

**SUPPLY CHAIN DYNAMICS, AGILITY
AND RELATIONSHIP MANAGEMENT:
BSS 421**



**WEEK FOUR :TOTAL QUALITY AND
BUSINESS PROCESS RE-ENGINEERING
MANAGEMENT
BY**

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RECAP OF LAST WEEK'S TOPIC



We discussed;

1. Just-in-Time manufacturing and Just-in-Time business approach.
2. Lean manufacturing / business approach.
3. Note ;
 - These are the same but JIT started and developed into Lean manufacturing.
 - Lean is the desired state of a modern manufacturing.
 - JIT focuses on systems
 - Lean focuses on systems, cost and wastes
 - Lean is the desired state by all organizations
 - Its, however expensive to implement.

Task for last Week



- Describe the factors that enable developed countries to use JIT and lean production.
- Do you think that JIT and Lean are practical manufacturing orientations for developing countries?
- Give examples of organizations that you think practice some form of JIT or Lean in your country
- What kind of relationships do you think that buyers and suppliers should adopt to make JIT and Lean production a success?

Possible Solutions to last Week's Task



- **Enablers of JIT and lean in developed countries.** Ability to afford infrastructure, Knowledgeable people, high purchasing power culture, developed supply chains etc.
- **Do you think that JIT and Lean are practical manufacturing orientations for developing countries?** NO. Only to a small extent.
- **Examples of organizations practicing some JIT or Lean in my country.** Some hotels and multinationals manufacturing firms
- **Relationships for JIT and Lean production.**

Partnerships and co-destiny

Objectives of Topic Four



1. Describe principles of total quality management.
2. Describe principles of business process re-engineering.
3. Show the relationship between TQM and supply chain dynamics.
4. Show the relationship between BPR and supply chain dynamics.
5. Show the relationship between TQM, BPR and business systems.

Introduction Total Quality Management



Oakland (2005) pp 5 Citing other experts in TQM show definition of TQM as :

- Fitness for purpose or use' – Juran, an early doyen of quality management.
- The totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs' (ISO 8402, 1986)

Introduction Total Quality Management Cont'd



- 'Quality should be aimed at the needs of the consumer, present and future' – Deming.
- The total composite product and service characteristics of marketing, engineering, manufacture and maintenance through which the product and service in use will meet the expectation by the customer' – Feigenbaum,
- Conformance to requirements' – Crosby
- Degree to which a set of inherent characteristics fulfils requirements. ISO (EN) 9000:2000

Introduction Total Quality Management Cont'd



Oakland (2004)p. 5 defines quality as that which meets customer requirements. **What is customer requirement?**

Stevenson (2007) p. 405 provides dimensions of quality for a physical product as follows ;

1. **Performance.** A product must first and foremost fulfill the function of which it is being purchased for
2. **Aesthetic** refers to the appearance, feel, smell or taste of a product. Customers buy a product according to how they perceive its beauty.
3. **Special features-** Refer to the extra features that a customer desires besides ordinary circumstances.

INTRODUCTION TOTAL QUALITY MANAGEMENT CONT'D



4.Conformance- Refers to how well the product or a service corresponds to the design specification.

5.Reliability refers to the consistency of performance of a product.

6.Durability. Usefulness life of the product. Products expire at different times. If a product has a longer expiry date or can withstand above normal circumstances, it is described as being durable.

7.Perceived quality. Indirect evaluation of quality such as reputation. If a company has a reputation of providing desirable products customers will make a purchase without much consideration.

INTRODUCTION TOTAL QUALITY MANAGEMENT CONT'D



Dimensions of service quality

1. **Convenience.** Availability and accessibility of the service.
2. **Reliability** – The ability to perform a service dependably, consistently and accurately.
3. **Courtesy** – The way customers are treated by employees who come into contact with them.
4. **Tangibles.** The physical appearance of facilities, equipment, employees and communication materials.

INTRODUCTION TOTAL QUALITY MANAGEMENT CONT'D



Dimensions of service quality

5. Time- The speed with which service is delivered.

6.Assurance-The knowledge exhibited by personnel who come into contact with the customer and the ability to convey trust and confidence.

7.Responsiveness- Willingness of service providers to help customers in unusual situation and to deal with problems.

Understanding Total Quality Management



Zehira et al, (2012) observes that the definition of TQM can be seen from the views of TQM gurus which scholars agree that it is difficult to narrow to one definition. TQM is therefore a multifaceted concept consisting of three broad components namely.

1. **Total** : The entire processes from product from idea to launch market and delivery.
2. **Quality** : The extent to which the product meets expectation of customers.
3. **Management** : The whole systems approach to planning , organizing , staffing and controlling production and delivery to customer.

Understanding Total Quality Management



Reference

1. Oakland J S (2004) . on Quality Management .3rd Ed.

Routledge, London.

DOI <https://doi.org/10.4324/9780080479781>

2.Stevenson, W. J. (2018). Operations Management (13th ed.). McGraw-Hill Education, pg 397-4001

3. .Zehira C , Ertosunb O. G , Zehirc S , Müceldillid B (2012) Total Quality Management Practices' Effects on Quality Performance and Innovative Performance .International Conference on Leadership, Technology and Innovation Management. Procedia - Social and Behavioral Sciences 41 pp 273 – 280,www.sciencedirect.com

Chase, R. and Jacobs, R. (2013) Operations and Supply Chain Management. 14th Edition, McGraw-Hill Higher Education, New York.

2. Stevenson, W. J. (2018) pp399-400 explains that various experts of TQM made a huge contribution to the development of TQM as follows;

TQM GURUS



	Guru	Contribution to TQM
1.	Shewhart	Introduced Control charts and Variance reduction
2.	Deming	Explained the role of system, variation and people in achieving quality
3.	Juran	Organization can control 80% of quality defects.
4.	Feigenbaum	Cost of non- conformance because it is the customer who defines quality
5.	Crosby	Zero defects, doing things right the first time and prevention rather than correction.
6.	Pareto	80% of variations have 20% of causes.
7.	Ishikawa	Introduced cause and effects diagrams for solving problems
8.	Taguchi	Introduced the cost of poor quality
9.	Taiichi Ohno and Shigeo Shingo	Continuous improvement

Principles and Elements of TQM



Stevenson (2007) pp416-417 outlines the principles and elements that describe the nature of TQM.

These are outlined as follows:

PRINCIPLES OF TQM



1. Basing the management decision on long term philosophy even at the expense of the short term financial goals.
2. Design a product or a service to meet what the customer needs.
3. Design the processes that facilitates doing the right thing the first time.
4. Keep track of the results and use them to guide improvement in the system.
5. Extend the concepts to the supply chain.

Elements of TQM.



1. Continuous improvement that seeks to improve all the factors that relate to the process of converting the inputs to output.
2. Competitive Bench marking. Identify organizations that are best at something and learning how to incorporate the standards with the aim of improving the systems.
3. Employee empowerment. It is giving the workers the responsibility for improving and the authority to make changes.
4. Team approach to solving problems and building consensus by taking advantage of synergy.

Elements of TQM Cont'd



5. Make decisions based on facts rather than opinions.
6. Having knowledge of the tools that are used to achieve the objectives of the product or the service.
7. Have a champion of TQM to promote value and importance of TQM principles throughout the organization.
8. Achieving the quality at the source by having the employee responsible of the quality at each point of production.

Responsibility for Quality



Oakland (2004) pp107 -120 describes who takes responsibility of quality in an organization. These are

- 1.Top management has the ultimate responsibility for quality.
- 2.Designers of product or the service.
- 3.Procurement of the inputs.
- 4.Production and operations teams
- 5.Quality assurance team.
- 6.Marketing and sales team.
7. Customer service.

TQM and Supply Chain Dynamics



1. All advanced manufacturing today is based of TQM.
2. Suppliers and distributors must see quality from the perspective of the manufacturer.
3. Skills and competences of the people in the whole of the supply chain is very important.
4. Input and transformations processes are the most critical in achieving TQM.
5. Given complexities and precisions of achieving TQM, very few companies in developing companies can achieve TQM.

Introduction Business Process Re-engineering



- Zigiariis (2000) pp 2-24 provides a clear description of BPR from which the following highlights are drawn.
- BPR is a business concept that came into focus in the 80s. It is associated with Michael Hammer who first introduced it in 1991.
- BPR is the fundamental rethinking and radical redesign of the business processes to achieve dramatic improvements in the critical and contemporary measures of performance such as costs, quality, service and speed.
- BPR is carried out on organizations that are not performing . It is a radical measure that is carried as the last measure to

Introduction Business Process Re-engineering



Concepts in BPR

1. Innovative thinking. It the process of thinking creatively or thought process that is inspirational. It can be initiated by;

- Acquiring employees from a performing organization in the same industry.
- Promotion of employees with radical thinking to innovate the way of doing things in the organization.
- Hiring consultant to help with reengineering.

Introduction Business Process Re-engineering Cont'd



Concepts in BPR : 2.Change of the process function. This is the logistical view that is mainly dependent on the experts who understand various technical fields that constitute the core business of the organization.

- Process function describes a collection of activities that are organized in a particular sequence in order to transform inputs to outputs that are valuable to the consumer.
- The process function is related to organizational structure, product design and development, the processing function, procurement, marketing etc.
- The various processes form a business model that is contingent to an organization.

Introduction Business Process Re-engineering Cont'd



Concepts in BPR ;

3. Radical change. The organization has to completely change the way operations and management has always been done. The radical change happens to be the only way for an organization to survive.

4. Organizational development and performance. This is re-looking at the firm's level of efficiency and the way to increase the current activity level in order to operate up to the standard and be able to cope with the competitive pressure.

Principles of BPR



1. Organize the management around outcomes and not the tasks. i.e. have the end in mind and treat the tasks as the means to achieve the end. Merge the tasks that are related and can be done by one person or by a team.

2. Have those who have conceptualized the output process perform it before it can be delegated to others.

3. Merge the information. Process the information into real work situation. The people who collect the information should implement it before delegating it to others.

Principles of BPR



4. Centralize data management and treat geographically dispersed resources as if they are centralized.

5. Link parallel activities at the performance level instead of linking the results.

6. Put the decision point where the work is performed but build in control.

7. Capture the information at the source.

Elements of BPR



- 1. Rethink the theory of the business.** Managers need to find out the base on which the business is anchored, the historical foundation of the business and alter this foundation.
 - 2. Challenge the old assumption** and discharge old rules that are no longer applicable to the business.
 - 3. Do not automate the old process design.** Instead redesign the whole process and then automate it.
- Automation of process does not ensure the outcome. It is to achieve speed and accuracy. If the old process has errors designed in them, automation cannot rectify but instead it magnifies the errors.

Elements of BPR Cont'd



4. Break away from the conventional wisdom and the Constraints of the organization boundaries.

5. Focus on the customer and create value for them through the perception of what they want.

6. Harness the potential of the people and apply these capabilities to the activities that add value to the customer.

Elements of BPR Cont'd



1. Develop business vision and objectives such as cost reduction, time compression, increased output, quality improvement and quality work life for the employees.

2. Identify the processes to be redesigned. Focus on key process that are aligned with the vision and use exhaustive approach to change all the processes of the organization.

3. Understand and measure existing process in order to avoid repeating old mistakes.

Form a baseline for improvement.

Elements of BPR Cont'd



4. Identify the Technology and IT levels required and available. They influence the execution of the processes.

5. Design and build a prototype of new process. Align BPR approach with quick delivery of results, involvement of the employees and satisfaction of the customers

BPR AND SUPPLY CHAIN DYNAMICS



1. BPR is not a popular concept when being implemented and business owners rarely disclose when they are about to implement BPR
2. It may result to shortage of supplies to another business
3. It may introduce a new product to the market.

Zigiaris, S.(2000) dissemination of innovation and knowledge management techniques by MSc, BPR report produced for the EC funded project INNOREGIO:

BPR HELLAS SA

Task for Next Week



1. What is the difference between quality control and TQM?
2. Why is lean and Agile manufacturing driven by TQM?
3. Why does BPR occur when there is merger or alliance of businesses?
4. Does economic down turn cause BPR ?
5. Why is BPR associated with anxiety in an organization?
6. If BPR was to happen in an organization you may be working for, how prepared would you be?
7. What effect does BPR have on supply chains?

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THANK YOU ALL
SEE YOU IN THE NEXT
CLASS