

Total Quality Management

FScN 4131 Food Quality

Class Objectives

- Basic concepts on TQM
- Compare TQM philosophies
- Describe the TQM process

TQM Definitions

- Total: Everyone should be involved
- Quality: customers should be provided with an uniform quality product that meets their expectations
- Management: the way Total Quality is conducted

TQM Definitions

- “Is the set of management processes and systems that create delighted customers through empowered employees, leading to higher revenue and lower cost”
 - The Juran Institute, Inc.

TQM Definitions

- “TQM is pure pragmatism”
 - Hutchins, Achieve Total Quality, 1992
- “TQM is not a destination, but a journey toward improvement”
 - Hunt, Managing for Quality, 1991

TQM Definitions

- Total Quality:
“Total dedication to the customer”
- Goal:
“Seek business excellence and competitive leadership to satisfy our customers expectations”

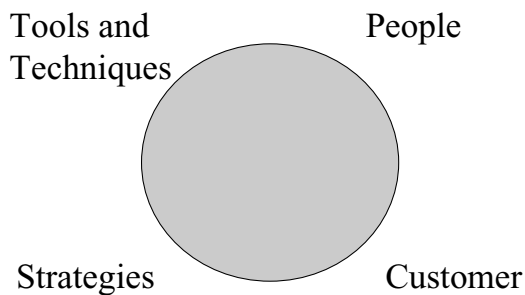
TQM Pre-requisites

- Leadership from the top
- Effective management of the cost of quality
- Focus on customer satisfaction
- Continuous improvement in all aspects of all operations
- Complete involvement of everyone in quality improvement

TQM Principles

- Commitment of everybody in the organization
- The company's success depends on the participation of everybody
- Opportunities for complete participation by everybody
- Opportunities to do their job properly

TQM Components



TQM Leaders

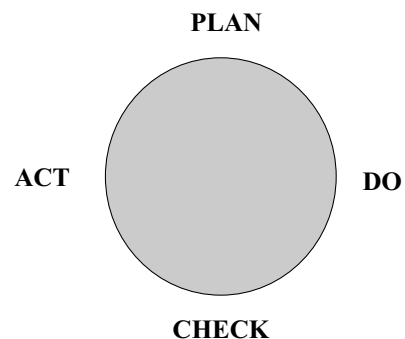
- W. E. Deming
- J. M. Juran
- K. Ishikawa
- A. V. Feigenbaum
- P. B. Crosby

TQM Leaders: Deming

- Central belief:
 - 94% of problems due to management
 - 6% ascribed to workers
- Results of Total Quality:
 - Higher productivity
 - Lower costs
 - Increased market share
 - Long-term stability

TQM Leaders: Deming

- The Deming circle



TQM Leaders: Deming

- 14 point plan for Western management:
 1. Constancy of purpose
 2. The new philosophy
 3. Cease mass inspection
 4. End “lowest price” purchasing
 5. Constantly improve systems
 6. Train everyone
 7. Institute leadership

TQM Leaders: Deming

- 14 point plan for Western management:
 8. Drive out fear
 9. Break down barriers
 10. Eliminate exhortations
 11. Eliminate targets
 12. Permit pride of workmanship
 13. Encourage education
 14. Top management’s commitment

TQM Leaders: Juran

- Management is responsible for quality failure and quality improvement
- Philosophical trilogy: quality planning, quality control and quality improvement
- Introduces the term “internal customers”

TQM Leaders: Juran

- 7-Step program:
 1. Establish quality policies and guides
 2. Establish quality goals
 3. Design quality plans to reach those goals
 4. Assign responsibility for the plans
 5. Provide necessary resources
 6. Review progress against goals
 7. Evaluate manager performance vs. goals

TQM Leaders: Feigenbaum

- Control has 4 steps:
 1. Setting quality standards
 2. Appraising conformance to standards
 3. Acting when the standards are exceeded
 4. Planning for improvement in the standards

TQM Leaders: Feigenbaum

- 10 benchmarks of Quality:
 1. Q is a company-wide process
 2. Q is what the customer says it is
 3. Q and cost are a sum not a difference
 4. Requires individual and teamwork
 5. Q is a way of managing

TQM Leaders: Feigenbaum

- 10 benchmarks of Quality:
- 6. Q and innovation are mutually dependent
- 7. Q is an ethic
- 8. Requires continuous improvement
- 9. Is the most cost-effective, least capital-intensive route to productivity
- 10. Is implemented with a total system connected with customers and suppliers

TQM Leaders: Crosby

- 5 absolutes of quality:
- 1. Quality means conformance, not goodness or elegance
- 2. There is no such thing as a quality problem
- 3. It is always cheaper to do the job right the first time

TQM Leaders: Crosby

- 5 absolutes of quality:
- 4. Cost of quality is the only measure of performance
- 5. Zero defects is the only performance standard

TQM Leaders: Crosby

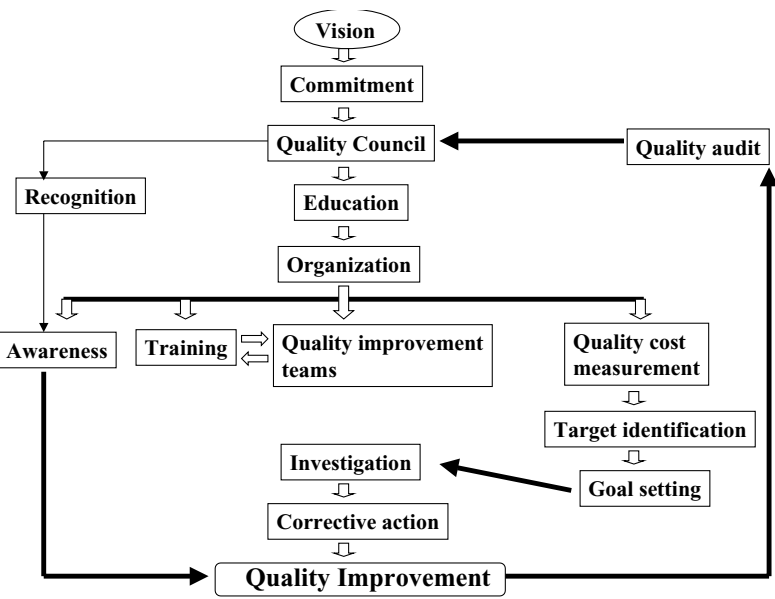
- 14-step process:
- 1. Management commitment
- 2. Quality improvement team
- 3. Quality measurement
- 4. Cost of quality
- 5. Quality awareness
- 6. Corrective action
- 7. Zero defects

TQM Leaders: Crosby

- 14-step process:
- 8. Training
- 9. Zero defects day
- 10. Goal setting
- 11. Error cause removal
- 12. Recognition
- 13. Quality councils
- 14. Do it over again

TQM Leaders: Comparison

- All but Crosby rely on Statistics
- Deming, Juran and Ishikawa blame management for the lack of quality, Crosby blames workers.
- Zero defects: Crosby in favor, Deming against it



TQM Process: Management Commitment

- Vital for TQM
- Should be visible and by example
- Should be transmitted to each employee
- Ultimate goal: satisfy customers!
- May need selling arguments

TQM Process: Quality Council

- Coordinates all corporate efforts to TQM
- Members from each unit of the company
- Develops strategic plans
- Addresses key questions for implementation
- Responsible of the TQM Mission Statement

TQM Process: Education

- On the business' own interpretation and implementation of TQM
- Will require continuity
- Needs to define who, what, how, how much, and who is responsible
- Re-education is necessary

TQM Process: Organization

- Using the company's structure an organization for quality should be developed based on:
 - Objectives
 - Delegation
 - Accountability
 - Achievement measurement
 - Efficient communication

TQM Process: Quality cost measurement

- Methods to measure, document and analyze the cost of quality are required

TQM Process: Training

- What is the difference between Education and Training?

TQM Process: Training

- Thorough learning of tools and techniques for quality improvement

TQM Process: Target identification

- Identify areas of priority
- Including goals to achieve

TQM Process: Quality improvement teams (QIT)

- Functions:
 1. Implement unit TQM
 2. Solve problems identified by goal setting
 3. Address local issues

TQM Process: Quality improvement teams (QIT)

- Characteristics
 - Intradepartmental
 - Membership is open based on knowledge of the operation
 - The leader should know the business
 - Membership is finite

TQM Process: Investigation and corrective action

- To reach the targets, the QIT should set a system of:
 - Procedures
 - Forms
 - Documentation

TQM Process: Quality Audit

- Feedback mechanism of TQM
- Conducted by the quality council or senior managers
- Goals:
 - Verify reported quality improvements
 - Verify the achievement of goals
 - Confirm that improvements match targets

TQM Process: Awareness

- Continuous communication about the TQM status and advances
- Employs communication tools
- Compatible with the company's culture

TQM Process: Recognition

- Achievements of individuals and groups should be made public
- Financial rewards should be included

TQM Discussion

- How would you decide which philosophy or system to use?