

QUALITY GURUS

A.DEMING'S CONTRIBUTION:

- 1. 14 points on route to quality,**
- 2. Deming Cycle or PDCA cycle,**
- 3. Seven deadly disease of management,**
- 4. System of Profound Knowledge.**

1. Deming's 14 Points on route to quality:

Deming's 14 principles:

- 1. Create and Publish the Aims and Purpose of the Organization**-Create constancy of purpose toward improvement of product and service, with the aim to become competitive and to stay in business, and to provide jobs.
- 2. Learn the New Philosophy**-Adopt the new philosophy. We are in a new economic age. Western management must awaken to the challenge, must learn their responsibilities, and take on leadership for change.
- 3. Understand the purpose of Inspection**-Cease dependence on inspection to achieve quality. Eliminate the need for inspection on a mass basis by building quality into the product in the first place.
- 4. Stop Awarding Business based on Price Alone**- End the practice of awarding business on the basis of price tag. Instead, minimize total cost. Move toward a single supplier for any one item, on a long-term relationship of loyalty and trust.
- 5. Improve constantly and forever the system**- of production and service, to improve quality and productivity, and thus constantly decrease costs.
- 6. Institute training**- on the job. Management must allocate resources to train employees to perform their jobs in the best manner possible.
- 7. Teach and Institute Leadership**-The aim of supervision should be to help people and machines and gadgets to do a better job. Supervision of management is in need of overhaul, as well as supervision of production workers.
- 8. Drive out fear, Create trust, and create a climate for Innovation** - so that everyone may work effectively for the company.
- 9. Optimize the Efforts of Teams, Groups and Staff Areas**-Break down barriers between departments. People in research, design, sales, and production must work as a team, to foresee problems of production and in use that may be encountered with the product or service.
- 10. Eliminate Exhortations for the Work Force**-Eliminate slogans, exhortations, and targets for the work force asking for zero defects and new levels of productivity. Such exhortations only create adversarial

relationships, as the bulk of the causes of low quality and low productivity belong to the system and thus lie beyond the power of the work force.

- Eliminate work standards (quotas) on the factory floor. Substitute leadership.
- Eliminate management by objective. Eliminate management by numbers, numerical goals. Substitute leadership.

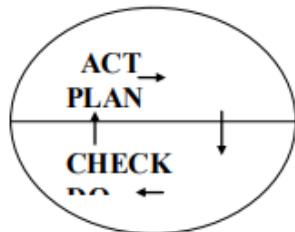
11. Eliminate Numerical Quotas for the Work Force - Quotas and work standards focus on quantity rather than quality. They encourage poor workmanship in order meet their quotas.

12. Remove barriers that rob people of Pride of Workmanship- This means, inter alia, abolishment of the annual or merit rating and of management by objective . When workers are proud of their work, they will grow to the fullest extent of their jobs.

13. Encourage Education and Self-Improvement for Everyone- Institute a vigorous program of education and self-improvement. A long-term commitment continuously train and educate people must be made by management.

14. Take Action to Accomplish the Transformation-Put everybody in the company to work to accomplish the transformation. The transformation is everybody's job.

2. PDCA cycle or Deming's Wheel:



PLAN What is needed
DO it
CHECK that it works
ACT to correct problems or improve performance

3. Seven Deadly Disease of Management:

1. Lack of consistency of purpose.
2. Emphasis on short term profits.
3. Reliance on performance appraisal and merits.
4. Staff mobility.
5. Reliance on financial figures.
6. Excessive medical cost.
7. Excessive legal cost.

4. System of Profound Knowledge: The four elements of the system of profound knowledge are,

- (i) Appreciation for a system: The need for managers to understand the relationship between functions and activities, and that the long term aim is for everyone to win.
- (ii) Knowledge of Statistical Theory: Knowledge and understanding of variation, process capability, control charts, interactions and loss functions.
- (iii) Theory of Knowledge: As all plans require prediction based on historical information, the theory must be understood before it can successfully be copied.
- (iv) Knowledge of psychology: The understanding of human interactions, how people are motivated and what disillusion them.

B.JURAN'S CONTRIBUTION:

Juran's contribution can be studied under the five topics

- 1. Internal Customer,**
- 2. Cost of Quality,**
- 3. Quality Trilogy,**
- 4. Juran's 10 steps for quality improvement; and**
- 5. The breakthrough concept**

1. Internal Customer:



Figure: Juran's three role model

Customer was not the just end user and each person along the chain from product designer to final user, is a supplier and a customer.

2. Cost of Quality:

Juran classified the cost of quality into three classes as,

- (i) Failure costs: Scrap, rework, corrective actions, warranty claims, customer complaints, and loss of customer.

- (ii) Appraisal costs: Inspection, Compliance auditing and investigations
- (iii) Prevention costs: Training, Preventive auditing, and process improvement and implementation.

3. Juran's Quality Trilogy:

- (i) Quality Planning: Objectives are to determine quality goals; to form implementation planning; to do resource planning; to express goals in quality terms; and to create quality plan.
- (ii) Quality Control: Objectives are to monitor performance; to compare objectives with achievements; and to act to reduce the gap.
- (iii) Quality improvement: Objectives are to reduce waste; to enhance logistics; to improve employee morale; to improve profitability; and to satisfy customers.

4. Juran's 10 steps for Quality improvement:

- 1) Build awareness for the need for quality and opportunity for improvement.
- 2) Set goals for improvement.
- 3) Organize to reach the goals.
- 4) Provide training.
- 5) Carry out projects to solve problems.
- 6) Report progress.
- 7) Give recognition.
- 8) Communicate results.
- 9) Keep score.
- 10) Maintain momentum by making annual improvement part of the regular systems and process of the company.

5. The Breakthrough Concept:

- (i) Journey from symptoms to cause,
- (ii) Journey from cause to remedy.

C.CROSBY'S CONTRIBUTION:

1. Four absolutes of quality.

2. Fourteen steps to quality management.

3. Crosby's quality vaccine.

1. Four absolutes:

- (i) The definition of quality is conformance to requirements not goodness.
- (ii) The system for causing quality is preventive not appraisal.
- (iii) The performance standard must be zero defects, not that's close enough.
- (iv) The measurement of quality is the price of non-conformance, not indexes.

2. Crosby's fourteen steps to quality management:

Step 1: Establish and ensure management commitment.

Step 2: Form quality improvement teams (QIT) for quality improvement process planning and administration.

Step 3: Establish quality measurements.

Step 4: Evaluate the cost of quality and explain its use as a management tool to measure waste.

Step 5: Raise quality awareness among all employees.

Step 6: Take action to correct problems identified through previous steps.

Step 7: Establish a zero defect committee and programs.

Step 8: Train supervisors and managers on their roles and responsibilities in the quality improvement process.

Step 9: Hold a zero defect day to reaffirm management commitment.

Step 10: Encourage individuals and groups to set improvement goals.

Step 11: Obstacle report by employees

Step 12: Recognize and appreciate all participants.

Step 13: Establish quality council to discuss quality matters on a regular basis.

Step 14: Do it all over again to demonstrate that the improvement process never ends.

3. Quality Vaccine:

The vaccine is explained as medicine for management to prevent poor quality. It has five sections as

- (i) Integrity** – Treat quality seriously throughout the whole business organization from top to the bottom.
- (ii) Systems** – Appropriate measures and systems should be put in place for quality costs, education, quality, performance, review, and interview and customer satisfaction.
- (iii) Communication** – It is most important to communicate requirements and specifications and improvement opportunities around the organization.
- (iv) Operations** – Work with and develop suppliers. Process should be capable and improvement culture should be the norm.
- (v) Policies** – Must be clear and consistent throughout the business.

BARRIERS TO TQM IMPLEMENTATION

- 1) Lack of management commitment.** – Management must consistently apply the principles of TQM.
- 2) Inability to change organizational culture-** People change if their needs are met. Remove fear & instill trust.
- 3) Improper planning** – Implementation plan; modify plan as the plan evolves
- 4) Lack of continuous training and education** – Training & education are ongoing process
- 5) Incompatible organizational structure and isolated individuals and department** – Use of multi-functional teams can break down the barriers of TQM implementation
- 6) Ineffective measurement techniques and lack of access to data and results** - Key characteristics of organizations have to be measured for effective decision making.
- 7) Paying inadequate attention to internal and external customers** – Organizations must understand the changing needs & expectations of customers
- 8) Inadequate use of empowerment and team work** – Teams need training & individuals should be empowered to make decisions.