

Case Study

SECTOR **MSME**

LEAN

A decorative graphic element in the bottom right corner, consisting of a blue triangle pointing upwards and to the right, with an orange triangle pointing downwards and to the right, overlapping the blue one.

Skylark Circuits P. Ltd

Lean

YEAR

2008

SECTOR

MSME

REGION

India, Asia

SERVICES

Manufacturing

Skylark is a Small Scale Industry engaged in manufacturing of printed circuit boards for various applications. It faced heavy competition from other market players. The market demand was almost double of its production capacity. Just as any other typical manufacturing company, they also faced space constraints due to which all the manufacturing processes were arranged in three adjacent workshops.



INDUSTRY OVERVIEW

Majority of the businesses in India fall in the Micro, Small and Medium Enterprises (MSMEs) category. MSME sector is still widely unorganized but holds a wide potential to contribute more to our GDP. The MSMEs contribute up to 40% to the overall industrial output in India. Foreign investors as well as the Indian banks are showing keen interest in lending credit to these organizations because of their significant contribution to the overall output and employment creation.

BUSINESS CHALLENGES

Skylark's process layout was just like any other manufacturing company. The machines were arranged based on the manufacturing steps such as cutting, drilling, screen printing, etching, etc. It carried high inventory to the tune of 10-15 days of production. Due to pitiable housekeeping & jumbled up layout, there was very poor traceability of the material. Due to this fragmented layout, there was no accountability of people and material, leading to profit leakages, resulting from scrap, re-work & excessive inventories.



The average lead time to manufacture the PCB was 2700 minutes whereas the actual manufacturing time was 12 minutes only. This huge difference was due to the “Push system” of any traditional manufacturing, in which the material moves & waits for the next operation to add value.



Fig.1 Poor traceability of material before Lean

As the material did not flow smoothly, the management at Skylark had to grant over time during the last 10 days of every month in order to clear the back log of sales order resulting in erosion of profits. Since the manufacturing operations were fragmented and there was lack of accountability for the output, the senior management of Skylark had to co-ordinate between the various processes.

“We had to work for 16 hrs a day to ensure that we kept our commitments for delivery; now after implementing Lean systems, we have been relieved from working late hours.”

-Mr. Gangurde, Director, Skylark Circuits Pvt. Ltd.



SSA's APPROACH

SSA worked closely with the Skylark team to design and implement a Lean manufacturing system involving all workmen and the supervisors. The Lean implementation involved the following steps:

Step 1

SSA studied their current work flow from the stage of raw material to the stage of finished goods. Data on cycle time of every process, inventory as WIP, machine down time, change over time from one model to another & rejection, rework level was collected.

Step 2

SSA re-engineered the process flow from “Push System” to “Pull System” in which the raw material flowed into small batches from one manufacturing process to another without waiting as WIP.

Step 3

SSA then established visual controls such as quantity planned, quantity produced, Kanban system to communicate between various stages of manufacturing to ensure that the raw materials converted in to finished goods were sold on the same day.

Using the above steps the Lean system was implemented within 60 days of the commencement of the project.



Fig.2 Kanban card system to regulate material flow

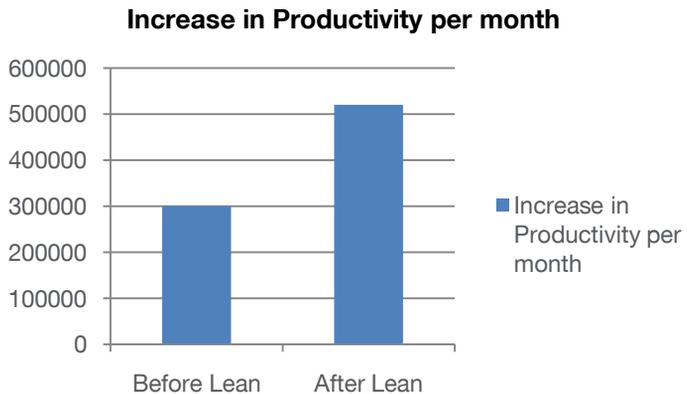


BUSINESS BENEFITS

The Lean manufacturing system implemented at Skylark lead to improvements in the following areas:

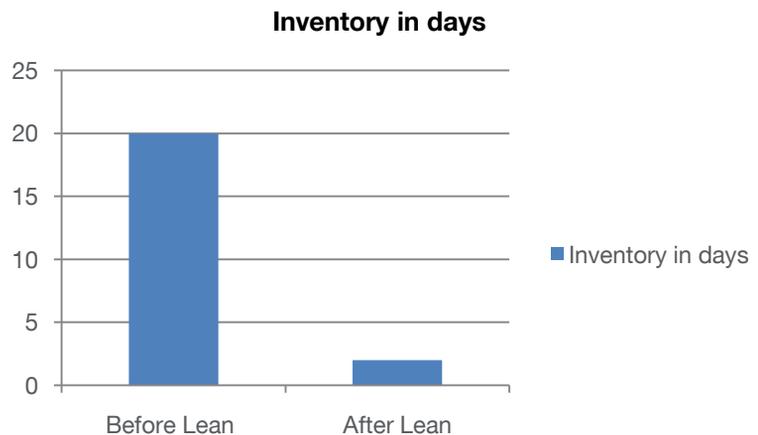
- **Productivity Improvement**

Skylark productivity went up from 3 lacs to 5.2 lacs quantity without any additional capital investment. This is a result of the smooth & continuous flow of material due to introduction of “Pull System”.



- **Inventory Reduction**

The Lean manufacturing system introduced at Skylark brought down the WIP inventory from 20 days to 2 days, dramatically reducing the working capital for running the business.



▪ Reduction in Floor Space

The cell manufacturing layout introduced at Skylark to facilitate continuous & smooth flow of material & reduction of inventory relieved 20% of the floor space which could be utilized for better purpose.

▪ Improved Profitability

The profitability went up by 3 times due to increased sales, reduced inventory, reduction in overtime charges & reduction in rejection & rework.

The implementation of Lean manufacturing system at Skylark proved that the plant was capable of tripling its profitability without any capital investment. This was achieved purely by changing the mindset of the people, creating a flow of raw material to finished goods & creating accountability & team work across all stages of manufacturing.

Skylark case study proved that Lean could be successfully implemented across small & medium sized industries as efficiently as in large scale industry.

“When SSA proposed the idea of Lean application in our industry, my partner Mr. Gangurde and I were very skeptical about its applicability for a small enterprise like ours. But now, after the redesigning our manufacturing system applying Lean, we were able to improve our profitability by 3 times without any investment.”

– Mr. Kamlapurkar, Director, Skylark Circuits Pvt. Ltd.



ABOUT SSA

SSA is a leading Business Excellence Solutions provider specializing in offerings like Lean, Six Sigma, BPMS, Strategy Deployment and many more. SSA provides customized business consulting and training solutions across countries and has helped its clients make a cumulative savings of over Rs. 1000 crores and growing. SSA is the first and only authorized provider of IACET CEUs in India.

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