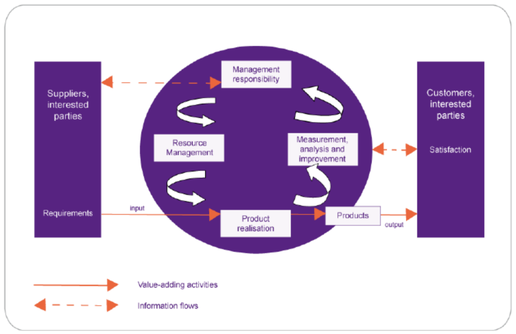


Quality management
Slack et al chapter 12 (2009)

Quality measurement

Variables
Continously variable scale (e.g. Length, Weight, Time)

Attributes
Two states (e.g. Right/Wrong, OK/NOK)

Costs of quality
Prevention costs --> To prevent problems etc.
Appraisal costs --> Controlling quality
internal failure costs -->errors inside operation
external failure costs --> errors being experienced by customers

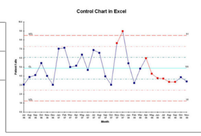
TQM and measurement
rejects "Optimum quality" concept
Getting things done right the first time
Prevention of errors
Effective investment in preventing quality errors can significantly reduce appraisal and failure cost

How to control

Sampling
Type 1 error: Occur when a decision was made to do something and the situation did not warrant it
Type 2 error: Occur when nothing was done yet a decision to do something should have been taken as the situation did indeed warrant it

SPC = Statistic process control
can lead to competitive advantage --> has become a strategic tool recently
High levels of variation reduce the ability to detect changes in process performance

Control charts
- monitor result over a period of time
- Looking for trends is important
- Investigation in Variation



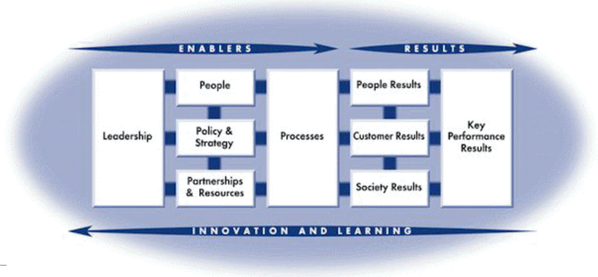
Systems view of QM (like SIPOC)

ISO 9000
set of international standards that establishes requirements for companie's quality management systems
- Should be customer focussed
- Should be measured
- Should be improvement driven
- Top management commitment to maintain & improve management systems

EFQM Excellence model

Enabler
- Leadership
- People
- Policy & Strategy
- Partnership & resources
- Processes

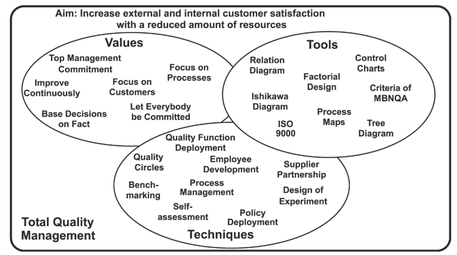
Results
- People results
- Customer results
- Society results
- Key performance results



Quality = Consistent conformance to customers expectations

TQM
Does quality apply to all parts of the organization?
- Service Level agreements --> **SLA**'s
- To satisfy external customers, you have to satisfy the INTERNAL customer --> **Internal customer concept**

Does everyone in the organization contribute to quality?
- *"Neglecting the potential that is inherent in all people is neglecting a powerful source of improvement"*

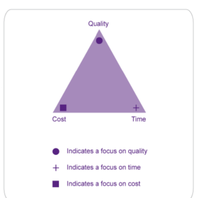


Note: The techniques and tools in the figure are just examples and not a complete list. In the same way the values may also vary a little between different organisations and over time

Source: From Hellsten and Klefsjö (2000)

Diagnosing quality gaps
1. Gap between what company's internal quality specification is and what customer may expect (e.g. 10k vs 15k km a year)
2. Concept specification gap --> mismatch between product or servoce concept and how company has internally specified product/service --> cheap car vs. expensive car
3. Quality specification - Actual quality gap --> mismatch between actual quality and defined internal quality specifications --> Airline is offering free drinks albeit not defined
4. Actual quality - communicated image gap --> Mismatch between what's been communicated and delivered

Project management quality



Quality planning, Quality assurance, Quality control, TQM --> **Holy triangle of the project manager**

Table 14.1 Project management maturity grid

Level 1 Initial process	Level 2 Repeatable process	Level 3 Defined process	Level 4 Managed process	Level 5 Optimised process
Can the organisation recognise projects and run them differently from its on-going business?	Does the organisation ensure that each project is run with its own processes and procedures to a minimum specified standard?	Does the organisation have its own centrally controlled project processes *and* can individual projects flex within these processes to suit the particular project?	Does the organisation obtain and retain specific measurements on its project performance *and* run a quality management organisation?	Does the organisation run continuous process improvements *and* with proactive problem and technology management – innovation and growth?

(Adapted from Office of Government Commerce, 2006c)