

INTRODUCTION TO QUALITY

- Productivity (measure of efficiency defined as the amount of output achieved per unit of input), the cost of operations, and the quality of the goods/services = customer satisfaction = profit
- Most significant factor in determining long run success/failure is quality
- High quality goods/services can provide an organisation with a competitive edge
- A reputation for high quality generates satisfied and loyal customers who reward the organisation with continued patronage and favourable word of mouth = new customers
- "No quality, no sales. No sales, no profit. No profit, no jobs" – Vice president of the United Auto Workers

DEFINING QUALITY

- People view quality subjectively
- The meaning continues to evolve as the quality profession grows and matures
- Some responses from firms include:
 - Perfection
 - Consistency
 - Eliminating waste
 - Speed of delivery
 - Providing a good, usable product
 - Total customer service and satisfaction
- Quality can be defined in 6 different perspectives:

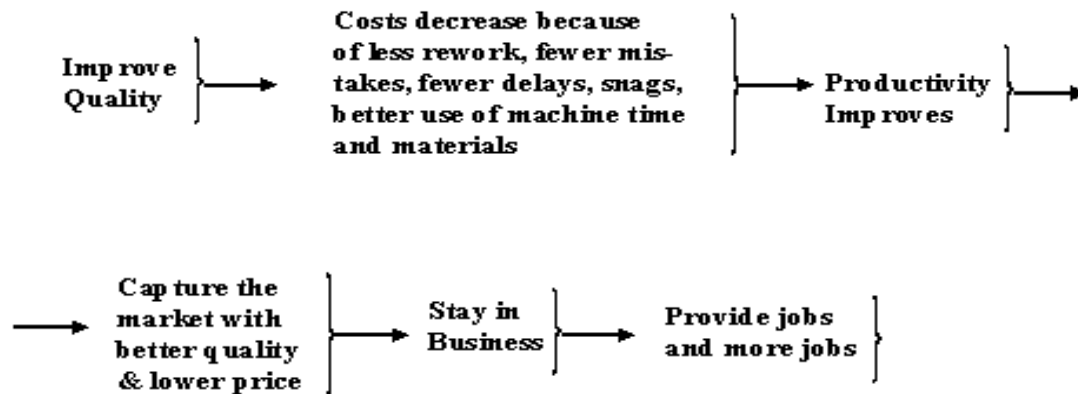
Transcendent (judgmental)/excellence	<ul style="list-style-type: none">• Often used by consumers• Quality is synonymous with superiority or excellence• Walter Shewhart, first defined quality as the goodness of a product• This is the transcendent view: to rise above beyond ordinary limits• From this perspective, quality can't be defined precisely, you just know it when you see it• Often loosely related to aesthetic characteristics of products that are promoted by advertising and marketing• Little practical value to managers• Doesn't provide a means for measurement in practical business decisions
Product	<ul style="list-style-type: none">• Related to the quantity of some product attributes, such as the number of features on a phone• This assessment implies that larger numbers of product attributes = higher quality
User/fitness for use	<ul style="list-style-type: none">• Individuals have different wants and needs, hence, different expectations of a product• "Good quality does not necessarily mean high quality. It means a predictable degree of uniformity and dependability at low cost with a quality suited to the market." - Deming

Value	<ul style="list-style-type: none"> • The relationship of product benefits to price • Consumers no longer buy solely on the basis of price • They compare the quality of the total package of goods and services that a business offers with price and competitive offerings • Customer benefit package includes: physical product, presale support (ease of ordering; rapid, on time and accurate delivery), post sale support (warranties, technical support) • From this perspective, a quality product is one that provides similar benefits as competing products at a lower price, or one that offers greater benefits at comparable price
Manufacturing/conformance to specifications	<ul style="list-style-type: none"> • Having standards for goods/services and meeting these standards leads to the fifth definition of quality: conformance to specifications • <u>Specifications</u>: targets and tolerances determined by designers of goods/services • <u>Targets</u>: ideal values for which production is to strive – necessary b/c it's impossible to meet targets all the time • This definition is an unambiguous way to measure quality and to determine if a good manufactured is delivered as designed • There is an acceptable region
Customer	<ul style="list-style-type: none"> • Totality of features and characteristics of a product/service that bears on its ability to satisfy given needs • Different types of customers • <u>Consumers</u>: ultimate purchaser of a product/service • <u>External customer</u>: the chain of firms or departments which a product flows through to add value to the product • <u>Internal</u>: every employee in the organisation who receives goods/services from suppliers within the org • E.g. assembly department is an internal customer of the machine department

Integrating quality perspectives in the value chain

- Customer is the driving force for the production of goods/services
- Customers generally view quality from either the *transcendent or product perspective*
- Goods/services should meet the consumers' needs and expectations
- It's the role of the marketing function to determine these – *user perspective*
- Manufacturer must translate customer requirements into detailed product and process specifications – *value perspective*
- Manufacturing function is responsible for guaranteeing that design specifications are met during production and the final product works as intended – *manufacturing perspective* for production workers
- *Customer perspective* provides the basis for coordinating the entire value chain

The Deming Chain Reaction



Source: Deming, W. *Out of the Crisis*, 1986.

Avenues to business improvement

- Reduces waste
 - Labour
 - Materials
 - Machine
- Increase market share
- Charge premium prices

WHY IS QUALITY IMPORTANT?

- The effect of market failures can be catastrophic
 - Melamine in milk in the Chinese dairy industry
 - Nana's Frozen Mixed Berries and hep A
- The effect of organisational failures can be catastrophic
 - Pan Am and Lockerbie
- Social issues effect market regulation
 - Quality standards and global warming
- Competitiveness issues effect firms
 - Customers expectations have increase – b/c of technological advantages and attitudes
 - Quality is an important competitive weapon
- Quality tools provide a guide to good management
 - Quality planning underlies innovation
 - Problem solving tools underpin employee involvement
- 99.9% quality is not good enough
 - "Best efforts are essential. Unfortunately, best efforts, people charging this way and that way without the guidance of principles can do a lot of damage. Think of the chaos that would come if everyone did their best, not knowing what to do?" – Deming, Edwards
 - Need adequate training – can be fatal