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SUCCESSFUL LEAN LESSONS FROM ROMANIAN COMPANIES

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Abstract
The companies today have to adapt to different changing conditions, like rapid technological development, shorter product life cycles and more demanding customers, in order to improve their position on the market. The objective of the paper is to present and analyses the impact of lean by using as research methodology a successful Romanian case study: ASSA ABLOY Romania. The article concludes that improvement and learning is part of the lean methodology and it requires follow-up processes and results.
Keywords: Assa Abloy, Lean production, Lean methodology.

1. INTRODUCTION

Business operates in an environment that is highly dynamic and challenging. Relationship with the stakeholders, mainly suppliers, customers and competitors are undergoing constant change (Walters and Rainbird, 2007). New business models are emerging and old ones are redefined to fit the new challenges of the market, ones in which competitive advantage is based upon managing processes that facilitate rapid and flexible responses to all changes that occur.

“Romanian organizations generally are concerned with their financial performances. With the development of Romanian society and its needs, market competition intensifies. Companies need to impose certain advantages on their products and services in order increase performances”(Grigore and Radu, 2010).

The aim of this article is to describe and analyze how successful companies work with lean principles in order to be more competitive. We will present a case study resulted from extended literature review on ASSA ABLOY Romania, European leader in locks manufacturing.

2. AN INTRODUCTION IN LEAN PRODUCTION

The American and European crisis has had an important impact on all organizations. Profitability and competitiveness required business to become more involved in the organisation of their business processes. Even though the improvement of processes has been around since the early 1990's (Kruger, 2008) the rapid globalization imposed several changes which have to deal with the elimination of waste, reducing costs and general business processes.

2.1. The concept of lean

Organizations are looking to expand their market share. Some achieved it through mergers and takeovers. Due to the fact that merged organizations were not on the same standards of performance as the parent company, rapid results were required to assure a higher return on investment for the parent organization.

One way of achieving this was to apply some methodologies of improvement, like lean production and lean techniques.

The concept of lean is very popular nowadays all over the world, but first originated in Japan. Lean is especially known in manufacturing companies. On a quick search on different research engines the word lean generates approximately 200.000.000 responses.

A summary of those findings suggests that lean is often associated with customer-focus, elimination of waste, creation of flow in the work processes and continuous improvements (Womack and Jones, 1990). The methodology of lean production demands that an organization eliminate waste and reduce cost. The single most important source of waste and cost is the holding of inventory.

The holding of excess inventory masks the real reasons why an organization is not doing well and why the processes are dysfunctional. The lean methodology identifies a number of other methodologies that could be utilized to achieve lean status, for example: Kaizen, Kanban, standardization, small batch production. In order to fully understand what being lean means, these key expressions and the ideas behind them need to be explained:

Kaizen is the Japanese idiom that denotes improvement in processes. The idiom in addition infers that continuous improvement has to be an integral part of the values of the organization and its employees.

Kanban is a methodology utilized in a pull system to show the beginning of component production, starting with the operation requiring the component.

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Pull system it can be classified as a methodology that accommodates the scheduling of jobs to be completed when customers require the jobs.

These methodologies focus on inventory, capacity, facilities and labor (Kruger, 2008). A very important part in being competitive is played by quality management. Inferior quality in processes or products has also an impact on waste and cost.

Nukina (2009) states that to "build in quality means that each worker is responsible for each of the work processes he does, and must ascertain quality for each."

According to Kruger (2008) the ultimate goal of an organization is to become a lean producer. The lean producer is the organization that has the smallest amount of waste in their systems and processes.

In conclusion the lean producer strives to eliminate waste on a continuous basis and as a result reduce costs, by adding more value to the client. The customers are the engine of an organization. The product that is produced as a result of the customer requirements must have high quality, be delivered at the place, time and in the right quantities.

2.2. Principles of lean

Womack and Jones (1990) have suggested five fundamental principles behind lean thinking, which if adopted can help organizations become leaner. These principles are: specify value, identify the value stream, flow, pull and perfection.

Specify value: The value of the product or service can be defined only by the customer. The producer knows what value to create if the customer's specifications for a specific product are defined, for example price and functionality. By not specifying the value carefully, a product may be produced in the right way, but still be the wrong product, which according to Womack and Jones is classified as waste.

Identify the value stream: The identification of the value stream includes specifying all activities and steps that are required in order to be able to bring the product from idea to final customer. This step is very important for a company because, it is common to find surprisingly high amounts of waste in its value stream.

Flow: The next step is to create a flow between the remaining activities, after the company has eliminated the most obvious unnecessary activities in the value stream. This means that the company has to reconsider how the conventional functions within and outside the company work and interact with each other.

Pull: The principle of market pull means that the product ideas should be derived from a market point of view; from customers' needs and wants rather than from a feasible technical solution or technology push.

Perfection: The last step means performing the above steps in a better way. One way to achieve perfection is through a transparent value stream and information flow.

According to Womack and Jones (1990) a number of positive aspects can be gained from implementing lean production. The first positive aspect is it ensures the participation of employees in the efforts of continuous improvement.

The second aspect is that employees are willing to participate in problem solving. Improvements would be achieved through job enlargement and cross training.

We will present in this article a successful case study focused on applying the lean principles.

3. RESEARCH METHODOLOGY

By using case studies as research design it is possible to study the phenomenon of lean in more detail and with depth in its natural environment (Bryman & Bell, 2005). Through literature review at the case company we have been able to study how the ASSA ABLOY Romania works with lean principles.

3.1. Assa Abloy Group

ASSA ABLOY is the global leader in door opening solutions, dedicated to satisfying end- user needs for security, safety and convenience.

ASSA ABLOY was created in 1994 in Sweden and since then has grown from a regional company into an international group with around 41,000 employees and sales of around SEK 42 billion.

Presently the group has a leading position area such as access control, identification technology, entrance automation and hotel security (www.asaabloy.com, 2011). ASSA ABLOY's strong development is based on long-term structural growth in demand on mature markets in Europe, North America, Australia and New Zealand, increasing demand on emerging markets in Asia, Eastern Europe, Africa and South America, and success in fast-growing product segments. The strategic action plans have been divided into three focus areas: market presence, product leadership and cost-efficiency.

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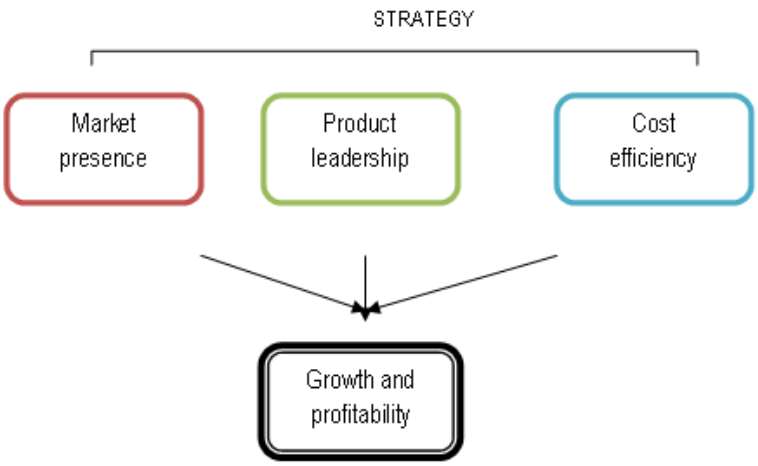

FIGURE 1 – STRATEGY AND GOAL OF THE ASSA ABLOY GROUP
Source: adapted from http://www.assaabloy.com

The Group's market presence is achieved by exploiting the brands of the portfolio, increasing growth in the core business and expanding into new markets and segments. In 2011 the group has increased its sales in all continents reaching 48% in Europe, 28% in North America, 16% in Asia and the rest in South America, Pacific and Africa.

Product leadership is achieved by developing products offering enhanced customer value and lower products costs. Also it takes into consideration close collaboration with ASSA ABLOY end users and distributers. The product development is under constant improvement, innovation being a key factor in this process. Common products platforms with fewer components are part of the development process.

Efforts to increase cost efficiency continue in all areas including production structure, product costs and the administrative flow. Production combines flexible final assembly close to the customer with the transfer of standard production to low-cost countries. Product development focuses on common product platforms with fewer components and an effective product development process.

3.2. Lessons from the successful Assa Abloy Romania

ASSA ABLOY Romania was founded in 1998 and it's the European Centre for manufacturing of locks. In 2012 ASSA ABLOY Romania managed to become the most profitable organization in the group with an annual growth rate of over 40%. This was not always so, a few years back the factory generated great loses, delivered low quality products and had lots of problems dealing with health and security labor.

Some of the most important elements that contributed to the improvement of the factory in Romania are (Tzachi Wiesenfeld, 2012):

(a) Managing a clear definition of the core processes on which the business relies and elimination of all other processes in a determined and limited period of time.

(b) Guidance and expertise- as soon as it was decided that the core processes to focus on are locks manufacturing, there was a clear determination to become the best in this product category.

(c) Implication and support from local unions and European Works Council ASSA ABLOY (EWC).

(d) Close communication between management and employees with full transparency about all the changes.

(e) Zero tolerance for security and health problems.

(f) Developing the lean methodology as a base for operation culture of the factory. Today ASSA ABLOY Romania is one of the four factories in the group to have received the certificate for "Golden factory in applying the lean principles"

(g) Investments in improving the infrastructure and aesthetics of the factory, both internally and externally, by creating an attractive working environment for employees.

(h) Promoting capable employees to roles with greater responsibility and firing unprepared managers.

(i) Strong leadership, prepared for all typed of decisions.

In conclusion the success of the Romanian company is consolidated on three pillars:

ASSA ABLOY has benefited from the advantages of being part of a global leader in security market - ASSA ABLOY GROUP. Is has benefited from investment management, know-how, quality products, solutions and a powerful brand. All these factors contributed to the safety, reliability and offered a privileged position in the security market.

Local production, ASSA ABLOY Romania is the European Centre of Excellence in manufacturing locks, and ensures its partners hard to find offers compared to other competitors. Few companies in Romania can offer today European quality products at competitive prices.

Differentiated offers, the power of brands like URBIS, YALE, VingCard, HID, ABLOY, TESA, provided from its own production, guarantee the consumers professional solutions.

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3.3. A process toward sustainable results

To be sustainable any successful business should aim to keep costs as low as possible to keep up with the highly competitive business environment of today. ASSA ABLOY Romania has taken into consideration a few projects in order to reduce costs:

(1) Increase of efficiency using lean projects. In 2012 the factory from Romania has managed to increase performance to 64% from 54% at the end of 2011. New innovation projects are developed in a similar way across the Group and based on the reduce-reuse-recycle principle. All projects are documented in the gateway process and communicated in the lean innovation instructions. The process encourages "up front loading" to ensure development of "the right things" before focusing on efficient project execution. In practice, this means that concepts must be carefully evaluated and tested against customer needs and sustainability should be considered before moving into the engineering design phase (www.assaabloy.com, 2011).

(2) Focus on finding new suppliers in the county with reduced costs in order to buy with low prices, short delivering terms and high quality services.

3.4. Example of lean projects in Romania

According to the manager of process improvement (Bădulescu, 2012) one problem identified in the production process deals with unnecessary transport, more exactly with the movement of materials, products and documents on large distances between two consecutive operations.

Any movement between parts, documents and materials from one process to another can be considered as waste.

The transport of materials or products doesn't bring income, but generates supplementary resources in dealing with operators, materials and equipment, supplementary costs, more storage space. A lot of the products can be harmed during transportation. The transport of materials and products increases stocks and increases delays in the process.

The causes for unnecessary transportation are:

(a) Lack of a well-defined value stream.

(b) Incorrectly designed layout plan.

(c) Excessive buffer stocks.

(d) Sharing of equipment.

In the case of the Romanian factory the situation is as follows: the materials are brought to the reception. Then they are being transported to an intermediary zone to be inspected and then to the warehouse. From here the materials are taken to the storage location before the primary operation. After the first operation is completed the components are being taken to a waiting zone. The components are transported to the next operation and so on till the production process is complete. When the final products are complete they go through the final revision and are sent in pallets to the final products warehouse. The pallets are removed from the warehouse to complete an order and moved to the packaging zone. The pallets are removed from the shipping zone and taken directly to the loading zone and finally placed in trucks.

From a study conducted at the process improvement department, the findings show that the time in which a material is handled represents 10-15% of the total processing time called "lead time" in production. "Lead time" means the time difference between the dates when a customer places an order on the organization until the date the delivery is made on the customer.

The whole process described above means money immobilized in handling equipment and personnel to perform these activities, and doesn't add value. These wastes are not entirely removed, but can be diminished by:

(a) Creating a material flux where the parts are transported between two operations without intermediary storages.

(b) Placing the material and products warehouses close to the production flux or at a very short distance.

(c) Creating smaller pallets that can respond to customer demands and which are easily handled manually without waiting for any means of transport.

4. CONCLUSIONS

The case study shows that lean production can lead to several improvements in the processes and product development, for example better overview and planning of resources and time, better focus and less waste. The ASSA ABLOY Romania case study also mentions less delays and faster time to market.

We don't think that lean methodology is the answer to all the problems an organization has to deal, but it can be a solution to the complexity of today's globalized business.

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