What is Quality?

- "[Quality is] a predictable degree of uniformity and
dependability at low cost with a quality suited to the
market"  
  Deming
- ‘Quality is consistent conformance to customer’s
expectations’  
  Slack et al
- ‘Higher quality has a beneficial effect on both revenues
and costs’  
  Gummesson

Quality Characteristics

- Functionality
  - How well the product or service
does the job
- Appearance
  - The sensory characteristics
- Reliability
  - Consistency of performance
- Durability
  - The total useful life of the
  product or service
- Recovery
  - The ease with which
  problems can be rectified
- Contact
  - Nature of person-to-person
  contact

Quality Gaps

<table>
<thead>
<tr>
<th>Customer expectations</th>
<th>Customer perceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expectation &gt; perceptions</td>
<td>Perceived quality is poor</td>
</tr>
<tr>
<td>Expectation &lt; perceptions</td>
<td>Perceived quality is good</td>
</tr>
</tbody>
</table>

Diagnosing Quality Problems

- Gap 1
  - Company’s internal quality specification and customer’s quality
  specification
- Gap 2
  - Product concept and company’s quality specification
- Gap 3
  - Actual product quality and company’s quality specification
- Gap 4
  - External communications / image and product quality
CRM

Service-Quality Model

- Word-of-mouth communications
- Personal needs
- Past experience
- Expected service
- Perceived service
- Gap 1
- Service delivery (including pre- and post-contacts)
- Gap 3
- Translation of perceptions to service-quality specifications
- Gap 2
- Management perceptions of consumer expectations
- Gap 5
- External communications to consumers

Costs of Quality

- Prevention costs
  - Training personnel
  - Identifying potential problems and resolving them
  - Improving the design of products & services
- Appraisal costs
  - Investigating quality problems
  - Conducting customer surveys and quality audits
- Internal failure costs
  - Lost production time
  - Cost of scrapped materials / reworking
- External failure costs
  - Loss of customer goodwill
  - Aggrieved customers take up time
  - Litigation
  - Guarantee costs

International Standards Organisation

- ISO 9000 Quality System
  - World-wide standards for company quality management systems
- ISO 9000: Selection and use of quality management standards
- ISO 9001: Quality assurance in design, production, installation and servicing
- ISO 9002: Quality assurance in production and installation
- ISO 9003: Quality assurance in final inspection and test
- ISO 9004: Quality management guidelines

Total Quality Management

‘An effective system for integrating the quality development, quality maintenance and quality improvement efforts of the various groups in an organisation so as to enable production and service at the most economical levels which allow for full customer satisfaction’.  

Feigenbaum

Organisational Features of TQM

- A focus on customer requirements
- A focus on product/service provision
- A commitment to improving quality and service at all levels: development of an ethos
- A desire not to ensure high quality, but also consistency
- Problem solving and decisions based on teamwork approaches
- The adoption of a scientific approach to quality control and problem solving
- Development of long term partnerships with suppliers to ensure incoming quality
- Quest for perfection in product quality and delivery

Three Axioms of TQM

- Commitment
- Obsession with Quality

The Joiner Triangle

- Involvement
- All one team
- Scientific Approach
- Logical Analytical Approach
**Monitoring Quality**
- Quality is consistent conformance to specification
- Performance variation vs production costs
- ‘Trade-offs’ between what the customer wants and the cost to deliver the service
- Standards have to be appropriate and tolerances have to be realistic

**Monitoring Product Quality**
- Standards and specifications
- ISO define specifications as ‘the document that prescribes the requirements with which the product or service has to conform’.
- Attaining and maintaining quality.
- Beware of stagnation!

**Objectives & Types of Benchmarking**
- Objectives of Benchmarking
  - Becoming competitive
  - Industry best practices
  - Defining customer requirements
  - Establishing effective goals and objectives
  - Developing true measures of productivity
- Types of Benchmarking
  - Internal
  - Competitive
  - Functional
  - Generic

**Competitive Benchmarking**
- Who provides the best support in which areas?
- Assess current performance versus the best competitor in that area.
- Large gaps will take time and effort. Tackle them in stages.
- Staff are motivated by achievable goals.
- Involve the employees in setting the standards.
- Staff have the knowledge.
- Kaizen: Quality Circles, Suggestion Schemes, Brainstorming.

**Market sensing**
- High Importance
  - Priorities
  - Short-term Dilemmas
- Low Importance
  - Long-term strategies
  - Time wasters

**Framework for market sensing**
- Probability of the event occurring
  - Ideal
    - Utopia
    - Field of Dreams
  - Things to watch
    - Danger
    - Future risks
  - Effect of the event
    - Disaster
    - Danger