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# Definition of Quality



## Definition of Quality:

Quality is defined as fitness for use at the most economical level.

It is the ratio between Performance and Expectations.

$$\text{Quality} = \text{Performance} / \text{Expectations}$$



# Total Quality Management (TQM)



- TQM is a proven technique to guarantee survival in world-class competition. Only by changing the actions of management the culture and actions of an entire organization will be transformed. TQM is for the most part common sense. Analyzing the three words
- **Total** – Made up of the whole
- **Quality** – Degree of excellence a product or service provides
- **Management** – Act, art, or manner of handling, controlling, directing, etc.



# Total Quality Management (TQM)



- TQM is the art of managing the whole to achieve excellence. TQM is defined as both a philosophy and a set of guiding principles that represent the foundation of a continuously improving organization
- TQM is the application of quantitative methods and human resources to improve all the processes within an organization and exceed customer needs now and in the future. TQM integrates fundamental management techniques, existing improvement efforts, and technical tools under a disciplined approach.



# Product Dimensions of Quality



- **Performance** – Primary product characteristics such as brightness of the picture
- **Features** – Secondary characteristics, such as added features, such as remote control
- **Conformance** – Meeting specifications or industry standards
- **Reliability** – Consistency of performance over time
- **Durability** – Useful life, includes repair



# Service Dimensions of Quality



- **Service** – Resolutions of problems and complaints, ease of repair
- **Response** – Human-to-human interface, such as courtesy of the dealer
- **Aesthetics** – Sensory characteristics, such as exterior finish
- **Reputation** – Past performance and other intangibles, such as being ranked first



# Six Basic concepts of Total Quality Management



1. Effective involvement and utilization of the entire work force.
2. Continuous improvement of the business and production process.
3. Treating suppliers as partners.
4. Establish performance measures for the processes.
5. A committed and involved management to provide long-term top – to – bottom organizational support.
6. An unwavering focus on the customer, both internally and externally.



# Quality Planning



- The strategic quality planning process starts with the principle that the quality and the customer satisfaction are the center of an organization's future. It brings together all the key stake-holders.
- Strategic planning can be performed by any organization. It can be highly effective, allowing organizations to do the right thing at the right time, every time.



# Strategic quality planning - seven basic steps



1. Customer needs
2. Customer positioning
3. Predict the future
4. Gap analysis
5. Closing the gap
6. Alignment
7. Implementation .



# Principles of TQM



- Customer's requirements must be met the first time, every time. Importance should be given to customer's satisfaction.
- Everybody in the organization must be involved, from all levels and across all functions.
- Regular communication (Both formally and informally) with staff at all levels is must. Two way communication at all levels must be promoted.
- Identifying training needs and relating them with individual capabilities and requirements is must.



# Principles of TQM



- Top management's commitment and participation is must.
- A culture of continuous improvement must be established.
- Treat suppliers as partners.
- Every job must add value to products and services.
- Focus on quality improvement.
- Learn new philosophy.
- Focus on prevention of problems.
- Focus on team work



# Quality costs



Quality cost is the cost involved in attaining the quality.

Categories of quality cost are

- *Internal Failure costs*
- *External failure costs*
- *Prevention costs*
- *Appraisal costs*



# Internal failure costs



These are costs which are associated with the defects or non-conforming situations that are found prior to shipment of the product to customer. These costs can be reduced to zero if no defect existed prior to shipment. Whenever quality appraisals are carried out, there exists a possibility of discovering non-conforming situations. Such situations are salvaged by either rework, complete replacement or scrapping.



# Internal failure costs



Examples of internal failure costs are

- Rework, fixing of bugs detected in internal testing of software
- Internal scrap
- Premium freight due to late delivery
- Engineering and drawing changes to correct errors.
- Energy cost for remelting of rejected castings



# External failure costs



Defects are found only after the product reaches the dealer or customer. Such costs are included in the external failure costs. This component of quality cost also disappears if there are no defects. Some examples of external failure costs are

- Complaints
- Warranty claims
- Retrofit and recall costs
- Liabilities and penalties
- Allowances and customer goodwill



# Deming Philosophy 14 points of quality management



1. Create and publish the aims and purposes of the organization.
2. Learn the new philosophy.
3. Understand the purpose of inspection.
4. Stop awarding business based on price alone.
5. Improve constantly and forever the system.
6. Institute training.
7. Teach and institute leadership.
8. Drive out fear, create trust and create a climate for innovation.
9. Optimize the efforts of teams, groups and staff areas.
10. Strive to eliminate intradepartmental conflicts



11. Eliminate exhortations for the work force.

a) Eliminate numerical quotas for the work force.

b) Eliminate Management by Objective.

12. Remove barriers that rob people of pride of workmanship.

13. Encourage education and self-improvement of everyone.

14. Take action to accomplish the transformation



# Barriers to TQM Implementation



- Lack of management commitment.
- Inability to change organizational culture.
- Improper planning.
- Lack of continuous training and education.
- Incompatible organizational structure and isolated individuals and departments
- Ineffective measurement techniques lack of access to data and results.
- Paying inadequate attention to internal and external customers.
- Inadequate use of empowerment and teamwork.
- Failure to continually improve.



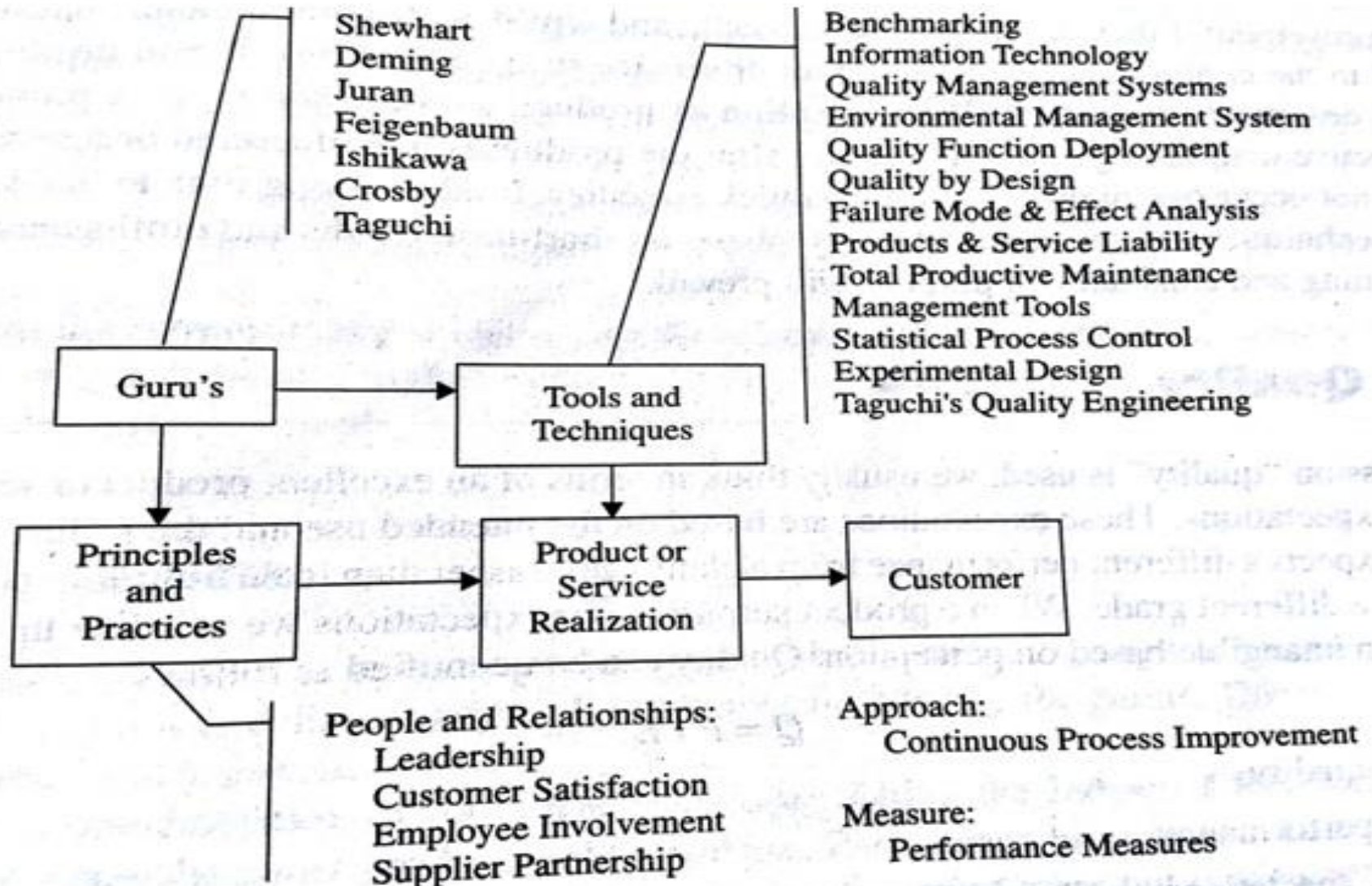
# Internal customer & External customer



- **Internal customer** - Every person in a process is considered a customer of the preceding operation. Each worker's goal is to make sure that the quality meets the expectations of the next person.
- An **external customer** is the one who uses the product or service, the one who purchases the product or service, or the one who influences the sale of the product or service. An external customer exists outside the organization.



# TQM framework





# Benefits of TQM



- Improved Quality
- Customer satisfaction
- Employee participation
- Teamwork
- Good Working Relationships
- Employee satisfaction
- Productivity Improvement
- Profitability & Market share



# Leadership



- A Leader is the one who instills purposes, not the one who controls by brute force.
- A Leader strengthens and inspires the followers to accomplish shared goals.
- Leaders shape the organization's values, promote the organization's values, protect the organization's values and exemplify the organization's values.
- Leaders and followers raise one another to higher levels of motivation and morality.



# Leadership



- Visionary leadership
- Customer-driven excellence
- Organizational and personal learning
- Valuing employees and partners
- Agility
- Focus on the future



# Leadership



- Managing for innovation
- Management by fact
- Social responsibility
- Focus on results and creating value
- Systems perspective



# Seven habits of highly effective people



- 1. Be Proactive:** Being proactive means taking responsibility for your life – the ability to choose the response to a situation. Proactive behaviour is a product of conscious choice based on values, rather than reactive behaviour, which is based on feelings. It's not what happens to us but our response that differentiates the two behaviour.
- 2. Begin with the end in mind:** Begin each day with an image, picture or paradigm of the end of your life as your frame of reference. Each part your life can be examined in terms of what really matters to you – a vision of your life as a whole.



# habits of highly effective people



3. **Put first things first:** This habit is self-management and time management matrix has to be followed. (urgent, Not urgent, Important, Not Important)
4. **Think Win – Win:** Win – Win is a frame of mind and heart that constantly seeks mutual benefit in all human interactions. Both sides come out ahead; in fact, the end result is usually a better way.
5. **Seek first to understand, Then to be understood:** Seek first to understand involves a paradigm shift since we usually try to be understood first. Empathic listening is the key to effective communication. It focuses on learning how the other persons see the world, how they feel. The essence of empathic listening is not that you agree with someone; it's that you fully, deeply understand the person.



# habits of highly effective people



6. **Synergy:** Synergy means that the whole is greater than the parts. Together, we can accomplish more than any of us can accomplish alone.
7. **Sharpen the Saw (renewal):** Taking time to sharpen the Saw so it will cut faster. It is personal PC – Preserving and enhancing the greatest asset you have, which is you. It's renewing the four dimensions of your nature – Physical, Spiritual, Mental and Social / Emotional. All four dimensions of your nature must be used regularly in wise and balanced ways.



Thank You