which are a key factor of our economic system, are going through tough times having great difficulties and not many means to react; maybe even few ideas.

In addition to the above factors, we need to ask how many of these companies have decided to revise their production philosophy? how many have changed their production systems and production processes to deal with the crisis? how many of them have realized that it is essential to completely change the production management, allowing to their products to be competitive once again but with an higher quality standard ?

How many companies have felt the need to discuss and adopt new philosophies, forgetting about their past successes?

I think it is important to make a deep reflection, examining what similar occurred in other countries.

After the Second World War, Japan was completely destroyed; Industry was in deep crisis; costs of raw materials became really high; the lack of raw materials caused an increased import of goods; the quality of products and services was far below the average of the industrial world and, last but not least, geographical surface of Japan is smaller than that of other industrialized nations. This has created considerable difficulties and obstacles. Their products were too expensive to be considered and appreciated.

Japan was at a crossroads: to renew, to change or to die.

Japan decided to follow a new industrial philosophy. Innovative, but probably hazardous and risky.

The first important step was to heavily change the structure of product costs, trying to preserve and even enhance the economic position of the workers, the real key for changing, focusing on product quality and services.

This is the beginning of the LEAN ORGANISATION FOR EXCELLENCE.

Japanese improved such techniques in order to cut down each production cycle waste (MUDA), by improving product quality and especially giving quick reply to the needs of customers: customized products at competitive prices.

It has been proved that in all industrial companies that have not implemented the Lean Manufacturing concepts, only the 5% of the performed processing creates an added value, the 15-20% consists of activities related to processing cycle waste, and 75-80%, consists of no-added value processes.

It has to be clear that the customer is willing to pay with satisfaction only for what he recognizes as an added value.

The base of Lean Organization principles is the total elimination of production and processes waste.

Lean Organization aim is to identify wastage in each process, to identify all no-added value operations, well keeping into consideration that – often - waste in the different Company areas or compartments, are the primary cause of wastage in production processes.

How much would the final product costs, with any production waste?

To better understand which would be the significant benefits of the Lean Organization, it is necessary to list the seven waste principles, according to the philosophy of Toyota, the first company who applied the Lean Organization philosophy in the 70's.

Excess in production – Excess of warehouse stocks - Transports - Defects of products or services - Process leakages - Loss of time (look- up, draw, check) – Dead time or waiting times before next process.

"We have achieved excellent results with normal men, able to manage and enforce excellent processes; we have noted that our competitors often get normal results, sometimes mediocre results, with brilliant men who run disastrous slighted processes"

*Shoichiro Toyoda
President of Toyota Corporation*

It is essential a constant involvement of the management and all the people directly involved in all the stages of product process, starting from design.

All the stages of an improvement should be handled as an intensive and important project.

Considering today's crisis situation, this improvement program must be considered critically important for survival and prosperity of the company.

It is essential that everything that will be done, changed and improved, it will remain forever and that every employee will remain aware that everything can be improved, all the time.

Fabrizio Caciolli