

# Total Quality Management

**Total Quality Management (TQM)** requires that the principles of quality management are applied in all aspects and at every level in an organisation (Hill, 2005). TQM has evolved over a number of years from ideas presented by a number of quality Gurus.

# The Cost of Quality

- The Cost of Achieving Good Quality
- The Cost of Poor Quality

# The Cost of Achieving Good Quality

Examples of prevention costs include:

- The cost of designing products with quality control characteristics
- The cost of designing processes which conform to quality specifications
- The cost of the implementation of staff training programmes

Examples of appraisal costs include:

- The cost of testing and inspecting products
- The costs of maintaining testing equipment
- The time spent in gathering data for testing
- The time spent adjusting equipment to maintain quality

# The Cost of Poor Quality

Examples of internal failure costs include:

- The scrap cost of poor quality parts that must be discarded
- The rework cost of fixing defective products
- The downtime cost of machine time lost due to fixing equipment or replacing defective product

External failure costs occur after the customer has received the product and primarily relate to customer service. Examples of external failure costs include:

- The cost of responding to customer complaints
- The cost of handling and replacing poor-quality products
- The litigation cost resulting from product liability
- The lost sales incurred because of customer goodwill affecting future business

# Quality Systems

- ISO 9000 provides guidelines for the use of the following four standards in the series.
- ISO 9001 applies when the supplier is responsible for the development, design, production, installation, and servicing of the product.
- ISO 9002 applies when the supplier is responsible for production and installation.
- ISO 9003 applies to final inspection and testing of products.
- ISO 9004 provides guidelines for managers of organizations to help them to develop their quality systems. It gives suggestions to help organizations meet the requirements of the previous four standards.



Detailed information on this topic: Operations  
Management – Albert Porter, BookBoon.com,  
2011