

# Business Process Re-Engineering

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**Abstract-** The world talks about how IT has changed the world with hundreds of different applications in different spheres of life. The common man is not aware of the implications of implementing a computer based system in any organization, how it is capable of changing the very working, culture & concept of business. This paper will present the "Business process Walkthrough" or we can say "A tour of the process a business follows will be conducted"

Any business before the IT era used to be done in its traditional manner. All processes were performed manually. There was little interaction between the various business functions. Sales, Production, Purchase of raw material, Inventory & other departments were functioning with very little correlation with each other resulting in higher inventories. Mismatch of production volumes with the requirements, Little analysis of the demands of the customer & other fundamental problems. Many business houses were not following the best business practices; Which may have brought them to the top of the world. But it was not their fault. They were sometimes not even aware of that.

That is the unseen part of IT applications that while bringing automation it also automatically implemented or forced to implement best business rules.

The management Information Systems, Enterprise Resource Planning & any other Computer based systems also changed "How we conduct business". That is the key.

The businessmen & customers were sure to gain from this. Here I will discuss with reference to a Manufacturing Industry because manufacturing is the core of any economy. It will also apply in general to any other Industry or service organization.

We will go through the business process of a company manufacturing toys.

Let us first take the business process overview of a toy Industry. The business process can be traversed in various directions like horizontal or vertical ( Top to Bottom, Bottom to Top)

If we look at it horizontally then it will look like something like the figure given below. Here we don't provide any Sequence to the steps or business functions being done. The business is simply a collection of all the given functions within an organization.

The whole spectrum of business functions starts by the market survey & goes through Planning according to the demand, manufacturing, Inventory, Sales Billing & then customer service.

Not even a single business function is now running without the help of a computer based system in one way or another & that is our theme that how this association has changed the way of doing business.

We divide the whole business process into four broad categories.

## 1. Market WILL Decide the product

In this we include the opinion of the customer, feedback from the customer, comparison of various products already in the market, analysis of the collected data, designing & recommending the product to be manufactured.

The IT tools & applications which are being used for this are

- a. Advertisement through Internet, mobile phones & other electronic media
- b. Getting Suggestions thru company's own website by E-mails or suggestion forms & thru telephone
- c. Artificial Intelligent systems record the customer History related to that category of products.

d. Highly sophisticated software to analyze the data collected, provided with right kind of input these can provide region wise & category wise details. Like for toys the people of one country may prefer some other kind of toys then the other country depending upon their culture, spending power & inclination to different product themes.

e. different reports with graphical layouts can be provided to be analyzed by the management & to facilitate the decision making

This scenario has brought a sea change. Now the products cannot be imposed on the customers. Hitherto, the companies have to make their products according to the wishes of the customer.

The companies who are not in touch with their customers through the IT tools are losing their business.

## II. Supply Chain Management

It is all about to keep your inventories optimized. This was the basic area of concern previously. But now the inventories are kept in tandem with the demand & supply. So t his will include

- a. A documented request to purchase goods or services
- b. A binding contract with a vendor to supply certain materials or services based on certain terms & conditions.
- c. The recording of the movement of materials into the warehouse
- d. the process of receiving the vendor invoice, comparing it with the purchase order and goods receipts and recording the corresponding liability to the vendor.
- e. Payment processing reduces the liability to a vendor and a company's cash balance, records discount taken and disburses payment.

The whole concept of inventory management has changed due to the advances in the tools provided by the computer based systems. Now the inventories databases of the companies are connected with the supplier databases on real time basis. The buyer knows the availability details of the various kinds of raw materials & hence can schedule their production accordingly. The optimized levels of inventory are

maintained according to the future demand forecasts & keeping other parameters in the mind. Side by Side various vendors can be checked based on the cost & quality of the material with the data provided on the net. The frameworks like XML & CORBA has opened the way for heterogeneous environments to work in cooperation.

Naturally the companies who had not molded themselves into this new IT based technology are spending more on their Raw materials & blocking more money to keep their inventories which may not be at an optimal level.

This is even more relevant to the toys industry because the product specification keep on changing frequently which may result on the obsolete inventory in the non-IT enabled organizations.

## III. Shop Floor Operations:

This includes the manufacturing process of an product from the raw material to the finished good. It generally includes

Financial/ Management Accounting, Reporting & Decision Making
Customer Order Management & Billing, Customer Service or maintenance
Procurement, Invoicing & Inventory control
Planning & Manufacturing
- Sales & Operation Planning (SOP)
- Master Production Scheduling (MPS)
- Material Requirement Planning (MRP)
Market Analysis
-Surveys
- Data Collection & Distribution
- Trends analysis & Demand analysis
-Product Planning

a. Generation of dependent requirements through Bill of Materials (BOM explosion) with reference to the sales & operation planning (SOP) & Master production scheduling (MPS)

b. To prepare a production order & get the material issued from the stores.

c. Completion Confirmation of the production order which will record actual amount & time of production, amount of yield & scrap produced.

How this part of the business is different will become apparent if you visit any of the automated shop floor. These require minimum of the human intervention. The best of the quality standards are being maintained. The quantity of the raw material used, the amount of wastage, the no. of units of different products produced automatically given at the end of the day in the form of the report given to the management. More over error handling techniques are now also being implemented. Expert systems are being put in place. Global certification & accreditation for the companies has become a selling point, which brings the confidence in the customer about the product. So naturally the companies, which are not implementing ERP in some or the other form in their production houses are lagging behind.

#### IV. Sale & post sales

It includes all the operations needed to reach the product to the customer location & any communication between the customer & the Organization up to the life time of that product.

a. Processing the sales order specifying the product & quantity requested by the customer.

b. The transfer of the ownership of goods by creating a deievery document. Picking the goods for shipment

c. Physically transferring the goods to the customer.

d. Financially recording the goods issue.

e. The processing of billing and invoicing the customer for the goods delievered.

f. payment processing by recording the customer's payment, increasing the customer's available credit, reducing receivables, and recording cash discounts given.

g. Financial/ Management Accounting & Reporting used to record and analyze financial & management performance.

h. Post sales processing by performing after sale service at the customer site, working on the complaints, suggestion & feedback on the product by the customer.

This area is the focus of accelerated revolution in the field of IT, that is how the customer is buying the products.

Now credit cards, ATMs, smart cards, payment through the mobile phones. WAP enabled handheld devices has replaced the traditional methods of payment. The companies having their marketing, production & sales outlets at various locations around the world can provide you the best product available anywhere & can deliver to your home.

The customers can register for various products online & can get the updated information on the upgrades quickly sitting at home. The troubleshooting kits with easy step by step information for the product can make your life very easy.

The companies which previously were scared of giving any information on line are now spending millions on it because they have only two options left either perish or become online.

The high profile customers who are now in the habit of buying through the net are not even aware of the companies which don't have their active presence on the network of networks.

So we can conclude by saying that now even the Business process run is being conducted on the screen through the simulation softwares with the input from all levels of the management.

Very ethics, human relationships, attitudes, Responsibilities, Hierarchy with in the company change when company goes to implement ERP, MRP, MIS or any other computer based system. Above all, the standing of the company takes a leap forward with in the business community & the customers.