



Fifth edition

Total Quality Management and Operational Excellence

Text with Cases

John S. Oakland, Robert J. Oakland and Michael A. Turner



Total Quality Management and Operational Excellence

The notion of 'Quality' in business performance has exploded since the publication of the first edition of this classic text in 1989. Today there is a plethora of performance improvement frameworks including lean-Six Sigma and the latest version of ISO 9001, offering an often confusing variety of ways to achieve business excellence.

Quality guru John Oakland's famous TQM model, in many ways a precursor to these frameworks, has evolved to become the ultimate holistic overview of performance improvement strategy. Incorporating the frameworks that succeeded it, the revised model redefines Quality by:

- Accelerating change
- Reducing cost
- Protecting reputation

The popular, practical, jargon-free writing style, along with ten supporting case studies, effortlessly ties the model to its real-life applications, making it easy to understand how to apply what you've learned to your practices and achieve sustainable competitive advantage.

Guiding readers through the language of TQM and OpEx and all their recent developments, including data analytics, this book sets out a clear way to manage change. This exciting update of a classic is all the busy student or professional will need to begin understanding how to manage Quality and achieve Operational Excellence.

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Preface

When John Oakland wrote the first edition of Total Quality Management in 1988, there were very few books on the subject. Since its publication the interest in TQM and business performance improvement has exploded. There are now many texts on TQM and its various aspects, including business/operational excellence, business process management, Six Sigma and lean manufacturing-based approaches.

So much has been learned during the last 30 years of TQM implementation that it has been necessary to rewrite the book and revise it again and again. In essence this is the 7th edition since TQM was first published in 1989 (two editions of '*Total Quality Management*' and five editions of '*TQM & OpEx: Text with Cases*'). The content in this edition has been updated to reflect the developments, current understanding and experience gained of TQM and Operational Excellence. John has been joined in authoring this edition by his colleagues and Partners in The Oakland Group, Rob Oakland and Mike Turner.

Increasing the satisfaction of customers and other stakeholders through effective goal deployment, cost reduction, process improvement, people involvement and supply chain development has proved essential for organizations to stay in existence in the 21st century. We cannot avoid seeing how quality has developed into a most important competitive weapon, and many organizations have realized that total quality and its relatives is *the* way of managing for the future. Neglect of product and service quality can have disastrous consequences, as we have seen repeatedly in recent years around the globe. Consequential reputational damage is deeper and quicker now than ever before because information, opinion and ultimately consumer choice is affected at scale due to the nature of modern communication technologies. Of course, TQM and OpEx is far wider in its application than assuring product or service quality – it is a way of managing organizations to improve every aspect of performance, both internally and externally.

This book is about how to manage in a total quality way. It is structured in the main around four parts of what has become known as the 'Oakland model for TQM' – improving *Performance* through better *Planning* and management of *People* and *Processes* in which they work. The core of the model will always be performance in the eyes of the customer, but this must be extended to include performance measures for all stakeholders. This core still needs to be surrounded by *Commitment* to quality and meeting customer requirements, *Communication* of the quality message and recognition of the need in many cases to change the *Culture* of most organizations to create total quality. These three Cs are the '*soft foundations*' that must encase the '*hard management necessities*' of the four Ps.

Under these headings the essential steps for the successful implementation of TQM are set out in what we hope is still a meaningful and practical way. The book should guide the reader through the language of TQM and OpEx and all the recent developments and set down a

clear way to manage change – new material has been included on these aspects. The Oakland ‘DRIVER’ improvement methodology is a major contribution to this.

Many of the new approaches related to quality and improving performance appear to present different theories. In reality they are talking the same ‘language’ but may use different ‘dialects’; the basic principles of defining quality and taking it into account throughout all activities of the ‘business’ are common. Quality has to be managed; it does not just happen. Understanding and commitment by senior management, effective leadership, teamwork, good process management and sound improvement methods and tools are fundamental parts of the recipe for success. We have tried to use our collective extensive research and consultancy experience to take what, to many, is a jigsaw puzzle and assemble a comprehensive, pragmatic, working model for total quality. Moreover, we have tried to show how holistic TQM and OpEx now is, embracing the most recent models of ‘excellence,’ Six Sigma, lean and a host of other management methods and teachings.

To support the 19 chapters of text are ten case studies. We have again presented these together at the end of the book as many overlap different topics in the chapters but have offered guidance on which parts are illustrated by the particular cases.

The book should meet the requirements of the increasing number of ‘students’ who need to understand the part TQM and Operational Excellence may play in their studies of science, engineering or business and management. We hope that those engaged in the pursuit of professional qualifications in the management of quality, such as the Chartered Quality Institute, the American Society for Quality and similar ones around the world, will make this book an essential part of their library. With its companion book, *Statistical Process Control* (now in its 7th edition), *TQM and OpEx: Text with Cases* documents a comprehensive approach, one that has been used successfully in many organizations across the globe.

The authors would like to thank our colleagues in The Oakland Group for the sharing of ideas and help in their development. The book is the result of many man-years of collaboration in assisting organizations to introduce good methods of management and embrace the concepts of total quality. We are also most grateful to the busy senior managers in the case study organizations for their contributions in pulling together the cases and for obtaining permission for their publication.

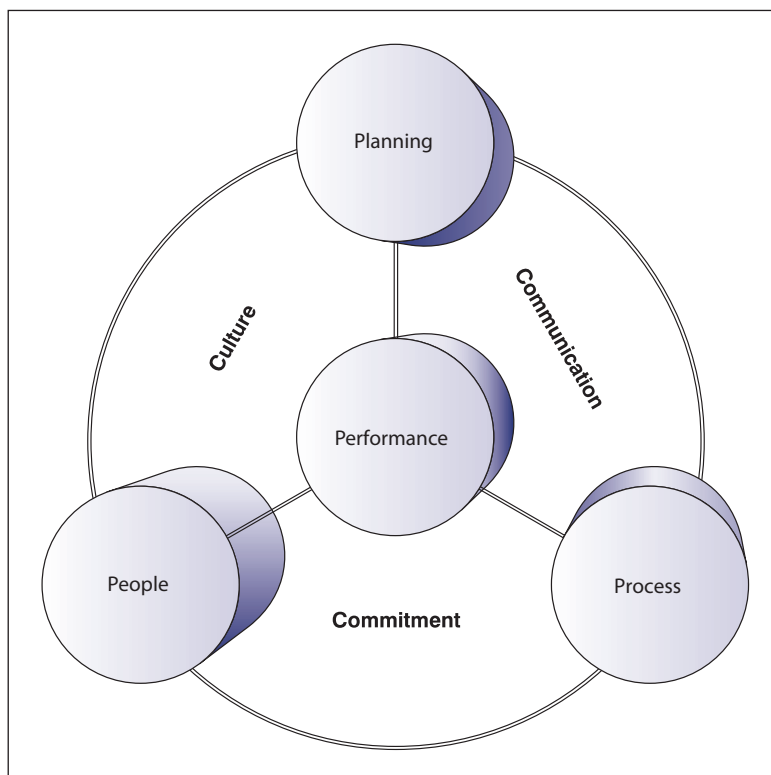
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Part I

The foundations of TQM

Good order is the foundation of all good things.

*Edmund Burke, 1729–1797,
from 'Reflections on the Revolution in France'*





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Chapter 1

Understanding quality

Quality, competitiveness and customers

In recent times, organizations have experienced a period of great change in their markets and operations. International as well as domestic competition has meant that many organizations have faced an increasingly turbulent and hostile environment. The pace of technological change has quickened to lightning speed, customers have become more demanding and competition has become more intense and sophisticated. Regulators and consumer groups have also added to these pressures.

Good quality performance has always been a key strategic factor for business success, but it is now more than ever required to compete successfully in the global markets of the 21st century. Many organizations have adopted a range of improvement approaches in response to these forces. We have seen the growing adoption of a range of quality and management systems standards, the emergence and development of total quality management (TQM), business process re-engineering (BPR), business excellence, performance excellence, lean thinking, Six Sigma, statistical process control, etc, etc. The battle-weary could be excused for taking a rather jaundiced view of this ever-lengthening list of ‘quality’ offers, but, by and large, they share many of the principles and elements that are found in TQM.

Whatever type of organization you work in – an online retailer, a bank, a hospital, a university, an airline, an insurance company, a software developer, local government, a factory – competition is rife: competition for customers, for students, for patients, for resources, for funds. Any organization basically competes on its *reputation* – for quality, reliability, price and delivery – and most people recognize that quality is the key to achieving sustained competitive advantage. If you doubt that, just look at the way some organizations, even whole industries in certain countries, have used quality strategically to win and retain customers, obtain business resources or funding and be competitive. Moreover, this sort of attention to quality improves performance in reliability, delivery and price.

Reputations for poor quality last for a long time, and a good or bad reputations can become national or international. Yet the management of quality can be learned and used to improve reputation. For any organization, there are several aspects of reputation that are important:

- 1 It is built upon the competitive elements of being 'On-Quality; On-Time; On-Cost'
- 2 Once an organization acquires a poor reputation for product or service quality or reliability, it takes a very long time to change it
- 3 Reputations, good or bad, can quickly become national reputations
- 4 The management of the competitive weapons, such as quality, can be learned like any other skill and used to turn round a poor reputation

Before anyone will buy the idea that quality is an important consideration, they would have to know what was meant by it.

What is quality?

Quality starts with understanding customer needs and ends when those needs are satisfied. Pointing to his wrist, John asks a class of students – undergraduates, postgraduates, experienced managers, 'Is this a quality watch?' It matters not who is in the group, the answers vary:

- 'No, it's made in Japan'
- 'No, it's cheap'
- 'No, the face is scratched'
- 'How reliable is it?'
- 'I wouldn't wear it'

John's watch has been insulted all over the world – London, New York, Paris, Sydney, Dubai, Brussels, Amsterdam, Leeds! Clearly, the quality of a watch depends on what the wearer requires from a watch – perhaps a piece of jewellery to give an impression of wealth; a time-piece that gives the required data, including the date, in digital form or one with the ability to perform at 50 metres under the sea? These requirements determine the quality.

Quality is often used to signify 'excellence' of a product or service – people talk about 'Rolls-Royce quality' and 'top quality.' In some manufacturing companies the word may be used to indicate that a piece of material or equipment conforms to certain physical dimensional characteristics, often set down in the form of a particularly 'tight' specification. In a hospital it might be used to indicate some sort of 'professionalism.' If we are to define quality in a way that is useful in its *management*, then we must recognize the need to include in the assessment of quality the true requirements of the 'customer' – the needs and expectations.

Quality then is simply *meeting the customer requirements*, and this has been expressed in many ways by other authors:

- 'Fitness for purpose or use' – Juran, an early doyen of quality management;
- 'The totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs' – BS 4778. 1987 (ISO 8402, 1986) *Quality Vocabulary; Part 1, International Terms*;
- 'Quality should be aimed at the needs of the consumer, present and future' – Deming, another early doyen of quality management;

- ‘The total composite product and service characteristics of marketing, engineering, manufacture and maintenance through which the product and service in use will meet the expectation by the customer’ – Feigenbaum, the first man to publish a book with ‘Total Quality’ in the title;
- ‘Conformance to requirements’ – Crosby, an American consultant famous in the 1980s;
- ‘Degree to which a set of inherent characteristics fulfils requirements’ – ISO (EN) 9001: 2015 *Quality Management Systems – fundamentals and vocabulary*.

Another word that we should define properly is *reliability*. ‘Why do you buy a Japanese car?’ ‘Quality and reliability’ comes back as the answer. The two are used synonymously, often in a totally confused way. Clearly, part of the acceptability of a product or service will depend on its ability to function satisfactorily *over a period of time*, and it is this aspect of performance that is given the name *reliability*. It is the ability of the product or service to *continue* to meet the customer requirements. Reliability ranks with quality in importance, since it is a key factor in many purchasing decisions where alternatives are being considered. Many of the general management issues related to achieving product or service quality are also applicable to reliability.

It is important to realize that the ‘meeting the customer requirements’ definition of quality is not restrictive to the functional characteristics of products or services. Anyone with children knows that the quality of some of the products they purchase is more associated with *satisfaction in ownership* than some functional property. This is also true of many items, from antiques to certain items of clothing. The requirements for status symbols account for the sale of some executive cars, certain bank accounts and charge cards and even hospital beds! The requirements are of paramount importance in the assessment of the quality of any product or service.

By *consistently* meeting customer requirements, we can move to a different plane of satisfaction – *delighting the customer*. There is no doubt that many organizations have so well ordered their capability to meet their customers’ requirements, time and time again, that this has created a reputation for ‘excellence.’ A development of this thinking regarding customers and their satisfaction is *customer loyalty*, an important variable in an organization’s success. Research shows that focus on customer loyalty can provide several commercial advantages:

- Customers cost less to retain than acquire;
- The longer the relationship with the customer, the higher the profitability;
- A loyal customer will commit more spend to its chosen supplier;
- About half of new customers come through referrals from existing clients (indirectly reducing acquisition costs).

Many companies use measures of customer loyalty to identify customers who are ‘completely satisfied,’ would ‘definitely recommend’ and would ‘definitely repurchase.’ The so-called net promoter score (NPS) is one such measure, often quoted on a scale from 1 (lowest score) to 10.

Understanding and building the quality chains

The ability to meet the customer requirements is vital, not only between two separate organizations but within the same organization.

When the air stewardess pulled back the curtain across the aisle and set off with a trolley full of breakfasts to feed the early morning travellers on the short domestic flight into an

international airport, she was not thinking of quality problems. Having stopped at the row of seats marked 1ABC, she passed the first tray onto the lap of the man sitting by the window. By the time the second tray had reached the lady beside him, the first tray was on its way back to the hostess with a complaint that the bread roll and jam were missing. She calmly replaced it in her trolley and reached for another – which also had no roll and jam.

The calm exterior of the hostess began to evaporate as she discovered two more trays without a complete breakfast. Then she found a good one and, thankfully, passed it over. This search for complete breakfast trays continued down the aeroplane, causing inevitable delays, so much so that several passengers did not receive their breakfasts until the plane had begun its descent. At the rear of the plane could be heard the mutterings of discontent. ‘Aren’t they slow with breakfast this morning?’ ‘What is she doing with those trays?’ ‘We will have indigestion by the time we’ve landed.’

The problem was perceived by many on the aeroplane to be one of delivery or service. They could smell food but they weren’t getting any of it, and they were getting really wound up! The air hostess, who had suffered the embarrassment of being the purveyor of defective product and service, was quite wound up and flushed herself, as she returned to the curtain and almost ripped it from the hooks in her haste to hide. She was heard to say through clenched teeth, ‘What a terrible mess!’

A problem of quality? Yes, of course, requirements not being met, but where? The passengers or customers suffered from it on the aircraft, but in part of another organization there was a man whose job it was to assemble the breakfast trays. On this day the system had broken down – perhaps he ran out of bread rolls, perhaps he was called away to refuel the aircraft (it was a small airport!), perhaps he didn’t know or understand, perhaps he didn’t care.

Three hundred miles away in a chemical factory . . . ‘What the hell is Quality Control doing? We’ve just sent 15,000 litres of lawn weed killer to CIC and there it is back at our gate – they’ve returned it as out of spec.’ This was followed by an avalanche of verbal abuse, which will not be repeated here but poured all over the shrinking Quality Control Manager as he backed through his office door, followed by a red faced Technical Director advancing menacingly from behind the bottles of sulphuric acid racked across the adjoining laboratory.

‘Yes, what is QC doing?’ thought the Production Manager, who was behind a door two offices along the corridor but could hear the torrent of language now being used to beat the QC man into an admission of guilt. He knew the poor devil couldn’t possibly do anything about the rubbish that had been produced except test it, but why should he volunteer for the unpleasant and embarrassing ritual now being experienced by his colleague – for the second time this month. No wonder the QC manager had been studying the middle pages of the *Telegraph* on Thursday – what a job!

Do you recognize these two situations? Do they not happen every day of the week – possibly every minute somewhere in manufacturing or the service industries? Is it any different in banking, insurance, health services? The inquisition of checkers and testers is the last bastion of desperate systems trying in vain to catch mistakes, stop defectives, hold lousy materials, before they reach the external customer – and woe betide the idiot who lets them pass through!

Two everyday incidents, but why are events like these so common? The answer is the acceptance of one thing – *failure*. Not doing it right the first time at every stage of the process.

Why do we accept failure in the production of artefacts, the provision of a service or even the transfer of information? In many walks of life we do not accept it. We do not say, ‘Well, the nurse is bound to drop the odd baby in a thousand – it’s just going to happen.’ We do not accept that!

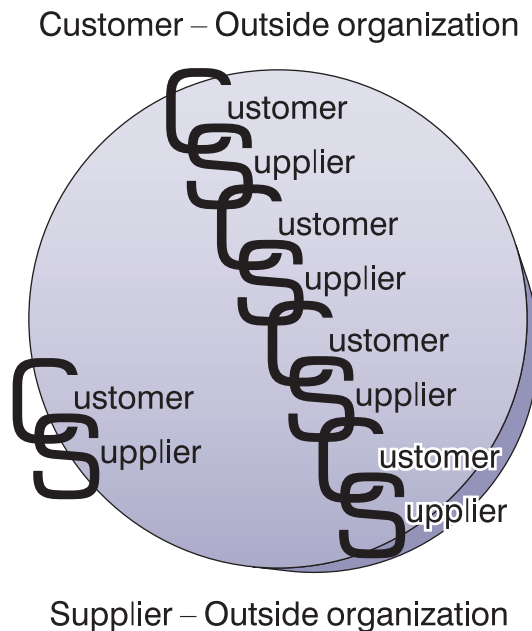


Figure 1.1 The quality chains

In each department, each office, even each household, there is a series of suppliers and customers. The personal assistant is a supplier to the boss. Are the requirements being met? Does the boss receive error-free information set out as required, when it is needed? If so, then we have a quality PA service. Does the air steward receive from the supplier to the airline the correct food trays in the right quantity, at the right time?

Throughout and beyond all organizations, whether they be manufacturing concerns, banks, retail outlets, universities, hospitals or hotels, there is a series of *quality chains* of customers and suppliers (Figure 1.1) that may be broken at any point by one person or one piece of equipment not meeting the requirements of the customer, internal or external. The interesting point is that this failure usually finds its way to the interface between the organization and its outside customers, and the people who operate at that interface – like the air hostess – usually experience the ramifications. The concept of internal and external customers-suppliers forms the *core* of good or ‘total’ quality management.

A great deal is written and spoken about employee motivation as a separate issue. In fact the key to motivation *and* quality is for everyone in the organization to have well-defined customers – an extension of the word beyond the outsider that actually purchases or uses the ultimate product or service to anyone to whom an individual gives a part, a service, information – in other words the results of their work.

Quality has to be managed – it will not just happen. Clearly it must involve everyone in the process and be applied throughout the organization. Many people in the support functions of organizations never see, experience or touch the products or services that their organizations buy or provide, but they do handle or produce things like purchase orders or invoices. If every fourth invoice carries at least one error, what image of quality is transmitted to customers?

Failure to meet the requirements in any part of a quality chain has a way of multiplying, and a failure in one part of the system creates problems elsewhere, leading to yet more failure, more problems and so on. The price of quality is the continual examination of the requirements and our ability to meet them. This alone will lead to a ‘continuing improvement’ philosophy. The benefits of making sure the requirements are met at every stage, every time, are truly enormous in terms of increased competitiveness and market share, reduced costs, improved productivity and delivery performance and the elimination of waste.

Meeting the requirements

If quality is meeting the customer requirements, then this has wide implications. The requirements may include availability, delivery, reliability, maintainability and cost-effectiveness, among many other features. The first item on the list of things to do is find out what the requirements are. If we are dealing with customer–supplier relationship crossing two organizations, then the supplier must establish a ‘marketing’ activity or process charged with this task.

Marketing processes establish the true requirements for the product or service. These must be communicated properly throughout the organization in the form of specifications.

The marketing process must, of course, understand not only the needs of the customer but also the ability of the supplying organization to meet them. If Mike’s customer places a requirement on him to run 1,500 metres in four minutes, then he knows he is unable to meet this demand, unless something is done to improve his running performance. Of course, he may never be able to achieve this requirement.

Within organizations, between internal customers and suppliers, the transfer of information regarding requirements is frequently poor to totally absent. How many executives really bother to find out what their customers’ – their PA’s or secretaries’ – requirements are? Can their handwriting be read, do they leave clear instructions, does the PA/secretary always know where the boss is? Equally, does the PA/secretary establish what the boss needs – error-free word processing, clear messages, a tidy office? Internal supplier–customer relationships are often the most difficult to manage in terms of establishing the requirements. To achieve quality throughout an organization, each person in the quality chain must interrogate every interface as follows:

Customers

- Who are my immediate customers?
- What are their true requirements?
- How do or can I find out what the requirements are?
- How can I measure my ability to meet the requirements?
- Do I have the necessary capability to meet the requirements?
(If not, then what must change to improve the capability?)
- Do I continually meet the requirements?
(If not, then what prevents this from happening, when the capability exists?)
- How do I monitor changes in the requirements?

Suppliers

- Who are my immediate suppliers?
- What are my true requirements?
- How do I communicate my requirements?

- How do I – or they – measure their ability to meet the requirements?
- Do my suppliers have the capability to meet the requirements?
- Do my suppliers continually meet the requirements?
- How do I inform them of changes in the requirements?

The measurement of capability is extremely important if the quality chains are to be formed within and without an organization. Each person in the organization must also realize that the supplier's needs and expectations must be respected if the requirements are to be fully satisfied.

To understand how quality may be built into a product or service, at any stage, it is necessary to examine the two distinct but interrelated aspects of quality:

- Quality of design
- Quality of conformance to design.

Quality of design

We are all familiar with the old story of the tree swing (Figure 1.2), but in how many places in how many organizations is this chain of activities taking place? To discuss the quality of – say – a chair it is necessary to describe its purpose. What is it to be

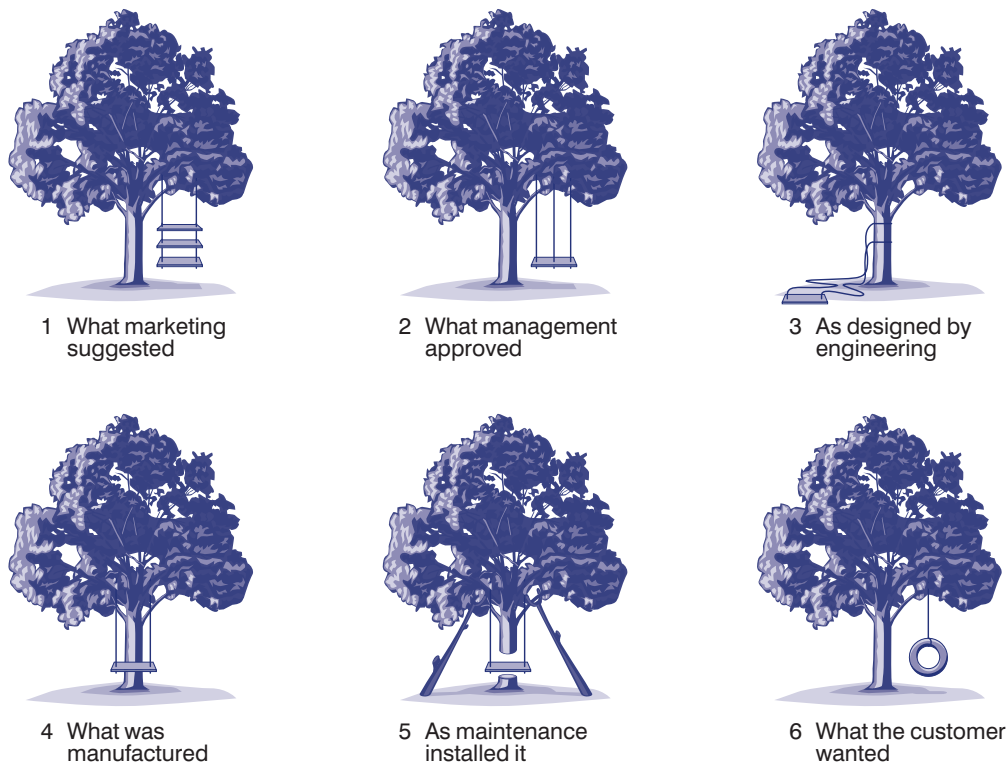


Figure 1.2 Quality of design

used for? If it is to be used for watching TV for three hours at a stretch, then the typical office chair will not meet this requirement. The difference between the quality of the TV chair and the office chair is not a function of how it was manufactured but its *design*.

Quality of design is a measure of how well the product or service is designed to achieve the agreed requirements. The beautifully presented gourmet meal will not necessarily please the recipient if he or she is travelling on a fast inter-city road and has stopped for a quick bite to eat. The most important feature of the design, with regard to achieving quality, is the specification. Specifications must also exist at the internal supplier–customer interfaces, if one is to achieve a total quality performance. For example, the company lawyer asked to draw up a contract by the sales manager requires a specification as to its content:

- 1 Is it a sales, processing or consulting type of contract?
- 2 Who are the contracting parties?
- 3 In which countries are the parties located?
- 4 What are the products involved (if any)?
- 5 What is the volume?
- 6 What are the financial aspects, e.g. price escalation?

The financial controller must issue a specification of the information he or she needs and when, to ensure that foreign exchange fluctuations do not cripple the company's finances. The business of sitting down and agreeing on a specification at every interface will clarify the true requirements and capabilities. It is the vital first stage for a successful quality effort.

There must be a corporate understanding of the organization's quality position in the market place. It is not sufficient that marketing specifies the product or service 'because that is what the customer wants.' There must be an agreement that the operating departments can achieve that requirement. Should they be incapable of doing so, then one of two things must happen: either the organization finds a different position in the market place or substantially changes the operational facilities.

Quality of conformance to design

This is the extent to which the product or service achieves the quality of design. What the customer receives should conform to the design, and operating costs are tied firmly to the level of conformance achieved. Quality cannot be inspected into products or services; the customer satisfaction must be designed into the whole system. The conformance check then makes sure that things go according to plan.

A high level of inspection or checking at the end is often indicative of attempts to inspect in quality. This may well result in spiralling costs and decreasing viability. The area of conformance to design is concerned largely with the quality performance of the actual operations. It may be salutary for organizations to use the simple matrix of Figure 1.3 to assess how much time they spend doing the right things right. A lot of people, often through no fault of their own, spend a good proportion of the available time doing the right things wrong. There are people (and organizations) who spend time doing the wrong things very well and even those who occupy themselves doing the wrong things wrong, which can be very confusing!

Managing quality

Every day two men who work in a certain factory scrutinize the results of the examination of the previous day's production and begin the ritual battle over whether the material is suitable for despatch to the customer. One is called Production Manager, the other Quality Control Manager. They argue and debate the evidence before them, the rights and wrongs of the specification, and each tries to convince the other of the validity of his argument. Sometimes they nearly start fighting.

This ritual is associated with trying to answer the question, '*Have we done the job correctly?*', correctly being a flexible word, depending on the interpretation given to the specification on that particular day. This is not quality *control*; it is *detection* – wasteful detection of bad product before it hits the customer. There is still a belief in some quarters that to achieve quality we must check, test, inspect or measure – the ritual pouring on of quality at the end of the process. This is nonsense, but it is still practised. In the office one finds staff checking other people's work because they expect errors, validating computer data, checking invoices, word processing, etc. There is also quite a lot of looking for things, chasing why things are late, apologizing to customers for errors, lateness and so on. Waste, waste, waste!

To get away from the natural tendency to rush into the detection mode, it is necessary to ask different questions in the first place. We should not ask whether the job has been done correctly, we should ask first '*Are we capable of doing the job correctly?*' This question has wide implications, and this book is devoted largely to the various activities necessary to ensure that the answer is yes. However, we should realize straight away that such an answer will only be obtained by means of satisfactory methods, materials, equipment, skills and instruction and a satisfactory 'process.'

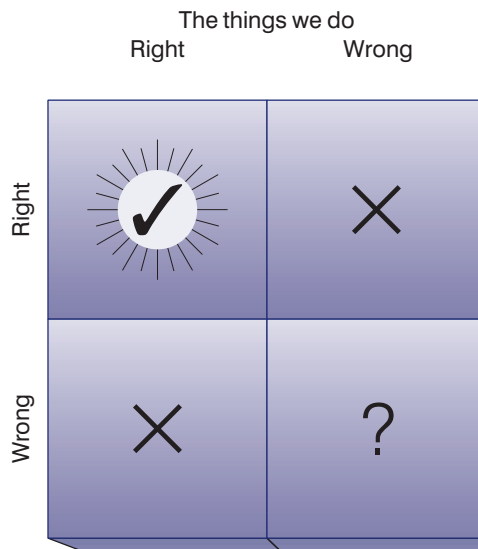


Figure 1.3 How much time is spent doing the right things right?

Quality and processes

As we have seen, quality chains can be traced right through the business or service processes used by any organization. A process is the transformation of a set of inputs into outputs that satisfy customer needs and expectations, in the form of products, information or services. Everything we do is a process, so in each area or function of an organization there will be many processes taking place. For example, a finance department may be engaged in budgeting processes, accounting processes, salary and wage processes, costing processes, etc. Each process in each department or area can be analyzed by an examination of the inputs and outputs. This will determine some of the actions necessary to improve quality. There are also cross-functional processes.

The output from a process is that which is transferred to somewhere or to someone – the *customer*. Clearly to produce an output that meets the requirements of the customer, it is necessary to define, monitor and control the inputs to the process, which in turn may be supplied as output from an earlier process. At every supplier–customer interface then there resides a transformation process (Figure 1.4), and every single task throughout an organization must be viewed as a process in this way. The so-called voice of the customer is a fundamental requirement to good process management, and the ‘voice of the process’ provides key

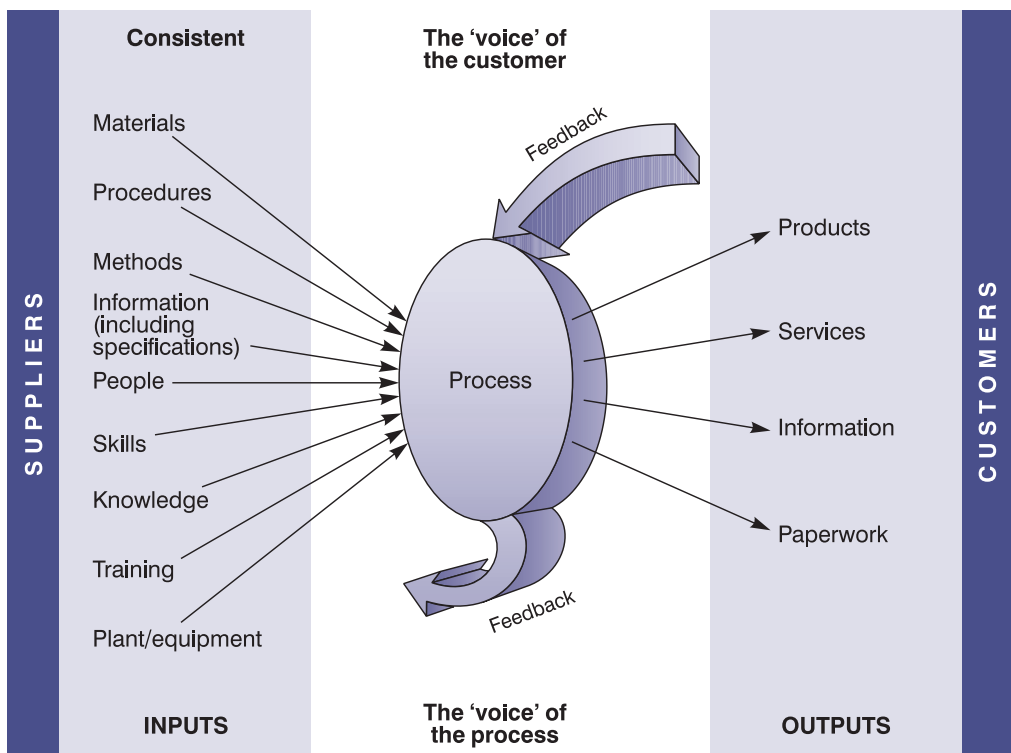


Figure 1.4 A process – SIPOC

feedback to the supply side of the process equation: right Suppliers + correct Inputs = correct Outputs + satisfied Customers (SIPOC).

Once we have established that our process is capable of meeting the requirements, we can address the next question, '*Do we continue to do the job correctly?*' which brings a requirement to monitor the process and the controls on it. If we now re-examine the first question, '*Have we done the job correctly?*' we can see that, if we have been able to answer the other two questions with a yes, we *must* have done the job correctly. Any other outcome would be illogical. By asking the questions in the right order, we have removed the need to ask the 'inspection' question and replaced a strategy of *detection* with one of *prevention*. This concentrates attention on the front end of any process – the inputs – and changes the emphasis to making sure the inputs are capable of meeting the requirements of the process. This is a managerial responsibility and is discharged by efficiently organizing the inputs and its resources and controlling the processes.

These ideas apply to every transformation process; they all must be subject to the same scrutiny of the methods, the people, skills, equipment and so on to make sure they are correct for the job. A person giving a conference presentation whose audio/visual equipment will not focus correctly or whose material is not appropriate, will soon discover how difficult it is to make a presentation that meets the requirements of the audience.

In every organization there are some very large processes – groups of smaller processes often called *core business processes*. These are activities the organization must carry out especially well if its mission and objectives are to be achieved. The area will be dealt with in some detail later on in the book. It is crucial if the management of quality is to be integrated into the strategy for the organization.

The *control* of quality can only take place at the point of operation or production – where the letter is word-processed, the sales call made, the patient admitted or the chemical manufactured. The act of *inspection is not quality control*. When the answer to '*Have we done the job correctly?*' is given indirectly by answering the questions of capability and control, then we have *assured* quality, and the activity of checking becomes one of *quality assurance* – making sure that the product or service represents the output from an effective *system* to ensure capability and control. It is frequently found that organizational barriers between functional or departmental empires have encouraged the development of testing and checking of services or products in a vacuum, without interaction with other departments.

Quality control then is essentially the activities and techniques employed to achieve and maintain the quality of a product, process or service. It includes a monitoring activity but is also concerned with finding and eliminating causes of quality problems so that the requirements of the customer are continually met.

Quality assurance is broadly the prevention of quality problems through planned and systematic activities (including documentation). These will include the establishment of a good quality management system and the assessment of its adequacy, the audit of the operation of the system and the review of the system itself.

Quality starts with understanding the needs

The marketing processes of an organization must take the lead in establishing the true requirements for the product or service. Having determined the need, the organization should define the market sector and demand, to determine such product or service features as grade,

price, quality, timing, etc. For example, a major hotel chain thinking of opening a new hotel or refurbishing an old one will need to consider its location and accessibility before deciding whether it will be predominantly a budget, first-class, business or family hotel.

The organization will also need to establish customer requirements by reviewing the market needs, particularly in terms of unclear or unstated expectations or preconceived ideas held by customers. It is central to identify the key characteristics that determine the suitability of the product or service in the eyes of the customer. This may, of course, call for the use of market research techniques, data-gathering and analysis of customer complaints. If necessary, quasi-quantitative methods may be employed, giving proxy variables that can be used to grade the characteristics in importance and decide in which areas superiority over competitors exists. It is often useful to compare these findings with internal perceptions.

Excellent communication between customers and suppliers is the key to quality performance; it will eradicate the 'demanding nuisance/idiot' view of customers, which even now still pervades some organizations. Poor communications often occur in the supply chains between organizations, when neither party realizes how poor they are. Feedback from both customers and suppliers needs to be improved where dissatisfied customers and suppliers do not communicate their problems. In such cases, 'non-conformance' of purchased products or services is often due to customers' inability to communicate their requirements clearly. If these ideas are also used within an organization, then the internal supplier/customer interfaces will operate much more smoothly.

All the efforts devoted to finding the nature and timing of the demand will be pointless if there are failures in communicating the requirements throughout the organization promptly, clearly and accurately. The marketing processes should be capable of producing a formal statement or outline of the requirements for each product or service. This constitutes a preliminary set of *specifications*, which can be used as the basis for service or product design. The information requirements include:

- 1 Characteristics of performance and reliability – these must make reference to the conditions of use and any environmental factors that may be important;
- 2 Aesthetic characteristics, such as style, colour, smell, task, feel, etc.;
- 3 Any obligatory regulations or standards governing the nature of the product or service.

The organization must also establish systems for feedback of customer information and reaction, and these systems should be designed on a continuous monitoring basis. Any information pertinent to the product or service should be collected and collated, interpreted, analyzed and communicated, to improve the response to customer experience and expectations. These same principles must also be applied inside the organization if continuous improvement at every transformation process interface is to be achieved. If one function or department in a company has problems recruiting the correct sort of staff, for example, and HR has not established mechanisms for gathering, analyzing, and responding to information on new employees, then frustration and conflict will replace communication and co-operation.

One aspect of the analysis of market demand that extends back into the organization is the review of market readiness of a new product or service. Items that require some attention include assessment of:

- 1 The suitability of the distribution and customer-service processes;
- 2 Training of personnel in the 'field';
- 3 Availability of 'spare parts' or support staff;
- 4 Evidence that the organization is capable of meeting customer requirements.

All organizations receive a wide range of information from customers through invoices, payments, requests for information, complaints, responses to advertisements and promotion, etc. An essential component of a 'Customer Relationship Management' system for the analysis of demand is that this data is channelled quickly into the appropriate areas for action and, if necessary, response.

There are various techniques of research, which are outside the scope of this book but have been well-documented elsewhere. It is worth listing some of the most common and useful general methods that should be considered, both externally and internally:

- Surveys – questionnaires, etc.;
- Panel or focus group techniques;
- In-depth interviews;
- Brainstorming and discussions;
- Role rehearsal and reversal;
- Interrogation of trade associations.

The number of methods and techniques for researching the market is limited only by imagination and funds. The important point to stress is that the supplier, whether the internal individual or the external organization, keeps very close to the customer. Good research, coupled with analysis of CRM data, is an essential part of finding out what the requirements are and breaking out from the obsession with inward scrutiny that bedevils quality. The rapid developments in computing capability, artificial intelligence and machine capability have, of course, enabled these processes to function rapidly and 'automatically.' The inherent danger is the absence of human connection with such systems, and we have all seen the nonsensical outputs that can result.

Quality in all functions

For an organization to be truly effective, each component of it must work properly together. Each part, each activity, each person in the organization affects and is in turn affected by others. Errors have a way of multiplying, and failure to meet the requirements in one part or area creates problems elsewhere, leading to yet more errors, yet more problems and so on. The benefits of getting it right the first time everywhere are enormous.

Everyone experiences – almost accepts – problems in working life. This causes people to spend a large part of their time on useless activities – correcting errors, looking for things, finding out why things are late, checking suspect information, rectifying and reworking, apologizing to customers for mistakes, poor quality and lateness. The list is endless, and it is estimated that about one-third of our efforts are still wasted in this way. In the service sector it can be much higher.

Quality, the way we have defined it as meeting the customer requirements, gives people in different functions of an organization a common language for improvement. It enables all the people, with different abilities and priorities, to communicate readily with one another, in pursuit of a common goal. When business and industry were local, the craftsman could manage more or less on his own. Business is now so complex and employs so many different specialist skills that everyone has to rely on the activities of others in doing their jobs.

Some of the most exciting applications of Q&OpEx have materialized from groups of people that could see little relevance when first introduced to its concepts. Following training, many different parts of organizations can show the usefulness of the techniques. Sales staff

can monitor and increase successful sales calls; office staff have used the methods to prevent errors in computing, including improving inputs; customer-service people have monitored and reduced complaints; distribution has controlled lateness and disruption in deliveries.

It is worthy of mention that the first points of contact for some outside customers are the telephone operator, the security people at the gate or the person in reception. Equally the e-business, paperwork and support services associated with the product, such as websites, invoices and sales literature and their handlers, must match the needs of the customer. Clearly Q&OpEx cannot be restricted to the 'production' or 'operations' areas without losing great opportunities to gain maximum benefit.

Managements that rely heavily on exhortation of the workforce to 'do the right job right the first time' or 'accept that quality is your responsibility' will not only fail to achieve quality but may create division and conflict. These calls for improvement infer that faults are caused only by the workforce and that problems are departmental or functional when, in fact, the opposite is true – most problems are inter-departmental. The commitment of all members of an organization is a requirement of 'organization-wide quality improvement.' Everyone must work together at every interface to achieve improved performance, and that can only happen if the top management is really committed and embeds it into the fabric of the business.

Digitalization and transformation – key operational challenges

In today's world, speed and the ability to adapt to changing market conditions are a significant challenge for business. New technologies and innovation acceleration are disrupting all traditional industries and markets. Start-ups no longer have major barriers to entry, computing power is accelerating, and business models are being disrupted in just a few months, causing massive pressures on margins.

The threat of new competition, rising customer expectations, expanding markets and digitalization are the key drivers of change. These are driving forces behind the ever-increasing need for Quality and Operational Excellence, especially for end-to-end business transformation and rapid, agile, flexible solution offerings and execution.

The following are the key Q&OpEx challenges executives face that we have gathered from our research in The Oakland Institute:

- Keeping up with, adapting and embracing new technologies and new business models;
- Rethinking operations end-to-end, incorporating digitalization/new advanced technologies along the whole value chain;
- Driving corporate culture transformation to create a culture of quality and operational excellence with innovation and continuous improvement;
- Implementing effective change management programs;
- Leadership understanding, buy-in, support and sponsorship from *all* leaders is critical – Q&OpEx needs commitment; resources and this cannot be optional.

One key aspect that needs serious attention in the new data driven world, of course, is the quality of data, which has six dimensions (Figure 1.5).

These six dimensions of data quality can all impact both the operation and the ability to analyze data. Data quality impacts more than just analytics – it is essential if the business is to develop strong and robust reporting or relatively 'simple' descriptive or retrospective analytics.

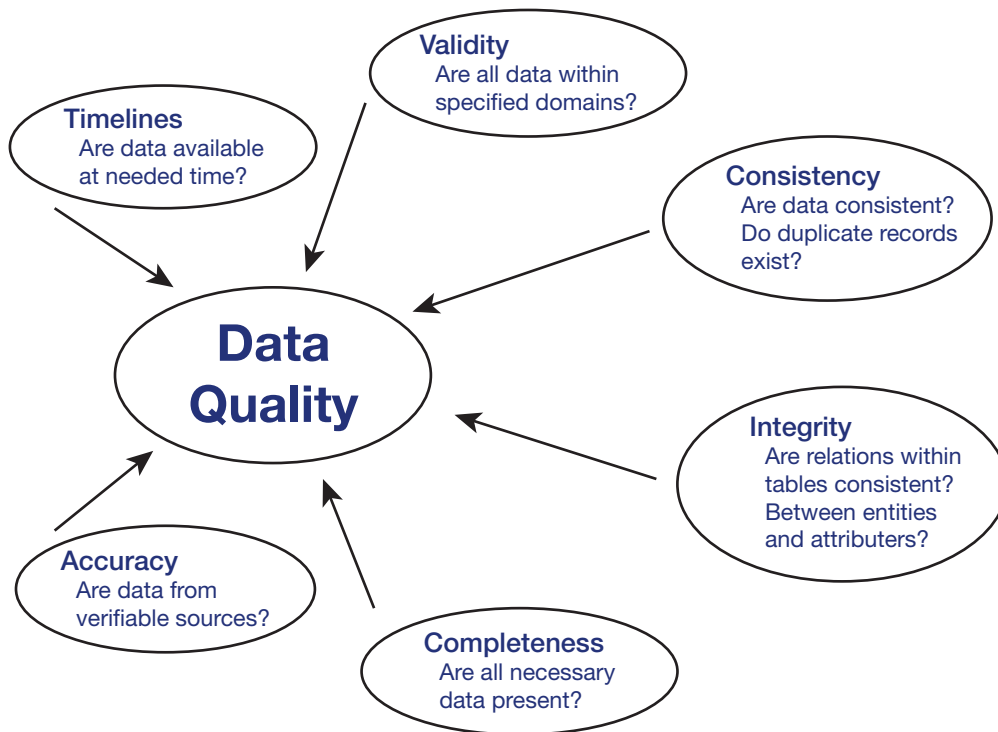


Figure 1.5 Dimensions of data quality

Chapter highlights

Quality, competitiveness and customers

- The reputation enjoyed by an organization is built by quality, reliability, delivery and price. Quality is perhaps the most important of these competitive weapons;
- Reputations for poor quality last for a long time, and good or bad reputations can become national or international. The management of quality can be learned and used to improve reputation;
- Quality is meeting the customer requirements, and this is not restricted to the functional characteristics of the product or service;
- Reliability is the ability of the product or service to continue to meet the customer requirements over time;
- Organizations ‘delight’ the customer by consistently meeting customer requirements and then achieve a reputation of ‘excellence’ and customer loyalty.

Understanding and building the quality chains

- Throughout all organizations there are a series of internal suppliers and customers. These form the so-called quality chains, the core of ‘company-wide quality improvement’;

- The internal customer/supplier relationships must be managed by interrogation, i.e. using a set of questions at every interface. Measurement of capability is vital;
- There are two distinct but interrelated aspects of quality, design and conformance to design. *Quality of design* is a measure of how well the product or service is designed to achieve the agreed requirements. *Quality of conformance to design* is the extent to which the product or service achieves the design. Organizations should assess how much time they spend doing the right things right.

Managing quality

- Asking the question ‘Have we done the job correctly?’ should be replaced by asking ‘Are we capable of doing the job correctly?’ and ‘Do we continue to do the job correctly?’
- Asking the questions in the right order replaces a strategy of *detection* with one of *prevention*;
- Everything we do is a process, which is the transformation of a set of inputs into the desired outputs;
- In every organization there are some core business processes that must be performed especially well if the mission and objectives are to be achieved. They are defined by SIPOC – suppliers-inputs-process-outputs-customers;
- Inspection is not *quality control*. The latter is the employment of activities and techniques to achieve and maintain the quality of a product, process or service;
- *Quality assurance* is the prevention of quality problems through planned and systematic activities.

Quality starts with understanding the needs

- Marketing processes establish the true requirements for the product or service. These must be communicated properly throughout the organization in the form of specifications;
- Excellent communications between customers and suppliers is the key to a total quality performance – the organization must establish feedback systems, such as CRM, to gather customer information;
- Appropriate research techniques should be used to understand the ‘market’ and keep close to customers and maintain the external perspective.

Quality in all functions

- All members of an organization need to work together on organization-wide quality improvement. The co-operation of everyone at every interface is necessary to achieve improvements in performance, which can only happen if the top management is really committed.

Digitalization and transformation – key operational challenges functions

- New technologies and innovation acceleration are disrupting all traditional industries and markets. This leads to an ever-increasing need for Quality and Operational Excellence, especially for end-to-end business transformation and rapid, agile, flexible solution offerings and execution.

- The following are the key Q&OpEx challenges executives face that the authors have gathered from their research: embracing new technologies and business models; rethinking operations; incorporating digitalization/advanced technologies along the whole value chain; corporate culture transformation; effective change management; leadership and commitment.
- The six dimensions of data quality are: timeliness, validity, consistency, integrity, completeness and accuracy.

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Chapter 2

Models and frameworks for Total Quality Management

Early TQM frameworks

In the early 1980s when organizations in the West seriously became interested in quality and its management there were many attempts to construct lists and frameworks to help this process.

In the West the famous American ‘gurus’ of quality management, such as W Edwards Deming, Joseph M Juran and Philip B Crosby, started to try to make sense of the labyrinth of issues involved, including the tremendous competitive performance of Japan’s manufacturing industry. Deming and Juran had contributed to building Japan’s success in the 1950s and 1960s, and it was appropriate that they should set down their ideas for how organizations could achieve success.

Deming had 14 points to help management as follows:

- 1 Create constancy of purpose towards improvement of product and service
- 2 Adopt the new philosophy. We can no longer live with commonly accepted levels of delays, mistakes, defective workmanship
- 3 Cease dependence on mass inspection. Require instead statistical evidence that quality is built in
- 4 End the practice of awarding business on the basis of price tag
- 5 Find problems. It is management’s job to work continually on the system
- 6 Institute modern methods of training on the job
- 7 Institute modern methods of supervision of production workers. The responsibility of foremen must be changed from numbers to quality
- 8 Drive out fear so that everyone may work effectively for the company
- 9 Break down barriers between departments
- 10 Eliminate numerical goals, posters and slogans for the workforce asking for new levels of productivity without providing methods
- 11 Eliminate work standards that prescribe numerical quotas

- 12 Remove barriers that stand between the hourly worker and his right to pride of workmanship
- 13 Institute a vigorous programme of education and retraining
- 14 Create a structure in top management that will push every day on the previous 13 points

Juran's ten steps to quality improvement were:

- 1 Build awareness of the need and opportunity for improvement
- 2 Set goals for improvement
- 3 Organize to reach the goals (establish a quality council, identify problems, select projects, appoint teams, designate facilitators)
- 4 Provide training
- 5 Carry out projects to solve problems
- 6 Report progress
- 7 Give recognition
- 8 Keep score
- 9 Maintain momentum by making annual improvement part of the regular systems and processes of the company

Phil Crosby, who spent time as Quality Director of ITT, had 'four absolutes':

- Definition – conformance to requirements
- System – prevention
- Performance standard – zero defects
- Measurement – price of non-conformance

He also offered management 14 steps to improvement:

- 1 Make it clear that management is committed to quality
- 2 Form quality improvement teams with representatives from each department
- 3 Determine where current and potential quality problems lie
- 4 Evaluate the cost of quality and explain its use as a management tool
- 5 Raise the quality awareness and personal concern of all employees
- 6 Take actions to correct problems identified through previous steps
- 7 Establish a committee for the zero defects programme
- 8 Train supervisors to actively carry out their part of the quality improvement programme
- 9 Hold a 'zero defects day' to let all employees realize that there has been a change
- 10 Encourage individuals to establish improvement goals for themselves and their groups
- 11 Encourage employees to communicate to management the obstacles they face in attaining their improvement goals
- 12 Recognize and appreciate those who participate
- 13 Establish quality councils to communicate on a regular basis
- 14 Do it all over again to emphasize that the quality improvement programme never ends

A comparison

One way to compare directly the various approaches of the three American gurus is in Table 2.1, which shows the differences and similarities clarified under 12 different factors.

Table 2.1 The American quality gurus compared

	<i>Crosby</i>	<i>Deming</i>	<i>Juran</i>
Definition of quality	Conformance to requirements	A predictable degree of uniformity and dependability at low cost and suited to the market	Fitness for use
Degree of senior-management responsibility	Responsible for quality	Responsible for 94 per cent of quality problems	Less than 20 per cent of quality problems are due to workers
Performance standard/motivation	Zero defects	Quality has many scales. Use statistics to measure performance in all areas. Critical of zero defects.	Avoid campaigns to do perfect work
General approach	Prevention, not inspection	Reduce variability by continuous improvement. Cease mass inspection.	General management approach to quality – especially ‘human’ elements
Structure	14 steps to quality improvement	14 points for management	Ten steps to quality improvement
Statistical process control (SPC)	Rejects statistically acceptable levels of quality	Statistical methods of quality control must be used.	Recommends SPLC but warns that it can lead to too-driven approach
Improvement basis	A ‘Process,’ not a programme. Improvement goals,	Continuous to reduce variation. Eliminate goals without methods	Project-by-project team approach. Set goals.
Teamwork	Quality improvement teams, quality councils.	Employee participation in decision-making. Break down barriers between departments.	Team and quality circle approach
Costs of quality	Cost of non-conformance. Quality is free	No optimum – continuous improvement	Quality is not free – there is an optimum
Purchasing and goods received	State requirements. Supplier is extension of business. Most faults due to purchasers themselves	Inspection too late – allows defects to enter system through AQLs. Statistical evidence and control charts required.	Problems are complex. Carry out formal surveys.
Vendor rating	Yes <i>and</i> buyers. Quality audits useless.	No – critical of most systems	Yes, but help supplier improve.
Single sources of supply		Yes.	No – can neglect to sharpen competitive edge.

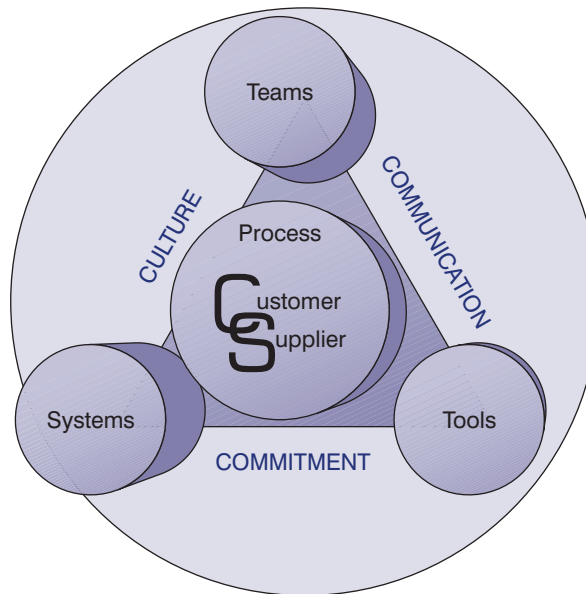


Figure 2.1 TQM model

Our understanding of ‘total quality management’ developed through the 1980s, and in earlier editions of John Oakland’s books on TQM, a broad perspective was given, linking the TQM approaches to the direction, policies and strategies of the business or organization. These ideas were captured in a basic framework – the TQM Model (Figure 2.1) – which was widely promoted in the UK through the activities of the UK Department of Trade and Industry (DTI) ‘Quality Campaign’ and ‘Managing into the 90s’ programmes. These approaches brought together a number of components of the quality approach, including quality circles (teams), problem-solving and statistical process control (*tools*) and quality systems, such as BS5750 and later ISO 9000 (systems). It was recognized that *culture* played an enormous role in whether organizations were successful or not with their TQM approaches. Good *communications*, of course, were seen to be vital to success, but the most important of all was *commitment*, not only from the senior management but from everyone in the organization, particularly those operating directly at the customer interface. The customer/supplier or ‘quality chains’ were the core of this TQM model.

Many companies and organizations in the public sector found this simple framework useful, and it helped groups of senior managers throughout the world get started with TQM. The key was to integrate the TQM activities, based on the framework, into the business or organization strategy, and this has always been a key component of the authors’ approach.

Quality award models

Starting in Japan with the Deming Prize, companies started to get interested in quality frameworks that could be used essentially in three ways:

- i) as the basis for awards
- ii) as the basis for a form of 'self-assessment'
- iii) as a descriptive 'what-needs-to-be-in-place' model

The earliest approach to a *total* quality audit process is that established in the Japanese-based 'Deming Prize,' which is based on a highly demanding and intrusive process. The categories of this award were established in 1950 when the Union of Japanese Scientists and Engineers (JUSE) instituted the prize(s) for 'contributions to quality and dependability of product' (www.juse.or.jp/deming).

This now defines TQM as 'a set of systematic activities carried out by the entire organization to effectively and efficiently achieve the organization's objectives so as to provide products and services with a level of quality that satisfies customers, at the appropriate time and price.'

As the Deming Award guidelines say, there is no easy success at this time of constant change, and no organization can expect to build excellent quality management systems just by solving problems given by others:

They need to think on their own, set lofty goals and drive themselves to challenge for achieving those goals. For these organizations that introduce and implement TQM in this manner, the Deming Prize aims to be used as a tool for improving and transforming their business management.

The recognition that total quality management is a broad culture change vehicle with internal and external focus embracing behavioural and service issues, as well as quality assurance and process control, prompted the United States to develop in the late 1980s one of the most famous and widely used frameworks, the Malcolm Baldrige National Quality Award (MBNQA). The award itself, which is composed of two solid crystal prisms 14 inches high, is presented annually to recognize companies in the USA that have excelled in quality management and quality achievement. But it is not the award itself or even the fact that it is presented each year by the President of the USA that has attracted the attention of most organizations, it is the excellent framework for TQM and organizational self-assessments.

The Baldrige Performance Excellence Program, as it is now known, aims to:

- Help improve organizational performance practices, capabilities and results;
- Facilitate communication and sharing of best practices information;
- Serve as a working tool for understanding and managing performance and for guiding, planning and opportunities for learning.

The award criteria are built upon a set of inter-related core values and concepts:

- Visionary leadership
- Customer-driven excellence
- Organizational and personal learning
- Valuing employees and partners
- Agility
- Focus on the future
- Managing for innovation
- Management by fact
- Public responsibility and citizenship

- Focus on results and creating value
- Systems developments

Organizations that apply for the Malcolm Baldrige National Quality Award are judged by an independent board of examiners. Recipients are selected based on achievement and improvement in seven areas, known as the Baldrige Criteria for Performance Excellence:

- 1 Leadership: How upper management leads the organization and how the organization leads within the community
- 2 Strategy: How the organization establishes and plans to implement strategic directions
- 3 Customers: How the organization builds and maintains strong, lasting relationships with customers
- 4 Measurement, analysis, and knowledge management: How the organization uses data to support key processes and manage performance
- 5 Workforce: How the organization empowers and involves its workforce
- 6 Operations: How the organization designs, manages and improves key processes
- 7 Results: How the organization performs in terms of customer satisfaction, finances, human resources, supplier and partner performance, operations, governance and social responsibility, and how the organization compares to its competitors

This 'Organizational Profile' is supported by the Core Values and Concept for the business/organization.

Each year the Baldrige Excellence Framework is available for the business/non-profit, healthcare and education industries. The criteria focus on managing all components of an organization as a whole, cybersecurity risks and understanding the role of risk management within a systems perspective of organizational performance management.

Figure 2.2 shows how the framework's system connects and integrates the categories. The main driver is the senior executive leadership, which creates the values, goals and systems and guides the sustained pursuit of quality and performance objectives. The system includes a set of well-defined and designed processes for meeting the organization's direction and performance requirements. Measures of progress provide a results-oriented basis for channelling actions to deliver ever-improving customer values and organization performance. The overall goal is the delivery of customer satisfaction and market success leading, in turn, to excellent business results. The seven criteria categories are further divided into items and areas to address. These are described in some detail in the 'Criteria for Performance Excellence' available from the US National Institute of Standards and Technology (NIST), in Gaithersburg USA (<https://asq.org/quality-resources/malcolm-baldrige-national-quality-award>).

The Baldrige Award led to a huge interest around the world in quality award frameworks that could be used to carry out self-assessment and to build an organization-wide approach to quality, which was truly integrated into the business strategy. It was followed in Europe in the early 1990s by the launch of the European Quality Award by the European Foundation for Quality Management (EFQM). This framework was the first one to include 'Business Results' and to really represent the whole business model.

Like the Baldrige, the 'EFQM Excellence Model,' as it is now known, recognizes that processes are the means by which an organization harnesses and releases the talents of its people to produce results/performance. Moreover, improvement in performance can be achieved only by improving the processes by involving the people. This simple model is shown in Figure 2.3.

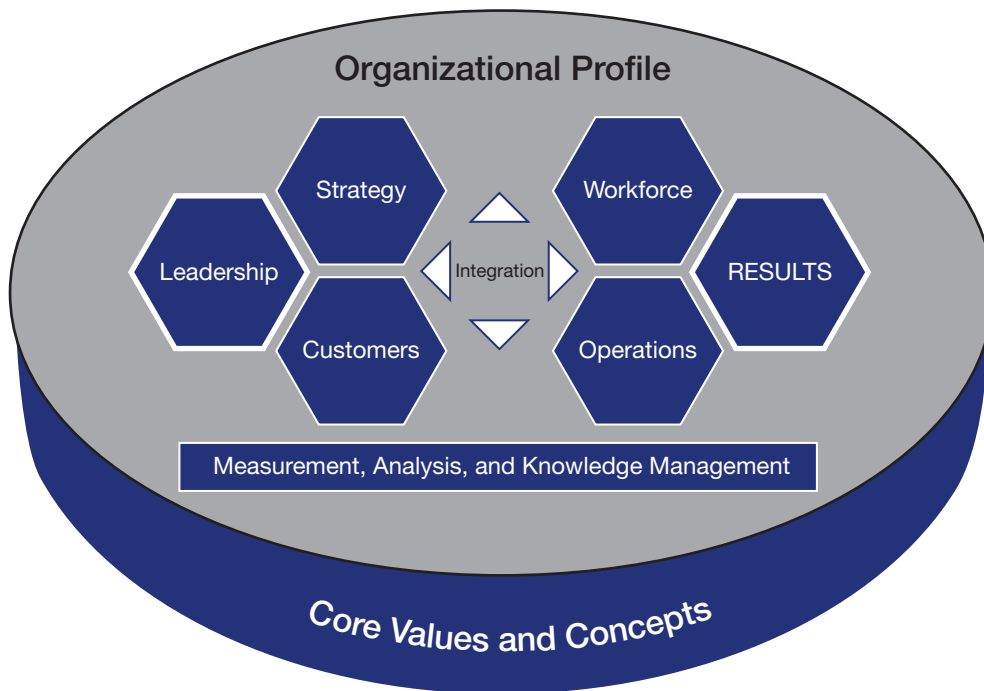
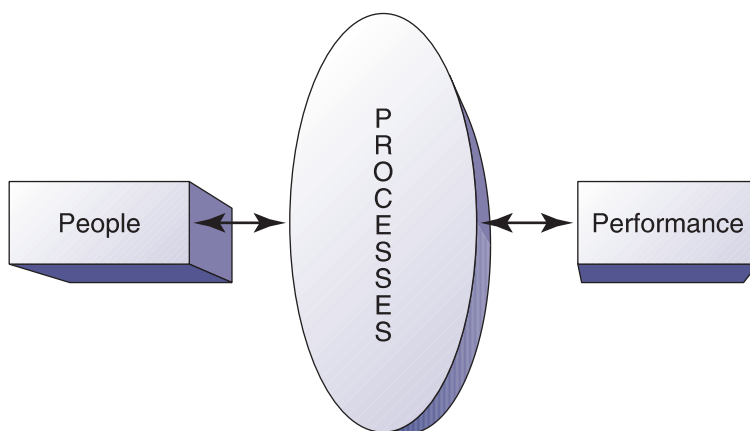


Figure 2.2 Baldrige criteria for performance excellence framework



Achieve better performance through involvement of all employees (people) in continuous improvement of their processes

Figure 2.3 The simple model for improved performance

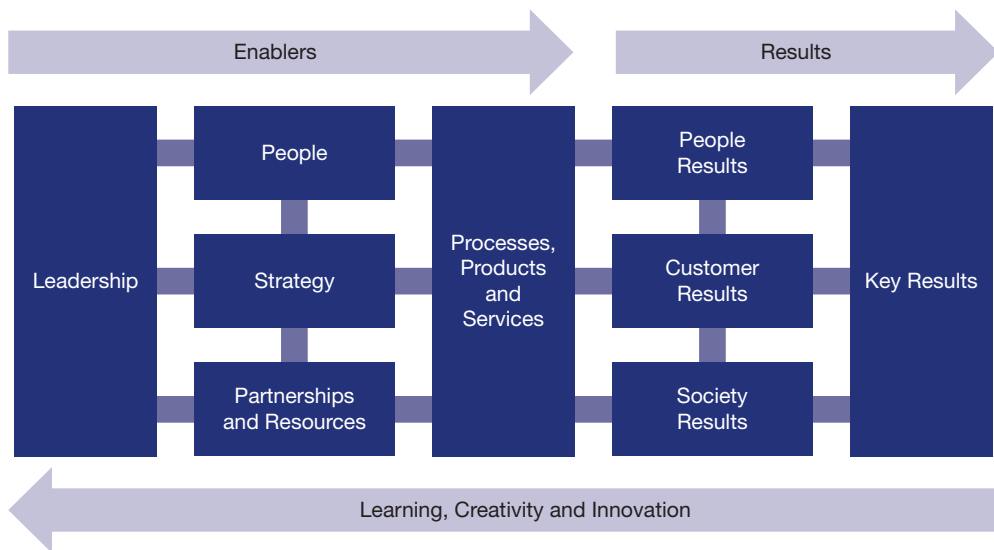


Figure 2.4 The EFQM Excellence Model

Figure 2.4 displays graphically the ‘non-prescriptive’ principles of the full Excellence Model. Essentially customer results, people (employee) results and favourable society results are achieved through leadership driving strategy; people; partnerships and resources and processes, products and systems, which lead ultimately to excellence in key results – the enablers deliver the results, which in turn drive learning, creativity and innovation. The EFQM have provided a weighting for each of the criteria, which may be used in scoring self-assessments and making awards (see Chapter 8).

It is noted that in late 2019 the EFQM presented a significantly revised model, Figure 2.5. However, as the authors of this book prefer the model described in Figure 2.4 for use as a platform for self-assessment (see Chapter 8), we will continue using this framework.

Through usage and research, the Baldrige and EFQM Excellence models have continued to grow in stature since their inception. They were recognized as descriptive holistic business models, rather than just quality models and mutated into frameworks for (Business) Excellence.

The NIST and EFQM have worked together well over recent years to learn from each other’s experience in administering awards and supporting programmes and from organizations that have used their frameworks ‘in anger.’

The EFQM publications on the Excellence Model capture much of this learning and provide a framework that organizations can use to follow ten steps:

- 1 Set direction through leadership
- 2 Establish the results they want to achieve
- 3 Establish and drive the strategy
- 4 Set up and manage appropriately their approach to processes, people, partnerships and resources
- 5 Deploy the approaches to ensure achievement of the strategies and thereby the results

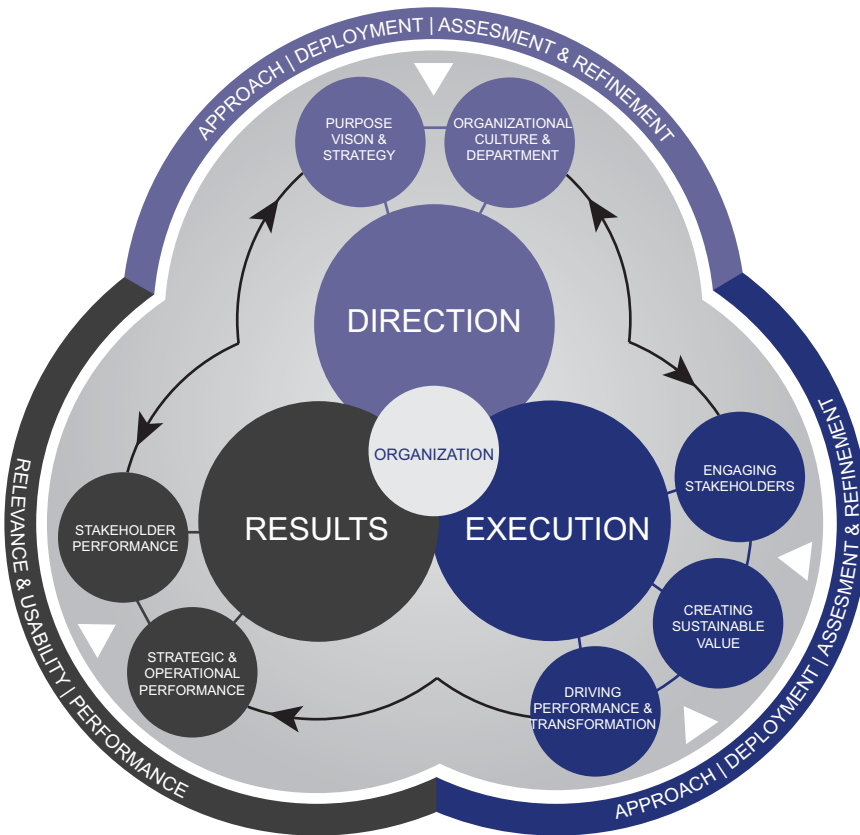


Figure 2.5 The EFQM Excellence Model 2019

- 6 Assess the ‘business’ performance, in terms of customers, their own people and society results
- 7 Assess the achievements of key performance results
- 8 Review performance for strengths and areas for improvement
- 9 Innovate to deliver performance improvements
- 10 Learn more about the effects of the enablers on the results

The four Ps and three Cs of TQM – a model for TQM

We have seen in Chapter 1 how *processes* are the key to delivering quality of products and services to customers. It is clear from Figure 2.4 that processes are a key linkage between the enablers of *planning* (leadership driving policy and strategy, partnerships and resources), through *people* into the *performance* of people society customers and key outcomes.

These ‘four Ps’ form the basis of a simple model for TQM and provide the ‘hard management necessities’ to take organizations successfully into the 21st century. These form the structure of the remainder of this book.

From the early TQM frameworks, however, we must not underestimate the importance of the three Cs – *Culture*, *Communication* and *Commitment*. The TQM model is complete when these ‘soft outcomes’ are integrated into the four P’s framework to move organizations successfully forward (Figure 2.6).

This TQM model, based on the extensive work done in and on organizations, provides a simple framework for excellent performance, covering all angles and aspects of an organization and its operation.

Performance is achieved using a business excellence approach and by planning the involvement of people in the improvement of processes. This has to include:

Planning – the development and deployment of policies and strategies, setting up appropriate partnerships and resources and designing in quality;

Performance – establishing a performance measure framework – a ‘balanced scorecard’ for the organization; carrying out self-assessment, audits, reviews and benchmarking;

Processes – understanding, management, design and re-design, quality management systems, continuous improvement;

People – managing the human resources, culture change, teamwork, communications, innovation and learning.

Wrapping around all this to ensure successful implementation is, of course, effective leadership and commitment, the subject of the next chapter.

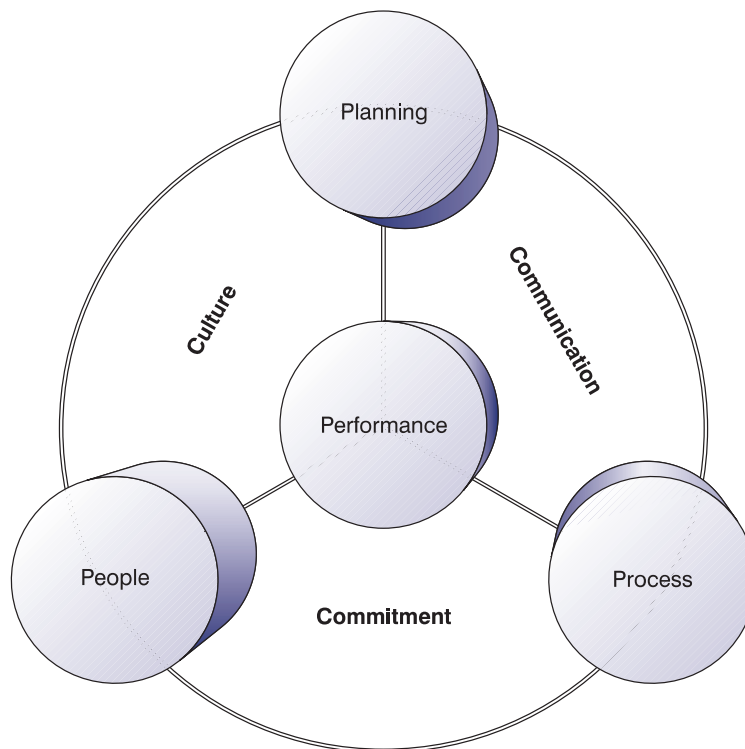


Figure 2.6 The framework for Total Quality Management



Figure 2.7 The CQI quality leadership skills framework

In the UK, the Chartered Quality Institute (CQI) published a document by two of the authors, entitled *The New Quality Professional* (www.quality.org). The purpose of that publication was to present the case for a change in the role and value delivered by the quality profession. It also outlined a vision for the quality profession as a compelling strategic business management function that helps organizations to sustain and thrive.

This vision comprised a statement of professional brand, a description of a unique skill set (Quality Leadership Skills framework – Figure 2.7) and key factors that must be achieved to deliver this vision.

This framework was intended to bring about change in the behaviour of all quality professionals, irrespective of position, the idea being that everyone brings quality behaviours to the work they do, whether that is as the Chief Quality Officer or a newly qualified quality engineer at the foot of their career ladder. This framework was designed for all those intent on bringing about change in their behaviour and in the organizations in which they serve. We will look at it again in some more detail under quality leadership aspects in Chapter 3 and quality appointments in Chapter 16.

Chapter highlights

Early TQM frameworks

- There have been many attempts to construct lists and frameworks to help organizations understand how to implement good quality management;
- The ‘quality gurus’ in America, Deming, Juran and Crosby, offered management 14 points, ten steps and four absolutes (plus 14 steps) respectively. These similar but different approaches may be compared using a number of factors, including definition of quality, degree of senior management responsibility and general approach;

- The understanding of quality developed and, in Europe and other parts of the world, the author's early TQM model, based on a customer/supplier chain core surrounded by systems, tools and teams, linked through culture, communications and commitment, gained wide usage.

Quality award models

- Quality frameworks may be used as the basis for awards for a form of 'self-assessment' or as a description of what should be in place
- The Deming Prize in Japan was the first formal quality award framework established by JUSE in 1950. The examination viewpoints include: top management leadership and strategies; TQM frameworks, concepts and values; QA and management systems; human resources; utilization of information; scientific methods; organizational powers; realization of corporate objectives
- The USA Baldrige Award aims to promote performance excellence and improvement in competitiveness through a framework of seven categories, which are used to assess organizations: leadership; strategic planning; customer and market focus; information and analysis; human resource focus; process management; business results
- The European (EFQM) Excellence Model operates through a simple framework of performance improvement through involvement of people in improving processes
- The full Excellence Model is a non-prescriptive framework for achieving good results – customers, people, society, key performance – through the enablers – leadership, strategy, people, processes, products, systems, partnerships and resources. The framework includes feedback loops of learning, innovation and creativity and proposed weightings for assessment
- It is noted that a revised model was published by EFQM in 2019, but the authors prefer the 'original' Excellence Model in practice

The four Ps and three Cs – model for TQM

- *Planning, People and Processes* are the keys to delivering quality products and services to customers and generally improving overall *Performance*. These four Ps form a structure of 'hard management necessities' for a simple TQM model, which forms the structure of this book
- The three Cs of culture, communication and commitment provide the glue or 'soft outcomes' of the model, which will take organizations successfully into the 21st century
- The Chartered Quality Institute (CQI) have outlined a vision for the quality profession as a compelling strategic business management function that helps organizations to sustain and thrive. This vision comprised a statement of professional brand, a description of a unique skill set (Quality Leadership Skills framework) and key factors that must be achieved to deliver this vision

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Chapter 3

Leadership and commitment

The Total Quality Management approach

‘What is quality management?’ Something that is best left to the experts is often the answer to this question. But this is avoiding the issue, because it allows executives and managers to opt out. Quality is too important to leave to the ‘quality professionals’; it cannot be achieved on a company or organization-wide basis if it is left to the so-called experts. Equally dangerous, however, are the uninformed who try to follow their natural instincts because they ‘know what quality is when they see it.’ Usually this belies a narrow product quality focus and can only yield limited benefits. This type of intuitive approach can lead to serious attitude problems, which do no more than reflect the understanding and knowledge of quality that are present in an organization.

The organization that believes that the traditional ‘quality control’ techniques and the way they have always been used will resolve their quality problems may be misguided. Employing more inspectors, tightening up standards, developing correction, repair and rework teams do not improve quality. Traditionally, quality has been regarded as the responsibility of a Quality (Assurance or Control) Department and still it has not yet been recognized in some organizations that many quality problems originate in the commercial, engineering, service or administrative areas.

Total quality management is far more than shifting the responsibility of *detection* of problems from the customer to the producer. It requires a comprehensive approach that must first be recognized and then implemented if the rewards are to be realized. Today’s highly complex, technological and rapidly changing business environment is such that managers must plan strategically to maintain a hold on market share, let alone increase it. In many companies quality problems have been found to seriously erode margins due to the cost of rectifying defective output. We know that low cost operations have dominated life during the last decade or more, but consumers still place a higher value on quality than on loyalty to