Continuous improvement as a business strategy

The case study focuses on Corus, Europe's second largest steel manufacturing company and their efforts in following the path of Continuous Improvement to produce quality product in a timely manner by streamlining their processes and reducing the wastage of resources. Corus is a subsidiary of Tata Steel, one of world's top ten steelmakers.

In their own words, Corus aspires to be the world's steel industry benchmark for value creation and corporate citizenship. Corus is a leading supplier to most of the demanding markets around the world including construction, automotives, packaging, mechanical and electrical engineering, metal goods, and oil & gas. With innovation and continuous improvement at the heart of its business performance, Corus aims to create value by offering a differentiated product range supported by unrivalled customer service. 1

The challenge that Corus faces in differentiating its products from that of its rivals is that, steel is a relatively inexpensive product and in major building projects, the cost of steel can be as little as 5% of the overall cost of the project. It is also a challenging task to meet the rising demand for steel, at increasing levels of quality and to comply with challenging delivery requirements. While it would be an easy task to meet these challenges using brand-new facilities, an investment of more than 300 million Pounds to build a ' Greenfield Site' steel mill is an impediment. Therefore, Corus decided to focus on the path of Continuous Improvement, commonly known as CI, at its steel plate manufacturing mill in Scunthorpe, to achieve process efficiency, quality and delivery improvements with its existing manufacturing setup.

What is Continuous Improvement?

Continuous improvement, with respect to organizational quality and performance, focuses on improving customer satisfaction through

continuous and incremental improvement processes, removing or minimizing unnecessary activities and delays in product delivery and also minimizing defects in the products being delivered. Several organizations have gained a competitive edge by implementing Kaizen, commonly known as continuous improvement (CI).

The philosophy of Kaizen was spearheaded by Masaaki Imai, and is constituted of two words, kai which means ‘ change’ and zen which means ‘ good’ as well as ‘ wisdom’. Hence we can conclude that Kaizen implies ‘ changes for the better’ and covers all processes in an organization like Engineering, Information Technology, Finance, Procurement and Supply, Customer Service and Manufacturing.

CI can be initiated either at Top Management level or at Process level based on effective feedback system. The most important factor is that, all employees should be responsible to make improvements and must work together to identify the steps needed to improve the efficiency of the overall process, in an iterative manner. This requires thorough supervision, flexible work force and technology to improve business efficiency.

When an established organization like Corus attempts to differentiate its products or services from its competitors in the industry, CI can be the “ Differentiation” or “ Focus” competitive strategies which can help the organization grow.

Corus has implemented CI of ‘ flow’ where the products are pulled through a carefully planned production process from the supply of raw steel to the finished steel plate. The process is paced and scheduled to control the

amount of product in each stage of the process, to keep bottlenecks to a minimum and to maintain high quality.

A part of the CI process involves the measurement of improvements to gauge, whether the improvements have resulted in benefits. These results can be reducing waste time, saving money and efforts, or better utilization of available resources. These are the tangible benefits of the implementation of a CI process. The intangible benefits will include greater staff motivation and increased job satisfaction3.

In Corus, improvement is gauged with the help of a set of new Key Performance Indicators (KPIs) focused on meeting customer deadlines, such as zero backlog of customer orders and meeting targets for rolling steel plate in its allotted week.

Thus benchmark level can be set and attempts can be made to better that level in an iterative manner.

When & Why CI need to be implemented?

It is human nature to feel secure in one's comfortable environment of a " CASH COW" organization and therefore people are hesitant towards big changes. Some of the most common excuses that people give to avoid changes at workplace are:

1) " It's been done in this way for a long time"
2) " We know there's a better way but there's not enough time to fix things"
3) " I don't get paid extra to think"
4) " It's not my problem but someone else's problem"

However, a key aspect of implementing CI is the fact that it does not deal with big changes, but with smaller ones that take less time to implement at minimal cost. Also, an interesting aspect would be that it gradually transforms and brings about what one can call a big change without people being hesitant and overcoming their apprehensions. The objective is to minimize cost by leveraging the existing knowledge pool and gradually implementing changes.

The key of effectively implementing CI is that it has to become a part of the organization’s culture and gain consensus from the work force and stake holders. Like in the Corus’ case, moving from Tonnage, the traditional key measure of productivity to the smooth paced process of CI involved a significant work culture change for the employees.

Initiation and integration of CI

1. Collect feedback from the horse’s mouth – It is imperative to understand the operations at the ground level from the people who perform the tasks on a regular basis. By asking for ideas and by listening to those that know how the job is currently performed you will achieve a much greater buy-in from your teams

2. Place checks and implement improvement process cycle – Not jumping to conclusions is the key here. Put into practice the steps of Plan, Do, Check and Act known as PDCA Model

PDCA a simple model for CI implementation

Plan – the plan phase constitutes of setting objectives and goals that would form the guiding path for the entire process of improvement.

Do – the Do phase requires the testing of possible alternatives and arriving at a solution that would comply with best practices and industry benchmarks

Check – In this phase, the effectiveness of the action phase is evaluated to ascertain the success of the plans and also to see if any negative consequences have arisen.

Act – The act phase is to implement the tried and tested processes and form the new standards. If the processes are unsuccessful, then the cycle is repeated till the time desirable results are attained.

Even after the process has been established, the implementation of CI is not over. The goal of CI is to set newer and more efficient benchmarks. This philosophy has to become a part of the organization’s culture.

For example, in the Scunthorpe plant of Corus, a CI manager co-ordinates the process and 40 CI coaches chosen from the workforce received training to facilitate improvements. A toolbox of techniques has been put together to help managers, employees and operators understand where and how they can improve their work and come up with new ideas to change processes for better. Scunthorpe plate mill has set out a 5-year vision improvement plan which will help in the process of developing a CI culture for the business and has held workshops for employees to understand the vision and change since it was recognized that people might be resistant and cling to old ways of working. The 5 year-plan, established a timeline for the thorough acceptance and implementation of the CI culture among employees so that by the end of the 5-year period, the team and individuals are empowered to take responsibility and make decisions for themselves.

Tradeoffs in implementing Continuous Improvement:

Although several companies have benefitted from implementing CI, it’s quite interesting to see that something this innovative and cost effective could also derail the organization from its path to success or even create a new bottleneck in the entire process.

At times CI may lead to a trade-off between self-management and discipline 5. Over engagement and a lack of prioritization in implementing new wave CI manufacturing strategies by front line managers and operations staff has actually led to a tradeoff between their core operations related work and CI related activities. Often, CI strategies led by an over-enthusiastic HR has caused them to over strategize which is a new bottle neck in itself and often goes unnoticed. Thus it is quite important to make sure that less than 7% of the total work time may be spent by such key operational personnel on CI oriented strategy development so that their core operational responsibilities may not be diluted beyond an acceptable limit.

Another very interesting drawback that has been noticed is the invert effect of over emphasis on the implementation of CI Practices on the price v/s quality competitive strategy model 6. In her study, Barbara Flynn has very effectively shown that an uninterrupted iteration of CI programs for the reduction of cost price would ultimately result in increasing price since perfection always comes at a premium. Secondly it was also observed that in the quest to achieve the goal of CI within its designated time period, the complex untested assumptions about the relation between process and outcome are often deliberately not studied in depth. Managers prematurely conclude that any detrimental effects of implementing the new plan would

be taken care of in subsequent CI programs 7. Thus such complacency could result in mission failure at the nth hour.

But still, careful and well planned implementation of CI strategy is effective because it keeps production processes under control, rapidly trains production personnel to effectively manage production and possesses the flexibility to slot improvements into production schedules with minimum disruptions and at least effective cost. 8

Continuous Improvement in action at FORD India (A firsthand account) 9:

Cost Reduction activity has become one of the major activities in any industry especially in Automobile field with ever increasing competition.

The following is a firsthand account of Continuous Improvement initiate undertaken at Ford India for Cost Reduction.

The Front End Module of the car is a plastic molded steel reinforced part, supplied to Ford by a Vendor X. The Input weight of the steel portion in that is 4. 0 Kg and its output weight is 1. 0 Kg. With 25% yield, Ford saw the scope for cost reduction in the above module.

Normally for any steel part, yield of at least 40 to 50% is expected. Hence, the only way to reduce the cost would by reducing the input weight. After several discussions with technical department, Ford decided to optimize the design to reduce the input weight and proposed the modified design to the vendor. Various trials were conducted and accordingly the design was altered without compromising on the quality of the final part. After several

iterations, the new design was approved by the quality team. Minor modifications were made to existing tools in order to work with new design.

This Continuous Improvement initiative not only reduced cost but also reduced the scrap content and process time.

Suggestions for Corus

Corus has implemented lean manufacturing method of CI, which has really improved its deliveries and quality but only in an internal manner. Yet another dimension which can be facilitated through external feedback is available in the form of " WOWing the customer". What we feel is that, Corus should start to simultaneously work upon gaining better customer feedback to facilitate continued product design improvement. This combined effort will enable them to suggest improvements in the product demanded by the customers which may exceed the customers' expectation and will make them feel that they are getting a value for money preposition. Thus this would add to their customer satisfaction, retention and self sustainable associations which would be mutually beneficial.

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