

World Class Manufacturing(20IP662)

UNIT2

Reengineering

Santosh C
Assistant Professor
Department of Industrial & Production
Engineering
SJCE,JSSSTU,Mysuru

“Reengineering,” properly, is the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service, and speed.



- Companies start by assessing what work needs to be done to deliver customer value.
- Techniques such as process mining (the analysis of information systems event logs) can help discover, monitor, and improve processes.

- Then they decide how to do the work—or if it should be done at all.
- Rethinking the roles of third parties or outsourcing is also a crucial component of Reengineering.

Implementation of Reengineering

- Refocusing company values on customer needs and eliminating low-value work
- Simplifying and standardizing overly complex work, and automating repetitive work
- Enabling processes with modern systems and data
- Locating work in the most efficient and effective environment
- Reorganizing a business into cross-functional teams with end-to-end responsibility for a process

- Rethinking basic organizational and people issues
- Determining appropriate roles for third parties or outsourcers, focusing on where they truly add value

Advantages of Reengineering

- Reducing costs and cycle times by eliminating unproductive activities and locating work in the most efficient and effective environment
- Reorganizing by teams to decrease the need for management layers, accelerate information flows, and eliminate errors and rework caused by multiple handoffs.
- Improving quality by standardizing and automating work to reduce errors and focus workers on higher-value activities. It also reduces the fragmentation of work and establishes clear ownership of processes.

MICHAEL PORTER'S FIVE FACTOR MODEL



Porter's Five Forces

['pɔː-tərs 'fɪv 'fɔːs-es]

A model that identifies and analyzes five competitive forces that shape every industry and helps determine an industry's weaknesses and strengths.

Porter's 5 forces are:

1. Competition in the industry
2. Potential of new entrants into the industry
3. Power of suppliers
4. Power of customers
5. Threat of substitute products

1. Competition in the Industry

- The first of the Five Forces refers to the number of competitors and their ability to undercut a company. The larger the number of competitors, along with the number of equivalent products and services they offer, the lesser the power of a company.
- Suppliers and buyers seek out a company's competition if they are able to offer a better deal or lower prices.
- Conversely, when competitive rivalry is low, a company has greater power to charge higher prices and set the terms of deals to achieve higher sales and profits.

2. Potential of New Entrants Into an Industry

- A company's power is also affected by the force of new entrants into its market. The less time and money it costs for a competitor to enter a company's market and be an effective competitor, the more an established company's position could be significantly weakened.
- An industry with strong barriers to entry is ideal for existing companies within that industry since the company would be able to charge higher prices and negotiate better terms.

3. Power of Suppliers

- suppliers can drive up the cost of inputs. It is affected by the number of suppliers of key inputs of a good or service, how unique these inputs are, and how much it would cost a company to switch to another supplier.
- The fewer suppliers to an industry, the more a company would depend on a supplier.

- As a result, the supplier has more power and can drive up input costs and push for other advantages in trade.
- On the other hand, when there are many suppliers or low switching costs between rival suppliers, a company can keep its input costs lower and enhance its profits.

4. Power of Customers

- The ability that customers have to drive prices lower or their level of power is one of the Five Forces.
- It is affected by how many buyers or customers a company has, how significant each customer is, and how much it would cost a company to find new customers or markets for its output.

- A smaller and more powerful client base means that each customer has more power to negotiate for lower prices and better deals.
- A company that has many, smaller, independent customers will have an easier time charging higher prices to increase profitability.

5. Threat of Substitutes

- Substitute goods or services that can be used in place of a company's products or services pose a threat.
- Companies that produce goods or services for which there are no close substitutes will have more power to increase prices and lock in favorable terms.
- When close substitutes are available, customers will have the option to forgo buying a company's product, and a company's power can be weakened.

3Cs

The 3 C's of marketing strategy are

- The Customer
- The Company
- The Competitors

The Customers

- Customers are the important part of any business.
- If customers are loyal to company it will be difficult for competitors to penetrate.
- In case don't have loyal customers, it will be difficult to penetrate.
- When do a customer analysis keeping the mind the following question?

- Who are your customers? what are their demographics?
- They are men or women, what is their disposable income?
- Why do they buy? Are they looking for value, economy or prestige?
- How many customers do we have in the present and future?
- They are satisfied customers and are looking for improvements
- What is their decision-making process?
- What are the different segments in the market?
- Who are the most valuable customers for our brand?

The Competitors

- Customer has always a choice to buy from company or from its competitors.
- Company should always create a unique value proposition than competitors.

Ask the questions when conducting a competitors' analysis.

- Do the customers buy for us or from competitors as well.
- Who are those competitors?
- What value proposition the offer we don't?
- What are the competitor goals and accomplishments?
- What are the strengths and weaknesses in terms of competitive advantages?

The Company

- Company can stand out of the crowd and reach out to target customer if you have a competitive advantage.
- Company can achieve it through cost leadership strategies and product differentiation strategies.

- How is the market where the company competes? Do products are commodities or can they be differentiated?
- Estimate the full product cost. This cost gives you a lower bound for pricing.
- Estimate the value of the product to potential buyers. This value gives you an upper bound for pricing.
- Investigate your competitors' pricing strategies. How do their products and prices compare to your company?
- Set prices and take into account all these inputs.

Characteristics of Business Process Reengineering (BPR)

- **Several jobs are combined into one:**

The feature of re-engineered process is absence of an assembly line.

The jobs are combined and compressed into one.

The jobs are combined mostly based on the needs and preference of the customer.

- **jobs are integrated,**

When this is done the chances of errors are reduced, eliminates misunderstandings, delays and reworking are minimized.

- **Workers make decisions**

as they are required to do so. Jobs are combined, both horizontally but also vertically. In other words jobs are compressed based on job enlargement and job enrichment.

- Vertical integration incorporates the tasks of decision making in the top ladders of the hierarchy.
- In addition, the workers in the re-engineering are empowered.
- The empowered workers are motivated and self determined to make decision.
- Decision-making is part of the work of the workers.

- **Compressing the work both horizontally and vertically**

reduces delays, overhead costs and betterment of response and satisfaction of customers.

- **steps in the process are performed in a natural order**

straight-line sequence is avoided in the re-engineering.

- Activities are performed not in artificial order but in natural order.
- This process is termed as 'De-linearising' which allows performing of many jobs simultaneously.
- This process reduces the process time and thereby delay.

Role of Information Technology in Reengineering

Information technology helps to provide consistent on-demand support to the organization as a whole to quickly respond to unpredictable challenges in the market.

- *Infrastructure and information management* IT enables the use of latest technology to build a strategic plan and vision to upgrade the process prior to its design.
- *Promote process efficiency* – IT is capable to control the geographically scattered units as a single hub by utilizing communication and linked networks. Thus it removes all geographical barriers facilitating ease of decision making at a faster pace.

- *Identification of processes that needs improvement* – The correct isolation of the problem leads to the apt solution. Identifying the root cause of a problem is an exhaustive and intricate task that IT could tackle effortlessly.
- Establishing long term goals regarding cost, revenue and profits.

- Collating huge amount of information in to the business process.
- Complex analytical methods can be brought under the IT umbrella by introducing Project Management tools and electronic medium.
- IT tools can automate the mapping and flow charting the on-going system of operations to pin down enablers for process redesign.

- Reduce and replace man hours with automated systems where ever possible.
- Formulate accurate performance measurement indicators.
- Creating computerised mechanism for capturing feedback.
- Critically analyzing the new process using project management and process analysis tools.
- Upgradation of technology of the redesigned functional units.

Barriers to Reengineering

- Information Technology (software and hardware) which is not suited to support a process based organization can evolve as a barrier.
- One typical resource problem is non availability of space for a work team to get together on a regular basis.
- Team members who are physically separated should have easy access to electronic communication equipment such as teleconferencing.

- Legal obstacles can become severe barriers, in some countries, various federal and state regulations hinder several Business Reengineering projects.
- People resist organizational changes.
- Four most common reasons people resist organizational changes are
 - (i) a desire not to lose something of value,

- (ii) a misunderstanding of the change and its implications,
- (iii) a belief that the change does not make sense in the organization and
- (iv) a low tolerance for change.

Deming prize



- The Deming Prize is an annual award presented to an organization that has implemented Total Quality Management suitable for its management philosophy, scope/type/scale of business, and management environment.
- Regardless of the types of business, any organization can apply for the Prize under certain conditions, be it public or private, large or small, domestic or overseas, or part of or entire organization

Organizations Qualified for Receiving the Deming Prize

The Deming Prize is given to applicant organizations that realize the following three particulars by means of Total Quality Management.

Under clear management policies that reflect its management principles, industry, business, scope and business environment, the company has established proactive customer driven business objectives and strategies based on social responsibility of the organization. And the top management exhibits leadership in their formulation.

- Total Quality Management is being suitably utilized and implemented for the realization of business objectives and strategies.
- Along with achieving effect regarding business objectives and strategies of above, organizational ability required for future growth has been secured.
- JSW Steel Limited, Salem Works (India) ,Larsen & Toubro Limited (India) ,
Brakes India Limited., Foundry Division
Mahindra and Mahindra Limited, Farm Equipment Sector
Rane Brake Lining Limited

MALCOLM BALDRIDGE AWARD



MALCOLM BALDRIDGE AWARD

- Good management has generally been recognized as necessary for achieving a World-Class competitive position in the manufacturing sector.
- With the rise of Japanese companies and, more recently, that of firms from other Pacific Rim countries, increasing attention has been given to excellence at the operational level.
- The Malcolm Baldrige National Quality Award, established in 1987, is the best known and most comprehensive award in the US.

- The Baldrige Award is used by many as a benchmark. The Award criteria are built upon the following core values and concepts:
 - Customer-driven quality
 - Leadership
 - Continuous improvement
 - Full participation
 - Fast response
 - Design quality and prevention
 - Management by fact Partnership development
 - Public responsibility