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# PREFACE

Many organisations, both public and private sector have been characterised by:

- a short-term outlook;
- changing only when forced to;
- little forward planning;
- driving on costs not consequences;
- no, or poorly defined, targets; and
- troubleshooting.

This can be successful if:

- employees are responsive to directions;
- demand exceeds supply;
- customer expectations are static; and
- the world situation is unchanged.

However:

- competition and competitors are increasing;
- available sources are increasing;
- alternatives are increasing;
- customer expectations are increasing; and
- technology is increasing

Survival is tough.

Management is now finding that there is increasingly little room left for squeezing more from the organisation within its existing structure and philosophy and that any future gains will be increasingly modest. A more fundamental approach is required. This is what **total quality management (TQM)** provides.

The booklet sets out a basic introduction to TQM and the framework of actions necessary to put a sustainable TQM programme in place.

# PART I : THE PRINCIPLES OF TOTAL QUALITY MANAGEMENT

## GROUNDWORK

The cost of mismanaging quality can be measured. It is enormous.

The aim of TQM is straightforward: to improve the competitiveness, effectiveness and responsiveness of the entire business. It is a way of ensuring that business processes are managed so that customers, both internal and external, are completely satisfied.

It is one thing to understand total quality but quite another to make it happen. There have been many failures.

TQM goes to the heart of the organisation and provides the opportunity to unleash the potential of all staff at all levels to contribute to the business. It is long-term. There must be a high level of investment and commitment from senior and middle management if the programme is to be properly managed and successful. Don't start a TQM programme until the top management team has a basic understanding of the benefits it can deliver and that it agrees either a TQM programme or at the least that TQM should become a standing item on their agenda as an integral part of the planning process.

There are a number of different approaches to TQM but they have several characteristics in common. They all require organisations to:

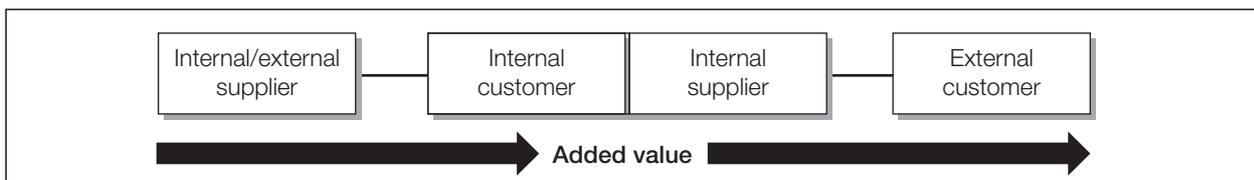
- know their business direction (mission/objectives/values);
- know their customers;
- know what their customers think of the services/products currently supplied and to be committed to providing products/services which meet consistently their expectations at the right cost;
- provide good value relative to available alternatives;
- be committed to finding problem areas and responsive to resolving them;
- be committed to pursuing TQM.

It is tempting to use the first TQM approach or model which appeals, but each organisation should select that which is most suited to its requirements. Quality networks are a particularly good source of information, offering the opportunity to draw on the experiences and expertise of other organisations. Careful thought, research and planning is required and there is a considerable amount of helpful published material – case studies and literature – available. Some of it is outlined at the end of this booklet.

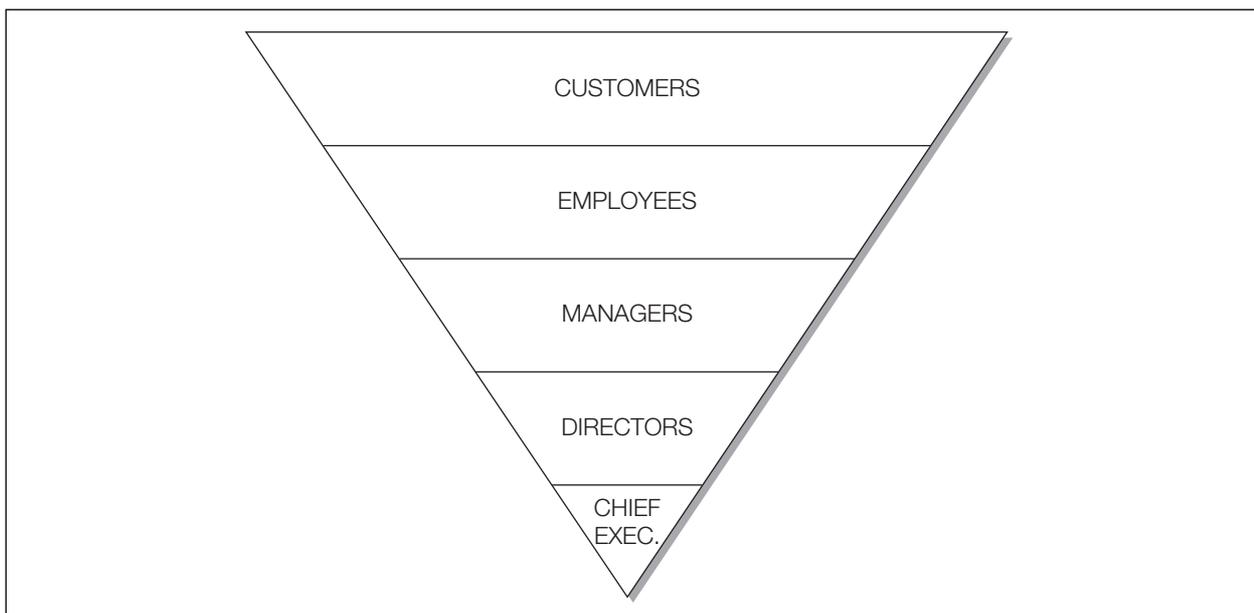
## CUSTOMERS AND THE QUALITY ORGANISATION

Managing quality into an organisation requires a common understanding amongst all staff of what the organisation is trying to achieve, as defined in its mission statement and business plan, and for them to be working towards a common defined quality goal in which they feel a sense of ownership. The goal should include a definition of what quality means so that it is understood by everyone and gives a clear sense of purpose of how it will be developed within the organisation. Management volunteers should be actively involved in the definition of the goal.

Getting people within an organisation to understand their interdependency and that each is both a customer and a supplier is key to achieving the business benefits of TQM. This requires there to be understanding of the customer chain throughout the organisation.



The value chain within an organisation must be focused on and geared to delivering what the external customer wants first time, every time. It is the impact of this focus which, in effect, turns the organisation upside down.



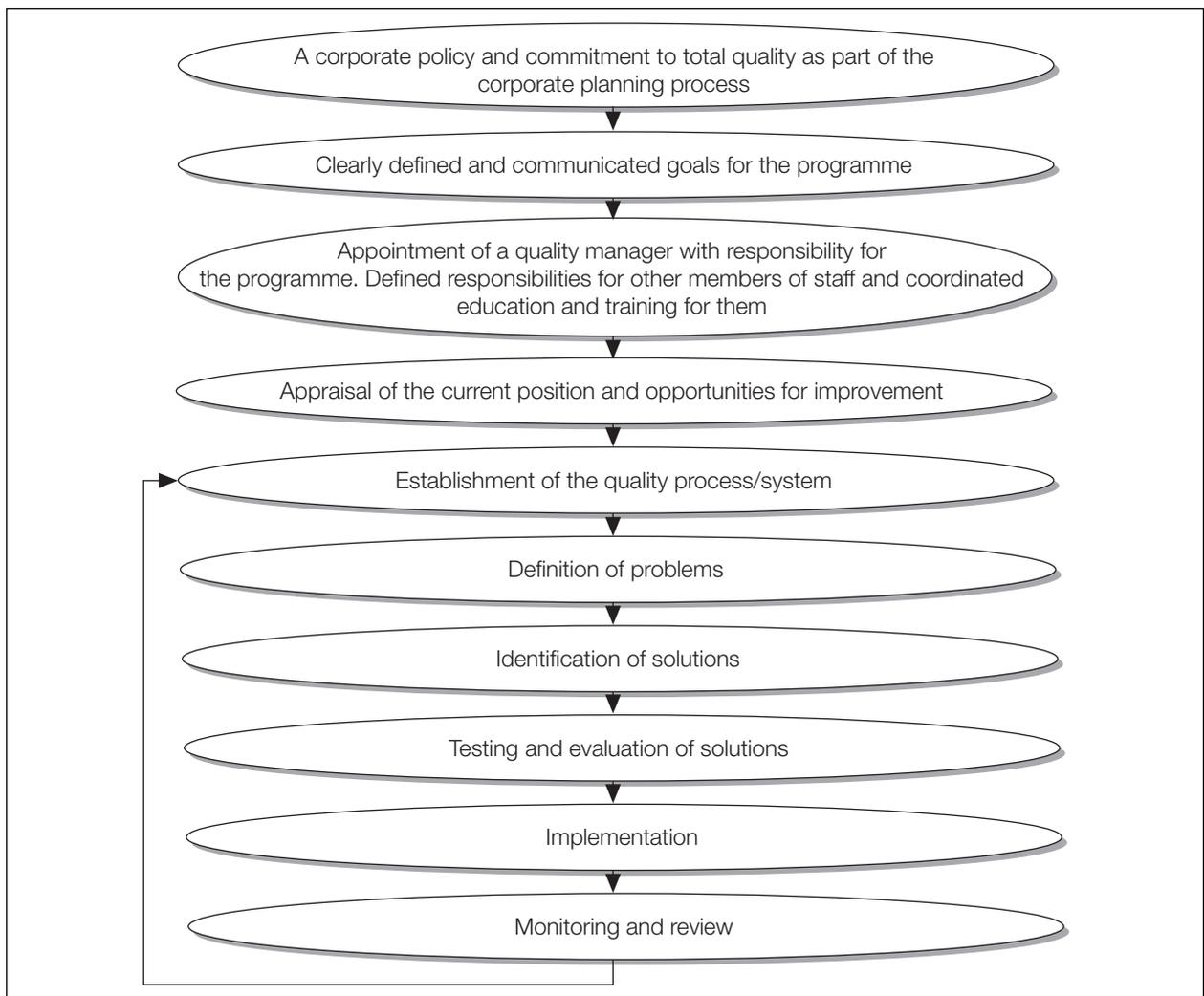
The role of employees is often under-emphasised. They should be able to feel free to experiment and confident to do so. They need to be fully trained to ensure that they are equipped to deal with the new challenges.

## A STRUCTURED APPROACH

Many TQM programmes fail. The reasons why they fail vary but can usually be traced to:

- fear of exposing weaknesses in the organisation;
- ignorance of the competitive position;
- no commitment from senior managers;
- little recognition of achievement;
- compartmentalisation;
- excess dependency on systems;
- low acceptability levels;
- comfort in doing what has always been done;
- poor training;
- seeing it as someone else's problem.

While the structure of the TQM approach will be determined by the individual characteristics of the organisation an overall framework should comprise:



Successful implementation requires:

- a proactive and disciplined approach (particularly at the senior level);
- a well-structured approach that is understood by everyone in the organisation; and
- perseverance.

**A large percentage of total quality programmes fail because of a lack of structure.  
Don't let yours be one of them.**

## PART II: APPLYING THE PRINCIPLES

### MAKING IT HAPPEN

Examine the changes which would be needed to turn your organisation into a total quality one.

Think about the likely implementation timescale and cost.

Start small and grow with confidence and experience.

#### **Ask yourself: can you afford not to do it?**

Identify the level of knowledge and understanding of TQM amongst the senior management team. Establish commitment at as senior a level within the organisation as possible. Through workshops or presentations encourage the interest of as many of the senior management team as possible.

While the value of mission/vision statements is often questioned, it is important that everyone in the organisation has a feel for what needs to be changed if the organisation is to become the best. A statement provides a valuable starting point. If the organisation does not have one encourage its development.

Examine a selection of TQM models and agree which best fits the organisation's needs. Adapt it if necessary.

Draw up the agreed model in outline.

Raise awareness of what has been done and what is intended. Involve everyone in briefing sessions. While in the early stages consultants can bring the experiences of other organisations and make a significant contribution, it is important that, over time, TQM skills are developed and owned in-house to ensure that the programme is sustainable and successful long-term.

Secure the commitment of both enthusiasts and cynics. Use the enthusiasts to pull the others along. Instigate artificial situations to encourage interaction e.g. team working events and begin training staff to help them become individually and collectively responsible for quality.

In the early stages, or until the benefits begin to flow, staff will be under tremendous pressure. Ensure that they are able to allocate time for training and for discussion and analysis. Key staff should be able to delegate other work to concentrate on the TQM initiative.

Agree the detail of the model and how its standards are to be measured.

Develop an action plan.

Agree the detail of the plan and ensure that it is adequately resourced.

Seek volunteers to identify a small trial project or pilot to establish a baseline and appoint a TQM coordinator/manager.

The pilot should provide experience of:

- defining the gaps between current and desired standards;
- defining and using relevant measurement methods, tools and techniques;
- acquiring information on, and understanding of, the management of quality.

Evaluate the trial/pilot.

Make any adjustments necessary to the mechanisms and the plan.

Agree a broad plan for extending implementation.

Consider recruiting or appointing one or more full time quality managers with experience and expertise and train facilitators (line managers who will then be able to help others have effective meetings and arrive at solutions).

Divide responsibility for progress amongst the team.

Commence implementing the initiative more widely across the organisation.

Introduce or extend programmes to provide individual members of staff or teams with ideas for improvements with a structured path through which these can be realised. Teams should be able to commission research, draw up action specifications and implementation programmes, assess capabilities and suggest measures.

Keep everyone up to date with developments. Ensure a continuous two-way flow of information and encourage involvement through presentations, bulletins etc.

Maintain the continuous improvement cycle.

Encourage self-assessment on a voluntary basis, say every 18 months to two years, against the model chosen to let people establish for themselves how far they have come. It should not be an audit but an honest self-appraisal of their impact on *business results*.

**The approach must be focused on business goals and improving business results.**

**It require courageous leadership and commitment from management at the highest level.**

**Managers must provide vision, give support, lead by example and be prepared to represent their work teams.**

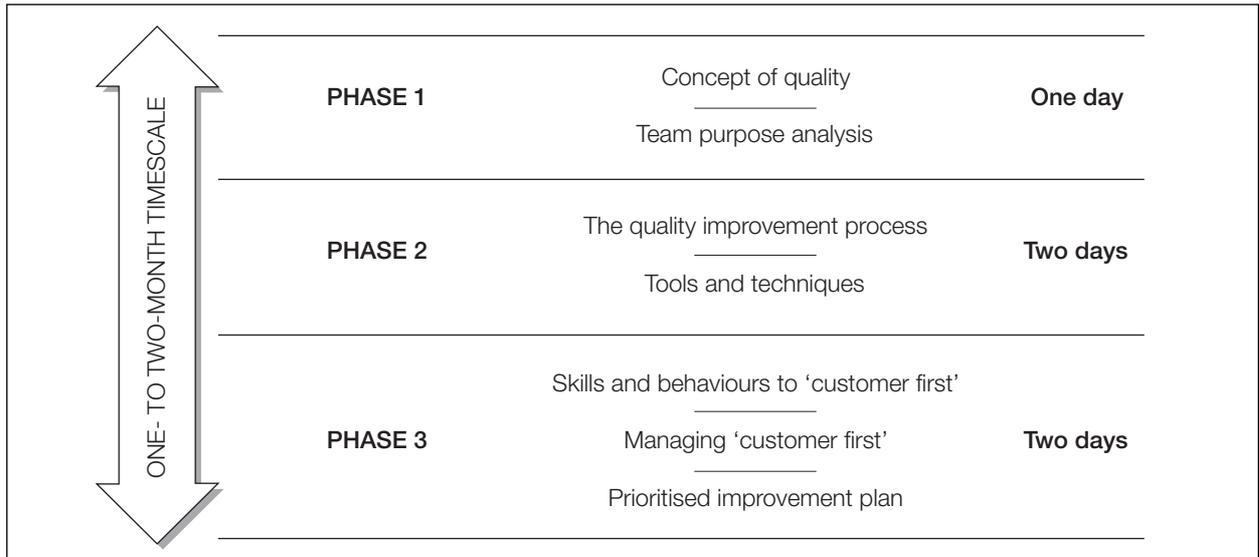
**The programme must produce, and must be seen to produce, tangible results.**

**DON'T CALL IT TOTAL QUALITY IF IT ISN'T.**

## TRAINING STAFF

TQM improves both individual development and organisational performance. Staff gain more autonomy and acquire new skills. It creates an environment of employee involvement and open communication. If employees are to be equipped to implement the philosophy of total quality then the organisation must also invest time and resource into their ongoing development. Training is central to the success of the programme.

There are benefits to be gained from cascading quality through the organisation. Under such an approach senior managers are trained and then in turn lead the training of those who work for them and so on. An outline of a training programme to enable this may look like this:



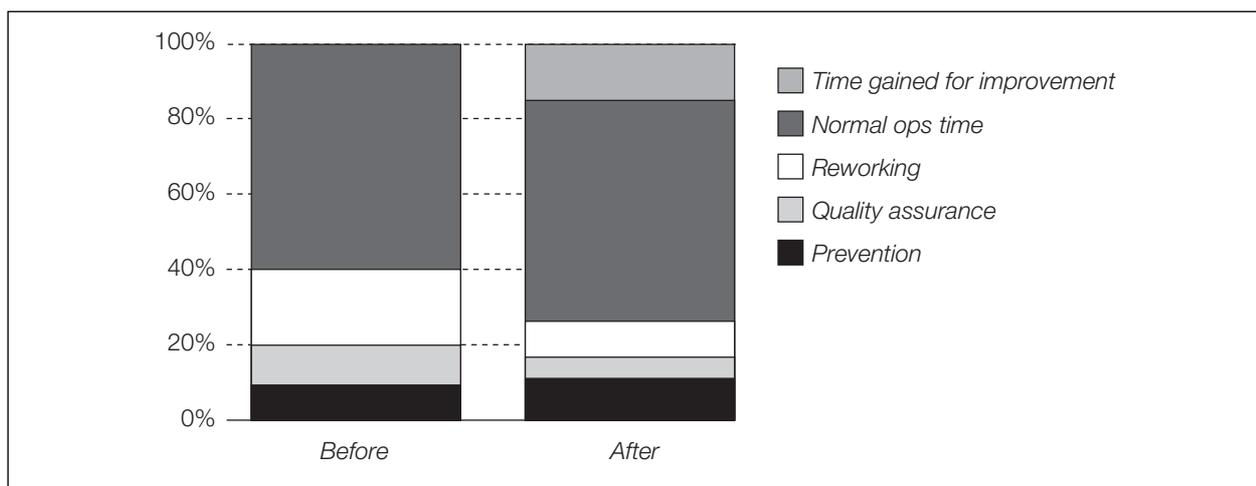
## THE COST OF QUALITY

Total quality is not an exercise in cost cutting, but organisations need to be aware of the costs associated with making errors and mistakes as a way of identifying areas for improvement. The cost of quality is essentially a tool for measuring the cost to an organisation of not getting things right first time. It is also a powerful tool for identifying waste whether of effort, time or resource/materials,. Assessing the cost of quality is very often used by organisations as a first step to introducing quality.

The cost of quality generally focuses on three major components:

- the cost of monitoring defects or errors (quality assurance);
- the cost of correcting defects and errors (networking);
- the cost of reducing defects and errors (prevention).

In service organisations as much as 40% of operating costs can be spent on prevention, quality assurance and reworking. This can be significantly reduced. One way is to move to prevention rather than appraisal. The aim should be to get things right first time through, for example, training people to do their own checking and to give them the skills they need to do the job right and to the correct standard. Savings made on checking and reworking can then be reinvested to improve service standards as illustrated below.



Units within the organisation may have their own clear ideas about the amount of time they spend on checking and correcting errors. To provide a structure to help them evaluate this a *pro forma* such as that opposite can be used. This can help them to identify waste and areas where improvements could be made. The *pro forma* is very general but can be adapted.

## COST OF QUALITY PRO FORMA

	Within my control		Time spent
	YES	NO	
Poor communication			
Lack of:			
• consultation			
• planning			
• resources			
Non co-operation/lack of service-level agreement			
Unnecessary third party in process			
Duplicate checking (checking checkers)			
Correcting errors:			
• other peoples' work			
• own section's work			
• own work			
Enquiries and complaints (formal)			
Dealing with irate customers (verbal)			
Criticising others			
Absenteeism (sick interviews?)			
Staff:			
• grievances			
• losses			
Dealing with faulty equipment			
Use of time:			
• poor timekeeping			
• time stealers			
• people failing to attend meetings			
• people not briefed for meetings			
Waste of resources			

# STATISTICAL PROCESS CONTROL

Problem solving for quality improvement requires the use of tools and techniques which most people will already be familiar with and on which structured training should be provided as part of the programme. At its most basic statistical process control (SPC) provides a simple set of tools and techniques for problem-solving and improvement. SPC includes such tools as:

## **Pareto analysis**

The 80/20 rule under which data is collected and sorted to identify the most frequent causes of a problem. Remedial action is then focused on the most significant.

## **Flowcharts**

These present a picture of the key elements in a process. By comparing what happens with what should happen sources of difficulty can be uncovered.

## **Control charts**

The collection of objective evidence of areas/processes/outputs which are not meeting customer requirements and what action needs to be taken. This is frequently best done in collaboration with customers/suppliers.

## **Cause and effect analysis**

This is often used in support of brainstorming sessions and is a concise way of setting out the causes of a problem by linking them in diagrammatic form. The diagram is usually compiled by one person writing up the ideas of others in a group session. When well prepared the diagram looks like a fishbone – the name by which the diagram is often called.

## **Stratification**

Breaking down data into component parts to enable appropriate corrective action to be identified.

## **Scatter diagrams**

Used to investigate and illustrate the correlation between two factors.

Some of these tools can be used as part of **brainstorming sessions**, run by quality circles or teams. Teams can be made up of, say, six people from those involved in the process under scrutiny and spend up to one hour, or until they run out of steam, suggesting ideas or identifying root causes of difficulties. This is an excellent opportunity to feed in information and lessons learnt from benchmarking. There should be no criticism or evaluation during the course of the session and a short list of ideas should be drawn up at the end. These can then be developed further.

SPC is more than just measurement. When supported by management and used as part of a total quality programme SPC provides an objective means of controlling quality in support of the long term corporate strategy.

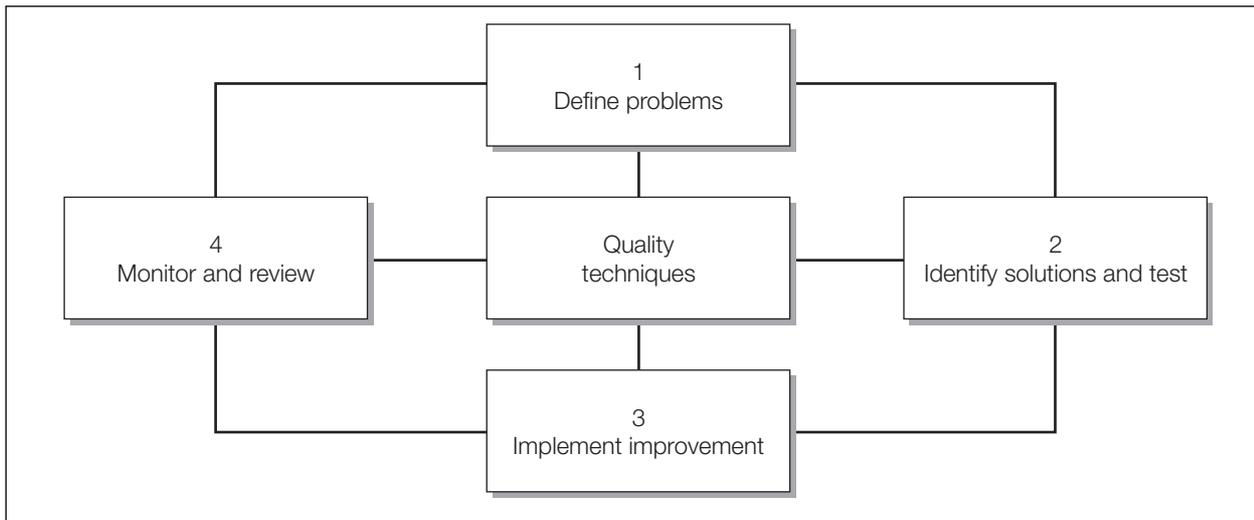
It can help ensure:

- a structured and systematic approach;
- that decisions are based on facts not opinions;
- better communication;
- quality improvements in products/services;
- increased productivity.

Attributes of successful SPC programmes include:

- tackling one problem at a time;
- structured and continuous training for all those involved;
- clear, documented and agreed instructions for all procedures;
- a long-term management commitment;
- well-informed employees dedicated to quality.

## APPLYING THE TOOLS AND TECHNIQUES



### Key stages in the quality improvement programme: an example

#### 1. Define the problem

- Gather data and chart the problem.

#### 2. Identify solutions

- *Short-term fix*

Take short term action to remedy the effects while you get on and examine the cause of the problem.

- *Examining the cause*

Use a flow chart to map out key elements in a process.

Hold a brainstorming session. Construct a cause and effect diagram.

Analyse the data using a Pareto diagram to focus attention on major causes.

#### 3. Implementation

- Brainstorm suggestions for corrective action. Select the best one. Benchmarking can add a useful external stimulus. A brief guide is enclosed at Part III.
- Ensure adequate resources are available.
- Train everyone, gain their commitment and involve them.
- Document and communicate progress.

#### 4. Monitor and review

- Chart progress
- Evaluate effectiveness
- Feedback lessons

#### 5. Move on to next problem

## PROGRESS ASSESSMENT

Assessment is a key element for internal management purposes as well as for meeting the requirements of national quality awards, under which organisations are appraised using performance scores (see Appendix 1).

### Setting targets and milestones

Targets should be set within the context of the organisation's business plan and the achievements this requires. They should be demanding, requiring innovative solutions focused on what the business should be doing, not what it currently does. They must not be seen by staff as threatening. Progress towards them will be reliant on appointment of courageous team leaders. Milestones/deliverables can include:

- evidence of planning, consultation and implementation from documents such as strategic and business plans, minutes of meetings, office notices, newsletter items etc.;
- evidence of improved customer satisfaction gained from surveys, indices specifically set up for its measurement, letters of appreciation/complaint and others;
- evidence of improved employee attitudes from feedback gained through internal employee attitude surveys and reductions in wastage;
- an increasing number of successfully completed 'customer first' improvement projects;
- significant reductions in the cost of quality flowing through from these projects;
- achievement of an external quality award.

### Self-assessment scales

Internal units can be required to assess themselves using scales set by the organisation and which reflect its quality framework.

Hard evidence of successful completion of each of these lower levels can be required before a unit can claim achievements in the higher levels.

#### Lower levels

<i>Level 0</i>	<i>No activity</i> The unit is at this level if it has no hard evidence to claim level 1.
<i>Level 1</i>	<i>Intention declared</i> The unit is at this level if management have announced their intention to develop a strategy in pursuit of quality performance under a criterion. The intention should be publicised to staff within the unit. Anecdotal evidence is not enough.
<i>Level 2</i>	<i>Projects/targets identified</i> The unit is at this level when it can demonstrate that it is turning its published intentions into practice. Key processes and both financial and non-financial objectives will have been identified. Quality will be a routine agenda item at meetings and there will be an increasing awareness of quality issues throughout the unit.
<i>Level 3</i>	<i>Plans formulated and communicated</i> Plans will have been developed to define roles, resources, timetables and the means of measuring the level of success achieved. The results of customer and staff consultations will

have been taken into account and addressed as fully as possible in developing the plans. The plan for a given criterion may be a specific document or an acknowledged strategy which coordinates a series of separate initiatives. Whatever form the plan takes it will have been communicated to all those involved in, or affected by, implementation.

*Level 4 Plans implemented and sustained*

Plans will have been implemented and sustained for sufficiently long to confirm that actions and processes are workable without major revision. All necessary performance measurements and records of achievement will have been established and maintained consistently.

### **Higher levels**

There need not be systematic progression through each of these levels. Provided Levels 1 – 4 have been fully satisfied, claims could be submitted for the highest levels for which a unit has evidence.

*Level 5 Some positive results shown*

At this level units will be able to show positive trends in at least 25% of activities and projects. There will be widespread awareness of the underlying causes of both positive and negative trends which will be used to adjust targets where necessary.

*Level 6 Many positive results shown*

At this level units will be able to show positive trends in at least 50% of activities and projects. Managers will have a clear understanding of the links between the matrix results criteria and the enabling criteria. They will also be visibly involved in improvement projects.

*Level 7 Positive results shown in most areas*

At this level units will be able to show positive trends in at least 75% of activities and projects. Quality improvement will be an integral part of target setting and performance review and managers will be proactive in recognising and rewarding achievement.

*Level 8 Excellence achieved*

Quality improvement has become a normal part of the unit's culture and is acknowledged as being so by virtually all customers and staff. It will show strongly positive trends.

*Level 9 Excellence sustained*

The unit can prove it has met the stringent requirements of Level 8 for a continuous period of at least three years.

# APPENDIX 1

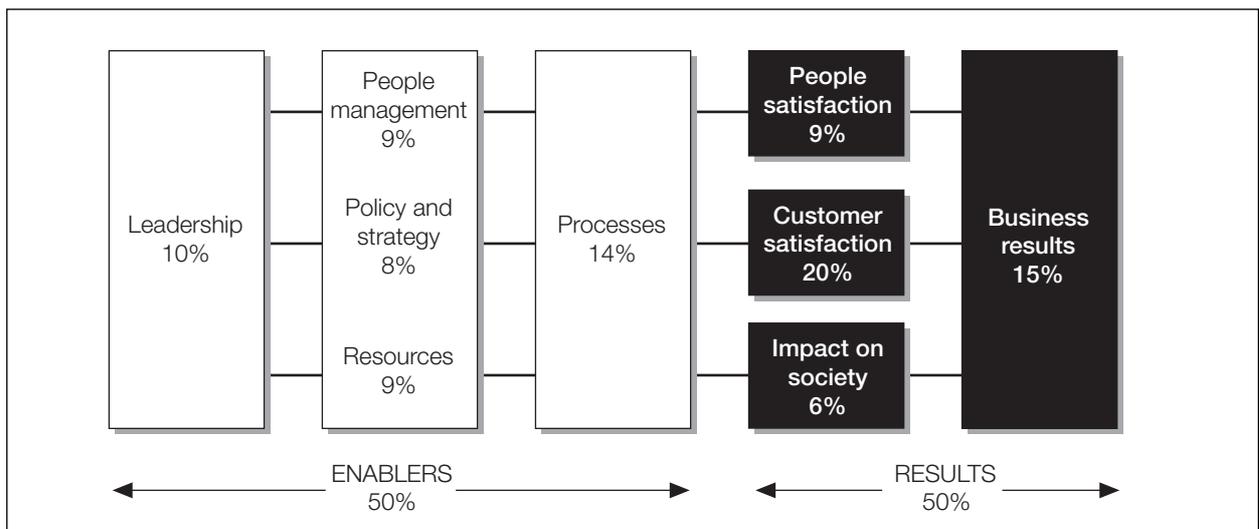
## TOTAL QUALITY MANAGEMENT: SOME ASSESSMENT MODELS

### UK QUALITY AWARD MODEL FOR SELF-APPRAISAL

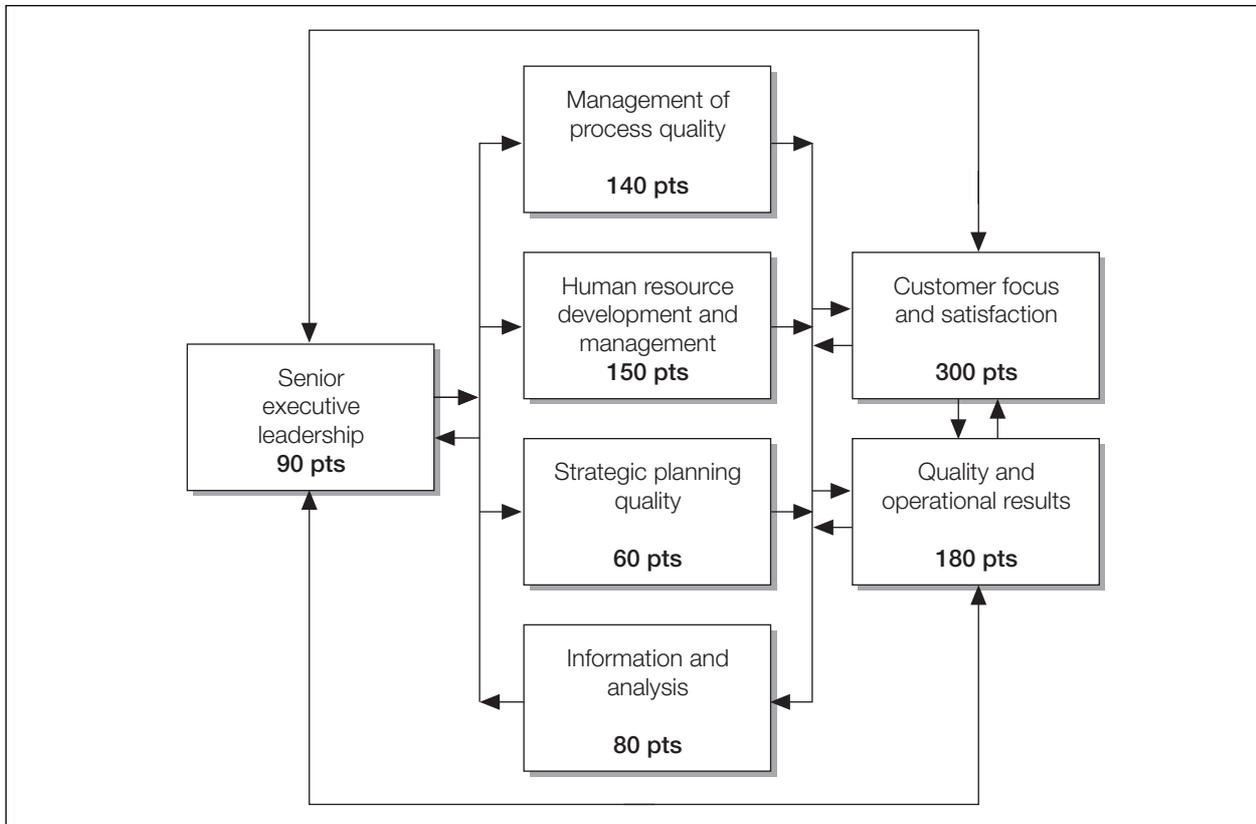
The model is based on The European Quality Award developed by the European Foundation for Quality Management.

Essentially the model demonstrates that *customer satisfaction, employee satisfaction and impact on society* are achieved through *leadership driving policy and strategy, people management, resources and processes*, leading ultimately to excellence in *business results*.

The model provides a structured basis for self-assessment which enables an organisation to evaluate its progress and to develop planned actions for improvement.



The US Baldrige Award model:



# APPENDIX 2

## TOTAL QUALITY MANAGEMENT: SOME OF THE THINKING

There are many gurus of total quality management and a considerable body of literature associated with each. Some of this is referenced in Appendix 3. Brief details of some of those most frequently referred to include the following.

### **Dr W Edwards Deming**

Deming's 14-point plan, condensed below, is a complete philosophy of management, not just quality:

1. An organisation must have a consistent message about quality and service.
2. There must be a commitment to change and continual improvement.
3. Defect prevention rather than detection.
4. Build partnerships with suppliers.
5. Constantly improve.
6. Train in a way which makes everyone responsible for their own quality.
7. Supervision must encourage and support not chase.
8. Drive out 'fear' of improvement.
9. Break down department barriers to foresee problems and improve quality.
10. Don't set unrealistic targets. Eliminate management by slogans.
11. Work standards and numerical quotas should be eliminated.
12. Enable employees to have pride in their work.
13. Train and educate.
14. Create an organisational structure which supports all of the above.

### **Joseph M Juran**

A prolific writer on quality whose quality road map says:

- Identify the customer.
- Establish customer needs.
- Translate those needs.
- Develop a product to satisfy those needs.
- Optimise the product features.
- Develop processes to deliver the product.

- Optimise the process.
- Prove processes work satisfactory.
- Transfer to operations.

Quality improvement is a two-journey process; one from 'symptom to cause'; the other from 'cause to remedy'.

### **Philip B Crosby**

Crosby's four absolutes of quality are:

- The definition of quality is conformance to requirements.
- The system of causing quality is prevention, not appraisal.
- The performance standard is zero defects.
- The measurement of quality is the price of non-conformance.

### **Tom Peters**

Tom Peters has identified twelve characteristics of successful quality programmes. These are:

1. A management obsession with quality backed up by practical action.
2. Passionate systems. Passion without system, or system without passion invariably leads to failure.
3. Quality measurement from the earliest stage.
4. Reward based on quality.
5. Extensive training in quality for everyone in the organisation.
6. The introduction of cross functional teams or quality circles.
7. There is no such thing as a small improvement. Any change is significant.
8. Report introduction of new goals, new themes and new events.
9. Parallel organisation structure devoted to quality improvement.
10. Everyone including suppliers, distributors and customers must be involved.
11. When quality goes up, costs go down.
12. Quality improvement is a never-ending journey.

# APPENDIX 3

## FURTHER INFORMATION

### Publications

Total quality management and effective leadership: a strategic overview	Department of Trade and Industry
The quality gurus	Department of Trade and Industry
The case for costing quality	Department of Trade and Industry
Quality circles	Department of Trade and Industry
Statistical Process Control	Department of Trade and Industry
World class performance through total quality: a practical guide to implementation	Paul Spenley, Chapman & Hall
Total quality management: the route to improving performance	John S Oakland, Butterworth Heinemann
Making quality work: lessons from Europe's leading companies	George Binney, Economist Intelligence Unit
Measuring quality-related costs	J H Rogerson and E M Rooney. (Available from CIMA, price £15.95)
Measuring performance for business results	Mohamed Zairi, Chapman & Hall
Measuring service quality: practical guidelines	John Ovrretveit
Achieve total quality	David Hutchings
Building total quality management: a guide for management	Tito Conti, Chapman & Hall
Cases in total quality management	Leslie J Porter and John S Oakland, Butterworth Heinemann
Implementing quality in the public sector	Tony Bendell, Pitman
Quality through people: a blueprint for practical total quality management	Jon Choppin, IFS
The road to quality	David Lascelles, IFS

CIMA's Information Service can provide you with further details on these and other information on Total Quality Management. Tel: +44 (0)171 917 9256. Fax: +44 (0)171 631 5309. E-Mail: [cimalis@cima.org.uk](mailto:cimalis@cima.org.uk)

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