

1997

# Organisational culture and quality improvement : a study

Brown, Robert Paul

<http://hdl.handle.net/10026.1/819>

---

<http://dx.doi.org/10.24382/4155>

University of Plymouth

---

*All content in PEARL is protected by copyright law. Author manuscripts are made available in accordance with publisher policies. Please cite only the published version using the details provided on the item record or document. In the absence of an open licence (e.g. Creative Commons), permissions for further reuse of content should be sought from the publisher or author.*

**ORGANISATIONAL CULTURE AND QUALITY IMPROVEMENT: A STUDY**

by

**ROBERT PAUL BROWN**

A thesis submitted to the University of Plymouth  
in partial fulfilment for the degree of

**DOCTOR OF PHILOSOPHY**

School of Computing  
Faculty of Technology

**March 1997**

# THE ROLE OF ORGANISATIONAL CULTURE IN QUALITY IMPROVEMENT

ROBERT PAUL BROWN

March 1997

## Abstract

The initial direction of this research was in the application of Quality tools and techniques, within the framework of the EFQM Model for Business Excellence. Three quality improvement projects managed by the author (Cost of Quality, BPR and Benchmarking) sought to identify the key elements of a process improvement methodology. However, the completion of the three case studies led the author to review the whole approach of the research. The review led to a the need to develop an understanding of the culture and the environment of an organisation as a precursor to implementing quality improvement.

The ability of an organisation to manage the process of continuous improvement or TQM implementation was fundamentally dependent on the culture of an organisation. Organisational culture is the bedrock upon which organisational change is based and an understanding of the culture could help the practitioner focus on key change issues at the outset. The main work in the research then set about attempting to develop and test a model of organisational culture and climate which would help practitioners develop a fuller understanding of organisational culture and internal environment before interventions were carried out.

A process for developing an understanding of organisational culture and climate was derived, using information obtained from the culture, quality and climate literature and the review of the case studies. This process included the use of various tools and techniques such as multi-item questionnaire and focus groups.

The process used Focus Groups to identify key issues within Lloyds TSB and to help develop a multi-item questionnaire, termed PCOC. The PCOC questionnaire was then tested in four different Areas of Lloyds TSB and the results were analysed and compared to identify similarities and differences across Business Areas. The implications for the implementation of quality improvement were identified and recommendations for managing change were made.

# CONTENTS

## **CHAPTER ONE. Introduction**

1.1 Introduction	1
1.2 TSB Bank and the Financial Services Sector	1
1.3 The Teaching Company Scheme	3
1.4 Quality and Total Quality Management	4
1.5 Organisational Culture	5
1.6 Aims of the Research	6
1.6.1 Development of the Research Problem	7
1.7 Contribution of the Research	9
1.8 Structure of the Thesis	10
1.9 Summary	12

## **CHAPTER TWO. Research Methods**

2.1 Introduction to Research Methods	14
2.2 Philosophy of Management Research	14
2.3 The Research Cycle	17
2.4 Research Methods	18
2.5 Action Research	20
2.6 Conclusions	22

## **CHAPTER THREE. Total Quality Management**

3.1 Introduction	24
3.2 Definitions of Quality	25
3.3 Total Quality Management	26
3.3.1 W Edwards Deming	28
3.3.2 Joseph Juran	29

3.3.3 Philip Crosby	30
3.4 The Present Paradigm	31
3.5 Implementation Problems	34
3.6 Change Management	37
3.7 Conclusions	39
 <b>CHAPTER FOUR. Quality Award Models</b>	
4.1 Introduction	40
4.2 The Malcolm Baldrige National Quality Award	41
4.3 The Deming Application Prize	44
4.4 The European Quality Award Business Excellence Model	46
4.5 Self Assessment Against The Business Excellence Model	49
4.5.1 The Scoring Process	50
4.6 Benefits of The Business Excellence Model	51
4.7 The Business Excellence Model and Financial Services	52
4.8 Conclusions	54
 <b>CHAPTER FIVE. Cost Of Quality</b>	
5.1 Introduction	56
5.2 Definitions of Quality Costs	56
5.3 Quality Cost Models	57
5.3.1 The Prevention-Appraisal-Failure Model	58
5.3.2 The Process Cost Model	59
5.4 Quality Costs In The Payroll Process Of TSB Bank Plc	61
5.4.1 Introduction To The Payroll Process	61
5.4.2 Total Quality Costs	63
5.5 Conclusions	64

## **CHAPTER SIX. Business Process Reengineering**

6.1 Introduction	66
6.2 Business Process Reengineering	67
6.2.1 BPR Constructs	68
6.3 Business Processes	70
6.4 A Proposed BPR Methodology	72
6.5 Process Redesign in Compensation and Benefits	74
6.5.1 Develop Strategy	75
6.5.2 Identify Key Processes	75
6.5.3 Analyse Processes	76
6.5.4 Develop Redesign	77
6.5.5 Implement Redesign	78
6.6 Conclusions	78

## **CHAPTER SEVEN. Benchmarking**

7.1 Introduction	80
7.2 Definitions	81
7.3 Types of Benchmarking	82
7.4 The Benefits of Benchmarking	84
7.4.1 Benchmarking and Financial Services	85
7.5 Where does Benchmarking Fit?	86
7.5.1 Benchmarking and Total Quality Management	86
7.5.2 Benchmarking and Business Process Reengineering	87
7.6 The TSB Group Strategic Development Process	87
7.6.1 Benchmarking Survey Results	88
7.7 Conclusions	90

## **CHAPTER EIGHT. Case Study Review and the PCOC Culture and Climate Model**

8.1 Introduction	92
8.2 Cost Of Quality Research	92
8.3 Business Process Reengineering	95
8.4 Benchmarking	96
8.5 Outcome From The Three Case Studies	98
8.6 Organisational Culture And Quality Improvement	102
8.6.1 Purpose Of The Research	103
8.7 PCOC	104
8.7.1 The PCOC Model	105
8.8 Conclusions	108

## **CHAPTER NINE. Organisational Culture**

9.1 Introduction	110
9.2 Theoretical Perspectives of Organisational Culture	111
9.2.1 Culture as an Independent Variable	112
9.2.2 Culture as a Dependent Variable	113
9.2.3 Research Issues	114
9.3 Organisational Culture	116
9.3.1 Culture as Learning	117
9.3.2 Culture as Belief System	118
9.3.3 Culture as Strategy	119
9.3.4 Culture as Mental Programming	120
9.4 Measuring Organisational Culture	123
9.4.1 Observation	123
9.4.2 Structured Interviews	124
9.4.3 Focus Groups	125

9.4.4 Organisational Culture Questionnaire	126
9.5 Managing Culture and Change	127
9.6 Conclusions	128
<b>CHAPTER TEN. PCOC - The Organisational Diagnosis Model</b>	
10.1 Introduction	130
10.2 Organisational Culture Questionnaires	130
10.2.1 London Business School Survey Research Unit and PCOC	131
10.2.2 UMIST Quality Improvement Framework and PCOC	132
10.2.3 Diagnosing Organisational Culture for Competitive Advantage and PCOC	133
10.2.4 TMI Quality Culture Audit	134
10.2.5 Discussion	135
10.3 THE PCOC Questionnaire	136
10.3.1 Focus Groups	137
10.4 Questionnaire Design	140
10.4.1 Likert Scales	141
10.5 Validity	142
10.5.1 Content Validity	143
10.5.2 Criterion Related Validity	143
10.5.3 Construct Validity	144
10.6 Reliability	144
10.6.1 Cronbach's Alpha	146
10.7 Using The PCOC Questionnaire	147
10.8 Conclusions	149
<b>CHAPTER ELEVEN. Results of the PCOC Analysis</b>	
11.1 Introduction	151

11.2 Scale Reliability	152
11.3 Demographic Breakdown	154
11.4 TSB Branch Network	155
11.4.1 Breakdown by Function	155
11.4.2 TSB Branch Network	155
11.5 Lloyds Branch Network	157
11.6 Mortgage Express	158
11.7 TSB Homeloans	160
11.8 Review of Business Unit Results	161
11.9 Overall Analysis	162
11.10 Review of Findings	164
11.10.1 What is the Current Culture?	165
11.10.2 Does the Culture Fit The Strategy?	166
11.10.3 What are The Implications For Organisational Change?	167
11.10.4 How Does The Organisation Manage Conflict?	169
11.11 Significance Testing	170
11.12 Conclusions	172
<b>CHAPTER Twelve. Conclusions</b>	
12.1 Introduction	174
12.2 Research Methods	175
12.3 The Research Problem	177
12.4 Literature Survey	179
12.5 Gaps in the Literature	181
12.5.1 TQM and Organisational Culture	181
12.5.2 Organisational Culture and Culture Audit Tools	183
12.5.3 Quality, Culture and the Internal Environment	184

12.6 New Knowledge	185
12.6.1 Cost of Quality Case Study	186
12.6.2 Business Process Reengineering	187
12.6.3 Benchmarking	188
12.6.4 Results of Focus Groups	189
12.6.5 Developing and Testing PCOC	190
12.7 Contribution of Research	191
12.8 Future Research	194
<b>References</b>	<b>196</b>

**Appendix 1 - Deming's 14 Points**

**Appendix 2 - Malcolm Baldrige National Quality Award Criteria**

**Appendix 3 - Criteria And Sub-Criteria Of The EQA Business Excellence Model**

**Appendix 4 - Quality Costs At Each TSB Payroll Site**

**Appendix 5 - CIM-OSA Generic Process Structure For a Typical HR Function**

**Appendix 6 - Sample PCOC Questionnaire**

**Appendix 7 - Breakdown Of PCOC Scores By Grade**

**Appendix 8 - Alpha Scores For All Sub-Elements Of The PCOC Model**

**Appendix 9 - Qualitative Question Analysis**

**Publications**

## **List of Tables and Illustrations**

Figure 1.1 Structure and Flow of the PhD research	7
Figure 2.1 Assumptions about the nature of social research	16
Figure 2.2 A Framework for Research Methods	20
Table 3.1. Quality Definitions	25
Figure 4.1. The Malcolm Baldrige National Quality Award Model	42
Table 4.1. List of Criteria for the Deming Application Prize	45
Figure 4.2. The EQA Business Excellence Model	48
Figure 5.1. ICOM Node	60
Table 8.1. Company Changes in Attitude to Their Planning Process	97
Table 8.2. The Elements of the PCOC Model	107
Figure 8.1. The PCOC Model	108
Fig 9.1 The Levels of Culture and Their Interaction	118
Figure 9.2. The Hofstede Levels of Organisational Culture	121
Table 10.1. Common Outputs From Focus Groups	138
Figure 10.1 The Basic Structure of a Covariance Matrix	146
Table 11.1 Alpha scores for PCOC elements	153
Table 11.2 Returns by Grade	154
Table 11.3 Returns by Function	154
Figure 11.1 Comparison of PCOC Elements for TSB Branch Network with Overall Mean	156
Figure 11.2 Lloyds Bank Branch Network Score Compared to Overall Mean	158
Figure 11.3 Comparison of PCOC Elements for Mortgage Express with Overall Mean Scores	159
Figure 11.4 Comparison of PCOC Elements for Homeloans with Overall Mean	160

## ACKNOWLEDGEMENTS

It has always been my dream to walk on stage to receive my prize, bask in the plaudits and then thank no-one but myself - I did it, no one else, just me. The vast majority of the pain involved in this research has been my own but there are others who have shared some of it. The product of this research has been a combined effort with the aid, help and support of many more people than the author, all not quite as insane as the author. All who are not mentioned never deserved it (a joke).

I would like primarily to thank my wife, Jane, who has never known what marriage is like without the shadow of a PhD hanging over it. Throughout the time of this research she has never complained at the amount of time that has been devoted to it. We both know what will be occupying my time shortly for the next few years.

A debt of gratitude is also owed to my two main supervisors, "The Two Rogers," without whose help, advice and motivating, this work could never have been started or completed. Dr. Roger Maull, my academic supervisor, has proved to be an inspiration throughout this work, understanding the pain yet still forcing me to finish. This PhD owes much to his time, effort and man management skills and little to his project management skills (thankfully). Luckily, his sense of humour was on the same wavelength as my own, otherwise who knows what the product might have been. Dr. Roger Cliffe, Quality Management Director at Lloyds TSB, provided much support, both financial and moral, as well as much insightful advice, guidance and help from someone who completed his doctorate in the same way. For this I am extremely grateful.

I owe much to the two groups of people who made my life over the last three years so schizophrenic. The Quality Management Team at Lloyds TSB provided financial assistance and other help. I would especially like to thank Adrian and Ian (for the graphics) for their help, expertise, and twisted view on life. Similarly, the MABS Group at the University of Plymouth deserve a lot for their help and assistance - Drs. Weaver and Smart and Bennett (the trailblazers with a headstart), Tammi, Jim and Debbi. A special thanks goes to Dr Steve Childe, my second supervisor for his advice and comment (always well received, not!). There are others, like me, on the periphery that I want to thank, including Ayda and Zoe.

I would also like to thank both the Teaching Company Centre and the School of Computing, University of Plymouth (especially Professor Patricia Pearce) for their support throughout this research.

Art Kleiner sums up the product of this research:

*Perhaps a corporation exists, in the end, precisely for its heretics. Perhaps its purpose, in the long run, is to help people expand their souls and capabilities - by providing venues within which people can try things on a grand scale, to succeed and fail and thereby change the world.*

My motto still remains the same - *I'd (still) rather be a one-eyed, three-legged, mangy cur, than a spoonfed lapdog.*

## AUTHORS DECLARATION

At no time during the registration for the degree of Doctor of Philosophy has the author been registered for any other University award.

This research has been undertaken whilst the author was employed in two different positions at the University of Plymouth and Lloyds TSB Bank plc, the first of which was externally funded. The external funding was contributed by the Teaching Company Directorate and TSB Bank plc during the author's employment as a Teaching Company Associate. The author contributed to his own funding after this two years.

Some of the publications that have been produced as a result of this research form an appendix to this thesis.

The author attended a 3-day "Research Methods" workshop held at the Moller Centre, University of Cambridge in March 1995 funded by EPSRC.

Relevant management seminars and conferences were regularly attended at which work was presented, and other external institutions were visited for consultation purposes. The author also attended conferences where he gave formal presentations of research undertaken,

- First European Operations Management Association Conference, Churchill College, University of Cambridge. June, 1994
- Technology Transfer and Innovation Conference, July, 1994

The author is also due to attend the IV European Operations Management Association Conference in June 1997 to present the findings of this research.

The author gave other presentations of the research undertaken for:

- Institute for Personnel and Development (Cheltenham Branch) in March 1995
- Presentation to IBM Customer Service Management Seminar in August 1995
- Plymouth University MBA Class, Quality Elective, March 1995
- Plymouth University MBA Class, Quality Elective, May 1996
- Plymouth University MBA Class, Quality Elective (Due in May 1997)

Throughout the time of employment as a Teaching Company Associate and an employee of Lloyds TSB Bank the author has made external contacts through:

- visiting a number of companies involved in BPR, TQM and other Change Management activities
- involvement in a number of BPR, and process workshops held for manufacturing and service organisations
- discussion of research findings with senior academics in this field of research

- consulting with other researchers working in the same field.

Signed ..... *Paul Zorner* .....  
Dated ..... *19/12/1997* .....

# **CHAPTER 1**

## **INTRODUCTION**

*“The biggest obstacle is the culture.”*

*“Redesign/restructuring is not the solution: it is the people, it is the culture. If banks concentrate on the mechanistic side they will have problems”*

**Responses given in in-depth interviews by members of eight top Financial Services organisations. (Wilson, 1994).**

## **1.1 INTRODUCTION**

The research presented in this thesis was undertaken while the author was working in the Central Quality Team of what was the TSB Retail Banking and Insurance Division (RBID) Head Office in Birmingham, now part of Lloyds TSB Retail Financial Services. Part of the time the author was employed on a Teaching Company Scheme with the University of Plymouth and the author was subsequently employed by the Bank for one further year, leading to the completion of the research.

This introduction to the research will focus on three main areas. Firstly, an introduction to the Financial Services Sector and TSB and a brief description of the role of the Teaching Company Scheme in the research. Secondly there will be an introduction of the concepts of quality and organisational culture, and the key philosophical issues relating to research will be mentioned. Thirdly, the aims of the research will be presented along with a description of the thesis structure.

## **1.2 TSB BANK AND THE FINANCIAL SERVICES SECTOR**

The TSB was founded on the promotion of the moral virtue of thrift and saving for hard times, as well as temperance. It has a long history of providing financial services for customers in all walks of life. Small, independent local banks, Trustee Savings Banks, were first recognised by Acts of parliament in 1817, when their security was virtually

guaranteed by the requirement that they invest their funds with the government. Essentially, the savings were to offset Government Borrowing and in return savers were guaranteed a return of 4.5%. Customers were mainly from the 'industrious classes' who sought a safe home for their small savings, especially servants, artisans, tradesmen and women. Domestic servants were the largest group comprising of up to half of the depositors in some banks during the first half of the 19th Century.

The 1970's saw the vision of a future for the TSB's as the 'Third Force in British banking', alongside the commercial banks and the National Savings Bank. After a series of amalgamations, the regional banks merged in 1983 and a holding company, TSB Group plc, was floated on the stock market in September 1986. In December 1995, during the period of this research, TSB merged with Lloyds Bank Group to create the single largest Financial Services organisation in the UK, with Lloyds, TSB, Cheltenham and Gloucester and Lloyds Abbey Life among some of the main brands in the combined Group.

The Financial Services Sector has undergone major change in the last ten years, not least the loss of thousands of jobs. This has been driven by three main challenges:

- Intense competition - from traditional and non traditional sources (Sainsbury's, Virgin, Marks and Spencer)
- More demanding customers - created by poor returns on endowment linked policies and branch closures
- Rapid technological progress - convergence of telecommunications, PC and internet as viable delivery channels for financial services products. (Watkins, Drury and Bolton, 1996)

Financial service organisations have come later to Total Quality than the manufacturing sector. A KPMG report (KPMG, 1992) into financial services reported that “*there is little evidence in most organisations of a systematic approach to quality improvement.*” Significant improvements have been made in the area of systematic approaches to quality since that report, not least with the widespread adoption of the EFQM Model for Business Excellence.

### **1.3 THE TEACHING COMPANY SCHEME**

The Teaching Company Scheme was established in 1975 and had four basic aims:

- To raise the level of industrial performance by effective use of academic resources
- To improve industrial methods by the effective implementation of advanced technology and ideas
- To help able graduates with careers for industry
- To give academic staff broad and direct involvement with industry in order to benefit research and enhance the relevance of teaching.

The scheme is a process of technology and knowledge transfer, closing the knowledge gaps between industry and academia. The scheme is run by an academic institution who provide part of the supervision for the associate. The subjects covered by the Teaching Company Scheme are numerous; the most popular are engineering, marketing, information technology and, more recently, quality management.

There were approximately 471 Teaching Company Programmes, employing some 970 associates in the year up to March 1993. More than £25 million was committed to new programmes in the same time period.

Associates have a number of advantages in the change process, since they are “*not as pressured as internal change agents to conform to organisational imperatives.*” (Peattie, 1994) The situation which combines the abilities of the Associate working in the Company with the external view provided by the Academic Supervisor, provides an element of objectivity and detachment to the interventions.

#### **1.4 QUALITY AND TQM**

The Quality story is dominated by the idea that Western organisations are battling to compete with higher quality products from Japan and the East. The tools and the techniques of Quality Management have been implemented and used but few organisations appear capable of learning to “*compete on Quality.*” (Garvin, 1987)

The dominant problem is the seemingly endless number of organisations that have not benefited from the implementation of Quality principles and techniques. The poor returns on quality (see Howe, Gaeddert and Howe, 1993) have been blamed on poor implementation and other factors. The fundamental belief of this research is that the underlying cause of such poor results from the implementation of quality is based on organisations lack of understanding of their current culture, *before attempting to implement TQM.*

When TQM programmes are implemented, they often fail to address the underlying issues, focusing instead on the tangible rather than the intangible, giving credence to Peters and Waterman's (1982) "soft is hard" argument. This research will suggest that it is the intangible "taken for granted" that are potentially the problem areas for quality improvement programmes.

## **1.5 ORGANISATIONAL CULTURE**

In a recent survey of Financial Services organisations, (Watkins *et al*, 1996) some of the respondents' answers to the question "*What difficulties have been experienced in the process of implementing quality initiatives?*" were:

- 65% of respondents rated "Organisational Culture Resistant to Change" (the Number 1 Issue)
- 44% rated "Middle Management Resistant to Change"
- 12% rated "Employee Resistance to Change."

Of the respondents 46% had adopted a culture change programme along with other initiatives.

In general, definitions of culture deal primarily with the way people act, not as individuals, but as part of social groups. The culture is perpetuated by the teaching of the way we do things to new members and in continued reinforcement of the culture as the correct way to operate. Schein (1984) defined culture in terms of artefacts, values and basic assumptions.

Deal and Kennedy (1982) have determined that there are a number of conceptual elements within the concept of corporate culture. They are: corporate climate, values, heroes, rites and ceremonies, the cultural network. Davis (1984) defines culture as shared beliefs and values and an examination of organisational culture begins by distinguishing between fundamental guiding beliefs and daily beliefs.

One of Total Quality Management's key elements is culture change. The problem with many Total Quality programmes is that they fail to tackle adequately the organisational culture, tackling the artefact level rather than the 'taken for granted' assumptions.

## **1.6 AIMS OF THE RESEARCH**

The initial focus of this research was in the application of Quality tools and techniques, within the framework of the EFQM Model for Business Excellence. This was applied through the use of three case studies (Cost of Quality, Process Management and Benchmarking). On reflection the changes that were made did not achieve the benefits expected. This led the author to review the whole approach of the research which used the culture framework proposed by Schein (1984). The review led to the research, development and testing of a diagnosis tool to help practitioners to understand the current culture and internal environment of their organisation.

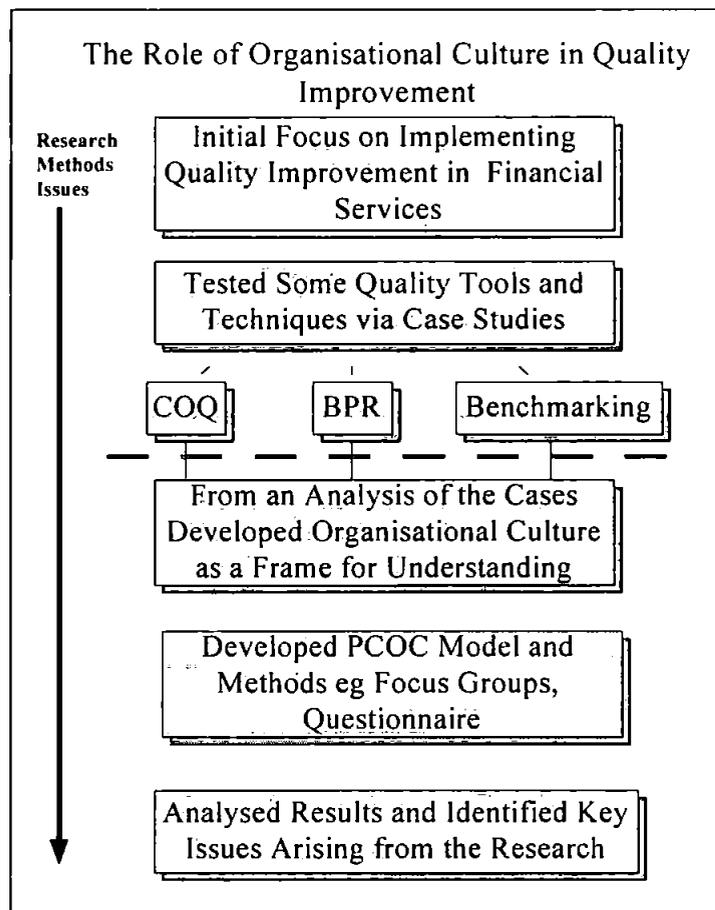
The author resisted the temptation to simply prescribe a "one best way" for organisational change. The research attempted to address the issues of managing change while addressing the key organisational issues related to the implementation of quality management interventions. The research will argue that "*Organisational culture is the fundamental*

*bedrock upon which organisational change is based.”* and from this, the key research problems that the researcher sought to address was:

- 1. How can a practitioner develop an understanding of organisational culture, and set about attempting to diagnose the culture of their organisation using various tools and techniques (Multi-item Questionnaires and Focus groups)?*
- 2. Can the knowledge that is collected and synthesised be used to make decisions concerning the focus and the type of interventions that may be made?”*

### 1.6.1 Development of The Research Problem

The development of the research follows the continuous research cycle of Description, Explanation and Testing. The diagram below identifies the way in which the thesis developed.



**Figure 1.1 Structure and Flow of the PhD research**

The initial three case studies lead to a rethink of the whole research content and focus, eventually leading to the development of the PCOC model and questionnaire. The focus of the research at the beginning was in identifying and using a range of quality tools and techniques in the Financial services sector in an attempt to construct a process improvement methodology. The objective was then to identify the ways in which the tools and techniques used in the research could be tailored to suit the needs and requirements of the sector. Through the use of the three case studies, the author sought to build guidelines and lessons for implementation of the methodology based on the findings and outcomes of the cases. The guidelines that the author expected to identify were issues such as the key steps in the implementation process, related to the characteristics of change in Financial Services and the problems associated with the adaption of tools and techniques to suit the needs of Financial Services organisations. These issues, combined with the use of the tools and techniques in the case studies, would assist in the development of a continuous quality improvement methodology.

The results of the three case studies carried out in Lloyds TSB led to a change in the research focus and the problems that the research was attempting to address. The issues identified with the three case studies, revolved around the view that the tools and techniques used were inadequate to identify many of the cultural issues related to change. Some of the main issues were staff attitudes, the power structures and the focus on customers. These and the other issues identified in Chapter 8.5 led to a change in the research focus.

The research shifted focus onto the human factors associated with change in organisations rather than the mechanistic process of continuous improvement. This led to a review of the literature in the area of organisational culture and change, developing the culture construct

as a frame for understanding the difficulties and problems encountered in the three case studies.

To answer the first research problem of how practitioners can understand and diagnose organisational culture the author developed the PCOC model and questionnaire that was used to investigate organisational culture across Lloyds TSB. To answer the second research problem of using the information collected to help practitioners make decisions, the output of the PCOC model was analysed and a review of the results was presented to TSB management..

## **1.7 CONTRIBUTION OF THE RESEARCH**

The main area of contribution was in the process followed in designing, developing and testing the PCOC Environmental questionnaire. The process by which this model and the accompanying questionnaire tool was derived was the most important aspect of the whole research. The model was developed into a self-administered questionnaire which was tested in four Business Areas of Lloyds TSB. The important lessons that were learned from the process included:

- the need for a clear process within which to develop, refine and test the model
- using focus groups to identify the cultural issues as part of the process and feeding this into the design of the questionnaire
- the need for a questionnaire development process
- identification of reliability and consistency issues before fully testing the tool

Another area of contribution was in the use of the diagnosis tool as a precursor to TQM or other interventions. Some consultancies do use diagnosis tools, but they are often

measuring hard, artefact issues, whereas the PCOC model measures the hard issues and the “soft issues” such as values, rituals and heroes.

## **1.8 STRUCTURE OF THE THESIS**

This chapter has introduced the research project and its fundamental underpinnings, as well as Total Quality Management and the construct of Organisational Culture. A brief overview of the aims of the research and the contribution to new knowledge has been made.

Chapter 2 describes the research methodology issues and the structure used for managing the research. The methodology utilised used a continuous Research cycle loop (Meredith, *et al*, 1989), consisting of a continuous iterative loop of description, explanation and testing. Other research issues relating specifically to the design and use of the questionnaire are addressed in the relevant chapters (chapters 9 and 10 respectively).

Chapter 3 provides a literature review of the Quality and Total Quality Management fields. As well as a broad review of the current literature, the chapter will focus on three of the more important contributors to the field (W. Edwards Deming, Joseph Juran and Philip Crosby). The problems associated with TQM implementation and the management of change will also be discussed.

In Chapter 4 a review of the popularity of Award models and frameworks is undertaken, examining the EFQM Model for Business Excellence, The Malcolm Baldrige National Quality Award Model in the USA, and the Deming Application Prize in Japan. The Business Excellence Model forms the basis of the next three chapters. The initial research

focus attempts to develop a Process Improvement methodology based on the criteria of the EFQM Model for Business Excellence. Process Redesign is the middle of the model linking the enablers and results criteria. Cost of Quality techniques are recommended as one of the key ways to measure quality improvement and Benchmarking is implicit throughout the model because of the requirement to compare results with external organisations.

The case study presented in Chapter 5 was the first undertaken by the author. A review of the Cost of Quality Literature is followed by the examination of the use of Cost of Quality techniques within the Payroll Process of TSB. Issues and lessons from the case study are presented.

The second case study, presented in Chapter 6, involves an intervention in the Compensation and Benefits department of TSB. It involves the process redesign of a pay review process. A five step process was outlined. The Process and Business Process Reengineering literature were also examined.

The third case study presented in Chapter 7 involves the Benchmarking of the TSB Group Strategic Planning Process. The author presents the findings from this research and examines the Benchmarking literature in detail. Conclusions are presented.

The rethink of the whole research took place following the last case study. This led to the development of a culture and internal environmental model and questionnaire termed PCOC. Chapter 8 outlines the review of the three case studies and the subsequent development of the overall PCOC model

Chapter 9 focused on the literature surrounding organisational culture, as a means to understanding how and where interventions could be focused. The literature is discussed in detail, and a number of models of organisational culture are presented, as well as various methods and ways in which organisational culture can be identified and measured.

The development of the PCOC model in Chapter 8 and the focus on Organisational Culture in Chapter 9 led to the development of a culture measurement methodology, utilising Focus Groups and Questionnaires. Chapter 10 presents the process followed to develop the questionnaire and the associated research issues and methods, particularly in relation to the consistency of the PCOC elements.

Chapter 11 presents the findings from the use of the PCOC model within four Business Areas of Lloyds TSB. This highlighted a number of issues surrounding the understanding of organisational culture, the implications for managing change, the issues of fit and context as well as the role of contention in managing organisational culture. The findings and the conclusions are discussed.

The final chapter, chapter 12, outlines the conclusions from the research, identifies the contribution made by the research and presents a number of areas for future research.

## **1.9 SUMMARY**

This chapter has identified the need to identify the culture and the climate of an organisation as a way of focusing Quality interventions. It eschewed the focus on hard tools and techniques, and instead focused on the need to understand the culture of the organisation as a minimum prerequisite to any change management interventions, whether

quality or not. The contribution of the research and the structure of the work has been presented. The chapter following contains the key issues related to the research methods of this research.

# **CHAPTER 2**

## **RESEARCH METHODS**

## **2.1. INTRODUCTION TO RESEARCH METHODS**

According to Meredith (1989) the new challenge of research is to produce research which is pragmatic and directly useful. It also needs to meet the challenges of the emerging areas of service operations, productivity and quality. The operations management paradigm needs a broader understanding of the variety and acceptability of alternate research methodologies.

This chapter will examine briefly the philosophical issues faced by research in this area and outline the Research Cycle followed. The issues raised by research methods and the variety of paradigms that could be utilised in this area will be outlined. The discussion will include an overview of Action Research which was used via the cases described in Chapters 5-7. The specific issues pertaining to questionnaire design and analysis are examined later in this thesis in chapters 8 and 9 respectively.

## **2.2. PHILOSOPHY OF MANAGEMENT RESEARCH**

According to Burrell and Morgan (1979), all researchers approach their subject via “*explicit or implicit assumptions about the nature of the social world and the way in which it may be investigated.*” While this issue may seem trivial it is indeed critical to the social science understanding of research. It provides epistemological problems discussed below, because interpretivist and positivist researchers have widely different epistemological frames with regard to social reality.

Burrell and Morgan assert that the assumptions of the researcher can be conceptualised in terms of 4 sets of assumptions relating to:

- ontology - the essence of the phenomena under study (is reality external, objective and “out there”, or individual, and the product of individual cognition?),
- epistemology - knowledge and how to understand and communicate it,
- human nature - the relations between humans and their environment, all 3 of which lead to:
- methodology - the way in which one attempts to investigate and obtain “knowledge” about the social world. Different ontologies, epistemologies and models of human nature are likely to incline the researcher towards different methodologies.

If the researchers world is hard, real and external to the individual, the scientific objective is to focus on an analysis of relationships and regularities between the various elements which it comprises. The research is concerned with the identification and definition of these elements and with the discovery of ways in which these relationships may be expressed. Methodological issues of concern are thus the concepts themselves, their measurement and the identification of underlying themes. There is also a search for universal laws which explain and govern the reality which is being observed (e.g. systems modelling).

The alternate view is based on the subjective experience of individuals in the creation of their social world. The focus is on different issues, and approaches them in different ways. The principal concern is with developing an understanding of the way in which the individual creates, modifies and interprets the world in which he or she finds themselves. The approach fundamentally questions whether there exists an external reality worthy of study. It emphasises the relativistic nature of the social world to such an extent that it may

be perceived as “anti-scientific” by reference to the ground rules commonly applied in the natural sciences. These methodological issues can be summarised in the diagram below.

The Subjective Approach to Social Science	Subjective-Objective Dimensions	The Objectivist Approach to Social Science
Nominalism	<b>ONTOLOGY</b>	Realism
Anti-positivism	<b>EPISTEMOLOGY</b>	Positivism
Voluntarism	<b>HUMAN NATURE</b>	Determinism
Ideographic	<b>METHODOLOGY</b>	Nomothetic

**Figure 2.1 Assumptions about the nature of social research. (from Burrell and Morgan, 1979).**

The above diagram presents the researcher with a choice. The positivist researcher views rationality as being taken-for-granted, objective rather than subjective, orderly reasoning. Burrell and Morgan (1979) suggest that the rationality of “the doing of research” is classified, interpreted and understood only in relation to a particular context by choosing a perspective or “Weltanschauung,” based on value-based assumptions about ontology, epistemology, human nature and ultimately methodology. (Hopper and Powell, 1985) The researcher must choose the dimensions on the subjective/objective dimensions which reflects their research approach and hence their methodology.

The author was in the positivist paradigm from the beginning of the research. From the ontological perspective the author clearly chose the realist perspective that the external environment is “hard” and objective and capable of change through intervention. Epistemologically, the author is in the positivist or functionalist paradigm. The issues of Human Nature is decided as deterministic. These value based assumptions of the researcher led directly to the formation, development and evolution of the research methods identified in 2.3 and 2.4 below. The acceptance of the positivist paradigm does

not preclude understanding and respect for other paradigms of research. The fundamental issue is that acceptance of the three sets of assumptions concerning "ontology", "epistemology", and "human nature", direct a fourth dimension of research, i.e. "methodology".

### **2.3. THE RESEARCH CYCLE**

Meredith (1993) proposes that all operations management research follows through a cycle of "Description, Explanation and Testing (through Prediction). The Description Phase is related to the reporting and chronicling of situations and events. It characterises the subject of interest, tests theories and frameworks and involved exploratory research.

The Explanation Phase produces construct descriptions, initial concepts and frameworks which lead to the development of conceptual frames, interpretation of research and the generation of alternative hypotheses which need to be tested.

The Testing Phase tests concepts and new knowledge to determine which are correct and which are not and how to modify key issues. The cycle is to explain and then predict. The testing phase asks whether the generated hypotheses were correct. In the true research cycle, the testing phase is then followed by the description phase, in an attempt to refine the new knowledge and integrate it into the cycle.

While these phases appear clearly defined and bounded, Meredith admits that, in reality, the phases are rarely clear and distinct. The real process is a continuous phase, each cycle refining and adding to the knowledge.

## 2.4. RESEARCH METHODS

The present operations methodologies have a number of shortcomings outlined by Susman and Evered (1978) and Meredith, mainly criticising the research as abstract and not useful to the practitioner, and technique and method oriented rather than knowledge oriented. Meredith lists the following criticisms:

- they are narrow instead of broad
- they are techniques instead of knowledge oriented
- they are abstract rather than reality perspective
- they are not integrative
- they are less sophisticated research methods
- they are not very useful to operations managers and practitioners

These issues are all important in management research, but the integrative and usefulness issues are especially crucial and form the methodological basis of the whole of this particular research. The various methods employed are integrative and it is intended to be of use to managers involved in the management of change. As Galliers and Land (1987) explain:

*“It follows, therefore, that if the fruits of our research fail to be applicable in the real world, then our endeavours are relegated to the point of being irrelevant.”*

A number of writers have developed frameworks to aid the understanding of the position of various common research methods and techniques. A research methodology is a

framework for describing appropriate research methods, as well as helping the researcher to understand more clearly the process of the research work. (Kaplan, 1964) Meredith (1993) proposed a framework for research which clearly divides the research methods into their different paradigms. Figure 2 below describes the main elements of the model.

The Rational/Existential axis concerns the epistemological structure of the research process, the reflection of the researchers Weltanschauung. There are four divisions along this axis (from rational to existential): axiomatic, logical positivist/empiricist, interpretive and critical theory. The rational pole is characterised as deductive, formal, objective, methodologically prescribed, restricting environmental interactions and requires a priori assumptions.

The natural/artificial axis defines the source or kind of information used throughout the research process. The natural end of the axis examines direct observations of object reality; field studies/experiments in the logical positivist realm and action research and case studies in the interpretive paradigm. The artificial end is characterised by subjectivism and artificial reconstructions of object reality. The types of methods include logic and reason (axiomatic), prototyping, simulation and modelling (logical positivist) and conceptual modelling and hermeneutics (interpretive). The shading in the table below identifies the research methods undertaken in this research, directly related to the ontology and epistemology outlined earlier in this chapter.

	NATURAL		ARTIFICIAL
	OBSERVE OBJECT REALITY	PERCEPTION OF OBJECT REALITY	ARTIFICIAL RECONSTRUCTION OF OBJECT REALITY
RATIONAL			
AXIOMATIC			Reason Theorems Logic
LOGICAL POSITIVIST/ EMPIRICIST	Field Studies	Structured Interviews Surveys	Prototyping Modelling Simulation
INTERPRETIVE	Action Research Case Studies	Delphi Expert Panels	Conceptual Modelling Hermeneutics
CRITICAL THEORY			
EXISTENTIAL			

**Figure 2.2 A Framework for Research Methods (from Meredith et al, 1989)**

Traditional operations management research is characterised by artificial/logical positivist methods and techniques. Mention has already been made of the criticisms of Meredith *et al* (1989) on this subject and their prescription to address the balance is straightforward:

*“We believe that a much stronger movement towards naturalistic paradigms (especially direct observation via case, action and field studies) and existential (primarily interpretive) paradigms is called for. The methods are accessible, their legitimacy is proven, and the need is great.*

The research undertaken in this case follows the advice of Meredith *et al* using methods and techniques that cross from the logical positivism to the interpretive paradigm.

## 2.5. ACTION RESEARCH

The 18th Century Scottish philosopher Hume (1975) provided deep insight into the phenomena of human understanding. Knowledge in relation to cause and effect was not

attained, he reasoned, by reasonings a priori “*but rises entirely from experience.*” Further he confirmed that cause and effect “*are discoverable, not by reason but by experience.*”

One way that management researchers can overcome the shortcomings of the positivist research emphasis is through the use of action research. Action research is one of the naturalistic and existential methods praised previously by Meredith et al. Reason and Rowan (1981) add that the involvement with practitioners over issues that matter to them is essential for legitimising the research while Eden and Huxham (1996) see practitioner involvement as a method that “*provides a richness of insight which could not be gained in other ways.*” (p75)

Action research is a “*systematic form of enquiry undertaken by practitioners into their attempts to improve the quality of their own practice.*” (Whitehead, 1994, p 138 ) The basis of action research should be an intent to take action and the output from the research should result from involvement with members of an organisation “*over a matter which is of genuine concern to them.*” (Eden and Huxham, p 75) Susman and Evered take the definition of action research further. To them action research is situational, agnostic, collaborative and future oriented, and implies systems development and generates grounded theory in action. Action research:

*“..aims to contribute to the practical concerns of people in an immediate problematic situation and to the goals of social science by joint collaboration within a mutually acceptable ethical framework.”* (Rapaport, 1970)

Two of the three goals of action research are contained within that definition: action research should contribute to the practical concerns of people, and it should contribute to the goals of social science. The third goal was to “develop the self-help competencies of

people facing problems.” Eden and Huxham regard action research as a process and utilise the cyclical process proposed by Rapaport (1970) of: Diagnosis, Action Planning, Action Taking, Evaluating, Specifying Learning.

## **2.6. CONCLUSIONS**

It has been identified that the task of identifying and adopting a research methodology is based on the identification and embracing of particular beliefs about ontology, the epistemological grounding and beliefs about human nature. In the case of this research the author, despite using tools and techniques from different research paradigms remains rooted in the positivist paradigm. This research follows the positivist worldview in the approach to methodology and tools and techniques. However, the author did make use of Action Research (via the Case Studies).

The research methodology broadly followed an iterative cycle of Description, Explanation and Testing. Action Research was chosen as the most appropriate research method in the early stages of the project. It enabled case studies to be formulated which could then be analysed to identify how successful they were in managing their respective changes. This developed a broad understanding of the main issues involved in the management of change.

Chapters 3 and 4 provided the Description Phase of this research. The analysis of the case studies in Chapters 5-7 provided the basis of the Explanation phase and led to the focus on organisational culture. The need for a Testing Phase led eventually to the development of an organisational environment model, termed PCOC, which was tested in four Business

Areas of Lloyds TSB. However, within each phase an iterative process of Description, Explanation and Testing occurred.

# **CHAPTER 3**

## **TOTAL QUALITY MANAGEMENT**

### **LITERATURE REVIEW**

### 3.1 INTRODUCTION

During the 1980's, large numbers of organisations in the US and Europe were introduced to TQM as the new management philosophy that would answer their competitive and performance ills. The increasing dominance of Japanese competitors in areas such as household electronics and automobiles led many Western organisations to the concept of Total Quality Management. An NCB television documentary entitled "If Japan can...why can't we?" in 1980 introduced W Edwards Deming to a country that had largely ignored the message of quality that he and others had taken to Japan in the early 1950's.

Since the 1980's, the importance of TQM has grown throughout the world, mainly through the efforts of management theorists, researchers and particularly organisational consultants. (Steingard and Fitzgibbons, 1993) In addition, there has been the influence of the efforts of many national governments, particularly in the dissemination and promotion of Quality concepts, tools and techniques. As Pettigrew and Whipp(1991) pointed out "*...some scholars have sought to move from the descriptive to the prescriptive*" in an attempt to identify the rules of excellence.

Perhaps the most remarkable aspect of Quality in the West has been this promotion by national governments of the idea of competitiveness through high quality products and services. In the UK, a government White Paper in 1982 entitled 'Standards, Quality and International Competitiveness' (Department of Trade, 1982) outlined the government's determination to enhance the status of quality in the UK. It recognised that success in global markets increasingly depends on '*a supplier's ability to satisfy customers on non-price factors.*' Another feature of this phenomenon has led in many cases to the development of national quality awards, the most notable of which is the Malcolm

Baldrige National Quality Award (MBNQA) in the US and the European Quality Award Business Excellence Model. None of the groups mentioned, however, or even individual members of these groups, have a unifying definition of TQM or quality. Since everyone has their own definitions, everyone also has their own views on what a successful TQM program is, and how it should be achieved.

### 3.2 DEFINITIONS OF QUALITY

As stated earlier there are numerous definition for both quality and Total Quality Management. The definition of what TQM is, is often dependent on how quality is defined. Some of the definitions of quality are listed in Table 1 below. The definition that a company may uses to describe quality is often based on the approach of the TQM programme that they implement.

<b>SOURCE</b>	<b>DEFINITION</b>
Juran and Gryna (1992)	Fitness for use
Feigenbaum (1991, p7)	The total composite product and service characteristics of marketing, engineering, manufacturing and maintenance through which the product and service in use will meet the expectations of the customer
Crosby (1979)	Conformance to requirements
Garvin (1987)	Eight dimensions of quality: performance, features, reliability, conformance, durability, serviceability, aesthetics, perceived quality
BS 4778 (BSI, 1991)	the totality of features and characteristics of a product or service that bear on it's ability to satisfy a given need

**Table 3.1. Quality Definitions**

Accompanying many of these definitions are a number of commandments or exhortations concerning how to implement quality and become a "quality" company. These range from Deming's 14 Points, to Juran's Quality Trilogy to Crosby's 14 Points. They set out the

activities that everyone has to do and the practices that they must adopt to successfully implement quality.

### **3.3 TOTAL QUALITY MANAGEMENT**

The philosophy that has evolved into Total Quality Management is far removed from its intellectual origins, (Grant, Shani and Krishnan, 1994) which were in statistical theory and sampling techniques. Statistical control charts were developed by Shewhart and Dodge developed the theories of sampling while working at Bell Labs in the 1920's, both of which were the foundation for modern quality assurance practices. The Deming philosophy presented to the Japanese in the early 1950's was that of learning to control the variation and variability in design and manufacturing processes. Similarly, Juran taught the Japanese the statistical concepts behind total quality control.

In the years between the 1950's and the late 1960's/early 70's there was little perceived need in the US or the UK for Total Quality. However, the lessons the Japanese learned in the 1950's were beginning to show in superior goods at lower cost than their Western competitors. A famous example was Xerox Corporation who lost huge market share to their Japanese competitors in the copier markets. Customers deserted to the superior quality, low cost of the Japanese copiers. (Haim, 1992).

It was Deming(1986) who observed that while concepts were important the application and practical implementation were key to the understanding of quality management. This was particularly insightful since only a few years later the Malcolm Baldrige National Quality Award (MBNQA) and the European Foundation for Quality Management Model for Business Excellence had become instantly popular in many industrial sectors. It is these

models and their use as a template to develop Total Quality programmes which has dramatically increased the popularity of total quality programmes. (Garvin 1991).

As already stated there is no unifying definition of Total Quality Management. According to Grant *et al* (1994) TQM comprised "*a group of ideas and techniques for enhancing competitive performance by improving the quality of products and processes.*" (p26) It is a company wide philosophy of quality improvement with the primary goal of meeting customer requirements by improving the quality of products and processes. They differentiate TQM from other management methods and philosophies taught in Business Schools in four key areas:

- Intellectual origins - statistical theory
- Source of innovation - industrial engineers and physicists
- National origins - international
- Dissemination process - populist

Throughout academia and industry there exists a wide range of perceptions of what TQM is, what constitutes "successful" implementation of Total Quality Management. The rise in popularity of 'gurus' and the large number of consultancies with TQM offerings, leaves the observer with a sense of disorientation concerning how to adequately implement a TQM programme. As Mann and Kehoe (1994) claimed "*it is not surprising that many companies experience problems when deciding on which approach will 'best fit' their organisations.*" (p ) Given this shaky theoretical underpinning of the discipline, it is perhaps not surprising that Financial Services organisations were reticent in adopting the philosophies and strategies of continuous improvement. A 1992 survey into Financial Services (KPMG, 1992) reported that the financial sector recognised the importance of

quality, but there was little evidence, overall, of a systematic approach to quality improvement.

### 3.3.1 W. Edwards Deming

The Deming philosophy was initially founded in statistics. His statistical theories concerned the effective control of variability within processes, and being able to recognise and change "common" causes of variability (those causes that were systemic) and remove "special" or "local" causes (uncontrolled and non random variability from outside the process). He called his message the "management of quality" and never provided his own unique definition of quality. Instead he defined it in relation to customers. The Deming theory emphasised the need to improve continuously all systems and processes, using the Shewhart cycle of Plan-Do- Check-Act (PDCA).

Deming developed his 14 points as the foundation of his management philosophy. (Deming, 1982) Deming's 14 points are summarised in Appendix 1. His first point (Create Constancy of Purpose) describes

*“the values, beliefs, and direction, or aim the company is trying to accomplish. [The Corporate philosophy - the declaration of constancy of purpose - must clearly show what direction is prioritised.”* (Yoshida, 1996, p15)

This is reinforced by the second point - adopt the new philosophy. To some extent the 14 points are a blueprint for adopting culture change, focusing as the do on the need to change the behaviours, attitudes and environment of the organisation and the people within it.

According to a British Deming Association Booklet (British Deming Association, 1994) the focus of attention and development of the Deming philosophy was at the Inter-Group,

Organisation and Systems levels. Other philosophies focus more on the Group, Interpersonal and Personal levels but Deming did not. His philosophy never promoted the transformation from the individual to the teamwork or group level but asserted the need to take the systems view, where 95% of the problems are created. This was the secret of becoming truly competitive.

### 3.3.2 Joseph Juran

Juran defined quality as “fitness for use” which has five main dimensions: quality of design, quality of conformance, availability, safety, and field use. (Juran and Gryna, 1992) His philosophy was based on three fundamental activities within any Total Quality programme:

- quality planning - developing the process to achieve the improvement goals
- quality control - addressing the issues of variation in the process, and
- quality improvement - lowering the cost of quality and implementing continuous improvement (Juran, 1986)

Juran recognised the need to deal with the cultural resistance to implementing technical changes. He defined culture as

*“a body of learned behaviour, a collection of beliefs, habits, practices and traditions shared by a group of people.”* (Juran and Gryna, 1992, p 127)

He identified two facets of change - technological changes (machines, products procedures, etc.) and social changes (the effect on the people involved). For Juran resistance to technological change was often a mask for resistance in the social effects of the change.

Change could only be achieved by

1. Being aware that the culture may be different from our own
2. Discovering the social effects and implications of proposed changes.

For successful, lasting change, Juran recommended that the need for change be established unequivocally and related to the people involved rather than on the logic for change. The need for participation in the changes by those affected was important and the crucial aspect was gaining agreement on the change through persuasion rather than coercion.

### 3.3.3 Philip Crosby

Crosby's message involves his own 14 points (which are very different to those of Deming) and four absolutes of quality. (Crosby, 1979). The four absolutes of quality are:

- Quality is defined as conformance to requirements
- The system for causing quality is Prevention, not appraisal
- The performance standard is zero defects
- The measurement of quality is the Price of Non-conformance

The main focus of the Crosby approach to quality was “right first time and every time” which was focused on Zero Defects as a philosophy of operation stressing the need to change management perceptions about quality and improvement. The key belief was that error was not an inevitable consequence of operations, which top management must understand. The problem with moving towards this philosophy is that the organisation often creates quality problems by rewarding and supporting the wrong things such as schedule or sales over service and quality.

The education process required to create the environment for Quality Improvement is a six stage approach (the six C approach). (Crosby, 1984). It starts with Comprehension (what is quality?), moving through Commitment (from senior management) to Competence (implementing quality in a methodical way). The fourth stage is Communication (create heroes and myths via quality success stories), while the fifth is Correction (focusing on prevention and performance). The final stage is Continuance stressing the need to integrate all quality improvement activity into everything that the organisation does. The goal was to develop an organisational culture focused on delivering products and services to customers which are defect free.

While Crosby stresses the need to transform the culture of the organisation, he does not provide in detail the "how to." Many organisations that have used Crosby are now recognised as leading exponents of Quality Management. Baldrige and European Quality Award winners such as Milliken Industries, ICL and Texas Instruments all began the process of implementing quality improvement using the Crosby methods. However, they have all moved on from the Crosby methods as they matured in their approach to quality management.

### **3.4 THE PRESENT PARADIGM**

Total Quality Management "*is a proven, systematic approach to the planning and management of activities*". (Munro-Faure and Munro-Faure, 1993) Total Quality is also fundamental because it is "*...a philosophy that affects all functions of the firm, at all levels of management*". (Grant *et al*, 1994) An analysis of TQM programmes would identify a number of key components. According to Boyce (1992) an investigation into thirty-two

Canadian Total Quality found that there were three elements of Total Quality programmes that need to be carefully considered at the outset:

- Developing an organisational-wide view of the philosophy of quality
- Carefully choosing the approach to be adopted
- Developing a process for the measurement of results from the programme

Often, the inspiration for developing and implementing a Total Quality programme amongst organisations is a keen desire to adopt best practice which have been manifest in companies regarded as "model TQ companies".(Smith, et al, 1992) This, and the delivery of world class performance improvements promised by consultants often proves an irresistible allure to many organisations.

The current paradigm asserts that if you train all employees in quality tools and techniques and focus on the customer, then you can change the culture of the organisation without specifically focusing on it. In addition, the approaches offered by quality consultants are often based on the Deming, Crosby or Juran approach or some combination of the best of each, "*as if these were routine production processes - put people in here and lo! out comes a quality organisation*". (Boyce, 1992, p59). In reality, infinitely variable people cannot be put through a fixed process to get uniform, predetermined results. It must follow from this that standard programmes can only raise awareness of quality and even with some tailoring, cannot conceivably deliver sustainable competitive advantage.

The large number of off the shelf TQM offerings from consultants are often based on the idea of "action centred programmes" in which the assumption is that "*if they carry out enough of the 'right' improvement activities, actual performance improvements will*

*inevitably materialise.*" (Shaffer and Harvey, 1992, p80) The problem is that these organisations mistake means for ends and process for outcome, i.e. the implementation of TQM is seen as a success in itself.

Total Quality is essentially about satisfying customers by providing timely and defect free products and services. In the rush to choose an approach, train staff, and measure quality improvement, the customer is often forgotten. Satisfied customers also impact greatly on both income and profit. The PIMS research began in 1972, drawing strategic and financial information from 3,000 business units and has served as the basis for over 100 studies of business strategy. A study of the PIMS database (Phillips, Chang and Buzzell, 1983 ) concluded that:

*"the pursuit of a quality strategy enables the company to command profit margins superior to lower quality competitors."* (p41)

The retention of customers (or repeat buying) is crucial to long-term profitability and is often associated with service quality programmes and TQM programmes, to a lesser extent. Smith (1994) reports that the average customer is worth, on average, up to \$4,400 profit to a local supermarket and \$80 per year to a bank. Hewlett Packard have determined that it is five times more expensive to attract new customers than to keep current customers. They also found that 91% of wronged customers never bought Hewlett Packard again, while British Airways analysis shows that happy customers tell four people: on the other hand unhappy customers tell eleven people about their experiences and can tell up to sixteen. All of the above are compelling arguments for satisfying (and delighting) customers, and for continuous improvement programmes.

The TQM / Quality Management paradigm has been dominated over the last few years by a debate surrounding the idea that TQM is dead and that it had reached the stage of having become just another management fad. The objective of the next section is to examine briefly the key arguments and reports that have been put forward about TQM failures and to propose that the present paradigm is inadequate and fails adequately to examine and confront key elements of the change.

It is the belief of the author that the recent problems highlighted with the implementation of Total Quality are symptomatic of more fundamental, underlying causes. This is mainly because the present paradigm fails to adequately address the key implementation issues. It is essential that these areas are examined in some detail to develop a frame around the problems with TQ programmes, in order to offer some insights into the present difficulties. The review of the TQM and Quality literature showed that much of it failed to address adequately the following issues:

- Implementation issues
- Organisational culture
- Change management

The issues and theories relating to organisational culture are discussed and analysed elsewhere in this thesis.

### **3.5 IMPLEMENTATION PROBLEMS**

There are a number of types of change that have received significant amounts of attention over the last number of years, for example technological change, Total Quality

Management implementation and Business Process Reengineering. The recent focus on implementation failures and problems with TQM (discussed in this chapter) can also be found in implementation failures with computer based systems and Business Process Reengineering. Given that the reported failure rates for all three are deemed to be 80-90% it is plausible to assume that the reasons for implementation failures have common themes.

Over the last few years a number of reports and articles have been published in the UK and the US decrying the lack of results from TQM programmes. They have expressed doubts about the benefits that have been derived from Total Quality programmes. The Economist (Anon., 1992) expressed doubts about the benefits that organisations can expect from Total Quality programmes. Studies by management consultancies such as Arthur D. Little (in Smith, Tranfield Foster and Whittle, 1993a) and AT Kearney (1992) report systematic failure of Total Quality programmes in delivering tangible, measurable benefits. To an extent, this has served to heighten the opinion of some that TQM is another passing management fad, used as a belated attempt to match the quality, efficiency and reliability of competitors, especially the Japanese.

The majority of these articles and reports focus mainly on the problems with implementing a Quality programme, and to some degree fail to examine the many organisations that have achieved measurable improvement as well as competitive success as a direct result of their Quality programmes. The AT Kearney report claims that almost 80% of TQM programmes fail to deliver the expected benefits. There has been a focus on TQM failure because of the popularity with which it is being introduced and, while the reasons for failure are numerous and complex, it is the objective here to examine some of the most widely highlighted reasons for "failures" in TQ programmes.

MacDonald (1993) provide a list of reasons for TQM implementation failure and claim that the reasons are easy to find and therefore, relatively easy to correct. Some of the reasons for failure postulated include: Looking for quick fix answers, goal setting problems, failure to measure benefits, resistance by middle management, top management commitment and a lack of "structure shift."

The AT Kearney study reported that the popularity of TQ belies the fact that 80% of these programmes fail. Successful programmes shared four characteristics: an emphasis on tangible results, an insistence on performance measurement, an integrated programme and a clear commitment from top management.

Those companies that failed were regarded as wearing rose tinted spectacles and despite having no tangible results to show from their programmes, almost 50% of companies still view them as successful. According to the report this suggests a triumph of hope over objectivity. However, while the report claims that 80% did not show improvements, 50% of all companies surveyed did not fill in anything in the question about business results.

Smith et al, have developed a map of TQM implementation that anticipates problems in the initial phases. They developed a frame around TQM implementation believing that the successful TQ programmes do not deliver a linear or smooth continuous improvement, but rather were punctuated by a series of stages, experienced as points of crisis and uncertainty. (Smith, Tranfield, Foster and Whittle, 1993b) The most significant problem for management is "*not knowing what they do not know*" (p1) and when an issue is known it is possible to plan to address it. This is also important because companies revisit their programmes during these transition stages, identify their limitations and add to their

existing approaches the things that were not previously tackled. This helps significantly to broaden the organisational map or world view of Total Quality.

Meredith's research into the implementation of computer based systems (Meredith, 1981) has resonance with the problems that are associated with all forms of change management implementation, especially the implementation of Total Quality Management. While acknowledging Bodin and Kursh (1978) on the effect on implementation of "*Politics, bureaucracy, unions, budgets, and changing administration*", Meredith believes that there are only two possible conclusions:

1. the reasons postulated for implementation failure to date are incomplete, incorrect, or only symptoms of other, more basic reasons for failure that have been identified, *or*
2. implementation of planned change can never be successful for a large proportion of cases, and only a small minority will escape the laws of chance and become successes.

Meredith classified implementation problems as falling into one of three categories: technical factors, process factors and inner-environmental factors.

### **3.6 CHANGE MANAGEMENT**

In its simplest form TQM is about moving from the present organisational state to a desired (and better) state. A core problem identified in many Total Quality programmes is managing the changes necessary to achieve the desired state.

Change may occur in any of the four components and the others will adjust automatically, causing major changes to take place. This will inevitably impact upon the organisational culture, leading to new changes in some form or other. This will inevitably impact upon

the organisational culture, leading to new changes in organisational form and structure. According to Almaraz (1995) much more work needs to be done *“to know what the implications of such changes are, how to design and implement such changes and what leadership qualities are required for success.”* (p 10)

The pace of change in most organisations today is both rapid and pervasive, so much so that it would appear needless to comment upon it. While these rapid changes are expected to be dealt with easily by organisations, the reality is that organisations can and do experience severe problems in bringing about any form of change

It is becoming clear, however, that managing change is an essential prerequisite to competitive success. Pettigrew and Whipp (1992) analysed a number of companies in the automotive, merchant banking, book publishing and insurance industries and identified a number of common themes surrounding their reactions to change:

- there was an observable difference in the way the higher performing firms manage change from their lesser performing counterparts
- a pattern emerges across the industry sectors, from the actions taken by the higher performing organisations

Pettigrew and Whipp (1991) believed that there were five interlinked aspects of the management of strategic and organisational change: Coherence; Leading Change; Linking Strategic and Operational Change; Human Resources as Assets and Liabilities; and Environmental Assessment. Pettigrew and Whipp (1991) suggest that in understanding strategic and operational change:

*"examining only the strategic event or project is insufficient. The character of change at the operational level over time must be jointly examined. Equally important are the thoughts and actions which pre-date the strategic event." (p 199)*

It is the author's view that one of the key failures of TQ programmes is in 'bolting on' programmes without considering strategic direction or operational realities

### **3.7 CONCLUSIONS**

During the 1980's and 1990's a wide range of organisations attempted to implement Total Quality Management within their organisations. These included service sector organisations such as Financial Institutions, although they appear to have adopted the philosophy and techniques later than their manufacturing counterparts. The plethora of models and theories are confusing for the practitioner and are sometimes so all-embracing as to induce confusion.

The problems faced by those attempting to implement quality improvement are the same for any type of change: attempting to implement change in organisational settings is the most difficult challenge for management.

This literature research was very wide ranging and attempted to provide an overview of the key aspects of the current total quality management paradigm. Other aspects of the TQM literature, on organisational culture, is discussed in this research. The next chapter builds on this more general quality research, focusing on the popularity of various quality award models that have been developed as "excellence" templates over the last ten years.

# **CHAPTER 4**

## **QUALITY AWARD MODELS.**

## 4.1 INTRODUCTION

In recent years the increasing popularity of TQM and its adoption by companies world-wide, has led to a large number of standards and awards. There are three awards which stand out as the most important in terms of importance: the Malcolm Baldrige National Quality Award, , the Deming Application Prize and the European Quality Award. There are also a plethora of local, regional and National quality competitions such as the British Quality Award; private-sector competitions such as America's Best Plants award and the British Best Factory Awards and an ever-growing number of quality standards.

The myriad of quality awards and standards at all levels also serve a much higher purpose. Their criteria for excellence help to serve as rigorous and detailed guidelines to total quality, world-class management as well as ideal operational models. Since they are frameworks used to determine quality award winners, it is therefore a framework of best practice. The European Quality Award and the Malcolm Baldrige National Quality Award criteria in particular are widely used as self assessment models.

Companies use the criteria of the award models, not to enter for the award, but to use the frameworks as benchmarks against which to assess their organisations. Over the last few years the use of self-assessment against the criteria of these models has increased dramatically, not least in the Financial Services Sector in the UK. As Garvin (1991) pointed out concerning the Baldrige Award, it:

*“provides companies with a comprehensive framework for assessing their progress towards the new paradigm of management and such commonly acknowledged goals as customer satisfaction and employee involvement.” (p 80)*

However, it is the contention of the author that there is major risk in approaching this “new paradigm” with management thinking that is of the “old paradigm.” The criteria make no mention of the fact that TQM principles require a change of mindset in order to be properly implemented. The almost seductive plausibility of these models in championing particular “activities to make you a quality company” ignores the fact that you have to change “the way we do things round here” first before any lasting changes can be achieved.

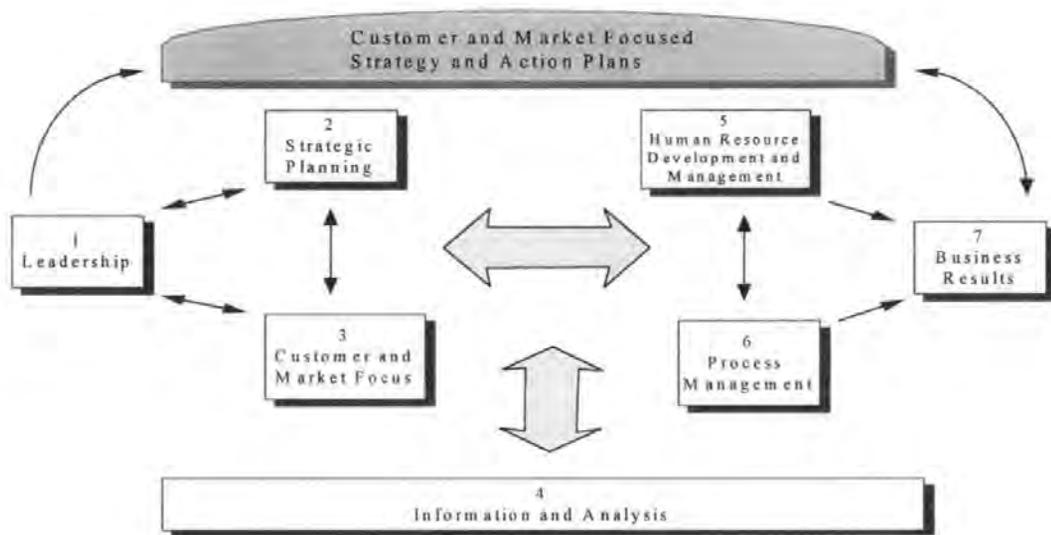
In the UK Financial Services sector most organisations are involved to differing degree in self assessment using the European Quality Award criteria, most direct rivals of TSB. These include: Barclays, Nat West, Midland, Abbey National, Prudential, Sun Life, Legal and General and Birmingham Midshires. Outside of Financial Services organisations who use self assessment include BT, ICL, Rank Xerox and Royal Mail.

#### **4.2 THE MALCOLM BALDRIGE NATIONAL QUALITY AWARD**

The Malcolm Baldrige National Quality Award (MBNQA) had received significant attention since its inception in 1987. Its purpose was to “*hold a significant leadership role in strengthening U.S. competitiveness*” (Frank and Chapman, 1995, p287) through raising quality awareness, facilitating intra-organisational communication about quality, and to serve as a practical planning and assessment tool. In a review of the Baldrige Award, Garvin (1991) concluded that the “*Baldrige Award is positioned exactly where it should be - as an agent for transforming US business.*”

The successful use of the Baldrige Award as a self assessment tool has been mirrored by the success of the EFQM Model for Business Excellence. While only around 100

companies apply for the award each year, approximately 250,000 copies of the Baldrige guidelines are sent out each year and it is believed that around four people, on average, read each copy of the guidelines. The Baldrige has become, in the words of Mahoney (in Kinni, 1995a), a “widely distributed management handbook.” A model of how the Baldrige Criteria are linked is shown below.



**Figure 4.1. The Malcolm Baldrige National Quality Award Model**

The Baldrige criteria are detailed in Appendix 2. There are 7 criteria for the Award: Leadership, Strategic Planning, Customer and Market Focus, Information and Analysis, Human Resource Development and Management, Process Management, and Business Results.

The leadership category examines how “senior leaders guide the company in setting direction and in developing and sustaining an effective leadership.” (NIST, 1997, p5) Also examined is company responsibility and citizenship. The Leadership category is worth 80 points out of 1000.

The Strategic Planning category examines how the company “*sets strategic directions, and how it determines key action plans.*” (NIST, 1997, p6) It also examines how strategy is developed and how the plan is implemented throughout the organisation. Strategic Planning is worth 80 points out of 1000.

The Customer and Market Focus Category examines “*how the company determines the requirements and expectations of customers and markets.*” (NIST, 1997, p8) Also examined is how the company enhances relations with customers and determines their satisfaction (through relationship enhancement). This category is also worth 80 points out of 1000.

The Information and Analysis category examines the “*management and effectiveness of the use of data and information to support key company processes and the company’s performance management system.*” (NIST, 1997, p10) It also examines the use of competitor comparisons and benchmarking as well as the use of company level data.

The Human Resource Development and Management category examines how “*the work force is enabled to develop and utilise its full potential, aligned with the company’s performance objectives.*” (NIST, 1997, p12) It also examines the efforts of the company to build a culture of performance excellence, staff participation, and personal growth.

The Process Management category examines “*the key aspects of process management, including customer-focused design, product and service delivery processes, support processes, and supplier and partnering processes involving all work units.*” (NIST, 1997,

p15) Also examined are how key processes are designed, effectively managed, and improved to achieve better performance.

The Business Results category examines

*“the company performance and improvement in key business areas - customer satisfaction, financial and marketplace performance, human resource, supplier and partner performance, and operational performance.”* (NIST, 1997, p17)

Also examined are the performance levels in comparison to the organisation's competition.

The category is worth 450 out of 1000, 130 for customer satisfaction, 130 for financial and market results, 35 for Human Resources, 25 for supplier and partner results, and 130 for company-specific results (performance against key company goals).

The standards and criteria of all these programs offer a variety of benefits any size of organisation. They represent some of the best management thinking currently available.

The Baldrige criteria, for example, have evolved and broadened with time and experience until they offer *“the most comprehensive set of standards available for evaluating the health of an organisation.”* (Kinni, 1995b)

### **4.3 THE DEMING APPLICATION PRIZE**

The Deming Application Prize was instituted in 1951 by JUSE (the Union of Japanese Scientists and Engineers) in recognition and appreciation of W. Edwards Deming and his achievements in Statistical Quality Control. The framework of the Deming Prize focused primarily on the implementation of tools, techniques and principles such as quality control circles, statistical process control, process analysis and policy deployment. Evaluation using the Deming criteria, measures an organisation against 10 criteria which, unlike the

Baldrige and the Business Excellence Model, are all equally weighted. The purpose was to:

*“award prizes to those companies which are recognised as having successfully applied CWQC (Company Wide Quality Control) based on Statistical Quality Control and which are likely to keep up with it in the future.”* (Evans and Lindsay, 1993)

It hoped to ensure that good results were achieved through the successful implementation of company wide quality control activities.

This is a much more focused approach than either of the other two award models, focusing specifically on the use and application of statistical methods and techniques. Criteria within the Prize model concerning planning, results and future plans are concerned more with the quality assurance aspects than the broader issues detailed within the Business Excellence Model and the Baldrige Award criteria. Within the criteria it is striking, however, that there is no specific category or criteria for the consideration of customer satisfaction or measurement.

The key objective of the whole process was to ensure that a company has so thoroughly deployed a quality process that it will continue to improve long after a prize is awarded.

The criteria of the Deming Prize are listed below in Table 1.

1. Policies and Objectives
2. Organisation and its Operation
3. Education and its Dissemination
4. Information Flow and Utilisation
5. Product and Process Quality
6. Standardisation
7. Control and management
8. Quality Assurance of Functions, Systems and Methods
9. Results
10. Future Plans

**Table 4.1. List of Criteria for the Deming Application Prize**

The Deming Prize has several categories of awards. There are those for individuals (for research in Quality methods), factories, divisions and small companies. The judging criteria consists of a checklist of 10 major categories which are detailed in the table below. While hundreds of companies apply few organisations actually win. Some of the companies who have won include Toyota Motor Company Ltd, Kansai Electric Power Company and NEC Microcomputer Systems. American companies who have won include Florida Power and Light and AT&T.

#### **4.4 THE EUROPEAN QUALITY AWARD (BUSINESS EXCELLENCE) MODEL**

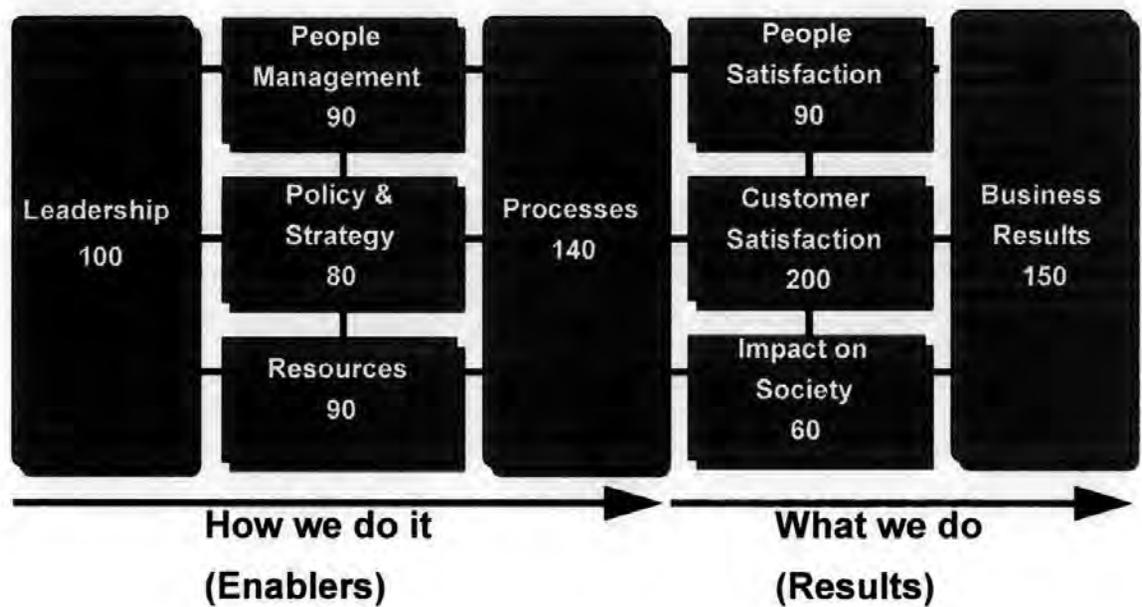
In 1988, fourteen leading Western European organisations formed the European Foundation for Quality Management (EFQM). In 1991 the group took the lead in establishing the European Quality Award, which is presented annually to the most successful exponent of Total Quality Management in Western Europe. The framework to determine this annual award was developed by the 14 founder companies [who included ICI, BT, ICL]. The first recipient of the European Quality Award was Rank Xerox. The British Quality Award, launched in February 1994, uses the same assessment model as the European Quality Award (the EFQM Model for Business Excellence).

From the Award criteria, a generic model has been developed as a framework for Total Quality Management in organisations. The European Quality Award model, shown in Figure 1, consists of nine criteria split between two groups - Enablers and Results. The enablers criteria are concerned with how results are being achieved, while the results criteria are concerned with what the company has achieved and is achieving. The model should be seen as Leadership, People Management, Policy and Strategy and Resources

managing Processes to achieve People satisfaction, Customer satisfaction, Business Results and a positive Impact on society. For the purpose of meaningful assessment in terms of the European Quality Award, a relative value is given to each of the nine elements within the model.

Each criterion is divided into a number of sub criteria. For example, Leadership deals with the behaviour of all managers and leaders and how they “*inspire support and promote a culture of Total Quality Management*” (EFQM, 1997, p15) looking at how they drive Total Quality as the way of improving the whole organisation. For the purposes of assessment the 1997 criteria were sub divided into four equal parts and addressed the following areas:

- a) How leaders visibly demonstrate their commitment to a culture of Total Quality Management
- b) How Leaders support improvement and involvement by providing appropriate resources and assistance
- c) How Leaders are involved with customers, suppliers and other organisations
- d) How Leaders recognise and appreciate people’s efforts and achievements.



**Figure 4.2. The EFQM Model for Business Excellence.**

Under each of these sub criteria, the model contains a number of suggested areas to address. These provide examples that quantify and clarify further what each sub criteria requires. The Criteria and Sub Criteria are detailed in Appendix 3.

Successful Quality implementation will generate measurable and sustainable improvements in people and customer satisfaction, contribution to society and business results. These results can only be achieved through effective implementation of enabling processes which drive the results. The effective assessment of an organisation's Quality progress must therefore take a balanced view of achievements in both enablers and results. Leadership is the key driving force behind the model. This ensures effective direction is achieved through policy and strategy and the effective management of people, resources and processes to achieve results in customer satisfaction, people satisfaction, impact on society and, of course, business results.

The link is apparent when looking at the model. For example; policy and strategy should determine what your key processes are. All processes should have measures of success captured in one or more of the results criteria. Similarly, the activities undertaken in the people management should have corresponding results in the people satisfaction criterion.

The European Quality Award is scored on the basis of 1000 points across the nine elements. In 1993 the EQA award winner scored over 700 points. A score such as this would be defined as of world-class standard. A score of over 500 points in 1993 was sufficient to warrant a site visit, which would put that organisation in the very good category. In 1996 the EQA Award Winner was a first time entrant from Turkey, Brisa. The European Quality Prize winners were BT (UK), Netas (also Turkish) and TNT (UK) Ltd.

#### **4.5 SELF ASSESSMENT AGAINST THE BUSINESS EXCELLENCE MODEL**

Self Assessment is a

*"cyclical, comprehensive, systematic and regular review of the organisations activities and results against the European Quality Award model, culminating in planned improvement actions." (EFQM, 1993, p 3)*

It provides an organisation with an objective approach to assess it's progress in applying Total Quality Management. Although each organisation is unique, this model provides a generic framework which enables an approximate but comparable benchmark score to be established against other organisations. The objective of a self assessment programme is to *"regularly review each of the nine criteria and, thereafter, to adopt relevant improvement strategies." (EFQM, 1994, p 4)*

The exercise is beneficial because it turns total quality management into a tangible process, and can determine the strengths and weaknesses of the approach taken by the organisation. The adoption of the self assessment approach has been seen to result also in other benefits as well. The process identifies progress against what is a model for business excellence. It forms a comprehensive basis for prioritising improvement opportunities and determining strategic direction. The approach clearly recognises the link between enabling activities and excellence in business results, and as previously stated, it provides the basis for successful Benchmarking against other organisations. The criteria serve as guidelines for excellence, a roadmap to world-class management and operational models. (Kinni, 1995, a)

#### 4.5.1 The Scoring Process

Not all the criteria carry an equal importance; a weighting is therefore applied to each of the criteria. The highest weighted criterion being customer satisfaction. Although the weightings were originally devised for the purpose of the European Quality Award, by using the weightings you have the advantage of being able to compare scores from assessments with the "Best In Europe"

The Enabler criteria (Leadership, Policy & Strategy, People Management, Resources and Processes) are scored on the excellence of the approach and the deployment of the approach. A score between 0 and 100 is then applied to each criterion part and multiplied by the relevant weighting.

To score highly in these criterion organisations need to provide evidence of soundly based systematic approaches and prevention based systems, with clear review cycles producing improved business effectiveness. The approach should be integrated into normal operations and applied to a high proportion of it's possible potential.

The Results criteria are scored on the excellence of results and the scope of those results. Although calculated differently, like the Enabler criteria, a score between 0 and 100 is applied to each criterion part and multiplied by the appropriate weighting.

To score highly in these criteria an organisation needs to demonstrate strong positive improvement trends over at least three years, with favourable comparisons with own targets, competitors and best in class organisations. The results need to address most relevant areas and activities and, most importantly, needs to demonstrate that the results are caused by the activities being undertaken in the Enabler criteria.

#### **4.6 BENEFITS OF THE BUSINESS EXCELLENCE MODEL**

Recent surveys on the subject of Self-Assessment have found a number of benefits that can be gained from using such a process. An EFQM sponsored study (EFQM, 1997) identified the following highest scoring benefits:

- it identified areas for improvement
- it provided a focus for continuous improvement
- it led to increases in customer satisfaction.

Other benefits included an increase in “top team” and organisational awareness of TQM as well as increased knowledge and focus on business process as the means to improving customer satisfaction. Of interest was the finding that almost 75% of user organisations have established the link between the enabler criteria and business results, linking the particular approaches to TQM to the end results.

Operational benefits to the use of Self Assessment include the ability to compare individual internal business units on an objective set of criteria and develop a baseline assessment of the organisation as a whole. Most organisations (80%) used Self Assessment on an annual cycle and it appeared that organisations were not particularly interested in using Self Assessment as a benchmark against other external organisations.

#### **4.7 THE EFQM MODEL FOR BUSINESS EXCELLENCE AND FINANCIAL SERVICES**

According to Wilkinson, McCabe and Knights (1996), almost 90% of the Financial Services organisations they polled had adopted a quality initiative of some sort. A KPMG Consulting study into TQM in the UK Financial Services industry (1992) identified 80% of companies who had a Total Quality initiative running. According to the Wilkinson study the main reason for the adoption of Total Quality programmes was the competitive pressure to improve service quality.

There would appear to be widespread use of the EFQM Model for Business Excellence within the Financial Services Sector in the UK. Midland Bank now use the Model after toying with the Baldrige model in the early 1990's while Lloyds (now merged with TSB) have only recently adopted the model at Business Unit level. National Westminster use the

EFQM Model for Business Excellence across the business and are preparing their Homeloans Operation for the British Quality Award in 1996.

Of all the Banks, the most advanced in the use of Self Assessment using the EFQM Model for Business Excellence is TSB. TSB began using the tool in 1992 and are recognised as a centre of expertise in its' use within the Service Sector as a whole. In excess of 200 separate Self Assessments at Business Unit and Departmental Unit have been completed since the first in January 1992. The key reason for the use and success of the EFQM Model for Business Excellence in all of these examples is the simple yet powerful way in which it links activities (enablers criteria) with success in business results (results).

In addition to the internal use of the model, two of TSB's business units entered the British Quality Award and the Scottish Quality Award in 1995 (Mortgage Express and TSB Homeloans respectively). Mortgage Express finished in the top three, while TSB Homeloans were runners-up to Rank Xerox Scotland in the other Award. In the corresponding awards in 1996, Mortgage Express won the British Quality Award and TSB Homeloans also won the Scottish Quality Award.

The British Quality Foundation has a Financial Services Special Interest Group which in January 1996 had 65 Financial Services members. As well as the traditional Banks, Building Societies and Insurance organisations a number of new competitors such as RAC, Gan and the AA are also involved in the selling of Financial Services.

A key finding of the Wilkinson study was the fact that 51% of the companies claimed that one of their major aims was to "support organisational culture change." This tends to

contrast with another key aspect of the whole study since of 65% of all of the organisations that they polled had experienced major implementation problems with organisational cultures resistant to change. Paradoxically, some 45% of the overall sample claimed that they had made improvements to their organisational cultures as a direct result of their quality improvement activities.

#### **4.8 CONCLUSIONS**

The EFQM Model for Business Excellence appears to have gained tremendous popularity with organisations, large and small, in the public and private sectors within Europe. It serves as a template for business excellence and it is a way to make Quality activities more business focused, linking enabling activities (how things are done) to results (what was achieved). It also emphasises the need for good customer service, both internally and externally, and the continuous management of processes.

Through the process of self-assessments the ownership of the quality improvement process should be passed to line management and thus help to achieve a consensus of the direction of the quality processes at the local level. The conclusion that many organisations draw from self assessment using the EFQM Model for Business Excellence is that it provides an effective framework for relating quality improvement to business goals and to determine how improvement opportunities ought be undertaken.

The model also promotes the use of a wide range of Total Quality Tools and Techniques to aid the continuous improvement process within organisations. This research has identified three that were very important to the working of the model, and tested them in different

situations to assess their suitability as tools for quality improvement. The three tools identified were Cost of Quality, Process Redesign and Benchmarking. These are discussed elsewhere in this thesis.

# **CHAPTER 5**

## **THE COST OF QUALITY**

## 5.1 INTRODUCTION

Although the economic significance of Quality and Quality control had been recognised since the work of Shewhart (1931) at Bell Labs in the 1930's, no published work on the cost of quality appeared until the early 1950's. During the 1950's and early 1960's Juran (1951) and Feigenbaum (1961) wrote books on quality control which included chapters on something they termed Quality Costs. In addition to this, Masser (1957) wrote a seminal article on Quality Costs and the Quality manager.

Despite the depth of work, the use of Quality Costs in industry remained a neglected one until the 1970's and the work of Grocock (1974), the ASQC (1974) and Crosby (1979). Since then a large number of Quality cost books have been published, both in the UK and the United States. In the UK, the most important figures were Dale and Plunkett (1991) who jointly wrote the book "Quality Costing". The British Standards Institute published BS6143 Part2 (BSI, 1990) and Part 1(BSI, 1992), replacing the old part 1 standard.

In this chapter, the literature on the various approaches to quality cost models will be closely examined, especially the Prevention-Appraisal-Failure model and the Process Cost Model technique. This examination of the field of Quality Costs will include in detail the work of two main experts in the Quality cost field, namely Juran and Crosby. Details of Quality Cost in the Financial Services industry sectors will be included.

## 5.2 DEFINITIONS OF QUALITY COSTS

BS 6143 Part 2 (1990, p 3) defined quality costs as "*the costs in ensuring and assuring quality as well as loss incurred when quality is not achieved.*" Feigenbaum (1991) defined quality costs as:

*"Those costs associated with the definition, creation, and control of quality as well as the evaluation and feedback of conformance with quality, reliability, and safety requirements, and those costs associated with the consequences of failure to meet the requirements both within the factory and in the hands of customers." (p 110)*

The American Society for Quality Control (ASQC) takes a more generalist approach, recognising that quality costs are as applicable to services as they are to manufacturing.

Their definition states that quality costs are:

*"The costs specifically associated with the achievement or non-achievement of product or service quality - including all product or service requirements established by the company and its contracts with customers and society." (Campanella, 1990)*

While the definitions differ in their application to services and manufacturing, they have two common themes; firstly, there is a cost associated with the conformance to quality requirements, and secondly, there is a cost associated with non-conformance to those quality requirements.

### **5.3 QUALITY COST MODELS**

Quality Costs are important as they are the only way to describe quality from a financial perspective. At the outset, there were two important factors to remember concerning Quality Costs: failures, however caused, reduce profits and preventive quality control activities and the appraisal of quality standards cost money to operate.

It has already been stated that quality costs consist of conformance costs and non conformance costs. The fundamental factor which lies behind the theory of cost of quality is that increases in true prevention costs lead to decreases in failure costs and subsequently appraisal costs. This has lent credence to a number of 'economic cost of quality models' which claim that the lowest point of total quality costs was some midpoint between very

poor quality and very good quality. The inference is that beyond this lowest cost point, returns on prevention costs diminish.

### 5.3.1 The Prevention-Appraisal-Failure Model

The Prevention-Appraisal-Failure model appears to be the only widely recognised methodology for the categorisation of Quality Costs. It is endorsed by the British Standards Institution and the American Society for Quality Control (ASQC) and is the scheme preferred by Juran and Feigenbaum. The model consists of three cost categories: Prevention, Appraisal and Failure. The category of Failure breaks down further into internal and external failure costs. Prevention and Appraisal costs combine to form the cost of conformance while Internal and External Failure Costs form the cost of non-conformance.

**Prevention Costs** - Prevention costs are *"the cost of any action taken to investigate, prevent or reduce the risk of non-conformity or defect."* (BSI, 1990, p 3) They are incurred with the objective of reducing all other categories of Quality Costs.

**Appraisal Costs** - These are the costs associated with *"evaluating the achievement of quality requirements including e.g. the cost of verification and control performed at any stage of the quality loop."* (BSI, 1990, p 3) Simply, appraisal costs are those incurred to discover the condition of the product the first time through the process.

**Internal Failure Costs** - Internal Failure Costs arise *"within an organisation due to non-conformities or defects at any stage of the quality loop such as costs of scrap, rework, retest, reinspection and redesign."*(BSI, 1990, p 3)

**External Failure Costs** - These are the costs that *"arise after delivery to a customer or user due to non-conformities or defects which may include the cost of claims against warranty, replacement and consequential losses and evaluation of penalties incurred."* (BSI 1990, p 3)

While these definitions are apparently more suited to a manufacturing environment, it is important to remember that some of the cost categories are applicable to service organisations. Even within the manufacturing environment, there is often the need to change the cost categories to tailor the language to that particular organisation. This was especially true, according to Keogh, Brown and McGoldrick (1996), for senior management to accept the ideas of quality costs.

The main advantage of the P-A-F model is that it is relatively easy to collect the cost elements. The process is aided by the fact that there is a large amount of written information available on the subject, both in the application of the model and guides to quality cost collection. It also has the advantage that some of the data may already be collected in some form by the finance department. A scrap log is an example of data that is sometimes invaluable when collecting quality costs within an organisation.

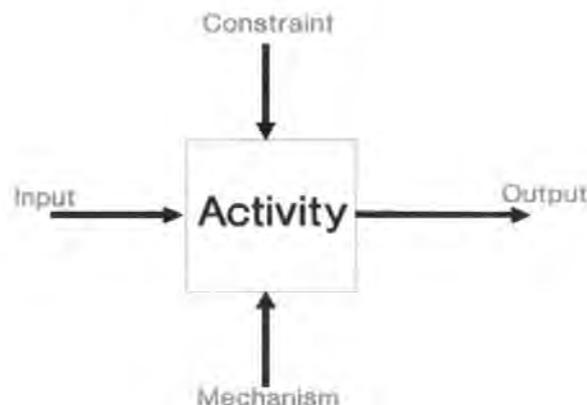
### 5.3.2 The Process Cost Model

A process can be defined as *"any activity that transforms inputs into outputs, utilising resources and being subject to particular controls."* (BSI, 1992, p. 3) The cost of conformance is defined in BS6143, 1992, Part 1 as *"the intrinsic cost of providing products or services to declared standards by a given, specified process in a full effective manner."*

(BSI, 1992, p. 3) This does not imply that the process is efficient nor even necessary, but that the process, operating within specified procedures, cannot be achieved at lower cost.

The cost of non-conformance is *"the cost of wasted time, materials and capacity (resources) associated with a process in the receipt, production, despatch & correction of unsatisfactory goods and services."* (BSI, 1992, p. 3) Each business processes has inputs and outputs, both desirable and undesirable: the desired inputs come from "suppliers" and the desired outputs are delivered to "customers". Suppliers and customers may be internal or external to the organisation. The process cost elements are recorded under the headings of people, equipment, materials and environment.

The process model requires the modelling to be carried out using the ICAM definition method, IDEFo. IDEFo was a development of the Integrated Computer Aided Manufacturing (ICAM) programme in the 1970's (CAM-I, 1980). The IDEFo diagram is based on a diagonal row of boxes (any number between 3 and 6) connected by a network of arrows. The boxes represent activities and are called ICOM nodes (Inputs, Constraints, Outputs, Mechanisms). Arrows represent the information or objects used, produced required by activities. An ICOM node is pictured in Figure 5.1 below.



**Figure 5.1. ICOM Node.**

The process cost model approach provides a structured representation of the functions of a process and the flow paths of information and objects which interrelate those functions. It exposes one new level of detail at a time, using functional decomposition and if a process is detailed the complexities of the model can be exaggerated. The methodology is recent and the extent of its use has not been fully examined. However, the methodology is important as it encourages people to consider in more detail the processes being carried out within the organisation. Using the IDEFo methodology and the Process Cost Modelling helps to facilitate this. The method also has the advantage that it focuses on the aims and objectives of each department and allows the clear identification of process owners who therefore "own" the quality costs. This is particularly useful when determining who should be responsible for the resulting improvement efforts.

#### **5.4 QUALITY COSTS IN THE PAYROLL PROCESS OF TSB BANK PLC**

In TSB a Total Quality Programme was started in 1991. An integral part of this Quality programme was the collection and quantification of the Price of Non-Conformance (or PONC). A detailed database of all cost savings was used to track the improvements and the benefits of the Quality programme. At the local level, however, especially in functions such as Human Resources, Finance and Marketing, Cost of Quality was not used widely as a tool for process quality improvement.

##### **5.4.1 Introduction to the Payroll Process**

The payroll process at TSB had been presenting problems over a number of years. This was due mainly to the geography of the old TSB areas. There were originally six payroll sites, each site dealing with a separate payroll population and different processes. This

meant that each payroll site had its own characteristics and distinctive operating problems. There was a merging of the Branch Network and Head Office payrolls which reduced the number of payroll sites to five.

The Payroll process was identified within the HR function as one process that touched parts of many other important processes. As a means of identifying opportunities for improving the payroll process, it was essential to identify the non value-added content of the work carried out. One of the ways that this could have been carried out was to use Cost of Quality (or PONC at TSB) techniques. This allowed those parts of the process that are non value-added to be costed and further analysed to determine how their costs could be reduced. This exercise used the P-A-F model to describe the quality cost elements in the process. There were two reasons for this: firstly the author was familiar with this categorisation of the costs and secondly because the model shows the relationship between time and resources used on prevention and resources spent on failure activities.

The P-A-F model was useful because it compared the cost of preventing failures with the cost of the failures themselves. These elements are defined as follows. Quality costs were collected in the Payroll process using two methods. The first involved going to the payroll department in Victoria House and determining what each area spent their time doing. The second method involved using the model of work developed for a quality cost reduction exercise. Other payroll sites regarded this as the best determination of the work that they carried out, since not all payroll areas did exactly the same kind of payroll processing.

#### 5.4.2 Total Quality Costs

The cost of Failure, based solely on the salary costs due to rework, was over £127K. Appraisal/audit costs contributed another £55.1K to the costs. Prevention costs (based on time given over to training and quality improvement) were approximately £19K. It was recognised that each payroll process was different, so this required analysis of each of the sites. The non value-added costs at each site varied widely. There were a number of measures which were used to show the level of Quality costs. The analysis for each site is shown in Appendix 4.

It was very important to measure the performance of the whole process as well as each individual process to give a holistic view of the payroll process. This would allow each payroll site to compare their performance against the average for the whole process. It also allowed an identification of where the process operated well and where the process operated below standard. It was not a judgement but to identify where and how improvements could be implemented.

The total Failure costs were 19.6% of salary costs. In addition, fewer mistakes in the process would lead to fewer mistakes in the payroll output and reduce the need for as much Audit activity.

The greatest proportion of operating costs in a service process is attributed to people, so a reduction in non-conformance costs means a reduction in time worked and hence in personnel. This was particularly true in the case of the payroll system. A large proportion of time had been built into the system, over a long period, for reworking of mistakes and

other non value-added activities such as Query resolution. A positive strategy would improve the process overall.

The structure was also top heavy, especially in Head Office. There seemed to be a degree of repetition in the work of the supervisors and the managers. The main role of supervisors and managers seemed to be to audit the input of staff. While the cost of quality analysis has shown a large amount of non value-added activities there is still a lot of good work being carried out in the payroll department. However, with the development of payroll outsourcing as a serious option there was a great motivation to implement changes.

## **5.5 CONCLUSIONS**

Without doubt the success of the collection of Quality Costs depends on more than a process that was logical and stepwise. The collection of Quality Costs must also include analysis of other aspects of the process in order to be truly successful. In the case of the Payroll process some success was gained through the identification of the various cost elements. Non-value added costs were very high, and there was a lot of audit activity to check and recheck that the information that was input was correct.

In the end the payroll process was outsourced to a facilities management company along with all of the staff who worked there at the time. The lessons learned from this initial research project were important for the author. Involving the staff in the process to a greater extent than happened might have cleared the suspicions that surrounded the project and led to much greater improvements to the process. Overall this project provided an extremely useful learning experience that helped the author in the analysis and research of

the other case studies, and the development of key research themes built on later in this research. A review of the case study is contained in Chapter 8.

# **CHAPTER 6**

## **BUSINESS PROCESS REENGINEERING**

## 6.1 INTRODUCTION

If Total Quality Management was seen as the competitive and strategic 'answer' of the 1980's, it would be true to conclude from the activity that Business Process Reengineering (BPR) has usurped it as the management tool of the 1990's. Organisations from every aspect of manufacturing and service sector claim to be involved in major reengineering processes, fundamentally redesigning the work processes and structures of their organisations. These companies include organisations as diverse as TSB Bank, Rank Xerox, BT, Reuters and Cigna UK. Most of the major banks and building societies in the UK are claiming to be carrying out BPR projects. (MABS Group, 1996).

The term reengineering was introduced in Hammer's seminal article (1990) and was positioned as being different from those usual prescriptions for corporate malaise - restructuring and downsizing, because it attempted to address fundamental performance deficiencies in the core business processes of the organisation. BPR is rooted in the belief that businesses can no longer operate theories based on fragmentation and functionalism and the specialisation of work is fundamentally wrong in the context of today's organisations.

Over the last thirty years, there have been increases in the development and dissemination of Business tools and techniques. Pascale (1990) examined the ebbs and flows of Business Fads since the 1960's. From decision trees and Theory X and Theory Y in the 1960's to T-Group training and Management by Objectives in the 1970's to Zero Based Budgeting and "Excellence" in the 1980's, business fads have passed into management history. Unlike all of these tools and techniques, Hammer claims that Business Process Reengineering strives to

*"break away from the old rules about how we organise and conduct business."* (Hammer, 1990, p )

The objective was to examine the BPR literature and to report on a process redesign exercise that was carried out within the HR function of TSB Bank. To understand the BPR paradigm it is important to examine the concept of business processes as well as the different viewpoints that underpin the tool. The chapter will also outline a number of key findings from visits to manufacturing and service companies who are currently undertaking large BPR projects. The redesign exercise in the HR function was undertaken on an important cross functional process which had provided a large number of problems to other functions and processes. The objective was to test a five stage methodology that the author developed to carry out redesign activities.

## **6.2 BUSINESS PROCESS REENGINEERING**

In the 1980's service companies in the US, on average, doubled investment in technology per worker. (Krohe, 1993) Productivity however in the same sector was negligible, with a total growth rate for the 1980's of only 0.1% per year. It is this productivity paradox which has to a great extent promoted the radical reengineering as the answer to this productivity malaise. The message from Hammer and Champy (1993) is that speeding up present process with computers is a waste since they have not yielded the dramatic improvements companies need. What is required is a fundamental rethink of the way that organisations do business. This is what Hammer calls the neutron bomb approach - *"We'll leave the walls standing and we'll nuke everything on the inside."* (Vogl, 1993, p 29). The old paradigm of process focused on

efficiency and control while the new paradigm focuses on innovation and speed, service and quality. Reengineering is an all or nothing approach to the competitive transformation of organisations and cannot be achieved in small incremental Kaizen-type improvements.

### 6.2.1 BPR CONSTRUCTS

Apart from the BRP message from Hammer and Champy, a number of 'gurus' have come to attention - Harrington (1992) (Business Process Improvement), Kaplan and Murdock(1991) (Core Process Redesign) and Davenport and Short (1990) (Business Process Redesign) have all added their distinctive angles to this emergent discipline. Each has their own views on what reengineering is and how it is achieved. A construct for analysing the different views on BPR recognises an analysis of:

- the characteristics of the degree of change
- the scope of the intervention
- the contribution of IT to the BPR project.

It is important to differentiate processed focused techniques from the traditional Organisation and Methods (O&M) approaches. According to Brown, Maull and Cliffe (1994)

*“The main difference is that O&M is systematic and focuses on the personal and group level rather than the whole process as the unit of analysis.” (p 79)*

According to Hitchin (1992) O&M is not systemic i.e. of or affecting a whole system. This lack of a whole process viewpoint differentiates it from the holistic viewpoint that exists within a BPR intervention.

Davenport (1992) accepted the radical nature of BPR but regards the combination of BPR with an incremental improvement effort such as TQM as the most appropriate strategy for many organisations. Before radically redesigning process, an organisation should attempt to stabilise it through the use of TQM process analysis techniques. In addition, Davenport and Short emphasised the use of information technology in redesigning business processes. They viewed IT and BPR as having a recursive relationship in which each is the key to the other. Thinking about IT should be in terms of how it can support redesigned processes, while business processes should be viewed in terms of the capabilities information technology can provide. (Davenport and Short, 1990)

Watts (1993) identified a framework which had been used successfully by a number of organisations, with the vision of change brought about through the leverage of Information Technology. This approach to BPR, however, identifies it with traditional systems analysis and CASE methods. The focus is on the systems development life-cycle with the development of databases and workflow management systems to support the redesigned processes. Hammer and Champy recognise the positive contribution of Information Technology but see it as an enabler of a new process through redesign, rather than the focus of the analysis and design.

In contrast to the last viewpoint, Harrington takes a more incremental and less IT dominated view of BPR. His preference is for Business Process Improvement which is led by the Quality processes within the organisation and which systematically helps the organisation to make significant advances in the way in which its business processes operate. (Harrington, 1990) This approach focuses on the whole process and does not merely look at removing waste from the process. It also allows the development of a synergy with Quality Improvement processes that are already operating.

This development of a process view of an organisation is different from other approaches to management. It has the effect of changing management behaviour in two main respects:

- It requires a horizontal, rather than a vertical (and functional) view of the organisation
- It implies a complete transformation in how the business does what it does

### **6.3 BUSINESS PROCESSES**

Davenport and Short (1990) defined a business process as "*the logical organisation of people, materials, energy, equipment and procedures into work activities designed to produce a specific end result.*" These processes have two important characteristics:

- They have customers (external or internal) i.e. they have defined business outcomes
- They cross organisational boundaries and are independent of formal organisational structures

The ICL MIT Briefing paper on Management into the 90's (1990) defines a business process as *"a sequence of interdependent tasks and functions, which together produce outcomes that contribute to the (business) success of the organisation."* (p 7) In addition, a process must satisfy one or more of the stakeholders. Hammer and Champy (1993) simply define a process as *"a collection of activities that take one or more kinds of input and creates an output that is of value to the customer."* (p 35)

The CIM-OSA structure for the high level definition of organisational processes is an effective generic construct for understanding how processes operate across an organisation. Business processes are sub-divided into the following three areas:

- Manage processes - concerned with direction setting, business planning and control
- Operate processes - processes directly relating to satisfying customer requirements (often called customer facing processes (CFP's) or core processes)
- Support processes - these processes act in support of the above two sets of processes including information systems provision, management of personnel, etc.

Appendix 5 shows a CIM-OSA structure for a typical HR department.

A point of caution is provided by Arnstein and Dickerman who remind that processes are conceptual constructions and as such, do not exist as clearly defined entities in nature. It is the modeller who must decide where a process starts and finishes and the modeller may change the description at any time. What really matters is defining the conceptual framework that is most useful to achieving the modelling objectives.

## 6.4 A PROPOSED BPR METHODOLOGY

Many companies and consultancies have proposed their own BPR methodology, with accompanying tools and techniques. TSB Bank has proposed their own five stage approach to Business Process Reengineering, one which attempts to marry strong analytical skills with the need to think creatively and strategically. This five stage approach formed the basis of the redesign exercise described in 3.5.

Phase 1 involves the development of strategy, vision, critical success factors and stretch goals. This stage is regarded as the crucial phase in the BPR cycle. It is important to develop a vision of what the processes should look like for two reasons: it provides a definitive blueprint for where an organisation wants to be, and it also defines the amount of analysis that must be undertaken in Stage 3. Without a vision, there is great danger in over analysis which can result in "analysis paralysis". A methodology beginning with a strategy will tend to be more radical than one which begins with an analysis phase.

In the next phase, phase 2, key processes and performance measures are identified. The use of a model such as the CIM-OSA structure is one way to begin to understand the processes that require to be defined and mapped. Whatever the method chosen at this stage, the key task must be to define the business processes. Davenport (1992) believed that processes which are clearly structured are amenable to measurement in a number of ways. The definition of performance measurements and factors are crucial to overall process performance. In general, these focus on time, cost and quality metrics but there are also measures relating to consistency, variability, and defect rates. After identifying and measuring the key performance

measures it is then possible to benchmark these against a variety of organisations, if applicable.

Phase 3 involves the analysis of existing processes including process modelling. There is a marked disagreement amongst practitioners and academics as to the focus of this phase. Hammer (1990) advocates the "clean sheet of paper" approach, forgetting about existing processes and structures and reinventing the process in a totally new form. This is often too radical for organisations who rely on the analysis phase to uncover the feasibility of various redesign options. In many cases organisations rely on incremental improvements in this phase to justify the initial investment, while developing more radical, longer-term systems solutions.

Any modelling tool used in this phase must convey understanding and form the basis for communication among the analysis team. There are many software packages and tools available for such tasks. Some have developed from specific CASE tools while others are derived from basic flowcharting. Popular modelling tools include Role Activity Diagrams, IDEFo and flowcharting. According to Maull, Childe, Bennett and Weaver (1995) some requirements of a modelling tool are:

- It should be simple and capable of modelling processes
- It should include a structured set of guidelines
- It should show why an activity is carried out
- It should identify who carries out the activity
- It should be capable of integrating with the redesign phase

In Phase 4 the redesign options for the process are developed and implementation plans are drawn up. According to Rummler and Brache (1991) a BPR methodology can be used to achieve one of three possible outcomes: it can be used to fix a broken process (incremental improvement), it can be used to redesign an existing process (radical improvement), or it can be used to design a new process (clean sheet of paper). Davenport (1992) presents the view that this stage is essentially one of creativity and the redesign team must address all aspects of the change - IT systems, HR issues, Management, Organisational Structure and Culture. It is the contention of the author, that many redesign programmes fail to adequately address more than one or two of these areas. The case study that will be examined will demonstrate how difficult it is to concentrate on all of the issues.

Phase 5 includes the implementation of process redesigns and the continuous improvement of the processes post redesign. This is the stage about which there is least guidance in the literature - how to turn the redesign developed in the previous stage into operational reality. Most methodologies available regard this as one which is company specific and therefore only give an outline as to their activities within the implementation phase. In many ways there are interesting parallels between the 70-80% reported failure rates for Business Process Redesign projects and for TQM.

## **6.5 PROCESS REDESIGN IN COMPENSATION AND BENEFITS**

The process that was redesigned was one which had been giving the Human Resource Function a lot of problems over a number of years. The Managers Pay review covered seven separate departments, each of which carried out part of the review and served a population of

over 1,000 managers. The process originated within the Compensation and Benefits department which, while setting policy, did not actually own the process.

It was decided to involve the author in an intervention to facilitate a team to radically improve the process. After the initial stages of the client/actor cycle and the agreement of a suitable definition of the project, the process team was formed from all of the departments who were actually involved in the process.

#### 6.5.1 DEVELOP STRATEGY

The key strategic element was the requirement for substantial time reductions for the workers in the process. The pressure of their work internally had presented difficulties in providing resources to operate the pay process. Their departmental heads had confirmed that the people would be spending less time on the process, whether the process changed or not. Thus the requirement for time reduction was crucial.

This time reduction requirement also led to a strategy to attempt to reduce the variability of personal benefits and contracts across the TSB group. As we shall see, this proved to be the more difficult of the two strategies.

#### 6.5.2 IDENTIFY KEY PROCESSES

There was a mapping exercise carried out within the HR function to identify the key processes and highlighted areas where substantial improvements could be made. One area where improvements were required was in the repeating processes involving the Compensation and

Benefits department. After a particularly difficult operation of the process it was decided to pilot an improvement project in this area.

To help focus the team on the process, it was decided to complete a Process Model Worksheet, in order to draw a boundary around the process and aid in gaining a full understanding of the process scope i.e. what was relevant and what was not. This was important for the team because it defined exactly the unit of analysis and prevented any misunderstandings about what might or might not have been a part of the overall Pay Review process.

For the particular process that was the focus of the intervention there were a number of key performance indicators that were identified by the improvement team. The three key process performance measures were:

- Timing
- Accuracy
- Completeness of Forms

These formed the basis of developing the analysis of the whole process.

### 6.5.3 ANALYSE PROCESSES

The Analysis phase consisted of four phases - Mapping Processes, Measuring Processes, Brainstorming Problems and Grouping Problems. The mapping of the processes was the most successful of all the activities. A group workshop enabled the process to be fully scoped and

understood by all participants and then to be mapped in great detail. The initial map was then transformed into a Deployment Flowchart to demonstrate the number of hand-offs in the process and also IDEFo maps for the benefit of the author.

A list of over 20 major problems were identified with the process. Fortunately, these problems could be grouped into six categories using affinity diagrams. The six problem areas were: Changes in details, Communications, Ownership of Problems, Procedures, Technology Problems and Time Constraints

#### 6.5.4 DEVELOP REDESIGN

There were two key phases in the development of the redesign - Imagineering and Migration Plan development. Imagineering (ODI Inc, 1993) is a technique designed to stimulate radical and creative thinking in the development of redesign solutions. Each team member was asked to imagine that they were in complete control and could change anything that they wanted - what would they do? The best suggestions were then put forward as a basis for the redesign. The ideas put forward were used to redraw the process flowchart. The new process was one which everyone had helped to develop and could easily agree the main elements. The redrawn process was then further developed to produce a workable plan for its implementation.

The migration plan set out clearly the key activities that had to be carried out, the timescales for implementing the activities and a routemap for the eventual process implementation. This document was crucial to the project because it got all stakeholders involved and agreed upon the key actions that had to be undertaken.

### 6.5.5 IMPLEMENT REDESIGN

The implementation phase did not in the end follow the migration. The Compensation and Benefits Manager left the company before the end of the project and one of the Senior Managers who ran part of the process did not agree with the proposed redesign (despite the support of everyone else). The process did finally get implemented 4 months after the schedule -in time for the process to operate that years benefits process.

The team involved in this process also ran a similar process annually for all TSB staff. The participants redesigned this process themselves, using the same tools, techniques and process as had been used on the original process. The transfer of skills in this areas was an important part of the whole process.

## **6.6 CONCLUSIONS**

Over the course of the three years of this research Reengineering has apparently fallen out of favour with organisations. The focus on processes, however, has not. The process that was the focus of the intervention was one which had been giving the Human Resource Function a lot of problems over a number of years. Like many process in organisations, it covered a large number of separate departments, had different standards and procedures at each stage and departments rarely communicated process issues to each other. In addition, the process did not actually have a process owner (someone who is the focal point for managing all cross-functional process issues).

The intervention process did gather a lot of information in a very structured way from the key participants in the process using the five step process that was developed (develop strategy, identify processes, analyse, redesign, implement). The information collected was mainly on cost, time and quality data from the process, as well as detailed maps of the process itself. This helped with an understanding of the operation of the process but was focused on the process as the unit of analysis.

There was a concern by the author that something more was required from the data collection process, and the five step methodology was not providing all of the information required. A detailed review of the BPR case study is contained within Chapter 8.

# **CHAPTER 7**

## **BENCHMARKING**

## 7.1 INTRODUCTION

According to the Collins Modern English Dictionary, a benchmark is either a mark on a stone post or other permanent feature, used as a reference point in surveying, or a criterion by which to measure something. Benchmarking is now synonymous with the use of a process which helps a company to learn its own strengths and weaknesses and those of other industrial leaders and to incorporate the best practices into its own operations.

Kearns, CEO of Xerox Corporation, the company that invented Benchmarking, defined the activity as "*the continuous process of measuring products, services and practices against the toughest competitors or those companies recognised as industry leaders.*" (Camp, 1989, p 10) It is as applicable to service organisations as it is to manufacturers, and service organisations are now applying it to their competitive advantage, including leading companies in the Financial Services sector.

A number of authors (Grayson, 1992, Collier, 1994) claim that there have been three principal drivers in the popularity of Benchmarking. These are:

- Global Competition
- Breakthrough Improvements
- Quality Awards

Global Competition has become a critical factor in Western European and the US decline in world markets. Many organisations believe that they must match the best practices of competitors or they will not survive. Large numbers of companies are now realising how far behind they actually are and the scale of the gaps in many areas of business. While

there is a need for incremental improvement this is now insufficient. The scale of the gaps mean that increases must be very great just to catch up in the marketplace. This was demonstrated by the plight of Xerox in the early 1980's, a company who had lost huge market share in three or four years. In the US, between 300 and 510 out of the 1000 points available in the Malcolm Baldrige National Quality Award require applicants to demonstrate competitive analysis and Benchmarking.

The aims of this chapter are to define Benchmarking, to examine the successful applications of Benchmarking and to analyse the various approaches to Benchmarking. There will be a brief analysis of Benchmarking in Financial Services in the UK. The chapter will also examine a benchmarking case study of the Group Strategic Development process in TSB, outlining the findings and lessons from the research carried out.

## **7.2 DEFINITIONS**

Camp's own definition of Benchmarking adds to Kearns describing it as:

*"...the search for industry best practices that lead to superior performance...In this regard it pursues dantotsu, the best of the best practices, best of class, or best of breed. (Camp, 1989, p12-13)*

Camp developed his work while working as a Business Analysis Manager in the US Marketing Group of Xerox Corporation.

Haim (1992) defined the phenomena of Benchmarking as *"the use of superior standards of practice against which to compare and improve one's own practices."* It can be based on the collaborative sharing of ideas and practices between two groups or companies or it can be one-sided (as in the case of reverse engineering of products).

Mitchell (1994) provided a more general definition of Benchmarking, believing it provides "*a rich basis for the development of new skills.*" These skills include:

- knowledge - from different environments
- motivation - a drive for continuous improvement
- learning - opportunities to apply new skills
- value - encourages groups and individuals to all pull in the same direction

There are a number of commonalities amongst the numerous definitions of Benchmarking and they can be distilled into a set of characteristics of a successful Benchmarking process.

These characteristics include the following:

1. Top management commitment is a prerequisite
2. It is a continuous process of measurement
3. You can measure against organisations who are your competitors or against those from other industries
4. Measurement is not as important as learning how other organisations do things (what and how)
5. A formal methodology is required for strategic Benchmarking projects
6. It will identify and focus opportunities for improvement
7. Implementing what you have learned is the key activity in the Benchmarking process

### **7.3 TYPES OF BENCHMARKING**

Camp (1989) and Grayson (1992) agree that there are four main types of formal Benchmarking, each depending upon who the Benchmark company is. Each type has its

own advantages and disadvantages but obviously a large, market leading company will have different needs to those of a smaller organisation. The four types of formal Benchmarking are:

- Internal Benchmarking is "*a comparison of your internal operations to other internal operations.*" (Hollings, 1992) This involves comparing site to site, department to department as well as country to country within the organisation. It is usually straightforward to arrange. It is relatively easy to obtain all the necessary information for a good comparison.
- Competitor Benchmarking involves "*comparing our own performance to that of our direct competitors.*" (Hollings, 1992, p 150). This competitor to competitor comparison is usually conducted through third party research. This is mainly due to the fact that competitors are unlikely to divulge in detail **what** they do and **how** they do it with their direct competitors.
- Functional Benchmarking is comparing an organisation, not just against the competition, but "*against the best organisations operating in similar fields or performing similar activities.*" (Camp, quoted in Haim, 1992) The basis of functional Benchmarking is comparisons which carry out the same functional activities that you are interested in. Examples could be warehousing, procurement and catering. This is often the easiest approach to collecting data and often yields the most innovative practices.
- Generic Benchmarking is similar to functional Benchmarking, except that the emphasis is upon analysing and comparing business processes which are similar, across a whole

range of industries. Organisations should "*compare themselves against the best from all industry groups.*" (Hollings, 1992, p 150) There are a limited number of fundamental business processes in every organisation. This limited set of generic processes should be benchmarked to find industry best practice.

#### **7.4 THE BENEFITS OF BENCHMARKING**

When done correctly, there are a number of advantages to using Benchmarking to help organisations. It not only tells you how good you need to be, it also demonstrate the extent of the changes needed to get there. Benchmarking has the ability to speed up the rate of change and help to create breakthrough improvements. According to Grayson (1992) it also

- helps convince sceptics
- forces attention on Critical Success Factors
- quantifies gaps in performance
- causes higher goal setting
- leads to increases in productivity, quality, effectiveness, competitiveness and ultimately the bottom line

Benchmarking should also help to provide an understanding of the activities and processes which are key to the success of the business and satisfying the requirements of customers. There are also the advantage of setting objective performance standards for key activities to surpass world-class standards. It also alerts management to just what is possible in world-class organisations and provides an insight into how other companies are performing. Rover makes what it calls 'wow' visits to world class organisations - 'wow, look what they

are doing.' (Harland, 1994) This helps to open up people to the opportunities for improvement and helps to remove resistance to change by breaking the accepted wisdom as to what is possible.

According to Davies (1992) British Airways have been using Benchmarking for a number of years. They have identified a number of benefits that have accrued from using Benchmarking within their business process management activities. They are:

- a proper understanding of internal processes
- an acceptance of the need for change
- promotion of cross functional activities
- Improvements in performance
- Better customer service

#### 7.4.1 Benchmarking in Financial Services

Benchmarking has now become an important competitive weapon for a number of organisations in Financial Services in the UK. Much of this is due to the breaking down of traditional boundaries with Banks, Building Societies, Insurance companies and even High Street retailers all vying for the same markets. Recent European Foundation for Quality Management (EFQM) Benchmarking seminars have been attended by companies such as Sun Life, Leeds Permanent, NatWest and American Express. TSB Bank PLC developed their own Benchmarking capabilities, based on the Xerox model and believe that their major competitors such as Abbey National, Hong Kong and Shanghai Bank (owners of Midland Bank), National Westminster and others are particularly active in the field of Benchmarking.

Examples of Benchmarking in the Financial Services sector are numerous. Abbey National are Benchmarking customer service metrics against a number of other organisations and are active in internal Benchmarking of their mortgage application sites. TSB piloted their Benchmarking methodology on their Corrective Action Process which allows quality improvements to be raised and implemented.

## **7.5 WHERE DOES BENCHMARKING FIT?**

Benchmarking is an improvement tool that makes the fundamental assumption that you are willing to learn from others, and as such fits easily into most total quality management systems. Benchmarking is an essential part of both the EFQM Model for Business Excellence and the Malcolm Baldrige National Quality Award (MBNQA). The MBNQA has Section 2.2 Competitive Comparisons and Benchmarking and benchmarking is a required part of Section 3.1 Strategic Quality and Company Performance Planning Process and Section 7.6 Customer Satisfaction Comparisons. It is important to determine briefly the role of Benchmarking within both philosophies.

### 7.5.1 Benchmarking and Total Quality Management

Within Xerox Corporation, Competitive Benchmarking was only a part of the original Leadership Through Quality theme. It stood alongside basic statistical tools, problem solving tools and quality improvement as part of the training of all Xerox employees. Within DEC (Digital), Benchmarking is one of the four key parts to their TQM philosophy. (Evans and Lindsay, 1993)

Grayson (1992) suggested that it was imperative for Benchmarking and TQM to be linked. He believed that "*....Benchmarking, coupled with Total Quality Management, to be the only way that firms in the US and Europe can survive in global competition.*" (p139) A.T. Kearney and the TQM Magazine carried out a survey on TQM successes (AT Kearney, 1992). In it, company Group A were those who saw significant improvement in performance over the preceding twelve months in their TQM programme, while Group B did not see any significant improvements. The survey showed that Group A was twice as likely to have used Benchmarking than Group B.

### 7.5.2 Benchmarking and Business Process Reengineering

Benchmarking within the framework of Business Process Reengineering can spark major ideas and opportunities as well as helping to set performance goals at the outset of any reengineering programme. This is especially true if benchmark partners come from outside of the benchmarkers industry. The most valuable lessons that generate redesign opportunities, may often come from Benchmarking at the process level.

## **7.6 THE TSB GROUP STRATEGIC DEVELOPMENT PROCESS**

The researcher was charged with benchmarking the Strategic Planning process for the Group Strategy Department. The reason for the examination of the planning process was due to the criticisms that had come from a senior Bank Director. After much discussion a set of criteria were identified for researching and visiting companies. The criteria meant that focus should be given to companies who had changed their planning process and to identify the drivers of the change, identify how the companies made the changes and map the process that they created.

Desktop research identified a number of companies that had changed their planning processes. This initial research showed that a number of them had completely redesigned their process from a process run by the planning department to one that involved as many managers and staff as possible (often called policy deployment).

Throughout the benchmarking process it became more and more apparent that the companies that had changed their planning process had not done so at the level of process i.e. the concerns were not process driven. Rather, the understanding of these companies about what planning and strategy was, had fundamentally changed. Strategic Planning had changed from a control process to a process to use the ability of all staff in achieving desired goals. This was exemplified by the approach of Reebok UK. They originally had a process which produced a planning document that was seen by four people. They changed to a process where all of their 200+ staff could contribute to the planning cycle and suggest areas for improving service, profitability and cost competitiveness. The change was not process based, but a case of change in the beliefs and attitudes by the organisation about the nature and purpose of strategic planning.

#### 7.6.1 Benchmarking Survey Results

There were a number of points of best practice that emanated from the research. At the top level, where the strategic planning is carried out, there appeared to be an emphasis on three or four key business priorities, i.e. if you are successful at these, the organisation will be successful. The result of this was a strategic planning process that was efficient and effective and focused on delivering measurable business results in these key priority areas. There was also the need for a clear process to deploy the strategy throughout the organisation. Involving staff from the initial stages of the development of the strategy

provided buy-in from staff at all levels. It means a shift in attitude by many managers, but experience had shown that this was essential for employees to understand the strategy that had been developed.

Firstly, it was seen as important to use a wide selection of relevant information when forming policy and strategy. Most of the organisations examined input a wide range of information into their planning processes e.g. feedback from customers, suppliers, and employees and competitor information

There was also agreement that a systematic review of the planning process should be undertaken regularly, with a view to improving it. Areas to address included how the communication of the strategy and the understanding of the aims of the company at the "shopfloor" levels.

A number of the companies examined had implemented major changes to their strategic planning processes. The old processes were, on the whole, mechanistic, inflexible, functionally oriented and unable to cope with the complexities of the external environment. These companies moved to processes which were effective, encouraged cross-functional communications and focused on delivering business results in key priority areas. There was also the problem of the "department of strategy" approach - the Group Strategic Development department was seen as the originators of strategy which often led to a dislocation of strategy and operations across the organisation.

It was also made clear by some of the companies that unambiguous criteria needed to be developed to review the vision and the mission of the organisation. This was assessed to be needed every three years at the most.

In the end changes were made to the process. However, they were not the kind of changes that the benchmarking findings had indicated was common among those companies that had implemented changes to their planning processes. The attitudes and strongly held beliefs of those involved in the process at TSB did not recognise the need for fundamental attitude changes. The unit of change for them was still the process and the tools of the planning department, rather than the more fundamental kind of change that other companies had adopted.

## **7.7 CONCLUSIONS**

Rover Group have learned from Benchmarking that:

*“Progress is conditional upon the culture being right - in terms of the desire for improvement, the willingness to learn from others, and the commitment to implement changes, at all levels of the company.”* (Harland, 1994)

In Rover, as in other companies, benchmarking is accepted as another tool for quality improvement. However, the culture of these organisations shows a greater willingness to learn and improve as the way we do things round here. Clearly, challenging perceived wisdom and being prepared to learn are part of the challenge of continuous improvement. In the case of this benchmarking research, these qualities were not well understood. The focus had not been on the process of strategic planning, the mechanics of the process, and the associated tools and techniques. Benchmarking more than many other tools requires such changes to be grasped.

It was not surprising that the research work carried out on the Strategic Planning process preceded a major review of the whole research, its content, theoretical basis and its course. The research on this case study was partly the motivation for the examination of where the research “was going.” The lessons from the Cost of Quality, Process Management and Benchmarking case studies served to illustrate to the author the difficulties in implementing lasting change. A review was carried out at the completion of the three case studies, and this led the research into the area of understanding the role of Organisational Culture and Organisational Climate in the change process. This could provide a means of understanding more fully and broadly the current situation before attempting to implement change. The review of the three case studies is more fully investigated in Chapter 8.

# **CHAPTER 8**

## **CASE STUDY REVIEW AND THE PCOC CULTURE AND CLIMATE MODEL**

## **8.1 INTRODUCTION**

In the preceding three chapters the researcher described attempts to implement quality improvements through the use of three different Quality tools and techniques, namely Cost of Quality, Business Process Reengineering and Benchmarking. The experience of implementing change through these case studies had a profound effect on the direction, content and, more importantly, led to adapting the nature of the research problem. This chapter will review each of the case studies discussed in Chapters 5, 6 and 7 and will provide an outline of the learning points and observations from each case study. The chapter will then link the case studies to the importance of understanding the culture of an organisation before attempting to implement change, showing how the lessons learned from the three case studies can be linked to the literature in this area.

The main objective of this chapter is to demonstrate how the lessons and issues raised through the three case studies as well (as the literature in this area) led to the development of the People-Customer-Organisation-Culture (PCOC) model for understanding the culture and climate within an organisation. The development of the elements of the PCOC model will be outlined and each of the interrelated sub-elements will be analysed and discussed in detail. The subsequent development of the PCOC Environmental Questionnaire will be discussed in detail in Chapter 10. A more in-depth analysis of the literature in the area of organisational culture is contained in Chapter 9.

## **8.2 COST OF QUALITY RESEARCH**

This was the first project undertaken by the author as part of this research and the details of the case are contained in Chapter 5. The author had previously been involved in the

implementation of a quality cost system in a manufacturing organisation (Keogh, Brown and McGoldrick, 1996). The project undertaken in TSB was very different due to the numerous sites and underdeveloped appreciation of quality and service. A review of the project identified a number of areas that required improvement, beyond the scope of that identified by the collection of quality costs.

The results of the Staff Attitude Survey (see below) demonstrated that 60% of HR staff thought that their focus was not on customers. The staff did not fully understand the importance of customer-supplier relationship between them and local personnel offices and the impact that it had on poor process performance. In addition, they had a poor understanding of their processes and how their work processes related to those of other departments. For example, many Payroll staff complained that the high number of exceptions routines that they had to process each month, caused a number of quality problems. Investigation of this identified that local Personnel Offices were providing tailored compensation packages in contravention of Company policy. This led to the poor performance of the process and a high number of complaints. As the project progressed the payroll staff had numerous ideas for improving the process and reducing the number of complaints. Unfortunately, the management team responsible for managing the process did not actually seek ideas for improvement, nor did they involve the staff in identifying and solving problems with the running of the process.

Some of the issues identified as the project progressed had been identified a few months before the Quality Cost Project within the TSB Payroll department began. A Brandwide Staff Attitude Survey (TSB, 1993) had been carried out and the results in the Human Resources and Quality function (within which Payroll was the largest department) had shown a marked decrease in satisfaction in the three years that the survey had been

running. The results had shown that 60% of HR staff thought that the focus was not on customers (internal and external) and only 17% felt that enough training was given to staff to enable them to deal effectively with their customers.

In the same survey, only 11% of HR staff felt that their department had efficient working practices, and only 28% felt that their department practised process improvement. Also, 33% of staff were very dissatisfied with their job. Job security (60% dissatisfied), career development (54% dissatisfied) and recognition for good work (50% dissatisfied) were the main reasons for a lack of job satisfaction.

In addition to the above information, only 39% of HR staff felt that they were involved by their managers and supervisors, 25% felt that they had the opportunity to show initiative and 39% felt very strongly that their department did not make the best use of their skills. 84% of staff felt that HR managers were secretive and made decisions without consulting staff.

The problem with using Quality Costs as a means of process improvement was that it did not provide sufficient information about the process or the people who worked in it. To make improvement suggestions on the basis of the cost of waste does not necessarily address the root causes of poor process performance. As shown in Chapter 5, performance was hindered by far more than the process steps or the way in which the process worked. More fundamental human factors were involved and this started to turn the focus of the research onto organisational culture.

### 8.3 BUSINESS PROCESS REENGINEERING

The success of a BPR project may rest on the success of dealing with human factors. In many ways the human element of Business Process Reengineering is the hardest to address since it is intangible and involves fundamental changes in behaviours, attitudes and values - organisational culture. It is the belief of the author that human issues in BPR are encapsulated in four areas: the organisation before reengineering, the methodology and reengineering team focus, the actual change process and the links to the social aspects of change and the organisation post-reengineering. (Brown, 1995)

During the process workshops held to identify and map the key processes many of the staff saw the end-to-end process for the first time, expressing surprise at how the whole process fitted together. It was also clear that many staff were dissatisfied with their work.

According to Ginzberg (1979) one of the most important areas of any implementation methodology is the identification of the current situation. The critical concern of the author was that there was no proper way of diagnosing the state of the people issues before the start of the project, in terms of behaviours, values and attitudes. Mumford and Hendricks (1996) propose that the change process must mirror the prevailing values, and understanding them is crucial to successful management of changes brought about by process improvement projects.

It was clear that a number of the participating departments failed to understand the issues related to Service Delivery, in particular the different needs of the different clients within the process. In terms of communications, a number of the departments failed to tell others of schedule changes and priorities leading to a number of conflicts that affected the running

of the process. Each line personnel department was often required to work overtime, processing bonus proposals in a very short time without any warning. The sending department (Compensation and Benefits department) never gave advance notice of when bonus claims would be required.

The power structure was clearly centred around a few Senior Managers who caused problems to the project by their initial refusal to accept the redesign proposals. These issues led to poor relationships and hand-offs from one department to another. One department, Payroll, felt that they were left to “pick up the pieces” since they were the first port of call for angry managers who had not received the correct money.

The methodology followed focused the project on the process as the unit of analysis, with concomitant measurement of cost, time and quality. The methodology limited the information that could be gained by a more thorough diagnosis of the areas involved in the Compensation and Benefits process. According to Harvey (1994), BPR case studies have exposed major HR related issues such as teamworking, reward and motivation and organisational culture within the context of reengineering projects. The problem with this is that these issues are diagnosed post-hoc. A diagnosis of organisational culture and climate before the intervention should highlight and identify the key elements of the culture of the organisation, which could only increase the chances of success for such projects.

#### **8.4 BENCHMARKING**

The benchmarking activity was carried out over a 10 week period and involved visits to four organisations (one of whom was part of a consortium who were benchmarking the

strategic planning process and provided information on an additional five organisations). Desktop research was also used. The companies that had changed their planning processes had all focused on the need to widen participation in the whole planning cycle, rather than focusing on just on the tools and techniques within the process.

There were a number of ways in which the organisations visited and researched had made changes to their planning processes. These are summarised in Table 1 below.

<b>FROM</b>	----->	<b>TO</b>
Limited staff Participation	----->	Encourage involvement of as many staff as possible
Organisational alignment not an issue	----->	Important to have all staff bought in to the strategy process
No need to communicate strategy to staff	----->	Essential to communicate as thoroughly as possible to all staff using varied media
Power Structure centralised	----->	Power devolved to business units

**Table 8.1. Changes in Attitude to The Planning Process**

The changes that needed to be made to the planning processes were not in the process but in attitude, especially in those of the senior managers in the organisation and the planning department. In the companies visited many senior managers had previously regarded the process as “theirs” and in one particular company the staff never knew what the strategy was, because the senior managers kept the only four copies of the strategic plan themselves. The need to utilise fully the creativity and energy of the staff led to major changes in both attitude and structures to accommodate the changes.

In the end changes were made to the process. However, they were not the kind of changes that the benchmarking findings had indicated were common among those companies that had implemented changes to their planning processes and had had a major, positive impact. The attitudes and strongly held beliefs of those involved in the process at TSB did not recognise the need for fundamental attitude changes. The unit of change for them was still the process and the tools of the planning department, rather than the more fundamental changes in beliefs, attitudes and assumptions of Senior Managers about the nature of strategic planning, that some of the other companies had adopted.

### **8.5 OUTCOME FROM THE THREE CASE STUDIES**

At the outset it was anticipated that the research would identify the key steps in the implementation process, relate these to the characteristics of change in Financial Services and outline the problems associated with the adaption of tools and techniques to suit the needs of Financial Services organisations.

However, on completion of each of the three case studies there were many questions and issues that were not initially conceived of by the author at the outset of the research. The main questions and issues that arose were the inability to develop information about the environment surrounding the processes under study. These wider organisational environment issues were:

- the identification of staff-behaviours, values and attitudes in relation to the service they delivered
- interdepartmental relationships
- the need for increased staff involvement

- communications
- the power structure
- the requirement for attitude change.

The main problem that arose from an analysis of these issues was the identification of an appropriate framework that would assist the author in understanding the complexities of change, as seen through the three case studies. A model which appeared to be appropriate to examining the results of the case studies was the Schein (1984) culture model (see Chapter 9.3.1 for a more detailed analysis). Schein's model is based around the construct of *Artefacts* (the tangible, visible level of culture), *Espoused Values* (the rationalisations for peoples behaviours) and *Basic Assumptions* (the taken for granted drivers of behaviour in organisations).

The Schein model assumes that successful change is contingent on the level of change in relation to the culture of the organisation. Changes at the artefact level are simple to make and staff often participate and contribute to changes because the change are at the superficial level and do not challenge staff beliefs and values. The new change is often difficult to enforce because of the values and beliefs that staff retain. In addition, changes at the artefact level are often designed by people involved in the culture of the organisation and will be aligned with the prevailing culture, leading to strategic drift (the widening of the gap between the organisation's strategy and the internal environment). This description of types of changes to the artefact level, match the researcher's view of the changes that had been made in the three case studies. The changes that were made, as a result of the three case studies, were at the artefact level and did not address the fundamental issues identified. As a result, there were a number of issues and questions raised, which were not addressed (described earlier).

At the level of Espoused Values, changes are required in the rituals, routines and structures of the organisation - the style of the organisation. A greater amount of resistance to changes at this level is encountered but the change still does not fundamentally change the behaviour of staff. Brown (1995) gives the example of change at this level where compliance with new working practices are enforced by the threat of reprimand or firing rather than employee enthusiasm for the change. Behaviour is changed but the drivers of that behaviour is not.

According to Schein (1984) change at the Taken for Granted level leads to the most permanent change. The change differs from the other two types of change because it focuses on changing the drivers of behaviour of staff, rather than working practices or processes. The changes at this level often become self sustaining over time where they are successful. Reflections on the three case studies clearly show that the changes made were at the artefact level (leading to changes in processes, procedures and working practices) but evaluation of the change shows that for change to be sustainable over time, it should be made at the Taken for Granted level. This was the key element that helped lead the research to the focus on the issues surrounding organisational culture.

The changes that were required need to be made at the more fundamental levels within the organisation. Changes at this level would require changes at the fundamental assumptions of the organisation - which are outside the current mindset of the organisation, and therefore, extremely difficult to implement. The need to gain an understanding of organisational culture was required to help identify and focus on the research problem - the use of a diagnosis model to assist the practitioner in identifying and managing organisational change, before any intervention.

The outcome of the three case studies are fundamental to the change in direction of the research (see above). The reason for the focus on organisational culture was the realisation that a number of key issues brought out by the research were not dealt with by the tools used in the three cases (Cost of Quality, BPR and Benchmarking). These key issues made the author aware that changes were only surface level changes, rather than more substantial, fundamental changes. The tools and techniques used were not capable of assisting the research in addressing the issues of fundamental and permanent change.

In summary the three case studies exposed and highlighted a number of issues when the case studies were reviewed. Fundamental issues such as the power structure, decision making processes, relationships with customers, relationships with other departments and staff involvement were all raised through the three case studies but did not receive the attention that they needed. The identification of these issues alongside the conceptual model offered by Schein (1984) led to the focus on organisational culture as the key element within quality improvement. As Schein argues, successful, fundamental change in performance can only be achieved with changes in the underlying “taken for granted” beliefs of the people who work in the department or process.

The rest of this chapter seeks to outline how a model of organisational culture was developed, drawing from the literature in the areas of quality improvement, organisational change and organisational culture as well as the issues raised by the case studies. It highlights the importance of having a model, in order to help the researcher develop a frame for identifying the human factors associated with quality improvement and change.

## 8.6 ORGANISATIONAL CULTURE AND QUALITY IMPROVEMENT

Authors such as Patten (1992), Kim, Pindur and Reynolds (1995) and Hildbrandt *et al* (1991), have encouraged the acceptance and the recognition of the organisational culture construct within the quality management literature, especially as a primary condition for its successful implementation. Vanisina (1990) argues that “*successful implementation of TQM requires an assessment of the organisational culture and the implementation of an integrated process for change in organisational behaviour.*” Crofton and Dale (1996) highlight the organisational culture problems associated with TQM implementation and the effect that culture can have. Bright and Cooper (1993), however, decry the lack of empirical and theoretical studies carried out or published on the connection of organisational culture to TQM, particularly the focus on the hard “tools, techniques and systems” in the implementation of TQM.

An examination of the organisational culture literature, the current offerings by consultants, as well as focus groups within the organisation, led to the development of an appropriate model, one which was more suited to the demands of this research. The model that was developed fulfilled two research requirements:

1. It provided a comprehensive examination of the culture within the organisation, and
2. It measured a number of key people, customer and organisational characteristics.

The failure of organisations to implement change successfully was documented in Chapter 3. It is this inability to effectively execute required changes which focused the attention on the development of a culture and climate model which could address the key change issues prior to an intervention. The author argues strongly that the reasons for failure outlined in

Chapter 3 were not failures of management techniques or skills but, as observed by.” McNabb and Sepic (1995), “*may be attributed to deeper, more critical sources: the fundamental, pervasive culture of the organisation and the operating climate that culture instils in its employees.* The lack of concern for their customers, expressed by payroll staff during the Cost of Quality work, the poor attitudes of departments to other departments working in the same bonus process and the failure of the Strategic Planners in TSB to understand the fundamental nature of change in the Strategic Planning Process of other companies, are all examples of the operating climate that existed in the various departments across the three case studies.

The key to improving the odds of successful change was to examine comprehensively the culture, and the climate created and constantly influenced by that culture. Climate may be defined as the “*prevailing attitudes or the atmosphere*” (Dastmalchian, Blyton and Adamson, 1991) and is a barometer of employee satisfaction and management effectiveness.

#### 8.6.1 Purpose of the Research

The purpose of this research was the development of a more culture and TQM specific model. The purpose of the current research was not to be in the “excellence genre”, focusing on good/bad cultures, or strong/weak cultures and generally attempting to extract overarching principles of what an ideal culture should look like.

*Instead the purpose of the model was to examine the appropriateness of the environment prevalent within the organisation, and to attempt to relate this to the organisational culture.*

Lodge (1995) and Leonard-Barton (1992) warn of the dangers in not understanding the way in which the artefact level of culture (the tangible environment) interacts with the taken for granted (sub-conscious values and beliefs). A lack of fit between the two layers will lead to incongruences which can cause tensions and stresses. The rest of this chapter will describe the PCOC model that was developed and the questionnaire used to measure and understand the culture and the environment within the organisation.

## 8.7 PCOC

The failure of organisations to implement change successfully has been documented in Chapters 3 and 6. It is this inability to effectively execute required changes which focused the attention on the development of a culture and climate model which could address the key change issues prior to an intervention.

The key step in the research process identified by McNabb and Sepic, (1995) was *“to develop a comprehensive, integrated model that identified the relevant factors determining readiness for change to a TQM operating philosophy.”* (p 370). Through the interaction of organisational culture with factors such as leadership style a specific climate may be created. The important step was to identify the areas that would eventually form the internal environment aspects of the model. A literature search set out to identify a number of sets of attributes internal to the organisation, that were both impacted and influenced by the culture, and important to successful change and quality improvement. Kim, *et al* (1995) were convinced that:

*“the culture of an organisation is the major determinant of organisational structure, how decisions are made, and how the organisation develops strategies to cope with its environment and cope with various challenges.”* (p 679-670)

### 8.7.1 The PCOC Model

The development of the PCOC model was based on the premise that it was not sufficient to attempt to understand and measure the culture of the organisation. It was also imperative to measure the impact that the culture had on the everyday operations and workings of the organisation i.e. how the organisation organised itself, relations with customers (internal and external) and how the organisation treated staff.

The PCOC model had two interrelated aspects or threads: the cultural element and three identified elements which made up the climate (or atmosphere) in which it existed. The visible, tangible elements of the model (the climate) were seen to be shaped, driven and moulded by the intangible, soft part of the model (the culture). The framework for the culture element of the PCOC model (Values, Ritual, Heroes and Behaviours) was the adaptation of the Hofstede model, described in detail in Chapter 9.

A number of issues were identified through the three case studies in sections 8.2, 8.3 and 8.4. The cost of quality case study raised issues such as relations with customers, processes and the use of staff suggestions for improvement. The BPR case study identified the issues of service delivery and the power structure as key to understanding the dynamics of that particular situation. The final case study, Benchmarking, raised the issues and problems associated with the planning and decision making processes within organisations. These and other issues were used to feed into the development of the final version of the PCOC model.

The elements of organisational climate identified are from a number of sources. Dastmalchian et al (1991) provided the source for three of the elements: overall

environment (effectiveness), communications, and supervisory support (innovation and problem solving). Kim, et al (1995) identified the importance of the organisational decision making within the overall framework of the organisational environment.

From the work of McNabb and Sepic (1995), the importance of work satisfaction was identified, which they described as a performance outcome. Combined with innovation and problem solving category taken from Dastmalchian, et al, this provided the Personal Section.

The EFQM Model for Business Excellence (see Chapter 4) gives highest priority (in terms of criteria weighting) to Customer Satisfaction, People (Management and Satisfaction), Results, Processes and Leadership. The model is based on the premise of "*business results achieved through leadership driving policy and strategy, people management, resources and processes.*" (British Quality Foundation, 1995, p 5). From the elements identified as most important above the PCOC elements of Service Delivery, Relationships and Processes, Planning and Decision Making and Mission and Vision were derived.

The important elements which made up the organisational climate were defined as: Personal, Customer Orientation and Organisational Issues. Personal issues were constructed using the sub-categories of Work Satisfaction and Innovation and Problem Solving. Work satisfaction referred to issues that help to keep staff satisfied in their jobs, focusing at job, departmental and organisational level. Innovation and Problem Solving referred to the extent to which management encourage, utilise and motivate staff to produce and implement new ideas for improvements to the current ways of carrying out their jobs. An earlier focus group identified the individual/manager relationship as a key element in the creation of a workplace where staff can contribute, rather than just 'do.'

In Chapter 3 the importance of Customer Orientation as an essential aspect of any Total Quality programme was discussed. It was important to identify issues that sought to examine the service delivery to customers, internal as well as external. This includes understanding customers, their requirements and the concept of the internal customer.

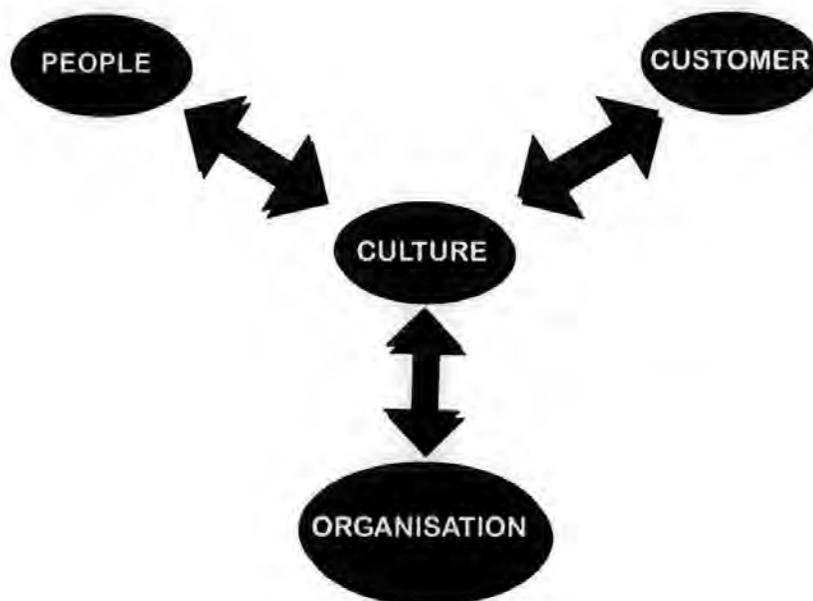
Organisational Issues were identified as important aspects of the organisational environment through the work of Dastmalchian et al (1991). Communications included the issues of formal and informal channels of communications as well as interdepartmental communications. The Power Structure refers to the sharing or otherwise of power and responsibility. Relationships and Processes represented the process philosophy and how demarcation issues relating to processes which flow between departments are resolved. The importance of planning for the future is expressed through Planning and Decision Making while Mission and Vision looked at whether employees knew and understood the mission and vision of the organisation. Effectiveness looked at how change was implemented, whether it was effective and examined a number of unwritten aspects of the change process. The PCOC model is shown in Table 8.2 below.

<p><b>Personal Outcomes</b></p> <ul style="list-style-type: none"> <li>• Work Satisfaction</li> <li>• Innovation and Problem Solving</li> </ul>	<p><b>Customer Orientation</b></p> <ul style="list-style-type: none"> <li>• Service Delivery to Internal and External Customers</li> </ul>
<p><b>Organisational Issues</b></p> <ul style="list-style-type: none"> <li>• Communications</li> <li>• Power Structure</li> <li>• Relationships and Processes</li> <li>• Planning and Decision Making</li> <li>• Mission and Vision</li> <li>• Effectiveness</li> </ul>	<p><b>Organisational Culture</b></p> <ul style="list-style-type: none"> <li>• Values</li> <li>• Rituals</li> <li>• Heroes</li> <li>• Behaviours</li> </ul>

**Table 8.2. The Elements of the PCOC Model.**

The model relates particularly well to the main criteria of the European Quality Award Business Excellence Model. The difficulty with the Business Excellence model is that the elements contained within it are very tangible and artefactual, and it ignored the important behavioural aspects of organisational culture. The issue is not that the Business Excellence Model measures and focuses on the artefact level of culture, but that the culture of an organisation will impinge and impact to some degree on all of the elements contained within the model.

After a number of attempts to develop the model graphically the author produced the elements of the PCOC model as shown pictorially in Figure 8.1 below.



**Figure 8.1. The PCOC Model**

## **8.8 CONCLUSIONS**

The review of the case studies and the examination of the literature identified the need for the researcher to focus on the development of a culture and climate model, which would

provide key information across a range of important issues before attempting to implement quality improvements. The case studies highlighted some deficiencies in the quality tools and techniques used, since they cannot assist the user in understanding key people issues that might affect any implementation of improvements.

The model was developed to assist in the diagnosis of departments or organisations, before intervention, outlining the issues that require understanding and identification before any attempt is made to implement quality improvements, clearly understanding the cultural considerations before acting.

The obvious next stage of development of the model was to use the structure of the model to develop a culture and climate questionnaire as an effective way to collect information about the current situation. The development of the culture and climate questionnaire, as well as guidelines for using it, are contained in Chapter 10.

# **CHAPTER 9**

## **ORGANISATIONAL CULTURE**

## 9.1 INTRODUCTION

*“The failure to recognise the ideological issues that underlie organisational conflict is common among managers and administrators.”* **Roger Harrison (1972)**

Today, there is broad acceptance by academics, managers as well as consultants that organisations can be thought of as having cultures. A number of writers have attempted to link the culture of an organisation to its performance (Kotter and Heskett, 1992, Hampden-Turner, 1994) and many organisations see their ability to manage change hindered by supposedly intangible people issues. Not surprisingly, there has been an explosion of culture “how to’s”, consultancy offerings and books. Organisations as diverse as British Airways, General Electric and Bank of America claim they owe their survival primarily to what they describe as major organisational culture changes.

The term “organisational culture” has proved extremely popular with management theorist and managers alike, since the publication of *In Search of Excellence* (Peters and Waterman, 1982). The term culture has its theoretical roots within social anthropology and was first used in a holistic way to describe the qualities of a human group that are passed from one generation to the next. It was described by Tylor:

*“culture...taken in its wide ethnographic sense, is that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society.”* (Tylor, 1971)

Organisational culture provides a people-centred, theoretical perspective on the management of change that is seen to offer some insight into the “intangible” nature of organisations and their behaviour: a vastly contrasting approach to the traditional management view of organisation (formal structures, rules and procedures and rational

argument). The difficulty lies in the generation and use of new tools and techniques which makes “*people management, the management of change and the realisation of strategic objectives, easier to accomplish.*” (Brown, 1992, p 3)

The objectives of this chapter are fourfold:

1. to identify the theoretical and research issues surrounding organisational culture
2. to examine a number of frameworks and other definitions of culture
3. to outline the implications for change in organisations, and
4. to describe the intervention methodology developed to measure the organisational culture within the organisation under study.

The theoretical and research issues are central to the definition of culture that the researcher chooses to adopt. Therefore point 1, above, presupposes 2, 3 and 4, i.e. to properly identify points 2, 3 and 4 the researcher must first identify their definition of culture and their research viewpoint.

## **9.2 THEORETICAL PERSPECTIVES OF ORGANISATIONAL CULTURE**

An examination of organisational culture raises crucial and unavoidable philosophical issues that confront the researcher in advance of proposing frameworks or frames of reference. There are two main areas within which philosophical issues must be addressed. They are in the theoretical perspectives of organisational culture and the research approach to organisational culture. They are encapsulated within the following issues:

- Whether organisational culture is an independent or dependent (internal) variable (i.e. is organisational culture something an organisation has or is?), and
- The epistemological grounding of the research method which affects the tools, methods and interventions that researchers have at their disposal and can use.

### 9.2.1 CULTURE AS AN INDEPENDENT VARIABLE

Culture as an independent variable looks at how it is imported into the organisation through the membership. It is based on the key premise that there are specific characteristics of “good” cultures that are universal and easily imported into the organisation. Modern management theory exhorts managers to create corporate cultures which dovetail with effective corporate strategy. (Davis, 1984) This is also one of the main success factors presented for “Excellent” or “Theory Z” organisations. (Ouchi, 1981) To be effective, organisations are told to apply generic formulae in order to obtain a corporate culture of an appropriate and productive form. The assumption that is fundamental is that culture is an objective and tangible phenomena and can be changed through the application of direct intervention methods.

The prescriptive approach identifies principles and practices of preferred organisational traits and draws general lessons from the results of qualitative case studies. The researchers are almost exclusively positivists (e.g. Peters and Waterman, 1982), attempting to operationalise concepts so that they can be measured. In comparative management studies organisational culture is considered to be a background factor, an explanatory variable and a broad framework in the development and reinforcement of beliefs. This supports a positivist approach to organisational culture. Change can be effected in the

types of assumptions and values held by management. It is, however, recognised to be difficult to conceive culture and it is more difficult to effect change.

If we want to use the culture construct as a basis for organisational change, formal procedures for making it happen must first be specified. According to Hassard and Sharifi (1989) there are two important factors in this:

1. the researcher must have a model of cultural change
2. ways are developed to test the productive significance of cultural change.

### 9.2.2 CULTURE AS A DEPENDENT VARIABLE

This view promotes the theory that organisations are themselves culture producing phenomena and are essentially social instruments that produce goods. (Smircich, 1983) As such, each culture is a unique product of its history, development and present situational issues. Cultures also produce as a by product, distinctive cultural artefacts, such as rituals, legends and ceremonies. While organisations are embedded within a wider cultural context, the emphasis is on the socio-cultural qualities that develop within organisations.

Researchers within this worldview construe the culture concept within a systems theory framework. The organisation exists largely in a determined relationship with its environment. According to Deal and Kennedy (1982), culture adds to the systemic balance and effectiveness of the organisation i.e. "through a strong culture." The key is to achieve sufficient holistic cultural integration across the varied areas of the organisation in order to effect sufficiently co-ordinated strategy or action, whilst maintaining the unique value

systems at the local levels. Culture is the glue that holds the organisation together. It expresses the values or social ideals and beliefs shared, manifest in rituals, stories, legends and specialised language that are unique to each organisations and that are a product of the history and operational issues within the organisation.

Culture as shared values and beliefs gives identity to members and generates commitment beyond the "self", and enhances social system stability. It is also a sense-making device that guides and shapes behaviour. Firms that have cultures supportive of strategy are likely to be successful, while firms that have insufficient "fit" between strategy and culture must change since it is the culture which supports the strategy. (Pascale, 1990)

### 9.2.3 RESEARCH ISSUES

While the key research issues were examined in more detail in Chapter 2 it is important to briefly relate them to the issues discussed above. By accepting that organisational culture is something an organisation has, we accept the positivist research view and set aside the phenomenological aspects of organisational culture. The acceptance of the positivist research Weltanschauung does limit our perspective but we acknowledge the rich picture that we might otherwise attempt to understand if we accept the phenomenological perspective.

Anthropologists or sociologists who study culture usually do so through ethnographic means which is, epistemologically, at odds with the use of survey methodology. The relationship between observable form and intrinsic meaning is a hurdle to defining method

and admitting evidence. At the lowest level it is reduced to the interpretivist/phenomenologist vs. positivist/functionalist perspective in cultural analysis.

A positivist researcher works with objective data that produce conclusions which directly reflect the nature of what is observed and recorded. Conversely, the interpretivist researcher eschews objectivity to deal with understandings and abstractions individuals impute to the world around them. The problem is that validity constructs also involve assumptions which render questionable the very issue of "validity". In terms of the research agenda of the author, the approach clearly lies somewhere between the functional and ethnographic extremes.

When approaching this research work the author was mindful of the warning by Zuboff (1988) who made clear that researchers should have a theory of reality and of how that reality might surrender itself to the development of knowledge and understanding. The author also supports Duncan's (1989) methodological goal of assembling a combination of techniques that would:

1. capture relevant dimensions of organisational culture
2. provide a holistic picture of the present culture
3. offset and balance the relative strengths and weaknesses of each technique.

Another aspect of this research is evident in the assertion of Popper (1959) that ignorance grows with knowledge or as Bate (1995) described it "*turtles all the way down.*" The more that the researcher studies the phenomenon of organisational culture, the less the researcher seems to know.

### 9.3 ORGANISATIONAL CULTURE

As mentioned earlier organisational culture holds out the promise of capturing a unique organisational frame. However, organisational culture is not an agreed conceptual identity and, for example, Kreiner (1989) has stated that:

*“Serious attempts to develop a stringent conceptualisation of organisational culture have failed to gain general acceptance.”*

Despres (1995) listed a number of descriptions of organisational culture which clearly underline the difficulties facing researchers in this field, as well as practitioners, in attempting to identify organisational culture. Some of the definitions include:

- The root metaphor of the organisation
- An independent variable
- A dependent variable
- The master contract that frames social reality
- Key to corporate success and failure
- Strategy
- Change efforts
- Transformation
- Revitalisation

To facilitate understanding of organisational culture, the importance of examining the literature cannot be underestimated. As with this particular research, the research Einstellung of each author colours their definition and examination of this complex issue.

A summary overview of some of the major definitions of organisational culture will be provided. These definitions will examine culture as learning, culture as belief system, culture as strategy and culture as mental programming. Each definition will be examined in turn and examples will illustrate models of organisational culture.

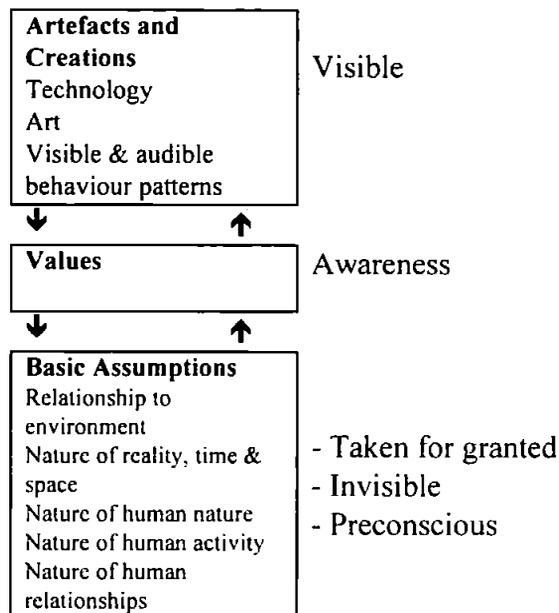
### 9.3.1 CULTURE AS LEARNING

At a basic level, culture may be defined as “the way we do things around here” or “the way we think about things around here.” (Williams *et al*, 1994) In general, learning definitions of culture deal primarily with the way we act or the way we think. A widely accepted definition of culture provided by Schein (1984) is:

*"the pattern of basic assumptions that a given group has invented, discovered, or developed in learning to cope with its problems of external adaption and internal integration, and that have worked well enough to be considered valid, and, therefore to be taught to new members as the correct way to perceive, think, and feel in relation to those problems."*

The key feature is that it is taught to new members as the correct way to behave, thus perpetuating its survival and continued growth. Schein believed that culture could be analysed at a number of levels (see figure 1 below). The first level of analysis is the visible artefacts that encompass everything from manner of dress, office layout, behaviour patterns, to symbols stories and myths. The next level of analysis is the values that govern behaviour which are *“part of the individual consciously held conceptual apparatus.”* (Davis, 1984) Since they are hard to observe, they can only be inferred. They represent only the visible manifestations or espoused values of culture, i.e. they reflect the underlying culture and act to justify actions and behaviour, but the reasons for behaviour remain hidden. To understand fully an organisation's culture an analysis of the basic

assumptions is essential. These are the invisible and unconscious reasons for behaviour and are 'Taken for Granted'. They are the unconsciously held learned responses which govern how organisational members think, act and behave. The problem for organisations is that changes at the artefact or value level of culture rather than the 'Taken for Granted' is *"likely to be short-lived and deteriorate into an abortive excursion into a new organisation form"* (Smith et al, 1993).



**Fig 9.1 The Levels of Culture and Their Interaction (From Schein, 1984)**

### 9.3.2 CULTURE AS BELIEF SYSTEM

According to Stanley Davis corporate culture offers a contrast to the past rigidity of management models. Davis (1984) defines culture as:

*"the pattern of shared beliefs and values that give members of an institution meaning, and provide them with the rules for behaviour in their organisation."*

An examination of organisational culture begins by distinguishing between fundamental guiding beliefs and daily beliefs. Guiding (loftier) beliefs provide the context for the

practical 'nitty-gritty' beliefs of everyday life i.e. guiding beliefs give direction to daily beliefs. As fundamental precepts, guiding beliefs rarely change since they are in the realm of universal truth. Daily beliefs are also part of the company culture. They are:

- the rules and feelings about everyday behaviour
- situational, and change to meet circumstances
- basically, the survival kit for the individual

For guiding beliefs the optimal number is three, the maximum four. Truly healthy companies know what the guiding beliefs and by implication the organisation stand for. Essentially, guiding beliefs focus on the external and the internal perspectives, much like Schein's internal integration and external adaption issues.

### 9.3.3 CULTURE AS STRATEGY

There is a link between beliefs and strategy. According to Davis (1984) guiding beliefs are the roots from which strategies grow. Strategy is what a company wants to achieve and the organisation is the means by which the strategy will be fulfilled. Guiding beliefs are why the company wants to achieve the strategy. The success of strategy depends on the match or mismatch of daily beliefs.

- Guiding beliefs - precepts upon which strategy gets formulated, they should always drive strategy and are the future manifest in the present
- Daily beliefs - affects whether strategies get implemented and are the past manifest in the present

Bate (1995) in a wide ranging analysis, fundamentally disagrees with this distinction of strategy and culture. He elevates culture as strategy much further because he has challenged the traditional separation of the concepts of culture and strategy. To him the separation of the two has no validity, since there should be substitutability between the two concepts. He made clear that he was:

*“not suggesting that culture is like strategy (and vice versa), nor am I saying that culture and strategy are closely related....What I am saying is that one is the other: culture is a strategic phenomenon: strategy is a culture phenomenon.”*

The implications of such beliefs are twofold:

1. Strategy formulation of any kind is a cultural activity (the development of strategy is cultural development), and
2. Culture change is strategic change

The rational outcome of these statements is that any suggestion of attempting to set up a separate “culture change” programme is fundamentally flawed since culture change is already taking place within formal and informal strategic planning processes. A more detailed outline of these arguments are contained in Bate (1995).

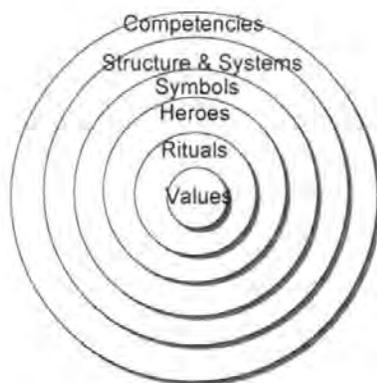
#### 9.3.4 CULTURE AS MENTAL PROGRAMMING

Hofstede (1980) defined culture as the *"collective programming of the mind, which distinguishes the members of one category of people from another."* This definition stresses that culture:

- a) is collective and not a characteristic of individuals (shared values)

- b) is mental "software", therefore invisible and intangible as such
- c) is interesting only to the extent that it differentiates among categories of people

Hofstede attempted to develop a cultural typology for the relationship between organisational cultures and their local national cultures. He developed this work through research at IBM. Figure 2 shows the onion diagram model of organisational culture developed by Hofstede et al. It has four main elements; symbols, heroes, rituals and values. The core of culture is formed by values which are broad tendencies to prefer certain states over others and are the deepest level of culture. Rituals are collective activities which, are considered socially essential and heroes are persons who possess characteristics which are highly prized and are often the "winners" or those who get on in an organisation. Symbols are the most overt element of culture and are the gestures, objects, or words recognised by those who are part of the same organisational culture.



**Figure 9.2. The Hofstede Levels of Organisational Culture (From Hofstede, 1980)**

According to Hofstede, organisational culture is meaningless if we are not in a position to measure it. The Hofstede process for the measurement of organisational culture involves two interlinked steps: in depth open interviews in each area or business unit, and a

questionnaire survey of stratified samples of managers and workers. Building on the original cross-national work carried out at IBM, Hofstede identified that there were six dimensions to the measurement of organisational culture:

1. Motivation - activity oriented (means) versus output oriented
2. Relationship - Job oriented versus person oriented
3. Identity - corporate versus professional
4. Communication - open system versus closed system
5. Control - tight versus loose
6. Conduct - pragmatic versus normative

It is these which form the basis of the qualitative and quantitative measurement of organisational culture. The author decided after some research to use the Hofstede model as the basis for the framework for organisational culture. This was built into the three research techniques described later in this chapter.

There were two main reasons for using the Hofstede model. A number of senior managers within the HR function had come into contact with the model through consultants and so were familiar with it. Secondly, discussions with managers about the different models available led to many favouring the Hofstede model, since it provided a clearer frame for understanding and analysing organisational culture, than the Davis or Schein frames. All of the culture models identified all follow the same basic structure: the tangible elements of the culture (symbols, artefacts, structure and systems, daily beliefs) and the Hofstede model is the best way to identify organisational culture. The successful use of the model [see Chapter 8] justified the decision to utilise this particular frame.

## **9.4 MEASURING ORGANISATIONAL CULTURE**

The identification and measurement of organisational culture has already been identified as a problem area in relation to research and method. The use of methods and techniques from different research frames is not uncommon. The use of different techniques is seen as a way of neutralising the disadvantages of using only one techniques. In this section, the objective is to outline briefly a number of qualitative and quantitative methods used to identify and measure organisational culture.

Some researchers (Duncan, 1989) use a number of these techniques together in a triangulation approach, which gives a much fuller and more complete picture of the organisation. The approaches used within triangulation include participant observation, structured interviews, and an organisational culture questionnaire in this sequence of use. While triangulation has been applied the in behavioural sciences, it has been used infrequently in management research. The use of both quantitative and qualitative methods is an attempt to maximise the amount of data being collected.

In this research, four main techniques were used to define and measure organisational culture: observation, structured interviews, focus groups and questionnaires. A more detailed analysis of the use of the questionnaire, including the analysis of a number of examples, is contained in Chapter 10.

### **9.4.1 OBSERVATION**

Participant Observation has its roots in ethnographic and anthropological research studies, where the researcher would often live with tribes, attempting to build an understanding of

their culture, language, history and customs. Easterby-Smith, Thorpe and Lowe (1994) proposed four main observer types: researcher as employee, research as explicit role, interrupted involvement and observation alone. This method is essentially ethnographic in nature, where a *“researcher tries to immerse himself or herself in a setting and to become part of the group under study in order to understand the meanings and significances that people put upon their own behaviour and that of others.”* (Easterby-Smith, et al, p.38)

According to Pettigrew (1979) this technique *“recognises that an organisation or any other social system may profitably be explored as a continuing system with a past, a present, and a future.”* (p 570) The use of these methods is important for identifying research problems and developments that the researcher may explore. This type of method is dynamic because it does not attempt solely *“to codify distributions of power at one point in time.”* (p 570)

#### 9.4.2 STRUCTURED INTERVIEWS

In structured interviews, the data collection is limited to the interview process itself and analysis of the transcripts afterwards. The essential task is to elicit qualitative information which can then be passed through the framework of the researcher. A fixed format is followed for the interview and the details of every answer are recorded as the interview goes on. According to Meredith et al (1989) the key to interviewing is that it allows the researcher to *“control the situation and responses, thereby aiding uniformity in analysis.”* All questions are the same so that answers can be compared across interviews, situations and departments.

The outputs from the interviews can be analysed using content analysis. The interviews would be transcribed and content analysed for themes around the research problem. Structured interviews can be utilised as a preliminary to questionnaire analysis to identify themes and issues for analysis. Alternatively, they can be used in conjunction with the main data collection phase to elicit explanation to specific answers given in the questionnaire phase. (Burke, Coruzzi and Church, 1996, p 78)

The main drawback with the use of this technique is the length of time required to analyse the outputs from each interview. The researcher did attempt to use this technique within the data collection phase - the length of time to analyse and transcribe interviews were prohibitive.

#### 9.4.3 FOCUS GROUPS

Focus Groups have been defined as:

*“a form of group interview in which the data arise from dialogue and general discussion among participants, rather than from a dialogue between yourself as investigator and a single person as respondent.”* (Kraut, 1996, p 74)

While focus groups can be used during the data collection phase, they are usually used early on in the survey design process to *“identify the content areas the survey should cover.”* (Burke, et al, 1996, p 78) It is a very useful technique for discovering and uncovering a range of information about participants views, beliefs and attitudes, in a non-threatening environment.

While the technique is invaluable in exploratory research in organisational situations, it is difficult to control and the data is sometimes difficult to analyse. The task of the group interviewer (or facilitator) is “*to facilitate an exchange of views in which all participants are able to speak their minds and to respond to the ideas of others.*” (Jankowicz, 1991)

According to Jankowicz (1991) if the purpose of the focus group is to familiarise the researcher with a range of views on a topic, a pair of focus groups would be acceptable as the number of groups required. One group would never be enough to validly generalise the findings across the organisation. In the case of this research this technique was used in the exploratory phases of the organisational culture questionnaire research. It provided information and frameworks for use in the development of the PCOC model as well as questions which were included in the questionnaire.

#### 9.4.4 ORGANISATIONAL CULTURE QUESTIONNAIRE

The need to develop an organisational culture questionnaire was identified in the early stages of the research as an important feature. The author identifies a number of “off-the-shelf” culture questionnaires including those from the major consultancies in this area. A detailed analysis of a number of organisational culture questionnaires is contained in Chapter 9.

The strengths of the questionnaire approach are that it can be statistically analysed and the researcher can involve a larger number of people than would be possible using only in-depth interviews. The drawback of questionnaires is that response rates are not always high. Questions identified in analysing returns cannot be clarified and interesting returns cannot be explained. This is overcome by using the other two research techniques.

The two main areas of concern when dealing with questionnaires are the validity and reliability of the measurement instrument. In terms of validity Despres (1996) takes an ethnologist's approach and is concerned about the fusing of survey methodology with the culture concept - "an attempt to measure culture." He argues that the questionnaire approach to defining organisational culture is flawed and reflects the cultural values not of the organisation, but of the researcher. An ethnographic approach, however, yields a less biased result in that few *a priori* assumptions are made.

## 9.5 MANAGING CULTURE AND CHANGE

For managers in organisations, the approach to managing change should be contingent on the depth at which there is an impact on culture. This can be assessed using Davis' Cultural Risk Model. The fundamental issue is that managers can, and should, benefit by taking this into account when conceiving and implementing organisational change. (Sathe, 1985) As Schein (1984) concluded:

*"Clearly, if culture is as powerful as I argue... it will be easy to make changes that are congruent with present assumptions, and very difficult to make changes that are not ."*  
(p16)

In detecting the need for change, designing and implementing change, it is necessary to assess the level of the culture that will be affected, so that an appropriate *modus operandum* may be adopted. (Lodge, 1995) This supports the basis of this entire thesis in that intervening in various situations, using tools and techniques that are not congruent with the "way we do things round here", will lead to major problems when attempting to effect any change. During this research project, some managers proposed the idea that successful changes that they had been involved with had resulted from changes that were

“culture neutral”, (i.e. did not impact on the deeper levels of culture) and not due to any proactive management of cultural issues. All major changes that did impact on culture showed varying degrees of successful implementation.

As well as affecting changes at the local or departmental level, the culture can impact strongly on change at the organisational level, especially when there is a lack of alignment between the change and the culture. The central question, posed by Hildebrandt *et al*, regarding culture as a tool of control and change is the degree to which

*"it is possible through a conscious process to formulate a new, but expedient culture and next have it accepted in an organisation by means of a rational, centrally directed process of change"?*

## **9.6 CONCLUSIONS**

This chapter has identified organisational culture as a major obstacle and challenge to the capabilities of change within all organisations. A number of models of culture have been identified and examined as well as the important research issues in this particular field of management research. The literature presented in the culture research helped focus the research on the need to be able to identify and measure organisational culture.

The particular difficulties of managing change at the most fundamental level of culture were also described. The benefits from the successful management of change (using organisational culture as a key element) are considerable, since managing the underlying assumptions so that they are aligned with the environmental context may be a powerful source of competitive advantage. However, there is also the issue of making change permanent, something which is extremely difficult to achieve. As Heygate (1993) warned:

*“Most corporations are like giant jellies. You can force them briefly into a new shape. But unless you can fundamentally reform the culture that holds them together they will swiftly wobble back into their old form.”*

Four models of organisational culture were presented. While the research which follows utilised the Hofstede model, the other models from Schein, Davis and Bate are presented for completeness. Culture is a phenomena which the literature survey has shown can be addressed within organisations and which can be changed. The next chapter shows the research process used in attempting to address the issues of organisational culture.

# **CHAPTER 10**

## **THE P-C-O-C CULTURE AND CLIMATE QUESTIONNAIRE**

## 10.1 INTRODUCTION

In Chapter 8 the development of the PCOC model was outlined in detail, demonstrating how the three case studies described in Chapters 5, 6 and 7 respectively, contributed to the focus on Organisational Culture as a framework for understanding organisational change. In the previous chapter the importance of Organisational Culture was examined, and the chapter detailed a number of culture models and frameworks. The chapter also included a number of different techniques that might be used to measure culture.

This chapter will examine the development of the PCOC questionnaire, which was used to measure organisational culture and climate within Lloyds TSB. The chapter also outlines how Focus Groups formed an integral part of the questionnaire development process, as well as providing qualitative information to back up the quantitative information that would be provided by the use of the questionnaire. An outline “How to use the PCOC model” is also included to provide the practitioner with a clear process for using the model and questionnaire. Methodological issues in the area of questionnaire design such as validity and reliability (Cronbach’s Alpha) are also discussed.

## 10.2 ORGANISATIONAL CULTURE QUESTIONNAIRES

There are currently available a large number of culture and climate questionnaires and audits based on validated models, theories and approaches. These off-the-shelf culture audits “*describe some perfect culture and then ask you the degree to which your company lives up to it.*” (Egan, 1994) Throughout the research the researcher had contact with a number of institutions and consultancies that had expertise in the area of organisational

culture questionnaire design and use. The objective of this section is to identify a number of different questionnaires, comparing and contrasting their content and use with the PCOC model. Some of the models that the author sought were not in the public domain and the developers were not always willing to discuss their work. Anglia Polytechnic University refused to give details of their culture model and questionnaires, claiming that they were mainly for use with companies who had consultancy work with the University and the only other people who had access to the questionnaires were students of the University's Quality and Innovation Centre.

#### 10.2.1 London Business School Survey Research Unit and PCOC

London Business School Survey Research Unit has a number of climate questionnaires (Fenton O'Creevy, 1997) which are used to link the climate of the organisation to a wide range of organisational issues. Some of the research currently being undertaken includes the links between the development of managerial careers and organisational culture change and how reward and employee involvement contribute to the development of TQM. In addition, the Research Unit also addresses climate issues such as teamwork, morale, training, appraisal, and communications.

This differs from the PCOC model because PCOC is a culture and climate questionnaire which attempts to measure a number of culture and climate issues, specifically to help the researcher understand a number of key issues, before attempting to pursue organisational change and the London Business School model is purely focused on measuring organisational climate.

### 10.2.2 UMIST Quality Improvement Framework and PCOC

The UMIST generic quality improvement framework was developed out of the need to give coherent guidance to those organisations setting out to introduce a process of quality improvement. The *raison d'être* of the model is the belief that only when an organisation has completed and put in place several of the detailed elements of the framework will an organisation be in a position to make the best use of other self-assessment methods. The elements of the model are: Organising, Systems and Techniques, Measurement and Feedback and Culture Change (Individual/Teamwork). The key cultural change issues in the Quality Improvement Framework are:

- “Assess the current status of the organisational culture before developing plans for change
- Outline specific changes while recognising ongoing nature of culture change
- Plans should be consistent and incremental
- People are an asset in this process
- Minimise conflict
- Identify culture change indicators
- Consider local and national cultures” (Dale, 1994)

This differs from the PCOC model which views organisational culture as the bedrock of the organisation rather than one important aspect of four. In the PCOC model the climate issues measured are the tangible, artefact products of the identified culture. The key features of the culture are the identified values, heroes, rituals and behaviours that are prevalent in the organisation and which play an important role in the development of the people, organisational and customer related issues.

### 10.2.3 Diagnosing Organisational Culture for Competitive Advantage and PCOC

The Diagnosing Organisational Culture for Competitive Advantage (DOCSA) model is an updated version of the Hofstede model developed in the mid 1980's by the Institute for Research on Intercultural Co-operation (IRIC). The DOCSA process involves the use of qualitative and quantitative techniques including a survey of samples of managers, workers and customers. According to Hofstede, Neuijen, Ohayv and Sanders (1990), there are six dimensions to the DOCSA organisational culture survey outlined in Chapter 9: Motivation, Relationship, Identity, Communication, Control, and Conduct.

The DOCSA methodology uses a number of different tools to help an organisation develop a profile of their current culture as well as a profile for a preferred culture. As well as the pre-printed questionnaire, the DOCSA methods utilises interviews, and group interviews using a set of cue cards. While the interviews and the group interviews can be flexible the questionnaire contains a set question format that is administered to staff and customers to identify their views about the culture.

The PCOC model is different from the DOCSA model because the culture questions used within the PCOC questionnaire can be changed when used within different organisations. The DOCSA method uses a fixed questionnaire format while PCOC allows for all of the culture questions to be replaced after going through the Focus Groups process. The purpose of this is to confirm the strength of the Focus Group output.

#### 10.2.4 TMI Quality Culture Audit

TMI was involved in one of the largest culture change activities ever undertaken in the UK - the changes implemented at British Airways in the early 1980's through the "Putting People First" programme. TMI (1992) define culture as "the often intangible *"beyond the bottom line"* aspects of the working environment that either encourage or prevent staff from being thoroughly effective." (TMI, 1992) TMI admit that in reality their Culture really measures climate, which they claim is just one aspect of an organisation's culture.

The TMI Culture Audit provides an assessment of the culture across an entire organisation/company and the teams within it. It is used to help organisations and departments improve performance in the areas of customer service and quality and identify strengths and weaknesses and the issues that adversely affect performance. The Culture Audit is a pre-printed questionnaire of 14 different cultural factors including goals, responsibility, physical environment, employee development and the psychological environment in general. The process for using the Culture Audit is a five stage process: Preparation, Distribute and Collect Questionnaires, Collate Data, Communicate and Interpret and Implement.

The PCOC model differs from the TMI questionnaire in a number of areas. The main difference is content related. Issues that are regarded as climate within the PCOC model are identified as culture elements within the TMI model. In addition, the TMI questionnaire is a fixed format questionnaire. The PCOC model allows for the culture questions to be changed to reflect any findings that may come out of the Focus Groups.

### 10.2.5 Discussion

The tools and techniques used to measure organisational culture vary widely. There are a number of similarities between the questionnaires discussed above: They are all currently used in organisations today and they utilise pre-printed questionnaires i.e. the questionnaires do not change and remain the same whatever the company using them or whatever the situation. In many cases, this allows the companies to build databases of scores for comparison and calibration purposes. PCOC differs from these questionnaires in this respect. The way in which the PCOC model was and is developed precludes the collection of normative data across different organisations and the continuous comparison with historic data.

The majority of these questionnaires focus on identifying and measuring gaps between theoretical “best cultures” and the current organisational culture. In addition, the questionnaire results are often not combined with the use of other measurement methods such as those outlined in Chapter 9. Only the DOCSA model specifically used other non-quantitative methods. This is an important difference between PCOC and the other questionnaires.

PCOC uses both Focus Groups and a self administered questionnaire to identify and measure the culture and the climate of the organisation. This enables the output of the qualitative techniques to be compared and contrasted with the output of the quantitative questionnaire (in the PCOC method the Focus Groups feed information into the questionnaire design). In addition, the qualitative techniques allow information and discussions to take place, providing a rich source of information for the researcher that would not have been gained from the use of questionnaires only.

The PCOC model varied from the questionnaires outlined above in a number of other ways. The five culture sub-elements of the PCOC questionnaire are not pre-printed - the results of the focus groups that are run before the questionnaire is administered are used to construct the issues within these elements. Other issues requiring investigation can be inserted within the other eight elements of the PCOC model.

The specific focus of the PCOC model is to identify areas for intervention within the organisation. The model does not contain implicit value judgements about “best” or “strong” cultures or what profile is best to have. The focus is on identifying those areas that can assist organisational and quality improvement through development and focused interventions.

### **10.3 THE PCOC QUESTIONNAIRE**

The identification and measurement of organisational culture has already been discussed in Chapter 9. The measurement of organisational culture provides epistemological problems, because interpretivist and functionalist researchers have widely different epistemological frames. The approaches utilised for this research included focus groups and an organisational culture questionnaire. A specimen copy of the questionnaire can be found in Appendix 6. The focus groups were run first for two reasons:

- I. to examine in detail the key aspects of the culture of Lloyds TSB, and
- II. the output of the focus groups was used to develop the questions in the culture sections for the questionnaire, as well as to feed issues into other areas of the questionnaire and culture research.

### 10.3.1 Focus Groups

Section 10.2 outlines in detail some of the issues and deficiencies identified with the questionnaires that were reviewed by the researcher. A decision was taken to operationalise the PCOC model outlined in Chapter 8 rather than use one of the questionnaires reviewed. The main reasons why this decision was made were:

- Critically none of the questionnaires include both culture and climate elements, central to PCOC.
- Some of the questionnaires would be difficult to relate to practitioners (e.g. the six independent dimension of the DOCSA model, see Chapter 9)
- The questionnaires had definitions of culture that did not fit well with the definitions of culture used by leading culture writers (Schein, 1984, Brown, 1995)
- Licensing and copyright issues were real practical problems that prevented all of questionnaires being used.

Research into the various organisational culture questionnaires led the researcher to conclude that the most appropriate way to progress the questionnaire issue was to develop a process which would develop a culture and climate model based on the fundamentals of the PCOC model.

For the purposes of this research two different focus groups were run, consisting of different sets of managers from Lloyds TSB. The literature in the area of focus groups is analysed in Chapter 9. The researcher conducted one of the focus groups over three

evenings (of around three hours per session) while the second focus group was conducted over 1 day by external facilitators. The objectives of the focus groups were threefold:

- To examine the process and mechanisms of change in Lloyds TSB generally
- To examine the organisational culture (using the adapted Hofstede model)
- To examine ideas of how and why the culture should be changed

Each of the focus groups were presented with a different organisational culture model - the group run by the author used the Hofstede () model while the other group utilised the Schein (1984) model. The groups were then asked to identify as a group the culture of Lloyds TSB based on structure of their model.

The output of the sessions were recorded on flip charts and after the two sessions were completed, the outputs were compared for their common features. The common answers from each of the two sessions are recorded below in the format of the Hofstede model, which was utilised as the Culture element of the PCOC questionnaire.

The outputs from the two focus groups were similar, which would be expected from two groups who were from the same organisation. The common output is shown in Table 10.1 below. Both groups agreed that the values of the organisation reflected command and control and anti-failure attitudes as well as the importance of delivery of work and aggressiveness to colleagues. In terms of rituals, both groups identified a number of activities considered as socially necessary (in the organisational sense) rather than productive. Both groups also identified the symbols of the organisation that reflected the values and beliefs of the organisation - the design of the Head Office, the unwritten “dress code” for staff and the status-related furniture.

<b>HOFSTEDE ELEMENT</b>			
<b>VALUES</b>	Young Cloth Cap Good Managers deliver Aggressiveness is okay “Bancassurance”	Anti-failure Command and Control Do not need to learn Bottom line Non-bankers	Change (but do not have to be good at it)
<b>RITUALS</b>	Always have a scapegoat Don't admit mistakes Communications Planning process	Management Meetings Cost Reduction Exercises Steering Committees	
<b>HEROES</b>	-----		
<b>SYMBOLS</b>	Tiered Head Office The Chateau and 4th Floor Uniforms - dark suits	Furniture	
<b>STRUCTURE AND SYSTEMS</b>	Cost/Income Razor Gangs Hidden Targets Hierarchy	Bancassurance Sales Orientation Budgets Functional Silos	PMM
<b>COMPETENCIES</b>	Aggression Delivery Veneer	Must know but do not need to learn Territorial	Teflon

**Table 10.1. Common Outputs From The Two Organisational Culture Focus Groups**

The important features of the structure and systems used to control the organisation were also identified - the hierarchy, the target and focus on sales, the use of budgets to control and the widespread use of Project Management Methodology were all regarded as the control systems in the organisation. Another reflection of the values of the organisation was the competencies required to “fit in” as a member of the organisation. Aggression, deliver, “teflon” (never let things stick) and the need to be territorial were identified by both Focus Groups as the required competencies to be successful in Lloyds TSB.

These common outputs were used to feed into the questions used for the culture section of the PCOC questionnaire. A number of the outputs from the focus groups were also used within the People, Customer and Organisational sections.

#### **10.4 QUESTIONNAIRE DESIGN**

One of the key aspects of questionnaire design is the development and use of a scaling procedure. Scaling is a *“procedure for the assignment of numbers (or other symbols) to a property of objects in order to impart some of the characteristics of numbers to the properties in question.* (Cooper and Emory, 1995) In the development of the PCOC model a five step scale development process was used based on DeVellis (1991). The five steps were:

1. *Determine the boundaries of what you want to measure* - be clear about what exactly you are trying to measure
2. *Generate an item pool* - it is best at this time to have more questions rather than fewer, and reduce the number as required
3. *Determine the rating scale to be used* - decide whether the type of scaling best suited to the research purposes
4. *Have item pool reviewed*
5. *Pilot test the scale and refine where required*

While the above five phases are self-explanatory, it is important to briefly explain Step 3 - reasons behind the choice of the Likert scale for the measurement instrument.

### 10.4.1 Likert Scales

Semantic scales such as the Likert Scale, Thurstone Scaling, Guttman Scales and Semantic Differential, are used for constructing most instruments used in business and social research. It has long been recognised that the precision (reliability) and the accuracy (validity) of verbal instruments are determined to a large degree by the design and construction of the scales. (Thurstone, 1928)

The PCOC model uses 5-point Likert scales to measure, not whether a respondent agrees or disagrees with a statement, but the strength of agreement or disagreement with that statement through the choice of response categories. The usual descriptions for the five-point scale categories are:

- strongly agree
- agree or tend to agree
- undecided or neither agree nor disagree
- disagree or tend to disagree
- strongly disagree.

The usual way of scoring the items is to assign scores of 1,2,3,4,5 or 5,4,3,2,1 based on the particular items being measured.

One of the key issues in the use of Likert scales is the use of 3, 5 or 7-point scales. Likert himself did not initially consider the number of choices to be an important issue. He pointed out that "*if five alternatives are used, it is necessary to assign values from one to five with the three assigned to the undecided position.*" (Likert, 1932) It was implied that

the actual number of choices may be left to the individual researchers. Likert later suggested that split-half reliability (reliability differences between the first half of the questionnaire and the second half) was a function of the total number of choices in the instrument. The total number of choices was computed as the intervals per scale times the number of items. Murphy and Likert (1938) showed that when the total number of items was reduced, the loss of split-half reliability could be reversed by increasing the number of scale choices from 3 to 5. In the case of the PCOC model the reduction of the number of scale items from 98 to 75 and the increase in the Scale from 5 to 7 would provide an extra 35 answer choices on the whole questionnaire.

The main argument of 7-point scales over 5 was that if too few choices were provided on the scale, then the subject may have wished to select a non-existent choice in between two consecutive choices. Since such a choice did not exist, the response was likely to be randomly assigned to either of the adjacent existing choices. The 5-point scale was considered adequate for the PCOC model questionnaire given that the total number of choices in the whole questionnaire was 490.

## **10.5 VALIDITY**

A critical and often confusing aspect of research is validity. There are two major forms of validity generally: external and internal. External validity of research findings refers to the ability to generalise across persons, settings and time. This is difficult given that "*the processes of any one organisation or social situation tend to be unique.*" (Warmington, 1983). Internal validity is the ability of an instrument to measure what it is purporting to measure i.e. does it measure what the designer claims it does, given the presence of other

extraneous variables that might serve as plausible alternative explanations for the results measured.

There are three main types of validity, which covers scale construction, the ability to predict events, and its relationship to measures of other constructs. (Cooper and Emory, 1995). These types of validity are: content validity, criterion-related validity and construct validity.

#### 10.5.1 Content Validity

This is the extent to which a specific set of items reflects a content domain i.e. does the measurement instrument provide adequate coverage of the topic under study? Content validity is easiest to evaluate when the domain under study is well defined. To evaluate content validity, one must decide in the initial stages of research the elements which constitute adequate coverage of the problem under study. If the questionnaire adequately covers the topics that have been defined as the relevant dimensions, we conclude the instrument has good content validity. For the development of the PCOC model the researcher employed the use of focus groups to determine the key dimension of the PCOC model. In addition, the piloting of the questionnaire allowed the items to be refined and changed based on the feedback provided by the respondents.

#### 10.5.2 Criterion-Related Validity

This form of validity reflects the success of measures used for prediction or estimation, whether it is a particular outcome, or the existence of a certain behaviour or set of values.

Criterion-related validity is sometimes called predictive validity due to the ability to predict future events. Criterion-related validity is a practical issue, since it is concerned, not with understanding a process, but merely with being able to predict a certain outcome. According to Cooper and Emory (1995), any criterion measure must be judged in terms of four qualities: relevance (is the scale or item scored in the way we judge to be proper?), freedom from bias (does the criterion give each population the opportunity to score well?), reliability (whether the criterion is stable or reproducible over time) and availability (is it easy to secure the information related to the criterion i.e. is it available?).

### 10.5.3 Construct Validity

Construct validity is tied to the theoretical relationship between a variable (e.g. a score on the PCOC scale) to other variables. It is the extent to which a measure “behaves” the way that the construct it measures should behave with regard to other measures of the same construct. Although the measurement of culture, values and behaviours is difficult, it is important to conclude that the measurement has acceptable degrees of construct validity. In evaluating construct validity it is important to consider both the theory and the instrument. The dimensions of organisational culture in the PCOC model must correspond to empirically grounded theory. Assured of this the focus is then on the adequacy of the questions.

## **10.6 RELIABILITY**

Reliability refers to the consistency of data derived from a measurement procedure. It refers to the accuracy, stability, repeatability or “trustworthiness” of the numbers being

generated by an item, scale or questionnaire. In most contexts, the notion of consistency (the degree to which consistent results are supplied) emerges i.e. the extent to which repeated measurement will give the same results.

Reliability is concomitant with validity, a necessary but not sufficient condition for validity. A measure may be reliable, but if it is not measuring the underlying construct then it is reliable but not valid. If a scale measurement is not accurate then it is not reliable and cannot therefore be valid.

Reliability is related to the number of observations being pooled (items in an instrument or number of items in a sub-scale). The more responses that are aggregated into a summary statistic, the more reliable it is likely to be. Sub-scales usually have lower reliability for individual respondents than the entire instrument in which they are embedded. It depends on the number of items in a scale, the rating scale itself, the traits or characteristics being rated, and the condition under which the instrument is being used.

Reliability is concerned with the degree to which a measurement is free of random error. Reliable instruments are robust: they work well at different times under different conditions and this provides a perspective on understanding and measuring internal consistency.

Internal consistency tests to assess consistency or homogeneity among the items in an instrument or test. Overall the longer the length of the test, the higher the reliability. The split-half technique can be used when the measurement tool has many similar questions to which the respondent can answer. After administering the test, the results are split into odd

and even numbers and then correlated. If the correlation is high, the instrument is said to have high reliability in an internal consistency sense. The Spearman-Brown correction formula is used to adjust for the effect of test length and to estimate the reliability of the whole test.

To remedy the effect of any undue influence which might interfere with the results of split-half tests other indexes are used to secure reliability estimates without splitting the test's items. The most widely used test of internal consistency for multi-item scales is Cronbach's Coefficient Alpha. The use of Cronbach's alpha is described below.

### 10.6.1 Cronbach's Alpha

The covariance matrix is the basis for measuring Cronbach's. Figure 10.2 below shows the basic structure of a covariance matrix. The diagonal elements of a covariance matrix are variances - covariances of items with themselves. The off-diagonal values are all covariances. This matrix is the basis for measuring Cronbach's alpha. A covariance matrix consists of:

- a) variances (on the diagonal) for individual variances, and
- b) covariances (off-diagonal) representing the unstandardised relationship between variable pairs.

A typical 3x3 covariance matrix for the variables  $X_1$ ,  $X_2$  and  $X_3$  is constructed like Figure 10.2 below.

	<b><math>X_1</math></b>	<b><math>X_2</math></b>	<b><math>X_3</math></b>
<b><math>X_1</math></b>	Var <sub>1</sub>	Cov <sub>2 1</sub>	Cov <sub>3 1</sub>
<b><math>X_2</math></b>	Cov <sub>1 2</sub>	Var <sub>2</sub>	Cov <sub>3 2</sub>
<b><math>X_3</math></b>	Cov <sub>1 3</sub>	Cov <sub>2 3</sub>	Var <sub>3</sub>

**Figure 10.1. The Basic Structure of a Covariance Matrix**

The total variance of a scale, made up of any number of items, equals the sum of all the values in the covariance matrix for those items, assuming equal item weighting.

Alpha is defined as the proportion of a scale's total variance that is attributable to a common source, presumably the true score of a latent variable underlying the items. A covariance matrix of a set of scale items will provide a value for the scale's total variation for the proportion that is "common" variance. (DeVellis, 1991)

Coefficient Alpha is a measure of the "internal consistency" of a multi-item scale. The scores for alpha range from 0 to 1. For a new scale Nunnally (1978) accepts that any score above .60 should be considered acceptable. Alpha increases as the number of items in the scale increases. The reliability of a measure equals the proportion of total variance among its items that is due to the latent variable i.e. is communal. The formula for alpha expresses this by specifying the portion of total variance for the sub-scale that is unique, subtracting this from 1 to determine the proportion that is communal, and multiplying by a correlation factor (the number of elements in the sub-scale). The formula for Cronbach's alpha is as follows:

$$\alpha = \frac{k}{k-1} \left( 1 - \frac{\sum \sigma_i^2}{\sum \sigma_{yi}^2} \right)$$

## 10.7 USING THE PCOC QUESTIONNAIRE

The development and use of the PCOC questionnaire can be broken down into seven key steps. These include the steps for developing the questionnaire, as well as the activities involved in examining the output from the questionnaire and focus groups. A new

questionnaire must be developed when it is used in different organisations. However, only the culture questions require to be changed. The seven steps are outlined below.

1. Develop and identify a strategy for what needs to be measured, what functions should be examined, and how the results are going to be analysed and published. Remember, the questionnaire is to be used before attempting to implement organisational change and the strategy should reflect this.
2. Identify appropriate members for the focus groups and agree the content of the groups. Members should be from around the company with as many sub-units as possible represented. Mixing the groups by grade may also help to create as much information for the focus groups as possible. There are no limits to the number of focus groups - as outlined in Chapter 8, the minimum number should be two.
3. Run the Focus Groups ensuring that the information from each set of focus groups is collated as accurately as possible and the key themes from the sessions are recorded. Where possible, run the groups away from the work environment to ensure that staff feel as comfortable as possible. The focus group contents should follow the outline identified in 10.3.1, above. Each focus group member should receive the feedback from their session as soon as possible after the event is held.
4. Design the questionnaire using the 7 step process identified in 10.4 - the basics of the questionnaire (identified in Appendix 6), and the results of the focus groups are fed into this process. In parallel, the spreadsheet that will be used to analyse the questionnaire results can be developed. When the questionnaire is desktop published, it should be

piloted in a small group to ensure that it is unambiguous and that the questions “read” correctly - important feedback can be obtained in this way before presenting the questionnaire to a larger sample of staff. When this is complete the questionnaire is ready to use and should be passed to identified samples of staff across the organisation.

5. As the questionnaires are returned they can be fed into the spreadsheet for analysis. When a reasonable number of questionnaires have been returned the analysis can begin in parallel to the ongoing inputting of the data. The analysis should be looking at what the data tells the practitioner about the organisation overall and what the data uncovers about prominent “sub-cultures” and differences across the organisation.
6. Results should be published to ensure that staff receive the information based on the questionnaire that they took time to fill in. In certain cases, the complex and controversial nature of the findings may preclude widespread advertising of the results (it would clearly be dependent on the culture of the organisation whether bad news might be published).
7. The output from the questionnaire can then be analysed thoroughly to identify the areas that need to be addressed when implementing organisational change. In the longer term, the results can be used to identify those areas that may need further examination, perhaps being more suited to future development activities.

## **10.8 CONCLUSIONS**

The research identified the need for methods and tools to attempt to identify and measure

the culture of the organisation. The chapter outlined the process of the development of the PCOC questionnaire, the use of Focus Groups in the questionnaire design process, and the methodological issues of questionnaire design and development. The knowledge gained through this process and the understanding of how the questionnaire should be assessed were important for the whole of the research.

The purpose of the research was not to develop tools and techniques that identified and measured the “good cultures/bad cultures” argument or “strong/weak cultures.” The purpose was to identify a tool that would aid the practitioner in attempting to surface and examine complex aspects of the culture and the internal environment in an organisation, looking for areas requiring focus and development, rather than identifying good or bad traits of a culture. Another objective was to attempt to identify the culture, since no objective, comprehensive culture survey had been carried out in either bank to this point.

The main challenge was in the development of the questionnaire using a clear, unambiguous process, involving the use of focus groups, and assessing the reliability of the instrument using Cronbach’s Alpha. The use of all of the methods, while recognising their strengths and weaknesses, allowed a richer and more complete picture of the culture of the organisation to emerge. The key method was the questionnaire which was eventually used to gather information from in excess of 230 respondents. The output of this research is discussed in the following chapter.

# **CHAPTER 11**

## **RESULTS OF PCOC ANALYSIS**

## 11.1 INTRODUCTION

According to Kraut (1996) organisational surveys can be used for a wide number of purposes. It is the researcher's belief that some of these apply to the use and development of the PCOC model. The research focused on the development of the questionnaire as a specific aid to help practitioners at the outset of organisational interventions. In this case the questionnaire has been used for four of the eight purposes expressed by Kraut: to pinpoint areas of concern, to act as an input for future decisions, to perform organisational behaviour research, and to assist in organisational change and improvement.

The key problem was how to address both the practical and research issues simultaneously i.e. generate useful information for the organisation to make use of, and to contribute to the knowledge about the effective management of organisations.

The key purpose as far as the research was concerned was whether the questionnaire was robust enough to pinpoint areas of concern and provide enough information to be a first step in the intervention process. The information it generated could be used to *"specify aspects of the culture that needed to change or stop, determine the causes of these problems, and focus intervention to address the root causes."* (Wagner and Spencer, 1996)

Six areas were used to provide respondents for the survey. Lloyds Bank Head Office in Bristol and TSB Head Office in Birmingham provided the initial respondents. The survey also included TSB and Lloyds Bank Branch Networks and two TSB

Operational sites, TSB Homeloans Ltd (the exclusive supplier of mortgages to TSB, based in Glasgow) and Mortgage Express Ltd. (a niche supplier of high risk mortgage loans and other related products). Both Mortgage Express and TSB Homeloans were excellent subjects for analysis, since they had recently won the 1996 UK Quality Award and the 1996 Quality Scotland Award respectively.

This chapter will explore the results of the PCOC questionnaire which was piloted across four areas of both Lloyds and TSB Banks. While the analysis of the data collected is important for the business usefulness of the research, the academic interests reside mainly in the steps leading to this point: the design and the development of the model and the questionnaire. The analysis will, however, focus on three areas; the reliability of the questionnaire, an analysis of the four Business Areas examined in the survey and an analysis of the implications for organisational change. Conclusions and issues raised by the questionnaire will be identified. An analysis by job grade is outlined in Appendix 6.

## **11.2 SCALE RELIABILITY**

In the previous chapter the importance of scale reliability was explained in detail. The main statistical determinant of scale reliability was Cronbach's Coefficient Alpha. This was used along with split-half reliability techniques. The Cronbach's alpha scores for the 4 PCOC elements are recorded below and the 13 sub-elements are recorded in Appendix 7. 11 of the 13 sub-elements had alpha scores in excess of the 0.6 suggested for new scales by Nunally (1978). The two sub-elements that did not

have adequate alpha scores were “*Behaviours*” and “*Rituals*”. The highest alpha scores were for and *Work Satisfaction* and *Planning and Decision Making* (0.81 and 0.77 respectively). The greater the alpha scores, the more reliable the mean score for that item.

The alpha scores for the 4 main PCOC elements were very satisfactory, allowing all respective data to be grouped into one of the four elements. Table 1 below shows each element and its score.

<b>PCOC Element</b>	<b>Cronbach’s Alpha Scores</b>
People	0.87
Customer	0.72
Organisation	0.93
Culture	0.79

**TABLE 11.1 Alpha scores for PCOC elements.**

Split-half reliability was tested in two ways, the data was split into 1-50 (without 17, a qualitative question) and 51-99, and the results of the two sets of data were compared. The second way that split-half reliability was tested was by dividing the data into odd and even numbers and again comparing the results. In the former the average question score was 3.06 for the first 49 questions and 3.15 for the second 49. Average (half) questionnaire scores were 150 for the first half and 154 for the second. For the odd and even numbers test the question average for odd questions was 3.09 and 3.12 for even numbers. Average (half) questionnaire scores were 151.47 and 152.83 respectively. Overall this analysis showed that there were no significant differences between either the odd and even numbers or the first and the second half of the data.

### 11.3 DEMOGRAPHIC BREAKDOWN

In total 235 staff returned the questionnaire; 140 of those questioned were former TSB staff, while 95 former staff from Lloyds were questioned. Of the total, 138 women and 97 men responded. The TSB breakdown was 88 female and 52 male. The Lloyds breakdown was 50 female and 45 male respondents.

The population was older than expected. 60% of all respondents were aged 30 and over, while only 16% were aged 25 or below. Overall, 50% of all respondents had been working for more than 10 years, (66% of Lloyds staff and 39% of TSB staff).

The large number of Senior Clerical staff in the sample who responded was due to the disproportionate numbers of Senior Clerical staff in the Lloyds Branch Network responding (50% of all senior clerical staff were Lloyds Branch Network). The overall breakdown by grade and sex was as follows:

GRADE	RETURNS
Junior Clerical	49
Senior Clerical	90
Junior Manager	50
Middle Manager	30
Senior Manager	16

**Table 11.2 Returns by Grade**

FUNCTION	RETURNS
Lloyds Head Office	21
Lloyds Branch Network	74
TSB Head Office	28
TSB Branch Network	64
Homeloans	24
Mortgage Express	23

**Table 11.3 Returns by function**

The scores by grade are provided in Appendix 6. Each of the four business area will be analysed in turn.

## **11.4 TSB BRANCH NETWORK**

### 11.4.1 Breakdown by Function

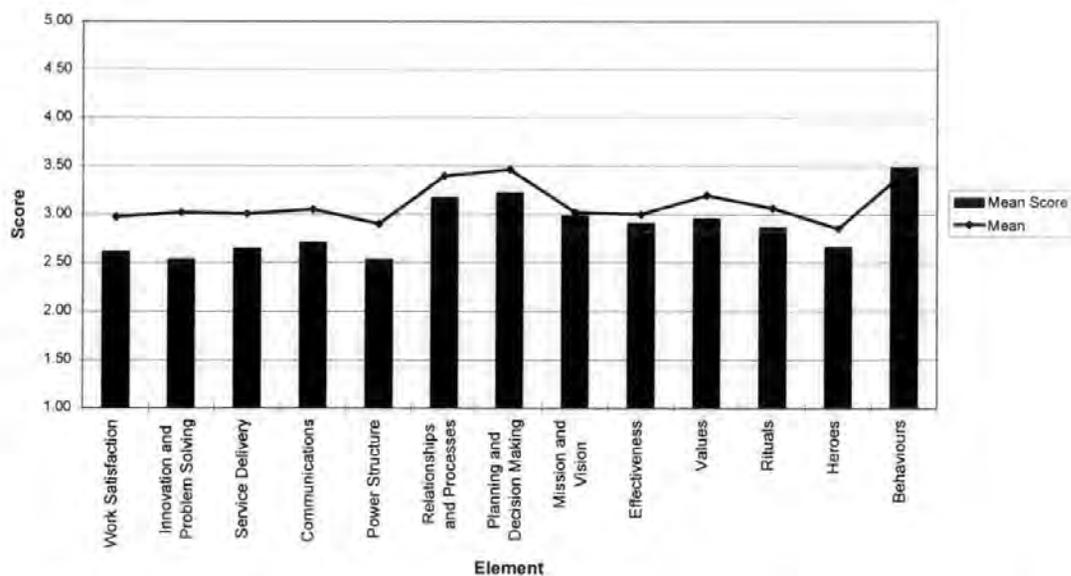
While it was difficult to accurately predict differences between grades, it was much easier to predict that there would be greater differences between the different functions analysed. The null hypothesis of the research was that there would be significant differences between various functions and areas of Lloyds and TSB as well as between Lloyds and TSB as a whole. The main functions that were the focus of the research were TSB Branch Network, Lloyds Bank Branch Network, TSB Homeloans and Mortgage Express. 59 questionnaires were also returned from the TSB and the Lloyds Bank Head Offices from 90 given out. This was a higher return than the other areas, possibly due to the geographical proximity of the respondents. While an enormous amount of data was collected, this analysis can only provide the highlights.

### 11.4.2 TSB Branch Network

The TSB Branch Network was the lowest scoring area of the whole of the questionnaire. The lower the score the less appropriate the culture would appear to be. It was the not only in the sense that it had a much less appropriate environment than the other areas examined, but also in the sense that it had very poor People scores

and Customer Delivery scores, as well as below average Culture and Organisation ratings. The Branch Network Results are shown in Figure 11.1 below.

The TSB Branch Network profile was characterised by extremely low *Work Satisfaction* and *Innovation and Problem Solving* and *Power Structure*, very low *Service Delivery* and *Heroes* scores, and low *Communications*. The profile presented was one where staff were not involved in any way in the decision making, planning and future of the organisation. Of the 98 rating-scale questions, Network staff rated 21 of them below 2.5 and another 42 questions scored below 3.0. The four lowest scoring questions were *Everyone looks forward to going to work*, *There is no time to examine problems that affect us*, *My branch has a lot of influence* and *Budget pressures have no impact on decisions being made*.



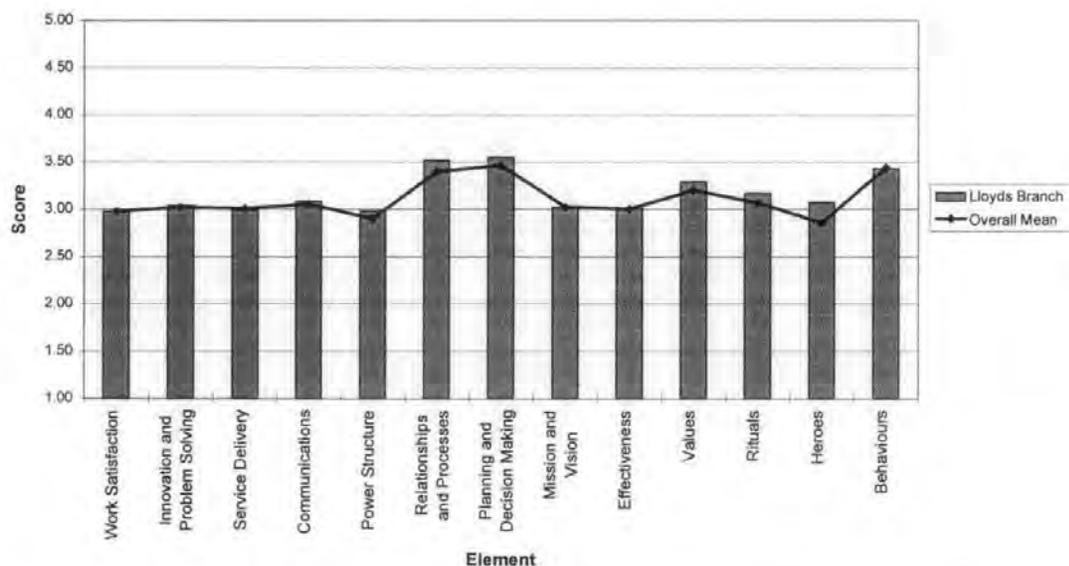
**Figure 11.1 Comparison of PCOC Elements for TSB Branch Network with Overall Mean**

## 11.5 LLOYDS BRANCH NETWORK

The profile of the Lloyds Branch Network seemed to present an organisation that was relatively happy with what it was doing, and doing only what was required to get by. The profile is presented in Figure 7 below. *Planning and Decision Making* (3.55) and *Relationships and Process* (3.52) all scored high but the rest of the scores were around the overall mean.

*Work Satisfaction* was slightly above the mean (2.98) although Q35 (In my department everyone looks forward to going to work each day) scored considerably below (2.21). The environment within the Lloyds Branch Network appeared generally to provide reasonable challenges to staff within their jobs,, although they did not have the time to examine problems due to lack of time and opportunity.

*Service Delivery* scored below the PCOC element mean (2.99). Staff understood who their customers were, and believed that the organisation was, to an extent, organised to meet customer need. The concept of the internal customer was not understood and sales and volume were clearly more important than quality and service. There were above average *Values* (3.3) and *Heroes* (3.07) scores. The PCOC elements are shown in Figure 11.2 below, compared to the overall mean.



**Figure 11.2 Lloyds Bank Branch Network Score Compared to Overall Mean**

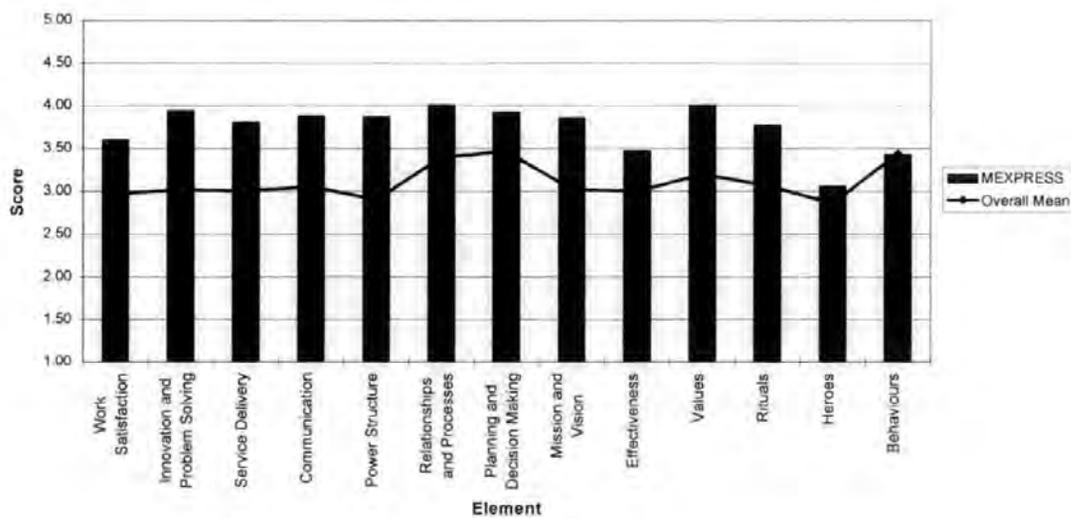
### 11.6 MORTGAGE EXPRESS

Mortgage Express presented a profile of an organisation that was strong in all areas of the PCOC model. The comparison with the overall mean scores is shown in Figure 8 below. *Work Satisfaction* was high (3.60 against a mean of 2.97), staff were involved in areas of *Innovation And Problem Solving* (3.95 against a mean of 3.02), they were trained to use quality tools and techniques and their managers actively appeared to solicit their ideas. Time was put aside to deal with problems that affected them.

Service delivery scored very high (4.0), compared to a mean of 3.01. Staff knew who their customers were, the organisation was organised to meet customer needs, staff understood strongly the concept of the internal customer and Quality and Service were

more important than Volume and Sales. Staff felt that they were involved in *Planning And Decision Making* (3.93), they had a strong understanding of *Relationships And Processes* (4.01), decisions were made with the long-term in mind and there was an emphasis on customer needs when planning.

In terms of Mission and Vision almost everyone understood the Mortgage Express mission, there was a clear vision for where they were going, and staff were committed to the achievement of the long term goals. The lowest scoring element was heroes (3.13), although it was well above the 2.86 average. Many of the issues around this relate to the strength of Total Quality role models. Only two questions scored below 2.5. They were *Successful people do not work long hours* and *Budget pressures have no impact on decisions being made*. Given that every other area also highlighted Q90 (budget pressures), it was clear that there was a company wide emphasis on cost control.

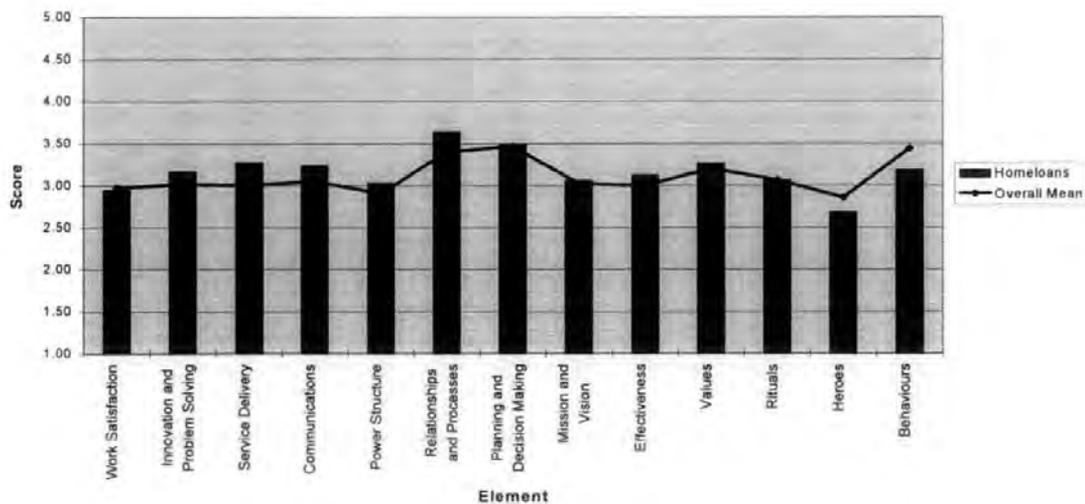


**Figure 11.3 Comparison of PCOC Elements for Mortgage Express with Overall Mean Scores**

## 11.7 TSB HOMELOANS

TSB Homeloans was the second highest scoring business unit. It scored below the item average in *Work Satisfaction* (2.95), and *Heroes* (2.68). *Service Delivery* (3.27), *Communications* (3.24), *Innovation and Problem Solving* (3.17) and *Relationships And Processes* (3.64) was above their respective means.

There were 10 questions that scored below 2.5. The two lowest scores were *Advancement was on the basis of Job Performance only* i.e. it is not, and Q90 (budget pressures, 1.79). *Decisions were not made in meetings*, to get promoted you had to work long hours, *Pay and bonus were not designed for team performance*, and *Not everyone had a personal development plan*. *Controversial issues did not appear in the staff magazine*, *Results were more important than procedures* and *Projects were not implemented by the agreed dates*.



**Figure 11.4 Comparison of PCOC Elements for Homeloans with Overall Mean**

## 11.8 REVIEW OF BUSINESS UNIT RESULTS

The TSB Branch Network profile presented was one of an unempowered, dissatisfied, but motivated staff with real customer services values in an environment which valued sales over customers and staff. In the questionnaire, Network staff consistently rated their pride in working for TSB higher than the extent to which they believed the organisation showed loyalty and respect to them. They felt that they did not receive adequate communication and there were no role models for them to look up to.

The Lloyds Network had low *Power* scores which suggested that power was concentrated elsewhere. The people who worked in the branches tended not to be in a position to, or be involved in, making any kind of important decisions. Overall, the profile was on or close to the overall mean for all other elements.

Mortgage Express presented a profile of a company that had successfully implemented quality principles and philosophies throughout the company. Mortgage Express had, in reality, actually transformed itself from an organisation on the brink of closing only four years ago, through the application of TQM. The Mortgage Express profile consistently exceeded the overall mean profile, often by 1 clear point (25%). This profile was one of an excellent company, committed very strongly to excellence in customer satisfaction and where continuous improvement was a priority.

The profile presented by TSB Homeloans was of a business area that was clearly above the mean in most areas and had applied and improved itself through the use and

application of Total Quality principles. It would appear from the profile, that the focus of TQM implementation had been the process, cost and planning areas and not on directly improving the areas of staff morale and improvement.

## **11.9 OVERALL ANALYSIS**

The profile that emerged overall had all scores about 3.0 except for planning and processes which were closer to 3.5. However, the overall data does mask the distinct sub-cultures that exist as sub populations or business units, each with its own values, behaviours and work climate. The analysis of the data was completed in the context of the recent Lloyds TSB merger so much interest was aroused concerning whether the questionnaire could identify and pinpoint real differences between the two sides. Interestingly, there would appear to be differences between Lloyds and TSB which are less overt, than between each of the business units analysed.

Deeper analysis of the data provided a much richer picture of the variation within the environment of Lloyds TSB. 39 of the questions scored below 3.0 (10 scored below 2.5), 14 scored between 3.0 and 3.1 (the question mean). 46 questions scored above 3.1 of which 11 were significantly higher than any others. Both the high scoring questions and the low scoring questions help to pinpoint the recurring traits of the environment and also pinpoint areas for closer examination and for possible development.

The high scoring questions present an environment in which procedures dominate - *New staff need to learn the formal rules* and *Across Lloyds TSB established procedures are important*. It would also appear that staff felt that Lloyds TSB was committed to quality and continuous improvement was a priority and a preferred way of working. This dovetails well with the two highest scoring questions overall, asking staff if *Success in the marketplace depends on high quality products and services* and whether *Satisfied customers are important for long-term success*. Customers and their requirements were understood, as were key departmental processes and departmental goals (much more than overall organisational goals and strategies). Interestingly, there was clear agreement that it was important to wear a suit (a very strong symbol and code of dress).

The low scoring questions also provide a picture of what was and was not important. Both questions relating to the balance of family and work scored very low overall. Combined with the view that successful people work long hours, a taken for granted assumption emerges about having to work long hours to be successful. Staff did not look forward at all to going to work each day (Q35) which is reflected by the relatively low work satisfaction scores (2.97). Staff had not “bought into”, or committed themselves to, any Lloyds TSB long term goals.

The overall results for the two qualitative questions used in the questionnaire are reported in Appendix 8.

## **11.10 REVIEW OF FINDINGS**

In research carried out in Fortune 500 companies, Schiemann (1996) identified six major barriers to organisational change. The main two were employee resistance to doing things in new ways and an inappropriate culture to support change. The other four were also culture related - poor communications of the purpose of change, incomplete follow through to change, lack of management agreement on business strategy and insufficient skills to support change. The problem is that people issues are poorly understood generally, which can be attributed to an inadequate measurement of people and organisational culture.

The PCOC model does address the Schiemann issues identified above. Apart from the issue of follow through to change PCOC attempts to diagnose the other areas of the organisation. Communications, strategy, staff skills, comfort with change and an appropriate culture are all aspects of the diagnosis process that PCOC regards as essential for managing change in organisations. Some of the issues identified above also were identified through the three case studies analysed in this research, especially the lack of skills required to cope with the changes.

The key to the current research is the implications for managing change that are raised by the information that was collected and analysed. The most difficult aspect of the research is identifying what information was important and what the implications were for managing change in organisations. The objective now is to briefly examine

the implication that were raised by the PCOC model. They have been divided into four main areas:

1. What is the Current Culture?
2. Does the Culture Fit our Strategy?
3. What are the Implications for Organisational Change?
4. How Does the Organisation Manage Contentions?

#### 11.10.1 What is the Current Culture?

The PCOC model identified that the environment within Lloyds TSB was not a homogenous phenomenon. Rather, perceptions of the culture and the environment differed widely by Business Unit and job grade which removed the myth of a single organisational culture with the organisation. That is why the author firmly believed that this research rightly focused on the need to manage change by measuring and understanding the key characteristics of the culture, before interventions are designed and planned. Bate (1995) argued that this was an essential task in the change process.

Wilkins and Dyer (1988) maintain that the main flaw in programmes of organisational change is that they fail to account for the nature of the culture that is to be changed i.e. they believe that the process of change is independent of the culture that currently exists and is the focus of the change process. Hampden-Turner (1994) identified the need to understand the cultural dynamics before attempting to implement change because even the *“most benign variety can turn very nasty when their patterns are*

*violated.*” He further suggests that the researcher attempts to identify the “black sheep” to gain an understanding of what corporate taboos they broke.

The development of the understanding of organisational culture at Lloyds TSB served to underline the particular difficulties of managing change at the most fundamental levels since each Business Unit was unique and had its own particular strengths and areas for development. This underlines the problems associated with attempting to implement “one size fits all” quality programmes.

#### 11.10.2. Does the Culture Fit The Strategy?

In the leading study on the value of cultural strength by Kotter and Heskett (1992), the key finding was that culture mattered, but strength did not. For them the most important issue was not whether a culture was strong or weak but whether a culture fitted its present or future context. There was no direct correlation between strength of culture and success. But there was a link between success and the adaptiveness and context-fit of a company - or its 'performance-enhancingness'. Kotter and Heskett identified a clear value for performance-enhancing cultures - and those companies without performance-enhancing cultures experienced an enormous cost.

Pascale (1990) identified the organisational paradox of “Fit/Split/Contend/Transcend” and the analysis that was undertaken raised important issues of “lack of fit”: a lack of consistency and coherence. The fit is seen between the coherence of the organisations

strategies with the current organisational culture and climate. Pascale believed that Fit required organisations to have:

*“a reasonable degree of alignment, where the parts fit together, achieve some significant things from just having a lot of congruence, or alignment, inside an organisation.”* (Brown, 1991)

Collins and Porras (1994), in their examination of visionary companies, identified that the successful companies imposed tight ideological constraints to ensure the existence of strategic fit, while simultaneously providing operating autonomy to encourage innovation. The contentions that helped to reduce fit within Lloyds TSB are described below, but there were clear differences of emphasis across the different business areas, that must have caused tension and conflict on a continuous basis due to their divergence. The importance of split, the ability to manage and sustain autonomy and diversity across an organisation, is also highlighted by the results.

### 11.10.3 What are the Implications for Organisational Change?

Kluckhorn (1963) believed that there would always be “intra cultural variation” and that the homogenous culture was a dangerous belief. It was clear from the high and low scoring questions and the widely varying scores between Business Units of Lloyds TSB that there was a lot of Pascale’s “Contention”. While procedures were very important, according to some of the high scoring questions, it was also clearly indicated that results were more important than procedures. And while staff believed that long term success was dependent on high quality products and high customer service, there was general agreement that Quality and Service were less important

than Sales and Volume. The main mechanism of control, which appeared strongly in all business areas, was that of cost control. It was apparent that decisions were made with the influence of strong cost consideration, whether quality and service issues or not (Q90).

All of the issues described in the previous paragraph describe areas of contention or of constructive conflict where seemingly contradictory issues of tension exist side by side. Results versus Procedures, Quality versus Volume, Cost versus Service all appeared as key decisions to be made on a regular basis. Pascale (1990) believed that they should not be resolved, rather that they should be used to "*orchestrate tension*" or "*harness contending opposites*." This leitmotif appears across a number of writings on the difficulties in managing organisational culture. Peters and Waterman (1982) advocated the use of "*simultaneous loose-tight properties*", Collins and Porras (1994) called for "*ideological control and operational autonomy*" and Hampden-Turner (1994) recognised the idea of "*making sense of opposites*" and reconciling "*values that contrast*."

The key is not to balance the issues, since balance insinuates stability, but rather the management of the dynamic relationships between opposites. Clearly, an analysis shows that some business units presented were better at managing contention than others and that there was a lack of dynamic balance. In the case of the TSB Branch Network in particular, management had failed to manage opposing values - instead they embraced strongly the Cost/Sales/Results values to the detriment of Quality/Service/Procedures.

It would appear that Lloyds TSB was also poor at managing and maintaining this in many situations. What was needed, but was lacking, was the idea of transcend management where management can orchestrate and manage the particular issues created by the Fit, Split, Contend paradigm for the benefit of the organisation. (Pascale, 1990, p 22)

#### 11.10.4 How Does the Organisation Manage Conflict?

A recent Industrial Society (1995) report on Change Management reported on the success of change management in different organisational improvement areas. It was seen as successful in areas such as downsizing and cost reduction, but much less so in areas such as TQM, culture change, BPR and Benchmarking. Of changes that are made, 58% of organisations reported that culture change had a major improvement impact on their organisation.

Yet another paradox for organisations becomes apparent. Culture change will have a major beneficial effect on the organisation, but culture is difficult to manage and even more difficult to change. Bate (1995) describes culture change as the struggle between the old and the new and this view provides important guidelines for managing organisational change. Any model of change requires a frame or Weltanschauung for understanding the present culture and why it is perpetuated. Only when this is carried out, analysed and fully understood will an organisation be in a position to change its culture.

The case studies outlined in Chapters 5, 6, and 7 provide evidence of the need to understand the culture and the environment when attempting to implement any types of organisational change. The case studies did not attempt to understand the current situation at the cultural level prior to attempting to develop and implement change.

Kim, et al (1995) and McNabb and Sepic (1995) see the barriers to TQM created by an organisations culture as too great. They express a need for changing the culture before implementing TQM, as the only way to improve the chances of success. They rely on the implementation of empowerment as the first step in the process of change. This research has shown that an organisation can develop sufficiently clear information to understand the culture. This information can be used to formulate the change programme and the interventions, focusing them on the key development areas and strengths of the organisation, rather than relying on changing the culture first.

An understanding of the culture of the organisational culture will not necessarily make change easier to implement or guarantee 100% success. What it provides is a frame which allows understanding of the key issues to develop through a strenuous diagnosis process, with the concomitant understanding of the areas to address in the intervention process.

### **11.11 SIGNIFICANCE TESTING**

The use of significance testing is a valid method from the positivist tradition, which attempts to identify statistically valid relationships and links. The question of

“meaningful” differences often arises (Macey, 1996) and some researchers use common tests of statistical significance for guidance. Comparisons such as these are useful when comparing data samples, attempting to identify meaningful differences and relationships through the use of statistical analysis.

To address the second research problem of helping the practitioner develop an understanding of organisational culture the questionnaire and the model examined the issues surrounding the appropriateness of the environment and the organisational culture. It did not attempt to identify and understand significant relationships lying within the data. This was because before attempting to examine significant relationships, the sample size would have to be reviewed to ensure that sample sizes across all subsets were valid. Whilst the overall sample size was large at 235 it does not adequately cover all subsets. These subsets include geography (business unit), sex and grade. In reality the sample size for each subset would have to be marginally larger.

However, to reiterate this was not the purpose of the research the key point of which was the process by which the researcher derived the PCOC model and the questionnaire. The results obtained merely reflect the pilot nature of the work. The author has shown that valid results can be obtained from the process. An increase in sample size would enable management to draw statistically valid results.

The examination of the data for deeper links and relationships which are statistically significant is another method that may be used to analyse the data collected from the

questionnaire responses and would provide a valid technique to aid the analysis process. The use of statistical significance would fall into the area for future research, which would build on the research already carried out.

## 11.12 CONCLUSIONS

In this chapter the findings from the use of the PCOC model have been presented in detail as well as the Cronbach's Alpha Coefficient for all elements and sub-elements within the survey. The results of the reliability scores were particularly encouraging with 11 of the 13 elements achieving a reliable score. This gave significant reliability to the data that was generated.

While the data generated were important for identifying potential areas for organisational interventions, the key implications of the research for Lloyds TSB and organisations in general were the issues of understanding organisational culture, the importance of context and fit between the strategy and the culture, the importance of managing contention on an ongoing basis across the organisation, as well as the implications for managing organisational change.

An equally important aspect of the research was the learning gained from the process of having developed the PCOC model and questionnaire in an organisational setting. Burke *et al* (1996) claimed that this process of learning "*is as important, if not more important, than the actual results that are generated.*"

The PCOC model was used as a pilot to determine whether the development of a questionnaire to measure the culture and the organisational environment could be achieved. The PCOC method was used in four Business Areas of TSB - the model identified that each was unique and had their own environment and culture. The PCOC questionnaire showed what the author had hoped it would show.

Using four main areas for the analysis, TSB and Lloyds Bank Branch Networks, TSB Homeloans and Mortgage Express, as well as data from both Head Offices, the data collected was presented to identify differences as well as similarities. The purpose of the data analysis was to present the actual data, raise the issues that were dropping out of the analysis, and to identify the main areas of concern for the business, at a business unit level and at the organisational level. For this research the main concern was the effectiveness of the approach that was adopted

The data analysis identified that each of the four main areas had their own particular culture and work environment. It was apparent from the analysis that Mortgage Express, had achieved important changes and had created a healthy environment conducive to innovation from highly motivated, satisfied staff. In contrast, the TSB Branch Network (the main contact point for the majority of TSB's 7.5 million customers) had an inappropriate culture, dominated, it appeared, by cost and profit considerations, to the apparent detriment of staff and customers. The PCOC model was sufficiently robust and focused to clearly identify and present these issues.

# **CHAPTER 12**

## **CONCLUSIONS**

## 12.1 INTRODUCTION

The ability to manage change in Financial Services Organisations is crucial to success in the UK. This is in response to the deregulation of the industry, consolidation of competitors, Mutuals transforming themselves into plc status, and heavy pressures from more discerning customers to change the way that Financial organisations run their business. (Watkins *et al*, 1996) The widespread use of Quality tools and techniques, especially the use of the EFQM Model for Business Excellence reinforces the impressions of an industry undergoing major structural transition.

Organisational culture has been described as the “excuse for all seasons” - that lack of change in organisations was due to the intransigence of the “corporate culture.” (Shapiro, 1996) This situation may be exacerbated by the lack of practical help available to guide practitioners. This research began with the premise of developing a continuous improvement process for Financial Services with a toolbox of quality tools and techniques to aid the improvement process. The importance of organisational culture became apparent as the research progressed. This led to a shift in focus from the Continuous Improvement Methodology to the design, development and testing of an Organisational Culture Diagnosis Tool. The focus on organisational culture as the main contributor to successful organisational change is demanded by the current competitive environment.

This concluding chapter will attempt to identify the issues and conclusions from the research that has taken place. The literature will be briefly reviewed, as will the issues

and problems surrounding the Research Methodology. The specific research problem will be identified, the deficiencies of the current literature and research will be highlighted, along with the gaps filled by this research. The new knowledge will be highlighted and examined, followed by an analysis of the results and findings of the experiments and cases studies. Finally, the chapter will examine the contribution of the research and its results and will attempt to provide direction, suggestions and areas for study for future research.

## **12.2 RESEARCH METHOD**

One of the key problem areas that was identified throughout the research process was that of appropriate research method. There was a lack of research papers in the use of research methods in the area of organisational culture and TQM together. Existing methods make use of the traditional Operations Management tools and techniques, which are often inappropriate to identifying organisational culture. Through its development, this research had sought to use research tools and techniques across the positivist and the interpretive paradigms, an area which still has not developed to the benefit of practitioners and researchers alike. For example, Hassard (1991) attempted to address this issue failed to address the mixing of different research tools and techniques within the same methodology (Hassard carried out four case studies of the same study using each of the four research paradigms used by Burrell and Morgan (1979)).

In the case of the research into organisational culture there are rigid boundaries between research paradigms, especially the positivist and interpretive epistemologies, with no conventions for using perspectives and tools from the different methods. The difficulty, highlighted by this research, was the requirement to straddle paradigms to develop a richer picture and to deepen understanding. Attacks on the use of positivist paradigms in the researching of organisational culture issues by Despres (1995), informed the choice of research method.

While authors such as Eden and Huxham (1996) and Meredith *et al* (1989) and others encourage the wider use of research methods from different research paradigms, in reality there is a dearth of useful integrative literature to guide the researcher. In the case of this research, the author attempted to identify tools, techniques and methods which would not only be useful to the researcher, but ultimately by the practitioner.

In terms of the process of research, Meredith's cycle of "Description, Explanation and Testing (through prediction)" was not entirely adequate for the use of methods in this research. The Description, Explanation and Testing cycle actually became

- DESCRIPTION (Description, Explanation and Testing)
- EXPLANATION (Description, Explanation and Testing)
- TESTING (Description, Explanation and Testing)

While Meredith criticised researchers who jump between sectors of the order out of turn, the practical nature of the research process made it inevitable that the continuous iterative process as outlined above, fitted the needs and the goals of the researcher.

At a philosophical level, the difficulties encountered with the research paradigms would appear to be irreconcilable. The fundamental issues of methodology relate to the definition of truth i.e. the ontological position:

- Truth resides in nature (The positivist definition) or
- Truth resides in the mind of the observer (The interpretive definition)

While acknowledging the strong traditions of the interpretive paradigm this research is firmly in the positivist tradition and the researcher does not accept that the positivist stance annuls the research as Despres (1996) and Pettigrew (1979) would argue. The proposition is not that the researcher can have all of the information (a positivist assumption) but that the research (using some of the techniques from the interpretive paradigm) provided what Geertz (1973) called "thick descriptions." The use of more than one research technique (case studies, focus groups, and survey methods) provided a broader overview of the research problem.

### **12.3 THE RESEARCH PROBLEM**

This research has in part set out to argue that the ability of an organisation to manage the process of continuous improvement or TQM implementation is fundamentally dependent on the culture of that organisation. An understanding of the culture can

help the practitioner focus on key change and intervention issues. This research, by implication, has followed the funnel process of research. Broad problems of failure to implement TQM, the so-called 80% failure rates, disappointing returns on investments in quality and programmes such as BPR or culture change programmes have through the funnel process, focused this research on the concepts of organisational culture.

The research resisted the requirement to simply prescribe a “one best way” for organisational change. Similarly, the codification of “best practice” strategies fail to fit with the dynamic social systems of organisations. Few current theories or research look at organisations as entities with their own specific internal and external contexts, with their own problems and issues that require intervention. As Dunphy and Stace (1990) note, few change management theories examine critical issues such as organisational politics. The research undertaken attempted to address the issues of managing change while addressing the key organisational issues related to the implementation of quality management interventions.

Specifically, the key research problems that the researcher had sought to address was:

- 1. How can a practitioner develop an understanding of organisational culture, and set about attempting to diagnose the culture of his or her organisation using various tools and techniques (Multi-item Questionnaires and Focus groups)?*
- 2. Can the knowledge that is collected and synthesised be used to make decisions concerning the focus and the type of interventions that should be made?”*

Throughout the later chapters of this research, the researcher accepted the fundamental importance of organisational culture to the success of any type of major change within

organisations. More important than the results was the process that was followed which lead to the development and use of an organisational culture measurement tool, PCOC. (Kraut, 1996)

## **12.4 LITERATURE SURVEY**

The implementation of TQM, the management of change and organisational culture are inextricably linked. The popularity of the EFQM Model for Business Excellence provides evidence that the TQM paradigm has shifted from the use of “off-the-shelf” programmes to ones which utilise mediate structures such as the Business Excellence model. These models rationally link quality management activities to customer satisfaction, strategic planning and in the end, business results, while allowing the company to decide the appropriateness of specific quality related activities. The popularity of these “excellence templates” does not address, however, the fundamental issues relating to the Quality Improvement process: how to identify, understand and manage the cultural aspects of organisational change and improvement. The Business Excellence Model does have Criteria 1b requiring the development of a “consistent Total Quality Culture.” This research has shown that this is an inappropriate requirement since the PCOC model has shown that consistent culture is not often the most appropriate way to operate.

The much quoted AT Kearney study (1992) “Time to take off the rose tinted spectacles” identified successful TQM programmes as sharing four main characteristics:

- as emphasis on tangible results
- insistence on performance measures
- an integrated programme
- clear commitment from top management

The appeal of models such as the Business Excellence Model is that they encompass, emphasise and integrate these and many more “hard” , tangible issues and concepts.

The researcher feels disappointed in the fact that TQM and cultural change are often mentioned simultaneously in the literature, but in practice the “organisational osmosis” syndrome is still prevalent.

In a similar way to the issue of separate research paradigms and their strict compartmentalisation in relation to organisational culture, there would appear to be parallels to the research and practice of TQM and organisational culture. While almost all authors herald culture change as a necessary by-product of TQM implementation, only a few authors such as Hildebrandt *et al* (1991) explicitly set out that the identification and active measurement of organisational culture is essential for the development of successful, balanced programmes of lasting change and improvement.

The process of developing an organisational culture study, from a TQM perspective, rather than a sociological or psychological perspective, was an important case study in

itself. It was not difficult to develop the culture audit tool which will address the information needs of a Quality Improvement intervention. More than that, it also pinpointed areas for concern and areas of development that would be appropriate to address from a Quality perspective.

## **12.5 GAPS IN THE LITERATURE**

There would appear to be a number of gaps in the literature. Some of the reasons for that were alluded to in the Research methods but the research method used highlighted the deficiencies, especially in the TQM and general quality literature. The research identified a number of important gaps in the literature:

- The links between TQM, TQM implementation and organisational culture are usually discussed only at a superficial level
- How to identify organisational culture and general use of culture audit tools
- Links between Quality and organisational culture and the internal environment of the organisation.

### 12.5.1 TQM and Organisational Culture

The link between the two concepts is often alluded to but rarely does a discussion of TQM include an in-depth analysis of the organisational culture. In many cases it does not even get mentioned as a key issue. The domain of TQM in the Operations Management research paradigm may be responsible for the focus on the “harder”

aspects of TQM, although Watson and Korukonda (1995) identify the lack of “conceptual clarity” and “muddled and multiple definitions” as the reason for such varying views.

This research did examine a small number of researchers who encouraged the acceptance and the recognition of the organisational culture construct with the quality management literature, especially as a primary condition for its successful implementation. Vanisina (1990) argued strongly that an assessment of the organisation’s culture was a prerequisite for successful organisational change. The lack of empirical and theoretical studies published on the connection of organisational culture to TQM was criticised by Bright and Cooper (1993), their view being that TQM was too “tool focused.”

The problem with the two concepts has always been the widely held view (perpetuated by consultants) that organisational culture change would come from TQM interventions, and that the process of training everyone in Quality concepts would be the vehicle for this change. As the research process has shown this is a simplification of the truth. The resistance that is often met by such programmes is that they have singularly failed to account for the current culture, and have attempted to implement change that was either incongruent with “the way they do things round here” or “*blind to cultural considerations.*” (Bright and Cooper, 1993, p ) Standard programmes can only serve to raise awareness, but cannot put the organisation into a position of competitive advantage. Another problem is the action centred programme

that focuses on doing enough of the right improvement activities to cause performance improvements to appear.

### 12.5.2 Organisational Culture and Culture Audit Tools

The literature that exists to promote the link between TQM and organisational culture involves the identification of the “*relevant factors determining readiness for change to a TQM operating environment.*” These studies rarely discuss the development or the preparation of a question set or questionnaire (or other approaches) to identify and measure the culture within the organisation. Often, the research followed on separately from other work that had developed the scale and the model in question. The normal research paper would include the introduction of a model, the outline of its empirical underpinning and the analysis of the output from the research, carried out in some client organisation. The work would not usually list the questions or describe the scale in detail.

This research explored the links between the TQM and organisational culture and through a step by step process, described by Kraut (1996) as the most important aspect of the research, showed the development of the PCOC model. It showed how the model was derived from other empirical research, as well as the development of a question pool as recommended by DeVellis. The completion of the Environmental questionnaire, its piloting and testing within TSB was also clearly documented. One of the goals of the research was to allow practitioners to utilise the questions, with the

use of focus groups, to develop a questionnaire to allow understanding within their organisation

### 12.5.3 Quality, Culture and the Internal Environment

The inability to implement organisational change may not necessarily be a failure of management but rather it “*may be attributed to deeper, more critical sources: the fundamental, pervasive culture of the organisation and the operating climate that culture instils in its employees.*” (McNabb and Sepic, 1995) The key to improving the odds of successful change was to examine comprehensively the culture, and the climate created and constantly influenced by that culture. The role of the internal environment in the organisational change process has also been little researched in the literature.

In many organisational situations the organisation may help to create a particular environment. A culture which does not value its staff may create an environment of discontent where staff are unhappy, demotivated, undervalued and uninvolved in the running of the organisation. The opposite may also be true: a culture which values its staff may have an environment in which all staff are motivated to be involved in helping to change the environment. What is required is a culture that is appropriate for the goals and aspirations for the organisation. An organisation with goals of customer satisfaction will struggle if the culture is one in which sales and profit are valued over customers. Davis' Cultural Risk model can help to identify the extent to which changes that need to be made will be congruent with current organisational

beliefs. Firms that have cultures supportive of strategy and likely to be successful, while firms that have insufficient “fit” between strategy and culture must change their cultures since it is the culture which supports the desired strategic intent. (Smith *et al*, 1993)

From the results there appeared to be important issues of what Pascale termed “lack of fit”: a lack of consistency and coherence. Pascale’s often ignored model of Fit, Split, Contend, Transcend is a very good way for organisations, especially larger ones, to think of the culture of their organisation. There are often contentions in organisations that help to reduce fit, when organisational integration across the varied areas of the organisation are required to effect sufficiently co-ordinated strategy or action. The key in doing so is to maintain the (often) unique values systems at the local levels.

## **12.6 NEW KNOWLEDGE**

There were a number of experiments carried out which helped to build up the new knowledge developed through the research process. Through the cycle of the research a number of experiments were carried out to test theories, tools and models that had been developed. In the research the following research tasks were conducted: three quality tools case studies (Cost of Quality, Process Management, Benchmarking Case Study, two focus groups on Organisational Culture and development and testing of the PCOC model within Lloyds TSB.

### 12.6.1 Cost of Quality Case Study

The Cost of Quality case study was the first piece of work undertaken at TSB, as part of the Teaching Company Scheme. The work was carried out over a period of two months from January 1994 to February 1994. The case study examined the application of Cost of Quality techniques as a method for improvement within the Payroll Process of TSB. The payroll process at TSB had developed out of the geographically disparate pre-floatation TSB structure, with five processing sites serving small populations, except for the one serving the Branch Network. The outcome of this work (and some benchmarking work that accompanied it) was that the payroll processes were centralised and a decision was then taken to outsource the whole of the process to a systems processing company. Some of the work that was done was used to help in reaching that decision.

While there were a number of improvements that came from the process, there were a number of issues that were raised by the intervention. Reflections on the process that had been followed brought out a number of key factors that had not been regarded as relevant to the improvement process. These included issues such as Politics and the management style, the views of staff and customers, as well as the environment and the culture.

Essentially, the use of the Cost of Quality techniques gave a very good understanding of the technical/operational level or the artefact level (Schein, 1984). What the intervention lacked was the broader understanding of the values or taken for granted

levels, which would help to uncover the key assumptions and behaviours of the staff working in the process. At the time however, the mindset of the researcher never saw them as important parts of the process of managing change.

### 12.6.2 Business Process Reengineering

The process that was redesigned was one which had been giving the Human Resource Function a lot of problems over a number of years. The Managers Pay Review process covered seven separate departments, the process originated within the Compensation and Benefits department which, while setting policy, did not actually own the process. It was decided to involve the author in an intervention to facilitate a team to radically improve the process. After the initial stages of the client/actor cycle and the agreement of a suitable definition of the project, the process team was formed from all of the departments who were actually involved in the process. The process improvement method adopted had five main stages from developing a vision of what the process should be to the implementation processes and the driving of continuous improvement after the changes.

The intervention process did gather a lot of information in a quite unstructured way from the key participants in the process. Each had their own ideas about what should be done with the process and how it should be changed. To facilitate this, a number of process workshops were held to map the current process and to decide what the new process should look like. The collection of cost, time and quality data from the process helped but there was a feeling by the author that something was missing, and

the research was just not providing the “whole picture.” No data was collected about the attitudes of the people in the process, their behaviours, the management influence on the process (via their line managers) or just basic issues of how things were really done. Reflections on the process began to create an impression of the limitations of the current tools and techniques used for quality improvement. There was a need for a tool that would help to provide more information about the intervention, that would help the researcher develop a better understanding of the climate and the people working in the process.

### 12.6.3 Benchmarking

The work carried out on the Strategic Planning process was the most interesting from a research point of view. The researcher was charged with identifying and visiting companies who had changed their planning process and identify the reasons for change, how they made the changes, and the process that they created. From an organisational culture viewpoint, this case was to provide enough evidence to support the evolving views that culture was a key element in the change process. Desktop research identified a number of companies that had changed their planning processes. This initial research showed that a number of them had completely redesigned their process from a process run by the planning process to one that involved as many managers and staff as possible (often called policy deployment).

Throughout the benchmarking process it became more and more apparent that the companies that had changed their planning process had not done so at the level of

process improvement. Rather, the understanding of these companies about what planning and strategy was, had fundamentally changed. Strategic Planning had changed from a control process to a process to use the creativity of all staff in achieving desired goals. This was exemplified by the approach of Reebok UK. They had a process which produced a planning document that was seen by four people. They changed to a process where all of their 200+ staff could contribute to the planning cycle and suggest areas for improving service, profitability and cost competitiveness.

#### 12.6.4 Results of Focus Groups

There were a number of common outputs from the two focus groups examining organisational culture. The common outputs are reproduced in Chapter 10. In relation to values the groups identified the issues of youth, aggression, anti-failure, bottom line and delivery. For rituals they identified the issues of finding scapegoats, not admitting mistakes, cost reduction, exercises and planning processes. The group was in agreement on the symbolic nature of the tiered TSB head office, the uniforms (the dark suits worn by men) and the furniture (different for different grades).

Structure and systems were easily identified, many being related to control of costs, sales and targets. The Finance cost reduction teams were one, the hierarchy, budgets, performance target and project management methodology were also identified as control based structures and systems. The competencies required of the management in the organisation were very much negative rather than positive. There was

agreement that managers were aggressive, territorial, delivery focused, did not need to learn, had an exterior veneer and had the ability to not let anything negative stick (teflon). It was agreed that these were not necessarily the best competencies required of managers to run the organisation.

#### 12.6.5 Developing and Testing PCOC

The PCOC questionnaire was specifically designed to help practitioners at the outset of organisational intervention. While Kraut (1996) outlines a number of uses for this type of organisational survey, the researcher identified four specific uses for the PCOC model. It can be used to pinpoint areas of concern, provide input for future decisions, perform organisational behaviour research, and assist organisational change and improvement. The findings from the survey will provide enough information for a practitioner to identify the majority of the key issues before attempting to utilise any improvement initiatives or techniques.

The PCOC model identified that the environment within Lloyds TSB was not a static or stable phenomena. Perceptions of the culture and the internal environment differed, to some extent, both by the four main Business Areas in the survey and by job grade (five grades were identified). Mortgage Express provided a profile of a very appropriate “total quality” culture, as did TSB Homeloans. However, the opposite could be said to be true of the TSB Branch Network. These findings highlight why the ability to manage change is so dependent on measuring and understanding the key characteristics of the culture and the environment, before interventions are designed

and planned. PCOC showed that each of the Business Areas had their own particular strengths and weaknesses and each Area had different needs and requirements, rather than a broad brush “one size fits all” approach. (Burke *et al*, 1996)

While the data generated was important for identifying potential areas for organisational interventions, the most important issue for the author was the learning gained from having gone through a process of developing and using an organisational survey method. Burke *et al* claimed that this process of learning “*is as important, if not more important, than the actual results that are generated.*” (p )

The PCOC model was used in response to the problems outlined earlier in collecting data and understanding the intervention situation, especially in relation to the culture and the organisational environment. The PCOC method presented information which was useful to the practitioner in understanding aspects of Lloyds TSB, the sub-cultures encountered and their environments. Wilkins and Dyer (1988) conclude that the flaw of culture change programmes is that they fail to understand the nature of the current culture.

## **12.7 CONTRIBUTION OF RESEARCH**

The gestation period of this piece of research has seen the development, and publication of numerous so called “new” answers to the variety of problems that organisations are confronting. This period has also witnessed the dramatic rise and decline of the “Fad of the 1990’s”, Business Process Reengineering (although the

Process aspect still remains). With this background, it is not surprising that this research began with the focus on the hard, tools side of change. The reasoning was that the research should attempt to show how change could be driven with the application of tools and techniques within a rigorous change management process.

The contribution of this research, however, is in different areas to those envisaged at the outset of this research. At the outset, the novelty of applying this research within the Financial services sector may have been enough to present a major contribution. The fact is that the adoption and use of quality tools and techniques within the last three year within the Financial Services sector has been significant. 90% of companies surveyed by Bristol University (Watkins *et al*, 1996) claimed to be developing customer focus, flatter structures, process-orientation and empowerment.

The contribution of this research has been in a number of areas, areas where the literature is often inconsistent and inadequate. The main area of contribution was in the process followed in designing, developing and testing the PCOC Environmental questionnaire. The process by which this audit tool was derived was the most important aspect of the whole research. However, it was in response to almost six months of frustration by the researcher, in attempting to review progress on the research to that point (about one year into the research). The detailed literature (presentation of model, approach and questionnaire) in this area was extremely poor.

Another area of contribution was in the use of the diagnosis tool as a precursor to TQM or other interventions. Some consultancies do use diagnosis tools, but they are often measuring hard, artefact issues, whereas the PCOC model measures the hard

issues and the “soft issues” such as values, rituals and heroes. The initial three case studies achieved their goals to varying extents. Post hoc evaluation of the results of these case studies highlighted the need for diagnosis before the tools and techniques are employed. The cases also highlighted the problems with tools and techniques: they make the practitioner focus on the problem with the tool in mind. PCOC focuses on the intervention in an unbiased way i.e. it was not focused solely on process, or on cost. The output of the diagnosis can then be used to identify development opportunities, areas for improvement as well as major problem areas.

This research attempted to promote the crucial importance of organisational culture to the development and implementation of Total Quality Management philosophies, as well as other change programmes. The research showed how the lack of understanding of cultural issues can hinder the performance of departments, and hence the whole of the organisation. The use of the PCOC model has helped to reiterate this aspect of the research. In 1991 a TQM programme was launched across TSB Bank: the training and the programme was “off the shelf” and everyone from every area received the same training. The successful areas of TSB (in terms of quality improvement) were those who took the initial training, and then converted the implementation of quality to their own particular requirements (i.e. made it culturally specific to themselves). This aspect showed up in the diagnosis that was carried out using PCOC. The areas that had done this were those areas that scored highest on the PCOC model, Mortgage Express Ltd, and TSB Homeloans.

## 12.8 FUTURE RESEARCH

There are many areas where continued research can help to develop practical knowledge that organisations can utilise to improve their performance and their ability to manage change effectively. The researcher would have liked to further examine a number of areas related to the research carried out, but was prevented by time and other issues. Future research should be focused in three main areas

- To utilise the PCOC development process in other organisations and assess appropriateness
- Use the PCOC as a basis for total quality interventions and then re-diagnosing using the same tool to see if differences are apparent
- Use PCOC to develop links between organisational culture, the internal environment and the external environment. A diagnosis model for the external environment can be used to assess the appropriateness of the current culture to the current and future strategies (strategic fit)
- The wider use of statistical significance testing could be applied to the model to aid the identification of meaningful statistical relationships from the data.

PCOC was tested in four main areas of TSB Bank and Lloyds Bank. It would be beneficial for the model to be tested in different types of organisations to reassess its suitability as a general environmental diagnosis tool.

The research undertaken carried out three interventions without any type of wide ranging diagnosis of the current situation. The development and testing of PCOC was a remedy for this issue. Unfortunately, the process did not include the focusing and initiation of interventions based on the findings. The usefulness of the PCOC model could be further strengthened by testing the diagnosis, through the use of interventions. These could preferably be in different organisations and different situations to strengthen the general use of a PCOC-type model. Of course it is as much the development process as the use of the model that is important in this respect.

The author recognises the implications for the external environment of the Environmental diagnosis that comes from the PCOC process. The PCOC process could be improved by including an external environmental diagnosis as part of the process. Not only would there be a diagnosis of the internal environment, but there would be a diagnosis of the external environment to complement this. The latter could be used to develop a set of prioritisation criteria based on the output that came from it. Not only could areas for development be identified, they could be prioritised on the basis of strategic need. Similarly the external diagnosis could help to identify areas of lack of strategic fit within the organisation. These areas could then be managed as the change process was implemented.

## REFERENCES

### A

Almaraz, J (1994) Quality Management and the Process of Change. *Journal of Organisational Change Management*, Vol. 7, No. 2, pp 6-14. MCB University Press, London.

AMICE ESPRIT Consortium (no author). (1991) *Open System Architecture for CIM, CIM-OSA AD 1.0, Architecture Description*. ESPRIT - Project 688, Project 2422, Project 5288, 2 Boulevard de la Woluwe Bte. 8, B-1150 Brussels, Belgium.

Anonymous. (1992) The Cracks in Quality. *Economist*, 18 April 1992. London.

Arnstein, F, Dickerman, M.E. (1992) Sixteen lessons to make process management easier. *Journal of Quality and Participation*, December, pp 62-67. USA

ASQC Quality Cost Committee. (1974) *Quality Costs - What and How*. American Society for Quality Control, Milwaukee, Wisconsin.

AT Kearney. (1992) *Total Quality: Time to take off the Rose-Tinted Spectacles*. AT Kearney and MCB University Press, London.

### B

Bate, P. (1995) *Strategies for Cultural Change*. Butterworth-Heinemann, Oxford.

Bodin, L D, Kursh, S J. (1978) A Computer Assisted System for the Routing and Scheduling of Street Sweepers. *Operations Research*, Vol. 26, pp 525-537.

Boyce, GWD. (1992) Why Quality Programs aren't - and How they Could Be. *Business Quarterly*, Autumn 1992, pp 57-64. Toronto, Canada.

Bright, K, Cooper, CL. (1993) Organisational Culture and the Management of Quality. *Journal of Managerial Psychology*, Vol. 8 No. 6, pp 21-27

British Deming Association. (1994) *Learning and Leadership*. World Series Booklet, W 4, Laverham Press, Salisbury, Wiltshire.

British Quality Foundation. (1996) *Guide to Self-Assessment (Business Edition)*, British Quality Foundation, London.

British Standards Institution. (1991) *BS 4778:Part 2:1991. Quality vocabulary. Quality concepts and related definitions*. BSI, London.

British Standards Institution. (1990) BS 6143. *Guide to the Economics of Quality, Part 2. Prevention-Appraisal-Failure Model*. BSI, London.

British Standards Institution. (1992) BS 6143. *Guide to the Economics of Quality, Part 1. Process Cost Model*. BSI, London.

British Standards Institution. (1994) *BS EN ISO 9000-1:1994. Quality management and quality assurance standards. Guidelines for selection and use.* BSI, London.

Brown, A. (1992) Organisational Culture: The Key to Effective Leadership and Organisational Development. *Leadership and Organisation Development Journal*. Vol. 13, No. 2, pp 3-6

Brown, RP, Maull, RS, Welling, W, Cliffe, RW. (1994) The Innovative Bank - A Case Study. *Proceedings of the Technology Transfer and Innovation Conference, Day 1, The Innovation Process*, pp 76-81.

Brown RP, Maull, RS, Cliffe, RW. (1994) Self Assessment in TSB Bank plc Using the European Quality Award Criteria. *Papers from the First European Operations Management Association Conference*, pp 391-396, Manufacturing Engineering Group, University of Cambridge.

Brown, R P. (1995) The Role of Human Factors in Business Process Reengineering. Presentation given to the Institute for Personnel and Development (Cheltenham Branch), March. Unpublished.

Brown, T. (1991). Pascale, R in Richard Pascale: the 'Christopher Columbus' of management? *Industry Week*, Magazine Jan 7 edition, New York.

Burke, WW, Coruzzi C A, Church, A H. (1996) The Organizational Survey as an Intervention for Change. In *Organizational Surveys. Tools for Assessment and Change*, pp 41-66. Allen I Kraut, editor. Jossey-Bass, San Francisco

Burrell, WG, Morgan G. (1979) *Sociological Paradigms and Organizational Analysis*. Routledge and Kegan Page, London.

## C

CAM-I. (1980) *Architects Manual - ICAM Definition Method IDEFo*. Arlington, Texas.

Camp, R C. (1989) *Benchmarking: The Search for Industry Best Practices that Lead to Superior Performance*. ASQC Quality Press, Milwaukee, Wisconsin.

Camp, R C. Quoted in Haim, A. (1992) *Closing the Quality Gap - Lessons from America's Leading Companies*. Conference Board / Prentice-Hall, New Jersey.

Campanella, J, ed. (1990) *Principles of Quality Costs, Second Edition*. ASQC Quality Press, Milwaukee, Wisconsin.

Collier, D A. (1994) *The Service/Quality Solution - Using Service Management to Gain Competitive Advantage*. Irwin/ASQC Quality Press, Milwaukee, Wisconsin.

Collins, JC, Porras, JL. (1994) *Built to Last. Successful Habits of Visionary Companies*. Century Business Books, London.

Cooper, DR, Emory W (1995) *Business Research Methods, 5th Edition*. Irwin, Homewood, IL.

Crofton, CG, Dale, BG. (1996) The Difficulties Encountered in the Introduction of Total Quality Management: A Case Study Examination, *Quality Engineering*, Vol. 8, No. 3, pp 433-439. Marcel Dekker, Inc.

Crosby, P. (1979) *Quality is Free*. McGraw-Hill, New York.

Crosby, PB. (1984) *Quality Without Tears: The art of Hassle-Free Management*. McGraw-Hill, New York.

## D

Dale, BG, Plunkett JJ. (1991) *Quality Costing*. Chapman and Hall, London

Dastmalchian, A, Blyton, P, Adamson, R. (1991) *The Climate of Workplace Relations*. Routledge Publishing, London.

Davenport T H and Short J E. (1990) The New Industrial Engineering: Information Technology and Business Process Redesign, *Sloan Management Review*, Summer, pp 11-27.

Davenport TH. (1992) *Process Innovation: Reengineering Work Through Information Technology*, Harvard Business School Press.

Davies, RJ. (1992) Mapping out Improvement. *TQM Magazine*, June 1992, Volume 4 Number 3. IFS Publications, pp 181-183.

Davis, SM. (1984) *Managing Corporate Culture*. Ballinger, Cambridge, Mass.

Deal, TE, Kennedy, AA. (1982) *Corporate Cultures: The Rites and Rituals of Corporate Life*. Addison-Wesley, Reading, Mass.

Deming Award Criteria, quoted in Evans, JR, Lindsay, WM. (1993) *The Management and Control of Quality*, Second Edition. West Publishing Company, Saint Pauls, MN.

Deming, W Edwards. (1986) *Out of the Crisis*. MIT Press, Cambridge, MA, USA

Department of Trade. (July 1982) *Standards, Quality and International Competitiveness*. Command Paper, 8621. HMSO London.

Despres, C. (1995) Culture, surveys, culture surveys and other obfuscations. " *Journal of Strategic Change*. Vol. 4, No. 2, March-April, Wiley.

DeVellis, RF. (1991) *Scale Development: Theories and Applications*. Sage, Newbury Park, CA, USA.

Duncan, WJ. (1989) Organisational Culture: "Getting a Fix" on an Elusive Concept. *Academy of Management Executive*, Vol. III, No. 3, pp 229-236.

Dunphy, D, Stace, D. (1990) *Under New Management: Australian Organizations in Transition*. McGraw-Hill, Sydney.

## E

Easterby Smith, M., Thorpe, R. and Lowe, A. (1992) *Management Research: An Introduction*. Sage, London.

Eden, C, Huxham, C. (1996) Action Research For Management Research. *British Journal of Management*, Volume 7, pp 75-86

Emory, CW. (1985) *Business Research Methods*, 3rd Edition. Irwin, Homewood, IL.

European Foundation for Quality Management. (1997) *Self Assessment Guidelines for Companies*, 1997. Brussels.

European Foundation for Quality Management. (1997) *Self Assessment Guidelines for Companies*, 1997. Brussels. Appendix 5: Findings From Two European Surveys on Self-Assessment, pp 78-88.

European Foundation For Quality Management. (1993) *Business Improvement Through Self Assessment*, EFQM, pp 3.

European Foundation For Quality Management. (1994) *Self Assessment Based on The European Model for Total Quality Management*, Brussels.

Evans, JR, Lindsay, WM. (1993) *The Management and Control of Quality*. Second Edition. West Publishing Company, Saint Pauls, MN.

## F

Feigenbaum, A. V. (1961) *Total Quality Control, First Edition*. McGraw-Hill, New York.

Feigenbaum, AV. (1991) *Total Quality Control. Third Edition, 40th Anniversary Edition, Revised*. McGraw-Hill International Editions, Industrial Engineering Series. Singapore.

Frank, C, Chapman, RE. (1995) Conference Report, Quest For Excellence VII. *Journal of Research of the National Institute of Standards and Technology*, Vol. 100, No. 3, May-June, pp 287-299.

## G

Galliers, RD, Land, FF. (1987) Choosing Appropriate Information Systems Research Methodologies. *Communications of the ACM*, Vol. 30, No. 11, Nov pp 900-902.

Garvin, DA (1991) How the Baldrige Award Really Works. *Harvard Business Review*, November-December, pp 80-93.

Garvin, DA. (1987) Competing on the Eight Dimensions of Quality. *Harvard Business Review*, November-December, pp 101-109.

Geertz, C. (1973). *The interpretation of cultures*. Basic Books, New York.

Ginzberg, M. (1979) A Study of the Implementation Process. *TIMS Studies in the Management Sciences* Vol. 13 p85-102. North-Holland Publishing Company, Netherlands.

Grant, RM, Shani, R, Krishnan, R. (1994) TQM's Challenge to Management Theory and Practice. *Sloan Management Review*, Winter, pp 25-35.

Grayson, C Jackson, Jr. (1992) Taking on the World. *The TQM Magazine*, Volume 4 Number 3. IFS Publications, pp 139-143.

Groocock, J. M. (1974) *The Cost of Quality*. Pitman, London.

## H

Haim, A. (1992) *Closing the Quality Gap - Lessons from America's Leading Companies*. The Conference Board, Prentice-Hall, New Jersey.

Hammer M. (1990) Reengineering Work: Don't Automate, Obliterate, *Harvard Business Review*, July-August , pp 104 - 112

Hammer, M, Champy, J. (1993) *Reengineering the Corporation - A Manifesto for Business Revolution*. Nicholas Brealey, London.

Hampden-Turner, C. (1994) *Corporate Culture. From Vicious to Virtuous Circle*. Revised Edition, Piatkus, London.

Harland, RP. (1994) "Practical Benchmarking - Closing the Gap", Paper Presented at *EFQM Benchmarking Seminar, Ashridge Management College*, Wednesday 23rd February, 1994. Unpublished

Harrington, H J. (1992) *Business Process Improvement*, McGraw-Hill, New York.

Harrison, Roger (1972). Understanding your organisation's character. *Harvard Business Review*, pp 119-128, May-June.

Harvey, D. (1994) *Reengineering: The Critical Success Factors*. Management Today / Business Intelligence publication. London

Hassard, J, Sharifi, S (1989). Corporate Culture and Strategic Change. *Journal of General Management* Vol. 5 No. , Winter.

Hassard, J. (1991) Multiple Paradigms and Organizational Analysis: A Case Study. *Organisational Studies*, Vol. 12 No. 2, pp 275-299.

Heygate, R. 1993: Immoderate Redesign. *McKinsey Quarterly* 1993 No. 1 p73.

Hildebrandt, S, Kristensen, K, Kanji, G, Dahlgard, JJ . (1991) Quality Culture and TQM. *Total Quality Management*, Vol. 20, No. 1, pp 1-15.

Hitchin, DK. (1992) *Putting Systems to Work*. Wiley, London.

Hofstede, G. (1980) *Culture's Consequences*. Sage, Beverly Hills, California, USA.

Hofstede, G, Neuijen, B, Ohayv, D D, Sanders, G. (1990) Measuring Organisational Cultures: A Qualitative and Quantitative Study Across Twenty Cases. *Administrative Science Quarterly*. Vol. 35, June, pp 286-316. Cornell University, USA.

Hollings, L. (1992) Clearing up the Confusion. *TQM Magazine*, June 1992, Volume 4 Number 3. IFS Publications.

Hopper, T, Powell A. (1985) Making Sense of Research into the Organisational and Social Aspects of Management Accounting, *Journal of Management Studies*, pp 429-465.

Howe, RJ, Gaeddert, D, Howe, MA. (1993) *Quality on Trial*. McGraw-Hill, Maidenhead, England.

Hume, D. (1975) *Enquiries Concerning Human Understanding and Concerning the Principles of Morals*. Oxford University Press, reprinted 1988.

## I

ICL PLC. (1990) *The Management in the 1990'2 Research Program - An ICL Briefing for management on the findings*, ICL, London.

Industrial Society. (1995) *Change Management. Managing Best Practice Series*, October. The Industrial Society, London.

## J

Jankowicz, AD. (1991) *Business Research Projects for Students*. Chapman and Hall, London.

Juran, J, Gryna, F. (1992) *Quality Planning and Analysis*. Tata McGraw-Hill Publishing, New Delhi, India.

Juran, Joseph. (1951) *Quality Control Handbook*, First Edition. McGraw-Hill, New York

Juran, Joseph, Editor in Chief. (1988) *Quality Control Handbook*, Fourth Edition. McGraw-Hill, New York

## K

Kaplan R B and Murdock L. (1991) Rethinking the Corporation: Core Process Redesign, *The McKinsey Quarterly*, No. 2. McKinsey and Co.

Kaplan, A. (1964) *The Conduct of Inquiry*. Chandler Publishing Company, London.

Keogh, W, Brown, RP, McGoldrick, S. (1996) A pilot study of Quality Costs at Sun Microsystems. *Total Quality Management*, Volume 7, No. 1, pp 29-38. Journals Oxford Ltd.

Kim, PS, Pindur, W, Reynolds, K. (1995) Creating a New Organisational Culture: The Key to Total Quality Management in the Public Sector. *International Journal of Public Administration*, Vol. 18 No. 4, pp 675-709.

Kinni, TB. (1995) Lofty Goals - Superstructuring with quality standards and awards. *IndustryWeek*, Sept. 4, Penton Publishing, New York.

Kinni TB. (1995) Total-Quality Bargains - Francis Mahoney on the TQM trilogy. *IndustryWeek*, Sept. 4, Penton Publishing, New York.

Kluckhohn, FR. (1963) Some Reflections on the nature of Cultural Integration and Change. *Sociological Theories, Values and Sociocultural Change: Essays in Honour of Pitirim A Sorokin*. Editor Tiyakian, EA. Free Press of Glencoe, New York, pp 217-247.

Kotter, JP, Heskett, JL. (1992) *Corporate Culture and Performance*. Free Press, Macmillan, New York.

KPMG Management Consulting. (1992) *A Survey of Service Quality in the Financial Sector*, KPMG Management Consultants, March.

Kraut, Allen I (1996) *Organizational Surveys. Tools for Assessment and Change*. Allen I Kraut, editor. Jossey-Bass, San Francisco.

Kreiner, K. (1989) Culture and meaning: making sense of conflicting realities in the workplace. *International Studies of Management and Organisation*, 19 pp 64-81.

Krohe Jr, J (1993) The Productivity Pit. *Across The Board, The Conference Board Magazine*. October, pp 16-21. The Conference Board, New York.

## L

Leonard-Barton, Dorothy. (1992) Core Capabilities and Core Rigidities: A Paradox in Managing New Product Development. *Strategic Management Journal*, Vol. 13, pp 111-125.

Likert, R. (1932) A Technique for the Measurement of Attitudes, *Archives of Psychology*, Vol. 140, June.

Lodge, J. (1995) *Strategic Change and Organisational Culture*. City University Business School, Unpublished. Downloaded from Compuserve Project and Cost Management Forum.

## M

MacDonald, J. (1993) *TQM: Does it Always Work?* TQM Practitioner Series, Technical Communications Publishing Ltd. UK

Macey, W H. (1996) Dealing with the Data. Collection, Processing and Analysis. In *Organizational Surveys. Tools for Assessment and Change*, pp 204-232. Allen I Kraut, editor. Jossey-Bass, San Francisco

- Mann, RS, Kehoe, DF. (1994) The Quality Improvement Activities of Total Quality Management. *Quality World Technical Supplement*, pp 43-56. IQA, London.
- Manufacturing and Business Systems Group. (1996) *UK Experiences in Business Process Reengineering*. IMI Grant GR/K67328, University of Plymouth.
- Masser, W. J. (1957) The Quality Manager and Quality Costs. *Industrial Quality Control*, Volume 14 No. 6, pp 5-8
- McNabb, DE, Sepic, FT. (1995) Culture, Climate, and Total Quality Management: Measuring Readiness for Change. *Public Productivity and Management Review*, Volume 18 No. 4, Summer.
- Meredith, J, Raturi, A, Amoako-Gyampah, K Kaplan, B. (1993) Theory Building Through Conceptual Methods. *International Journal of Operations and Production Management*. Vol. 13 No. 5 pp 3-11. MCB University Press, Bradford.
- Meredith, JR, et al. (1989) Alternative Research Paradigms in Operations. *Journal of Operations Management*, Vol. 8, No. 4, pp 297-322.
- Meredith, JR. (1981) The Implementation of Computer Based Systems. *Journal of Operations Management*. *American Productivity and Inventory Control Society*. Vol. 2 No. 10. USA
- Mitchell, A. (1994) Benchmarking - an Introduction. Paper Presented at *EFQM Benchmarking Seminar, Ashridge Management College, Wednesday 23rd February, 1994*. Unpublished.
- Moser, C A, Kalton, G. (1979) *Survey Methods in Social Investigation*, 2nd Edition with supplementary bibliography. Heinemann, London.
- Mumford, E, Hendricks, R. (1996) Business Process Re-engineering RIP. *People Management*, 2 May, pp 22-29, London.
- Munro-Faure, Lesley and Malcolm. (1993) *Implementing Total Quality Management*. Financial Times Pitman, London.
- Murphy, G, Likert, R. (1938) *Public Opinion and the Individual: A Psychological Study of Student Attitudes on Public Questions With a Re-Test Five Years Later*, Harper Books, NY.
- N**
- National Institute of Standards and Technology (NIST). (1996) *Malcolm Baldrige National Quality Award, 1996 Award Criteria*, Gaithersburg, Maryland.
- Nunally, JC. (1978) *Psychometric Theory*. McGraw-Hill, New York, NY.

## O

ODI Inc. (1993) *Managing Process Improvement*. Organisational Dynamics Inc. Burlington, MA, USA.

Ouchi, WG. (1981) *Theory Z*. Addison-Wesley, London.

## P

Pascale, R (1990) *Managing on the Edge. How Successful Companies Use Conflict to Stay Ahead*. Penguin Books, London.

Patten, Thomas Jr. (1992). Beyond Systems - The Politics of Managing in a Total Quality Management Environment. *National Productivity Review*, Winter, pp 9-15.

Peattie, K. (1994) Teaching Companies As A Vehicle For "Soft" Skills Transfer. *Technology Transfer and Innovation, Conference Proceedings, Day 2*, pp 27-32.

Peters, TJ, Waterman, RH (1982) *In Search of Excellence. Lessons from America's Best-Run Companies*, Harper and Row, London.

Pettigrew, A, Whipp, R. (1991) *Managing Change for Competitive Success*. Blackwell Publishing, London.

Pettigrew, AM. (1979) On Studying Organisational Culture. *Administrative Science Quarterly*. Vol. 24, December, pp 570-581. Cornell University, USA.

Phillips, L W, Chang, D R, Buzzell, R D. (1983) Product Quality, Cost Position and Business Performance: A Test of Some Key Hypotheses. *Journal of Marketing*, Spring, pp 26-43.

Popper, K. (1959) *The Logic of Scientific Discovery*. Hutchinson, London.

## R

Rapaport, RN. (1970) Three Dilemmas of Action Research. *Human Relations*, Volume 23, pp 499-513.

Reason, P, Rowan, J. (1981) *Human Inquiry: A Sourcebook of New Paradigm Research*. Wiley, London.

Rummler, GA, Brache, AP. (1991) Managing the White Space. *Training Journal*, January, pp 55-68.

Sathe, VJ. (1985) How to Decipher and Change Corporate Culture. In *Gaining Control of the Corporate Culture*, eds. Kilmann, R.H., Saxton, M.J. & Serpa, R, pp 230-261. Jossey Bass, San Francisco.

Schaffer, RH Harvey, AT. (1992) Successful Change Begins with Results. *Harvard Business Review*, January-February, pp 80-89.

Schein, Edgar H (1984). Coming to a New Awareness of Organisational Culture. *Sloan Management Review*, pp 3-16, Winter.

Schiemann, WA (1996) Driving Change Through Surveys: Aligning Employees, Customers, And Other Key Stakeholders in *Organizational Surveys. Tools for Assessment and Change*. Allen I Kraut, editor. Jossey-Bass, San Francisco

Shapiro, EC. (1996) *Fad Surfing in the Boardroom. Reclaiming the Courage to Manage in the Age of Instant Answers*. Addison-Wesley, Canada.

Shewhart, Walter A. (1931) *Economic Control of Quality of Manufactured Product*. New York, Van Nostrand.

Smircich, L. (1983) Concepts Of Culture And Organizational Analysis. *Administrative Science Quarterly*, 28: pp 339-358. Cornell University, USA.

Smith S, et al. (1993) *TQM 2: After the Honeymoon is Over*. Unpublished Quality Management Workshop paper, 10 February, 1993.

Smith, S, et al. (1993) *Culture and Regeneration*. Working Paper, Change Management Research Unit, Sheffield Business School. ACME Grant GR/J21316.

Smith, S et al. (1993) Strategies for Managing the TQ Agenda. *International Journal of Operations and Production Management*. Vol. 14 No. 1, pp 75-88. MCB University Press, England

Smith, S, et al. (1992) Implementing Total Quality: The Downside of Best Practice. *In International Operations: Crossing Borders in Manufacturing and Service*. Elsevier Science Publishers, Holland. RH Hollier, RJ Boaden, SJ New (eds).

Smith, S. (1994) *The Quality Revolution*. Management Books 2000. Oxford.

Steingard, DS, Fitzgibbons, DE. (1993). A Postmodern Deconstruction of Total Quality Management (TQM). *Journal of Organisational Change Management*, Vol. 6 No. 5, pp 27-42. MCB University Press.

Susman, GI, Evered, RD. (1978) An Assessment of the Scientific Merits of Action Research. *Administrative Science Quarterly*, Vol. 23, pp 582-603. Cornell University, USA.

## T

Thurstone, LL (1928) Attitudes Can Be Measured. *The American Journal of Sociology*, Vol. 33, No. 4, pp 529-554.

Taylor, EB. (1971) *Primitive Cultures: Research into the development of mythology, philosophy, religion, language, art and custom*. London: J. Murray, 2 Volss. (1903)

## V

Vanisina, Leopold S. (1990) Total Quality Control: An Overall Organisational Improvement Strategy. *National Productivity Review*, Winter, pp 57-74

Vogl A J. (1993) In interview with, Hammer M "The age of Re-engineering", *Across the Board, The Conference Board Magazine*. June. The Conference Board, New York.

## W

Wagner, DB, Spencer, JL (1996) The Role of Surveys in Transforming Culture. Data, Knowledge and Action. p74, in *Organizational Surveys. Tools for Assessment and Change*. Introduction, p4. Allen I Kraut, editor. Jossey-Bass, San Francisco

Warmington, A. (1983) The Nature of Action Research. *Efficiency of Manufacturing Systems* (Ed. Wilson, B), Plenum Publishing, New York.

Watkins, J et al. (1996) *People and Performance. A Survey of HR Issues in the Retail Financial Services Sector*. University of Bristol, Cheltenham Strategic Productions, Cheltenham, UK.

Watson, J G and Korukonda, A R. (1995) The TQM jungle: A dialectical analysis. *International Journal of Quality & Reliability Management*, Vol. 12, No. 9, Pg. 100-109. MCB University Press.

Watts, J. (1993) *Software Assistance for Business Reengineering*, eds. Spurr, K, Layzell, P, Jennison, L, Richards, N. Wiley, London.

Wilkins, AL, Dyer, WG. (1988) Towards Culturally Sensitive Theories of Culture Change. *Academy of Management Review*, Vol. 13 No. 4, pp522-533

Wilkinson, A, et al. (1996) Looking for Quality: A Survey of Quality Initiatives in the Financial Services Sector. *Total Quality Management*, Vol. 7, No. 1, pp 67-78.

Williams, A, et al (1994) *Changing Culture: New Organisational Approaches*. Second Edition, Institute of Personnel Management, Cromwell Press, Wiltshire.

Wilson, A. (1994) High Street Banking: The Culture has to Change. *Financial Services Training Journal*, Vol. 2 No. 1, 1994, pp 21-28

## Y

Yoshida, K. (1996) Revisiting Deming's 14 Points in Light of Japanese Business Practices. *Quality Management Journal*, Volume 3, Issue 1, pp 14-30.

## Z

Zuboff, S. (1988) *In the Age of the Smart Machine*, Basic Books. New York

## APPENDIX 1

### DEMING'S 14 POINTS

Source: Deming, (1982)

1. Create consistency of purpose for improvement of product and service.
2. Adopt the new philosophy.
3. Cease dependence on mass inspection.
4. End the practice of awarding business on price tag alone.
5. Improve constantly and forever the system of production and service.
6. Institute training.
7. Institute leadership.
8. Drive out fear.
9. Break down barriers between departments.
10. Eliminate slogans, exhortations and targets for the workforce.
11. Eliminate numerical quotas.
12. Remove barriers to pride of workmanship.
13. Institute a vigorous program of retraining and education.
14. Take action to accomplish the transformation.

## APPENDIX 2

**MALCOLM BALDRIGE NATIONAL QUALITY AWARD CRITERIA.** Source: National Institute of Standards and Technology (1997)

	Total Points
<hr/>	
<b>1 LEADERSHIP</b> <i>110 POSSIBLE POINTS</i>	
1.1 Leadership System	80
1.2 Company Responsibility and Citizenship	30
<b>Category Total</b>	<b>110</b>
<hr/>	
<b>2 STRATEGIC PLANNING</b> <i>80 POSSIBLE POINTS</i>	
2.1 Strategy Development Process	40
2.2 Company Strategy	40
<b>Category Total</b>	<b>80</b>
<hr/>	
<b>3 CUSTOMER AND MARKET FOCUS</b> <i>80 POSSIBLE POINTS</i>	
3.1 Customer and Market Knowledge	40
3.2 Customer Satisfaction and Relationship Enhancement	40
<b>Category Total</b>	<b>80</b>
<hr/>	
<b>4 INFORMATION AND ANALYSIS</b> <i>80 POSSIBLE POINTS</i>	
4.1 Selection and Use of Information and Data	25
4.2 Selection and Use of Comparative Information and Data	15
4.3 Analysis and Review of Company Performance	40
<b>Category Total</b>	<b>80</b>
<hr/>	
<b>5 HUMAN RESOURCE DEVELOPMENT AND MANAGEMENT</b> <i>100 POSSIBLE POINTS</i>	
5.1 Work Systems	40
5.2 Employee Education, Training, and Development	30
5.3 Employee Well-Being and Satisfaction	30
<b>Category Total</b>	<b>100</b>
<hr/>	
<b>6 PROCESS MANAGEMENT</b> <i>100 POSSIBLE POINTS</i>	
6.1 Management of Product and Service Processes	60
6.2 Management of Support Processes	20
6.3 Management of Supplier and Partnering Processes	20
<b>Category Total</b>	<b>100</b>
<hr/>	
<b>7 BUSINESS RESULTS</b> <i>450 POSSIBLE POINTS</i>	
7.1 Customer Satisfaction Results	130
7.2 Financial and Market Results	130
7.3 Human Resource Results	35
7.4 Supplier and Partner Results	25
7.5 Company-Specific Results	130
<b>Category Total</b>	<b>450</b>
<hr/>	
<b>Grand Total</b>	<b>1000</b>

**APPENDIX 3**

<b>CRITERIA AND SUB-CRITERIA OF THE EFQM MODEL FOR BUSINESS EXCELLENCE, 1997.</b>	<b>Points</b>
<p><b>1. Leadership</b></p> <p>a) How leaders visibly demonstrate their commitment to a culture of Total Quality Management</p> <p>b) How Leaders support improvement and involvement by providing appropriate resources and assistance</p> <p>c) How Leaders are involved with customers, suppliers and other organisations</p> <p>d) How Leaders recognise and appreciate people's efforts and achievements.</p>	100
<p><b>2. Policy &amp; Strategy</b></p> <p>a) How policy and strategy are based on information which is relevant and comprehensive.</p> <p>b) How policy and strategy are developed.</p> <p>c) How policy and strategy are communicated and implemented.</p> <p>d) How policy and strategy are regularly updated and improved.</p>	90
<p><b>3. People Management</b></p> <p>a) How people resources are planned and improved.</p> <p>b) How people capabilities are sustained and developed.</p> <p>c) How people agree targets and continuously review performance.</p> <p>d) How people are involved, empowered and recognised.</p> <p>e) How people and the organisation have an effective dialogue.</p> <p>f) How people are cared for.</p>	80
<p><b>4. Resources</b></p> <p>a) How financial resources are managed.</p> <p>b) How information resources are managed.</p> <p>c) How supplier relationships and materials are managed.</p> <p>d) How buildings, equipment and other assets are managed.</p> <p>e) How technology and intellectual property are managed.</p>	90
<p><b>5. Processes</b></p> <p>a) How processes key to the success of the business are identified.</p> <p>b) How processes are systematically managed.</p> <p>c) How processes are reviewed and targets are set for improvement.</p> <p>d) How processes are improved using innovation and creativity.</p> <p>e) How processes are changed and the benefits evaluated.</p>	140

<p><b>6. Customer Satisfaction</b></p> <p>a) The customers' perception of the organisation's products, services and customer relationships.</p> <p>b) Additional measurements relating to the satisfaction of the organisation's customers.</p>	<p>90</p>
<p><b>7. People Satisfaction</b></p> <p>a) The people's perception of the organisation</p> <p>b) Additional measures relating to people satisfaction</p>	<p>200</p>
<p><b>8. Impact On Society</b></p> <p>a) Society's perception of the organisation.</p> <p>b) Additional measurements of the organisation's impact on society.</p>	<p>60</p>
<p><b>9. Business Results</b></p> <p>a) Financial measures of the organisation's performance.</p> <p>b) Non financial measures of the organisation' s performance.</p>	<p>150</p>

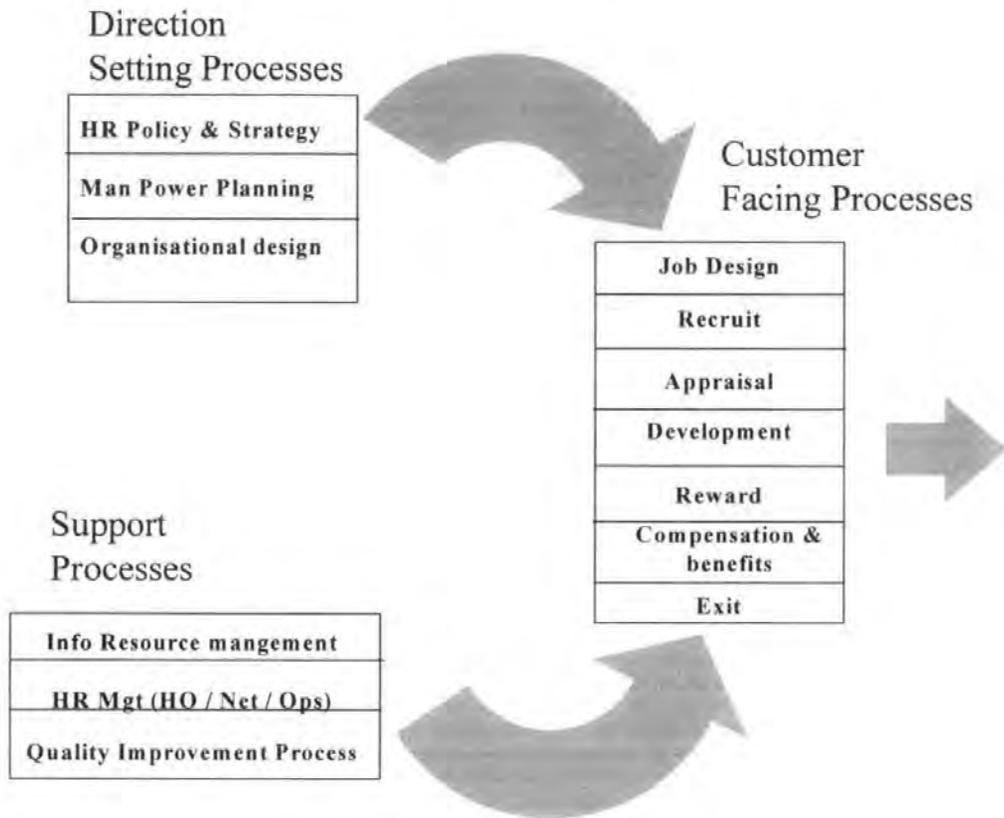
**APPENDIX 4.**

**QUALITY COSTS AT EACH TSB PAYROLL SITE**

<b>Payroll Site</b>	<b>Annual Prevention Costs (£'000)</b>	<b>Annual Appraisal Costs (£'000)</b>	<b>Annual Failure Costs (£'000)</b>	<b>Total Annual Costs (£'000)</b>
Branch Network	17	39	98	154
Head Office	0.4	3.6	4.38	8.38
Southgate Payroll	0.54	4.5	2.8	7.84
Andover Payroll	0.1	6.0	2.4	8.5
Brighton Payroll	1.17	2.0	20.3	23.47
<b>TOTALS</b>	<b>19.21</b>	<b>55.1</b>	<b>127.88</b>	<b>202.1</b>

## APPENDIX 5

### CIM-OSA Generic Process Structure For a Typical HR Function



**APPENDIX 6**

**SAMPLE PCOC QUESTIONNAIRE**

## INSTRUCTIONS FOR COMPLETING THE LLOYDS TSB ENVIRONMENTAL QUESTIONNAIRE

Thank you for agreeing to complete this questionnaire. This questionnaire is completely anonymous and there will be NO follow up to discuss your answers.

This instrument contains 100 statements and questions which describe certain important aspects of the Lloyds TSB organisational environment as well as behaviour, beliefs and values. This questionnaire is attempting to measure and understand what you think about the Lloyds TSB environment and how it operates, not what it is or what it should be. Your personal views are therefore extremely important. There are questions and statements about the organisation as a whole. There are also a number of statements about your team or department and a number of statements addressed to you personally.

Questions 1-16 and 18-99 are statements, answered by marking one of the five boxes which follow each question. The scale at the top of the page, goes from left to right, along a scale from strongly disagree to strongly agree as demonstrated below. The scale at the top of the page is marked as the example below.

**Strongly Disagree**

**Tend to Disagree**

**Neither Disagree nor Agree**

**Tend to Agree**

**Strongly Agree**

If you strongly agree with a statement, then mark the box at the far right of the scale but if you tend to disagree with a statement then mark the box second from the left on the scale

Items 17 and 100 are open questions. They ask you to provide a name for question 17 and write a few words in question 100. All other questions are answered by marking one of the appropriate boxes.

Please work through the questionnaire, answering all of the questions quickly and please check your answers to be sure that you have answered all 100 questions.

Once you have finished the questionnaire, please send it to me at the address below.

I would like to thank you again for completing this questionnaire.

Paul Brown  
Quality Manager  
Central Quality Team  
Victoria House, Victoria Square  
Birmingham  
B1 1BZ

## QUESTIONS ABOUT YOU

Please answer all of the questions.

1. Are you:

Female

Male

2. Please indicate your age

Up to 20

21-25

26-30

31-35

36-40

41-45

46 and over

3. Please indicate your length of service:

Up to 3 years

4-6 years

7-9 years

10-12 years

13 years and over

4. Which one of the following grades is equivalent to your current position?

Junior Clerical

Senior Clerical

Junior Manager

Middle Manager

Senior Manager

5. In which area is your current job based?

Head Office (Vic. House)

Operations (not Head Office)

Head Office (Canons House)

Newport

TSB Branch Network

IT

Lloyds Branch Network

Mortgage Express

Other (please state) \_\_\_\_\_

6. Before the merger, to which part of the organisation did you belong?

Lloyds Bank

TSB Bank

		Strongly Disagree	Tend to Disagree	Neither Agree nor Disagree	Tend to Agree	Strongly Agree
1.	Lloyds TSB shows loyalty and respect towards employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	People are proud to work for the organisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Lloyds TSB is committed to excellent customer service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	In Lloyds TSB continuous improvement is a priority	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	In Lloyds TSB people talk a lot about the past	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	In Lloyds TSB sticking to the basics is important	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Lloyds TSB balances the demands of work and personal/family demands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	In Lloyds TSB newcomers need to learn the formal rules and procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	In Lloyds TSB meetings are planned well in advance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	In Lloyds TSB decisions are always made in meetings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	In Lloyds TSB newcomers are left to find their own way in the organisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	In Lloyds TSB we regularly celebrate our achievements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	In Lloyds TSB advancement and promotion is on the basis of job performance only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	People who are successful in Lloyds TSB are very ambitious	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.	People who are successful in Lloyds TSB have a real concern for customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.	Successful people in Lloyds TSB do not work long hours	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.	Please give the name of one person that you would describe as a corporate hero - someone who, to you, represents or embodies the organisation	_____				
18.	Successful managers in Lloyds TSB are mavericks, who do things differently	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.	It is important to wear a suit in Lloyds TSB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20.	My dept has no rules about the use of memos, faxes and letters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		Strongly Disagree	Tend to Disagree	Neither Agree nor Disagree	Tend to Agree	Strongly Agree
21.	In Lloyds TSB experimentation and innovation are stressed, even at the expense of orderliness and consistency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22.	In Lloyds TSB controversial issues appear regularly in the staff magazine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23.	Everybody in Lloyds TSB is cost conscious	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24.	In Lloyds TSB employees are always well dressed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25.	People in Lloyds TSB talk seriously about the organisation and the job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26.	In Lloyds TSB people are recruited who fit into the culture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27.	Across Lloyds TSB established procedures are important	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28.	In Lloyds TSB pay and bonus is designed to maximise group/team interests.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29.	In Lloyds TSB successful managers keep the best people in their own departments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30.	In Lloyds TSB senior managers focus is primarily on customer service and quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31.	In Lloyds TSB senior managers are not aggressive or territorial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32.	I am satisfied with my job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33.	I am satisfied with my department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34.	I am proud to work for Lloyds TSB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35.	In my department everyone looks forward to going to work each day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36.	Communication is open in my department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37.	In my department we have the equipment and resources to do our jobs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38.	In Lloyds TSB management actively seeks new ideas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39.	All employees of Lloyds TSB acknowledge the need for change	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		Strongly Disagree	Tend to Disagree	Neither Agree nor Disagree	Tend to Agree	Strongly Agree
40.	In Lloyds TSB employees are trained to use a wide range of problem solving tools	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41.	In Lloyds TSB we have the time to examine problems that affect us.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42.	In Lloyds TSB employees are not blamed for new ideas that don't work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43.	In Lloyds TSB everybody has an individual development plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44.	In Lloyds TSB individuals are given reasonable challenges in their jobs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45.	In Lloyds TSB there is a balance struck between work, family and personal goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46.	In Lloyds TSB employees have opportunities to use their skills effectively in their jobs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47.	In my department I am encouraged to find new methods and ways of doing things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48.	In Lloyds TSB employees are rewarded for developing new ideas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49.	There is more co-operation than competition between different departments in Lloyds TSB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50.	My department is effective in influencing policies and procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51.	All employees understand who our customers are and their requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52.	Lloyds TSB is organised to effectively help us meet current and future customer needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
53.	In Lloyds TSB employees treat internal teams and people as important customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
54.	Quality and service is more important than volume and sales in Lloyds TSB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
55.	Lloyds TSB employees are not closed or secretive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
56.	In Lloyds TSB team meetings are effective	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
57.	My department has good communications with other teams in the organisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
58.	In Lloyds TSB important information comes from formal communications channels rather than the "grapevine"	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
59.	In Lloyds TSB senior managers take time to talk informally to employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
60.	In Lloyds TSB information suggesting bad news is passed up the formal communication channels	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		Strongly Disagree	Tend to Disagree	Neither Agree nor Disagree	Tend to Agree	Strongly Agree
61.	In Lloyds TSB managers make use of everyone's job skills and talents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
62.	In Lloyds TSB managers are prepared to pass on responsibility and power	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
63.	In Lloyds TSB employees are treated fairly, and with respect	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
64.	In Lloyds TSB people are willing to share their power - there is a lot of co-operation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
65.	My department has a lot of influence across Lloyds TSB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
66.	In Lloyds TSB employees avoid observing rules for the sake of rules	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
67.	In my department we know and understand our key processes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
68.	In Lloyds TSB problems over cross-functional/inter-departmental processes are resolved to everyone's satisfaction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
69.	In Lloyds TSB key processes have process owners - managers responsible for the operation of that process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
70.	I understand the key processes of Lloyds TSB	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
71.	In my department all staff are involved in continuously reviewing and improving processes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
72.	In Lloyds TSB senior managers role is primarily strategy and planning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
73.	Lloyds TSB is actively developing new capabilities and competencies to meet future needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
74.	My department is developing plans for the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
75.	I am optimistic about the future of my department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
76.	In Lloyds-TSB managers consider the longer-term when making daily decisions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
77.	In Lloyds TSB there is a major emphasis on meeting customer needs when planning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
78.	In my department we know and understand our goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
79.	In Lloyds TSB we know our competitors and their strengths and weaknesses.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
80.	Lloyds TSB adapts effectively to changes in its markets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		Strongly Disagree	Tend to Disagree	Neither Agree nor Disagree	Tend to Agree	Strongly Agree
81.	In Lloyds TSB we are strongly aware of the competition and what they are doing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
82.	Success in the marketplace depends on high quality products and services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
83.	Lloyds TSB think ahead three years or more	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
84.	Everybody knows and understands the Lloyds TSB mission	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
85.	My department has a clear mission and vision for where it wants to be	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
86.	Lloyds TSB has clear long term goals agreed with all employees committed to achieving them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
87.	In Lloyds TSB procedures are more important than results	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
88.	In Lloyds TSB important decisions are made by groups and teams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
89.	In Lloyds TSB changes are normally made through consultation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
90.	In Lloyds TSB budget pressures have no impact on decisions being made	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
91.	Lloyds TSB employees are comfortable in unfamiliar situations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
92.	In Lloyds TSB change is fast and immediate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
93.	In Lloyds TSB there is a preference for continuous quality improvement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
94.	In Lloyds TSB every day is different	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
95.	In Lloyds TSB there is a clear preference for challenge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
96.	Having satisfied customers is important for long-term success	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
97.	In Lloyds TSB projects are always implemented by the agreed deadline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
98.	In Lloyds TSB we achieve the productivity demands placed upon us	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
99.	In Lloyds TSB we find it easy to adjust to new requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
100.	Please list some words you would use to describe the culture of Lloyds TSB. ( <i>Culture can be defined as the way we do things here</i> )	<hr/> <hr/> <hr/>				

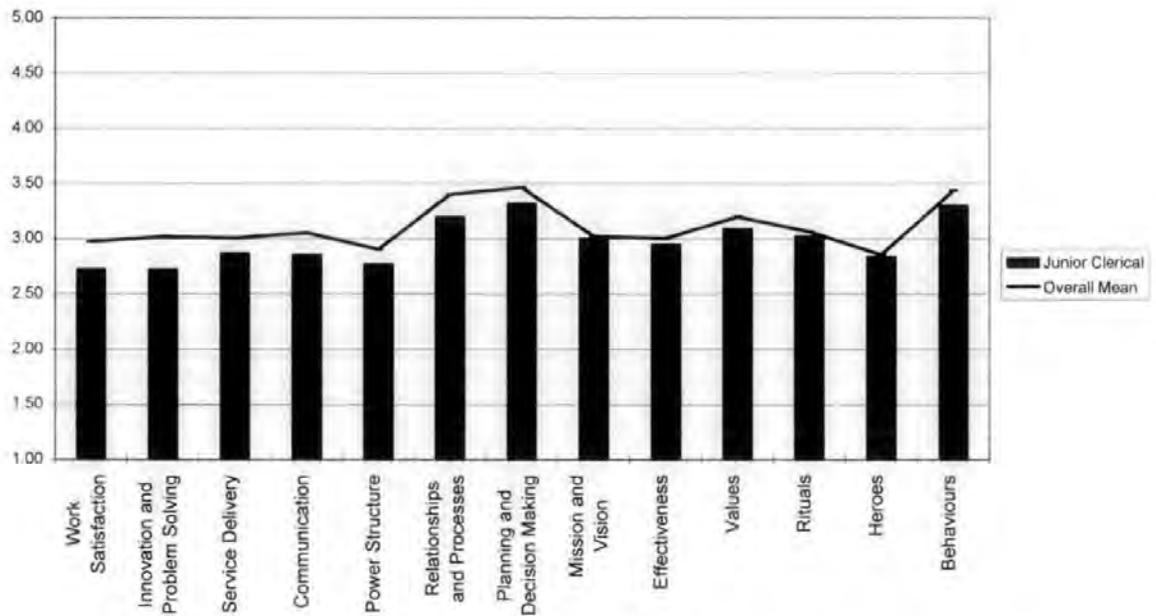
## APPENDIX 7.

### BREAKDOWN OF PCOC SCORES BY GRADE

#### 1 Junior Clerical

Of all the grades, the junior clerical grades scored consistently lower than the overall mean in all categories, particularly in relation to *Work Satisfaction*(2.73) and *Innovation and Problem Solving* (2.72). Figure 1 below shows these differences clearly. This may have been influenced by the fact that half of the respondents worked in the TSB Branch Network. They also scored low in *Service Delivery, Communications, Power Structure, Effectiveness* and *Heroes*. Only *Planning and Decision Making* (3.32), *Behaviours* (3.3) *And Relationships and Processes* (3.2) scored relatively high compared to the mean of the other elements. A mean of 2.98 per question was below the overall 3.10 average for questions.

There were also a number of significantly low scoring questions (scores below 2.5). The two lowest scoring were question 35 "*staff look forward to going to work each day*" (1.84) and question 90 "*budget pressures have no impact on decisions being made*" (1.96). Other significant low scoring questions were "*quality and service are more important than volumes and sales*"(2.44) and "*staff are treated fairly and with respect.*"(2.31)



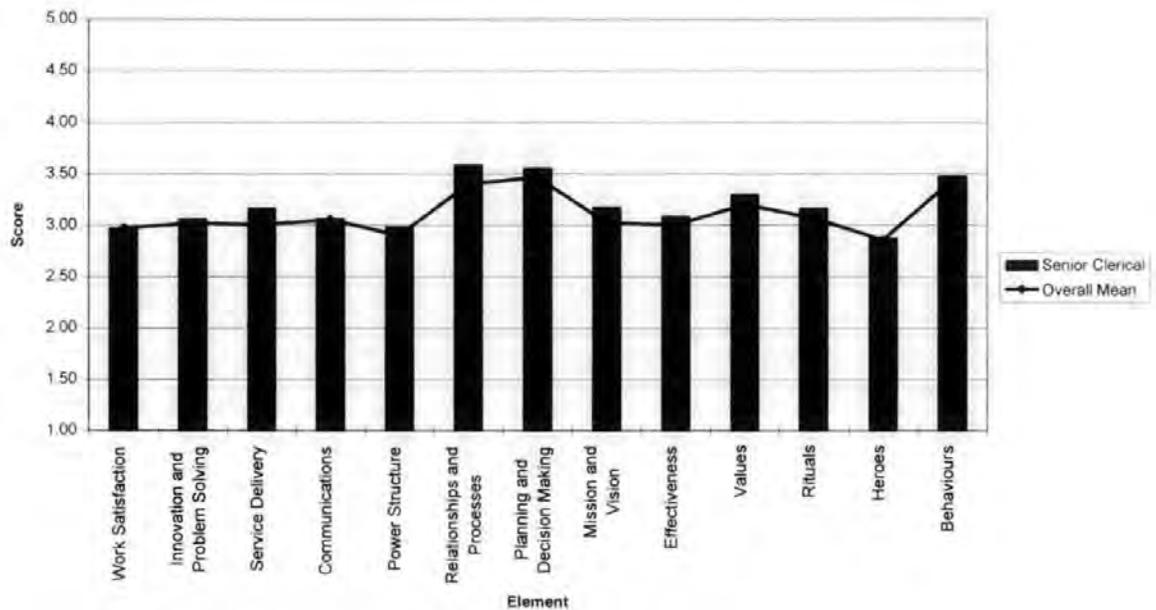
**Figure A7.1. Comparison of PCOC elements for Junior Clerical Staff with Overall Mean Scores**

## 2 Senior Clerical

Of all the grades it was the senior clerical who consistently scored the highest overall. This is demonstrated in Figure 2 below. Their scores were equal to or above all mean scores for PCOC model elements. They had a high average questionnaire score (7 points above the mean). *Work Satisfaction* and *Innovation and problem solving* were average or above, while beliefs about service delivery were considerably higher than the mean. In every other element of the model the Senior clerical staff scored above the overall mean.

There were a few low scoring questions. They strongly believed that Lloyds TSB did not balance work demands and personal demands (Q7, 2.47) while job advancement on the basis of performance only was dismissed (Q13, 2.36) as was the idea of successful managers being mavericks (Q18, 2.51). It would appear that few Senior Clerical staff look forward to going to work each day (Q35, 2.25). They did believe that results were more

important than procedures (Q87, 2.32). Budget pressure (Q90, 1.99) was the lowest scoring question again.



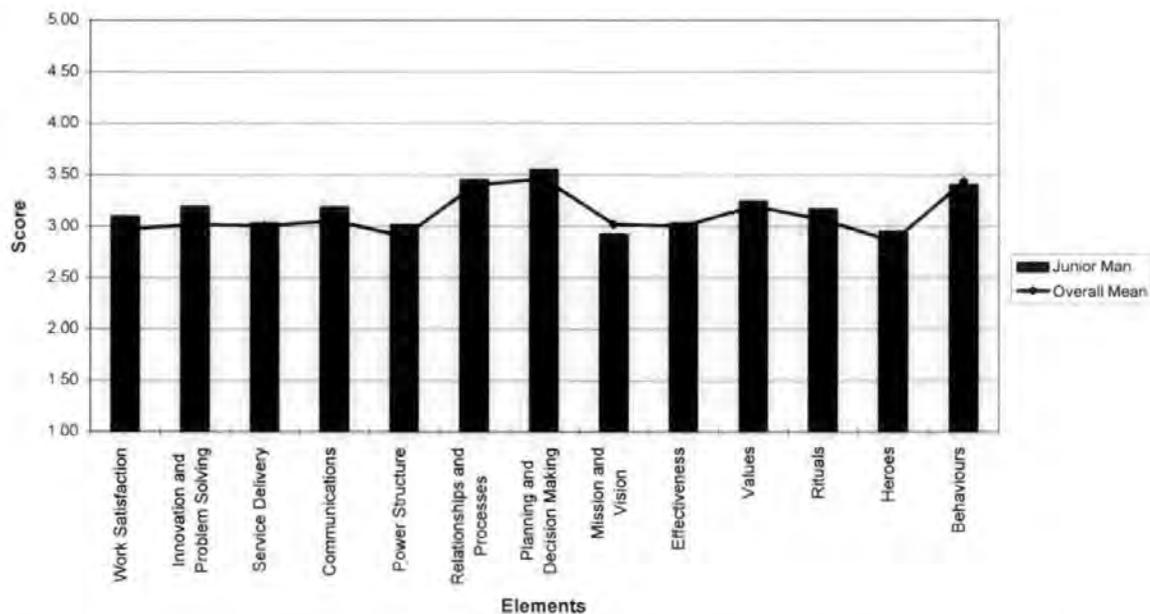
**Figure A7.2. Comparison of PCOC Elements For Senior Clerical Staff with Overall Mean Scores.**

### 3 Junior Management

Junior Management were the second highest scoring grade in the study. Figure 3 below demonstrates this. Their scores were slightly lower than those for senior clerical. *Work Satisfaction* was average while *Service Delivery* scored average. *Power Structure*, *Mission And Vision* and *Heroes* also scored average or above. The highest scores were for *Relationships And Processes* and *Planning And Decision Making* (3.46 and 3.56 respectively).

There were a number of low scoring questions. The balance of work and family (Q7 and the check question Q45) both scored low (2.34 and 2.43 respectively) as did Q16 - successful people do not work long hours (2.36). Pay and bonus were not designed to

maximise team interests(Q28, 2.38) and there were no clear long term goals that staff had committed to (Q86, 2.40). Results were thought also to be more important than procedures(Q87, 2.32) while the budget pressures (Q90, 1.85) were also evident.



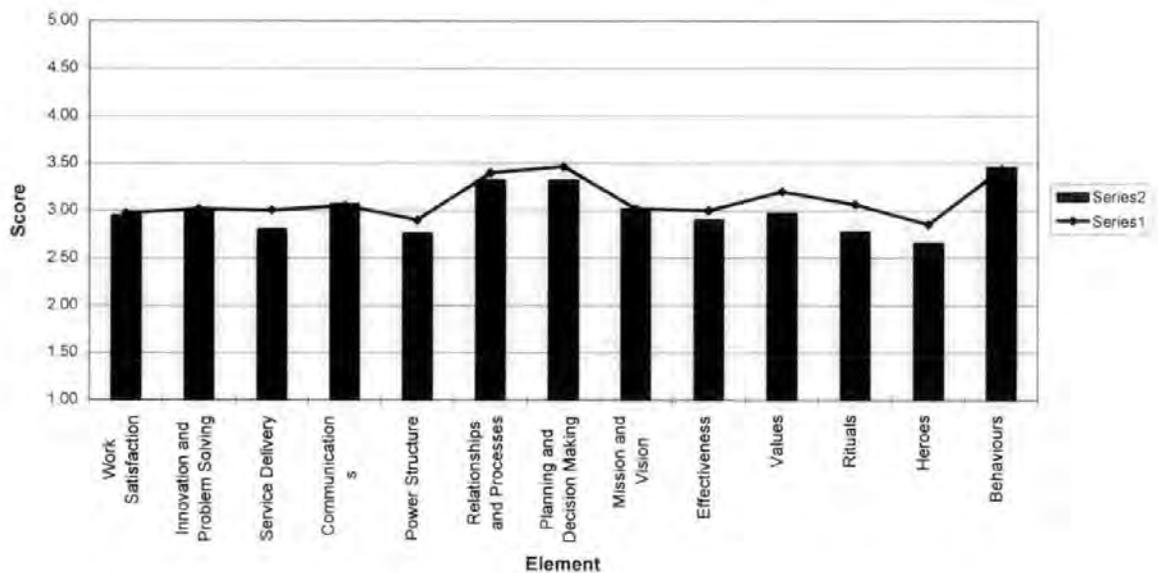
**Figure A7.3. Comparison of PCOC Elements For Junior Management Staff with Overall Mean Scores.**

#### 4 Middle Management

Middle Management were the second lowest scoring group in the study. They scored *Communications* (3.07) and *Behaviours* (3.05) above the overall mean and *Mission And Vision* was on the mean. All of the other 10 categories scored below their overall averages. The lowest scoring category was *Heroes* (2.66), closely followed by *Rituals*, *Power Structure* and *Service Delivery*. The profile of the middle management group is shown in Figure 4 below.

The issue of work and family balance (Q7) and successful people not working long hours (Q16) scored very low.. Pay and bonus were not designed to maximise team interests

(Q28, 2.36). Employees did not have the opportunity to use their skills effectively (Q61, 2.76) and Volume and Sales were more important than Quality and Service (Q56, 2.09). They believed their department did not have influence(Q50, 2.73), and there were no clear long term goals that staff had bought into(Q86, 2.36). Results were more important than procedures (Q87, 2.18), budget pressures were high (Q90, 1.45) and projects were always implemented by the agreed date (Q97, 2.12).



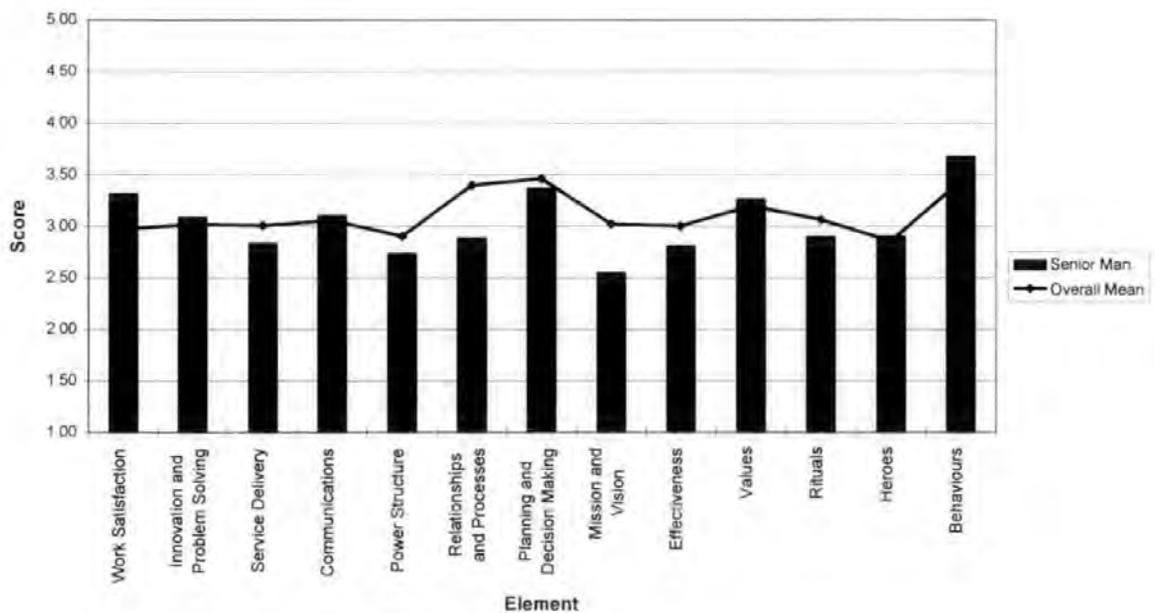
**Figure A7.4. Comparison of PCOC Elements For Middle Managers With Overall Mean Scores**

### 5 Senior Management

Senior management were the middle scoring grade within the study. *Work Satisfaction* was the highest amongst any of the grades (0.35 above the work satisfaction mean). *Innovation and Problem Solving*, *Communications*, *Values*, and *Heroes* also scored above their respective means. All of the other elements were scored low including *Relationships And Processes* and *Planning And Decision Making*. The lowest scoring element (almost

0.30 below the overall average) was mission and vision. The senior management profile is shown in Figure 5.

Senior Managers had more low scoring questions than any other group in the survey. They scored 14 questions below 2.5.. These included both balance of work and personal issues questions, pay and bonus maximises team interests, Sales and volume are more important than Quality and Service, long term goals, Q90 budget pressures and Q97 projects implemented by agreed dates. The also scored low on whether decisions were made in meetings, and whether everyone knows and understands the Lloyds TSB mission. Three questions of great interest to the author were also scored very low. They disagreed with the assertion that successful managers were mavericks who did things differently (Q18) and they agreed that Senior Managers were aggressive and territorial (Q31). They also strongly disagreed with the statement that problems over cross-functional issues are resolved to everyone's satisfaction (Q68).



**Figure A7.5. Comparison of PCOC Elements For Senior Managers With Overall Mean Scores.**

**APPENDIX 8**

**ALPHA SCORES FOR ALL SUB-ELEMENTS OF THE PCOC MODEL**

<b>PCOC Model Elements</b>	<b>Alpha</b>	<b>Mean Score</b>	<b>Items</b>
Work Satisfaction	<b>0.81</b>	2.97	12
Innovation and Problem Solving	<b>0.77</b>	3.02	5
Service Delivery	<b>0.72</b>	3.01	6
Communications	<b>0.73</b>	3.05	6
Power Structure	<b>0.67</b>	2.90	4
Relationships and Processes	<b>0.73</b>	3.40	5
Planning and Decision Making	<b>0.78</b>	3.46	11
Mission and Vision	<b>0.70</b>	3.02	4
Effectiveness	<b>0.72</b>	3.00	14
Values	<b>0.74</b>	3.20	8
Rituals	<b>0.56</b>	3.07	5
Heroes	<b>0.67</b>	2.86	8
Behaviours	<b>0.51</b>	3.44	6

**Table A8.1 Sub-Elements Alpha Scores and Overall Means.**

## APPENDIX 9

### QUALITATIVE QUESTION ANALYSIS

#### 1 Corporate Heroes

Q17 asked respondents to give the name of someone who embodies the organisation. The author expected each of the areas to strongly identify with one or more figureheads e.g. the former Chief Executives of Lloyds or TSB, or respective operations Directors. This would also be expected based on the culture literature examined by the author. The results were less clear cut when they were analysed. Of the returns 75 did not answer the question, which would give rise to concerns about the wording of the question, although pre-piloting did not raise it as an issue. The fact that 45% of the sample could not name a hero in their organisation or did not reply goes against the cultural theories that senior managers behaviour is closely observed and copied by staff. The top 10 responses are in the table below.

Name	No	Job	Name	No	Job
No reply	75	_____	K. Greenhough	9	MD, Mortgage Express
Cannot name one	31	_____	John Spence	7	Director
Sir Brian Pitman	20	Group Chief Executive	Dave McVeigh	3	Department Head
Peter Ellwood	18	Deputy Group Chief Executive	Liz Barlow	3	Department Head
Paul P Brown	10	Director	Other	49	_____

**Table A9.1. Corporate Heroes, Question 17.**

## 2 Descriptions of the Culture

The words used to describe the culture listed below were the words that were repeated by respondents. The majority of the TSB Branch Network responded negatively with the Sales, Target and Results driven answers. Most of the Mortgage Express respondents were positive which is why there are so many recordings of Quality as a response.

<b>Words Used</b>	<b>Frequency</b>	<b>Words Used</b>	<b>Frequency</b>
Quality	23	Efficient	12
Cost Cutting	14	Open	10
Results/profit driven	14	Challenging	9
Service	13	Friendly	8
Change	13	Dictatorial	7
Sales/Target driven	12	Professional	7
Customer Focused	12	Pressured	7

**Table A9.2. Words used to describe the Lloyds TSB Culture (by frequency).**

Brown RP, Maull, RS, Cliffe, RW.

Self Assessment in TSB Bank plc Using the European Quality Award Criteria.

in

*Papers from the First European Operations Management Association Conference*, pp 391-396, Manufacturing Engineering Group, University of Cambridge. 1994

# **SELF ASSESSMENT IN TSB BANK PLC USING THE EUROPEAN QUALITY AWARD CRITERIA**

Paul Brown, *TSB Bank PLC, UK*  
Roger Maull, *University of Plymouth, UK*  
Roger Cliffe, *TSB Bank PLC, UK*

## **Abstract**

Self assessment, using the criteria of the European Quality Award model, is an effective method of assessing the strengths and opportunities for improvement of any organization against a generic framework for business excellence. It makes quality improvements more business focused and emphasises customer satisfaction internally and externally. It also provides ownership of the quality process at the local level to senior management. The major lesson that has been learned is that quality improvement will only occur when the self assessment action plans are implemented, monitored and reviewed on a regular basis.

## **INTRODUCTION**

TSB Bank PLC is one of Britain's leading financial institutions in retail banking, insurance, merchant banking and investment services. With over eight million customers, 1300 branches and more than 21,000 staff, TSB is a major presence in High Street banking services. Since the flotation on the Stock Exchange in 1986, TSB now has approximately 1.4 million shareholders.

In the last financial year, TSB made pre-tax profits of over £454 million and the Bancassurance cost to income ratio was 57%. This is in sharp contrast to 1989 (before the Total Quality Management initiative) when profits were £200 million and falling and the cost to income ratio was 72%. One of the company's main goals is to reduce further the cost/income ratio to compete more effectively with the Building Societies, who have cost/income ratios of less than forty percent.

The TSB Executive Committee stated their commitment to Total Quality at the end of 1990. This was greatly reflected by the TSB Quality Policy:

"We shall provide defect free products and services to our internal and external customers which meet their agreed needs. We shall do so on time, first time and every time. Only by doing this will we achieve our mission to be the UK's leading financial retailer."

The approach to total quality used was based upon the methodology of Philip Crosby. The main concepts of this approach were taught to staff at all levels within the business. Eighteen Quality Improvement Teams, each led by a senior executive, were established to promote visible leadership and create an environment for quality improvement. The cost of the training was £8 million, representing over 150 man years of training for 25,000 staff. Process Improvement was conducted by natural work groups, for example branches, and by cross functional teams. To date, more than 50,000 'Snags' have been resolved resulting in savings of more than £34 million.

## **THE EUROPEAN QUALITY AWARD**

In 1988, fourteen leading Western European organizations formed the European Foundation for Quality Management (EFQM). In 1991 the group took the lead in establishing the European Quality Award, presented annually to the most successful exponent of Total Quality Management in Western Europe. The first recipient of the European Quality Award was Rank Xerox. The British Quality Award, launched in February 1994, uses the same model as the EQA Award.

An EQA Award winner must demonstrate clearly that their application of Total Quality Management has made a significant impact in satisfying the expectations of all stakeholders in the organization over a number of years. The winner will be seen as excellent in the European market place. Any type or size of organization may apply but the organization should be a model against which all companies can measure their own quality improvement approaches.

From the Award criteria, a generic model has been developed as a framework for Total Quality Management in organizations. The European Quality Award model, shown in Figure 1, consists of nine elements split between two criteria - Enablers and Results. The enablers criteria are concerned with how results are being achieved, while the results criteria are concerned with what the company has achieved and is achieving. The model should be seen as Leadership, People Management, Policy and Strategy and Resources managing Processes to achieve People satisfaction, Customer satisfaction, Business Results and a positive Impact on society. For the purpose of meaningful assessment in terms of the European Quality Award, a relative value is given to each of the nine elements within the model.

The Enablers criteria and the Results criteria are assessed in different ways when examining the approach in an organization. The Enablers criteria are scored on the basis of the combination of two factors: the degree of excellence of your approach, and the degree of deployment of that approach. Similarly, results criteria are also based on the combination of two factors. These are: the degree of excellence of your results, and the scope of the results. For all factors, assessors may choose one of five levels to score the criteria (0%, 25%, 50%, 75% or 100%).

The European Quality Award is scored on the basis of 1000 points across the nine elements. In 1993 the EQA award winner scored over 700 points. A score such as this would be defined as of world-class standard. A score of over 500 points in 1993 was

sufficient to warrant a site visit, which would put that organization in the very good category.

## **SELF ASSESSMENT**

Self Assessment is a "cyclical, comprehensive, systematic and regular review of the organizations activities and results against the European Quality Award model, culminating in planned improvement actions." (EFQM,1993) It provides an organization with an objective approach to assess it's progress in applying Total Quality Management. Although each organization is unique, this model provides a generic framework which enables an approximate but comparable benchmark score to be established against other organizations. The objective of a self assessment programme is to "regularly review each of the nine criteria and, thereafter, to adopt relevant improvement strategies." (EFQM,1994)

The exercise is beneficial because it turns total quality management into a tangible process, and can determine the strengths and weaknesses of the approach taken by the organization. The adoption of the self assessment approach has been seen to result also in other benefits as well. The process identifies progress against what is a model for business excellence. It forms a comprehensive basis for prioritizing improvement opportunities and determining strategic direction. The approach clearly recognises the link between enabling activities and excellence in business results, and as previously stated, it provides the basis for successful Benchmarking against other organizations.

In the Financial Services sector there are a large number of organizations who are involved in self assessment using the European Quality Award criteria, many direct rivals of TSB. These include: Barclays, Nat West, Abbey National, Prudential and Birmingham Midshires. Outside of Financial Services organizations who use self assessment include BT, ICL, and Royal Mail.

## **TSB APPROACH TO SELF ASSESSMENT**

At TSB the self assessment process was developed for use by eighteen Quality Improvement Teams (QIT's) representing all areas of the business. Each QIT, which consists of senior managers within that particular area, is responsible for the deployment of Quality within that area. They are responsible for the self assessment process, which within TSB is called the "Quality Fitness Review" or QFR. The self assessment process is carried out annually in each area and is facilitated by the central quality team.

In many cases, where the QIT is the senior management team in that area, the QFR process is cascaded down one level to the management teams in their departments. The QIT identify the strengths and improvement opportunities for the whole area and the management teams are able to carry out a QFR in their areas, identifying more specific opportunities for quality improvement.

Business Units and departments which are not covered by the QIT's have started to use the QFR process as a means of continuous improvement. They see the QFR in its broadest

sense as a means of achieving business excellence. The self assessment is carried out through workshops facilitated by the central quality team. Team members complete their QFR workbooks before the team workshop. This process is shown in figure 2. The workshop is then used to finalise and agree scores, raise important issues, and crucially, to decide a plan of action for improving areas that have low scores. This allows Quality Improvement activities to focus on the areas that require the most attention.

The objectives of a Quality Fitness Review in TSB are clearly defined. These include:

- \* To ensure that the skills acquired from quality training are being applied effectively
- \* To ensure that business activities are customer focused
- \* To ensure continuous improvement
- \* To measure existing status and prioritise improvement activities
- \* To achieve Business Excellence
- \* To increase awareness and involvement in quality
- \* To ensure that Quality is successfully integrated into working practices

## **BENEFITS**

There are a number of benefits that TSB has identified through the QFR process. The main benefit of this process is due to the fact that ownership of the self assessment process lies primarily with the senior management in the particular area. There have been tangible benefits in focusing the organization on quality issues and the process has acted as a catalyst for future quality improvements.

The criteria are highly customer focused and relate to both internal and external customers of the Bank. The fact that it also provides an indication of status, i.e. where you are now, is very important for the various areas. They see this as important both for quality improvement activities and recognition.

The model has a focus on Business Results which is the result of effectiveness in the Enablers criteria. In the longer term, the improvement in business performance will be due, in part, to the improvements made against the model for business excellence

An important feature of the self assessment process is the fact that it achieves a consensus among senior management of what is required for quality improvement in the future. It achieves a consensus of direction, or where you want to go in the future, and priorities for quality improvement.

The real strength of the self assessment process is that it is a morale booster because it identifies what you do well. It is important to avoid being negative about the process and to stress the strengths as well as the opportunities for improvement. It is also seen as an effective way to develop a team based approach among senior management who are sometimes from different areas within a function.

## **LESSONS TO BE LEARNED**

The QFR self assessment process has proved to be an effective, non threatening tool to measure strengths and opportunities for improvement. Through this tool, TSB has learned a great deal about self assessment and the organization. The scoring within the QFR process is really not as important as the improvement activities that arise from it.. Arguing about the scores is a waste of time. What is important is identifying tangible opportunities for continuous quality improvement. Continuous improvement will only occur when the action plans are implemented, monitored and regularly reviewed. To facilitate this, it is important to resist the temptation to make the process bureaucratic - the more simple the process is, the more effective it will be.

It is important not to rush into self assessment since careful planning is required. As Mae West said "If something is worth doing it is worth doing slowly!" Improve the process itself if it is required! TSB has changed the format from a two day workshop to a one day workshop. Workbooks were distributed weeks before the workshops so that the QIT members could complete them and attend the workshop with their scores and opportunities for improvement already identified.

Benchmarking scores and improvement activities against other organizations who are more experienced in Total Quality has given TSB a realistic picture of the Quality maturity of the organization, in addition to promoting additional improvement. TSB benchmarked against a large service organization who had been involved in Total Quality for six years. It identified the main areas where improvement opportunities were required, but it also highlighted the areas where TSB was as good as, or better, than the partner organization. The next step was to try to identify from that company why they excel at certain areas and learn from them.

## **CONCLUSIONS**

The EQA model is a tested formula for business excellence used by major organizations. It is a way to make Quality activities more business focused and emphasises the need for good customer service, both internally and externally.

It provides ownership of the quality improvement process and thus helps to achieve a consensus of the direction of that quality process at the local level. Since the self assessment is carried out on yourself, it is much less threatening than a third party assessment.

The conclusion that TSB draw from self assessment is that it is an effective way to relate quality improvement to business goals and to determine how improvement opportunities will be undertaken. It aids the drive towards quality improvement and builds on the original Total Quality programme. It is not a process which contradicts anything that the organization has already achieved to date with it's quality improvement efforts.

## **REFERENCES**

EUROPEAN FOUNDATION FOR QUALITY MANAGEMENT. (1993) "Business Improvement Through Self Assessment", EFQM, pp 3.

EUROPEAN FOUNDATION FOR QUALITY MANAGEMENT. (1994) "Self Assessment Based on The European Model for Total Quality Management, EFQM, pp 4.

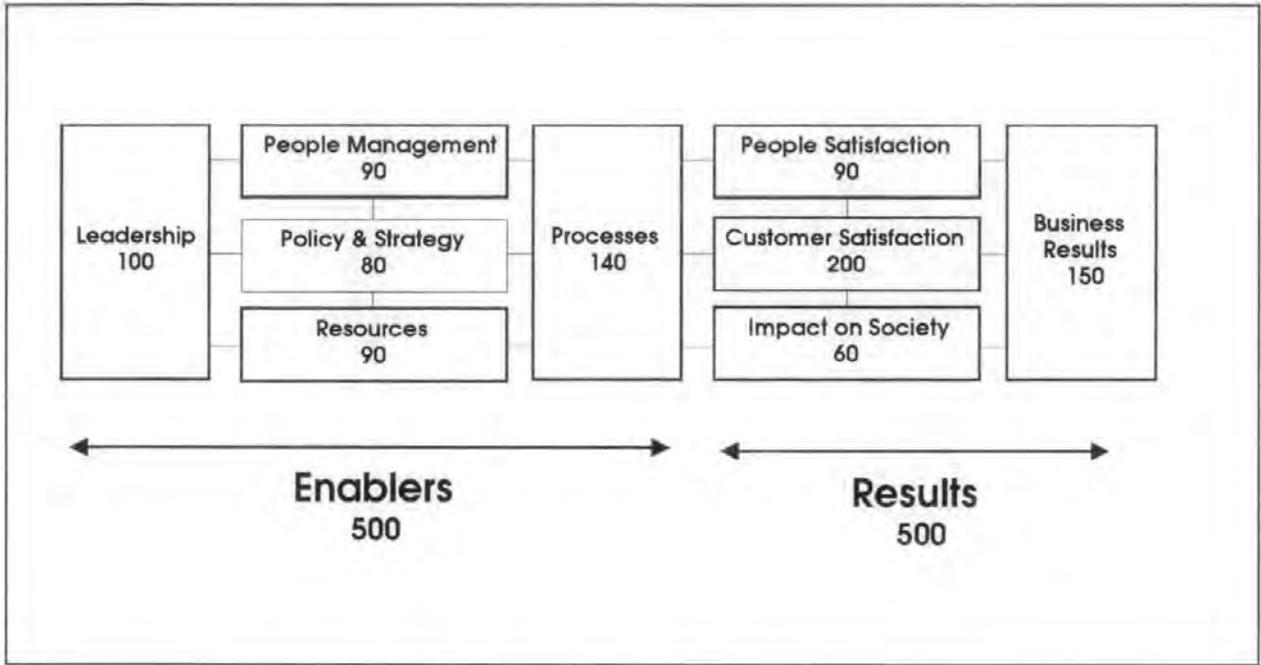


Figure 1 The European Quality Award Model

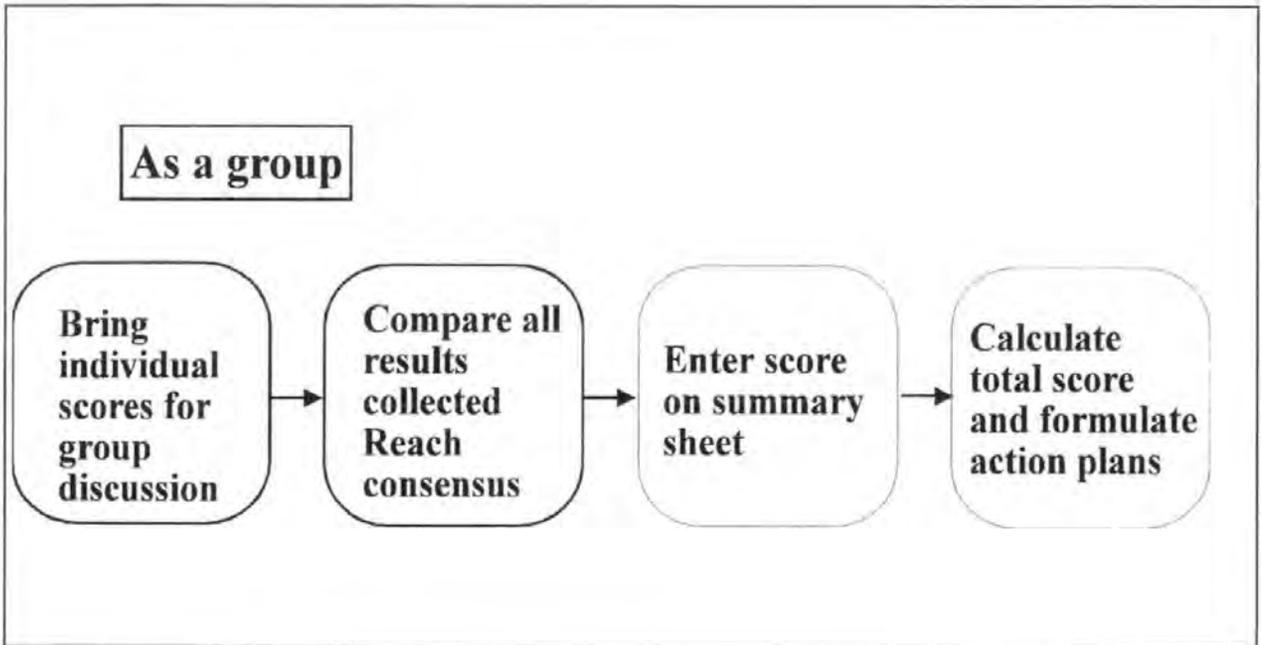


Figure 2 The QFR process in TSB

Brown, RP, Maull, RS, Welling, W, Cliffe, RW.

The Innovative Bank - A Case Study.

in

*Proceedings of the Technology Transfer and Innovation Conference, Day 1, The  
Innovation Process, pp 76-81, 1994*

## THE INNOVATIVE BANK - A CASE STUDY

Paul Brown, TSB Bank, UK  
Dr Roger Maull, University of Plymouth, UK  
Mr Wally Welling, TSB Bank, UK  
Dr Roger Cliffe, TSB Bank, UK

### INTRODUCTION

TSB Bank PLC is one of Britain's leading financial institutions in retail banking, insurance, merchant banking and investment services. With over seven million customers, 1300 branches and more than 21,000 staff, TSB is a major presence in High Street banking services. Since the flotation on the Stock Exchange in 1986, TSB now has approximately 1.4 million shareholders.

In the last financial year, TSB made pre-tax profits of over £454 million and the Bancassurance cost/income ratio was 57%. This is in sharp contrast to 1989 (before the company's Total Quality Management initiative) when profits were £200 million and falling and the cost/income ratio was 72%. One of the company's main goals is to reduce the cost/income ratio further to compete more effectively with the Building Societies, who have ratios of forty percent and below.

This paper will present the results of an extensive collaborative exercise between the University of Plymouth and the Total Quality Management group based at the TSB Head Office in Birmingham. The research has concentrated on the application of Business Process Re-engineering (BPR) as a means of re-orientating the bank, and focusing on customer needs through innovative management practice.

The traditional functionally oriented bank is characterised by fragmentation and staged inventories of work caused by a failure to integrate and synchronise activities, which leads to huge delays in the processing of application forms and often substantial customer dis-satisfaction. A bank which is process focused aims to optimise performance across the whole process rather than departmental optimization (and process sub-optimization). The organizational structure is shaped around horizontal and unbroken flows of activities while traditional organizations are formed into vertical groupings called "functional silos."

BPR is the emerging technique which enables organisations to concentrate on managing key processes e.g. providing mortgages or credit cards as one "holistic" process, rather than managing the organisation as separate insurance, and operational divisions. BPR strives to "break away from the old rules about how we organise and conduct business." Hammer(1) In relation to Information Technology BPR has been described as "the current popular term for examining an organization's business processes and recommending automation or changes to achieve strategic goals." It is recognised that BPR and Process Redesign must be used to take advantage of "the enormous potential of information technology." Gant (2)

BPR's rise to prominence as a powerful means of transforming business performance has led to the emergence of a number of "gurus" in the field, the most notable of whom are Hammer (1), Harrington (3) and Davenport (4). Within the Banking sector there are a number of organizations (apart from TSB) who are actively carrying out or have carried out major business process re-engineering projects to improve performance and service. These include Royal Bank of Scotland, Birmingham Midshires, Abbey National and National and Provincial Building Society.

## BUSINESS PROCESSES

According to Davenport and Short (5), a business process is "the logical organisation of people, materials, energy, equipment and procedures into work activities designed to produce a specified end result". Davenport and Short also state that processes have two important characteristics. Firstly, they have customers, i.e. processes have defined outcomes and recipients of the outcome. Secondly, they cross organisational boundaries and are generally independent of formal organisational structure.

Similarly, Hickman (6) defines a business process as "a logical series of dependent activities which use the resources of the organisation to create, or result in, an observable or measurable outcome, such as a product or service". The authors would add that a business process must be initiated by and must provide results to a customer, who may be internal or external to the company.

A useful structure established by the CIM-OSA standards committee (7) subdivides processes into three main areas: Manage, Operate and Support. The CIM-OSA framework regards *manage processes* as those which are concerned with strategy and direction setting as well as with business planning and control. *Operate processes* are viewed as those which are directly related to satisfying the requirements of the external customer, for example the logistics supply chain from order to delivery. These are sometimes referred to as "core processes". *Support processes* typically act in support of the Manage and Operate processes. They include the financial, personnel, facilities management and Information Systems provision (IS) activities.

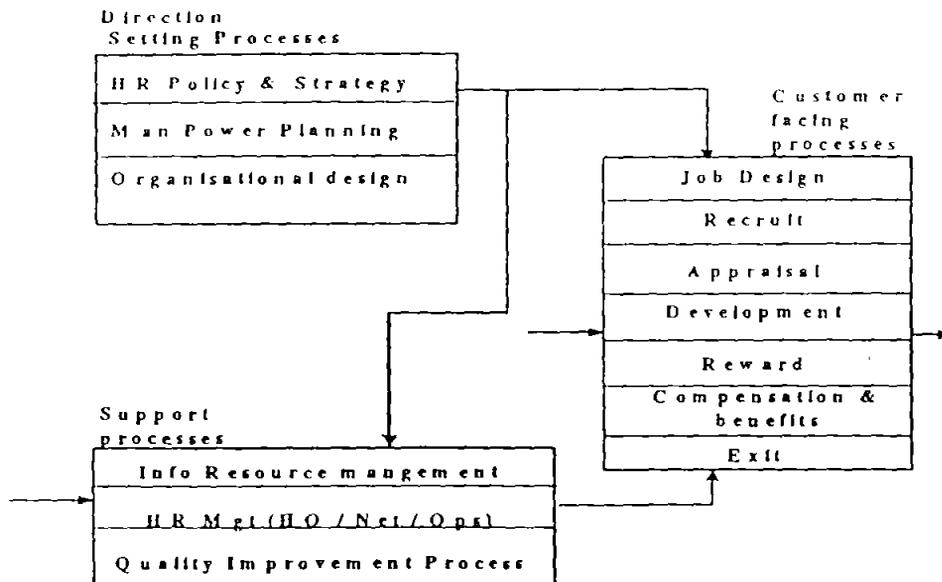


Figure 1 CIM-OSA Structure of a Typical HR Function

However, these definitions are an abstract or high level. Further work needs to be carried out to define business processes at the more detailed levels. In the authors' view, in general terms, a business process operates in a manner analogous to the operation of an industrial or chemical process in as much as it comprises "a series of continuous actions or operations ...." Hawkins (8) which are performed upon a commodity. It may also be regarded as a conduit along which a commodity flows. In this context, a commodity might be conceptual or material. Such commodities pass along their respective process conduits and are transformed, at different stages in their progress, as various operations are performed upon them. A process can therefore be identified by the type of commodity which flows through it. Typical examples of businesses processes at the bank include processing money transmissions, processing a new mortgage application, preparing budgets etc.

WHAT IS BUSINESS PROCESS RE-ENGINEERING?

Various authors have described approaches known as Business Process Re-engineering, Business Process Redesign, Business Process Management, Business Process Improvement and Core Process Re-design. Their approaches have different characteristics in terms of the degree of change (radical against incremental), the scope of the exercise, and the focus of attention. Some useful scales of analysis are shown in Figure 2.

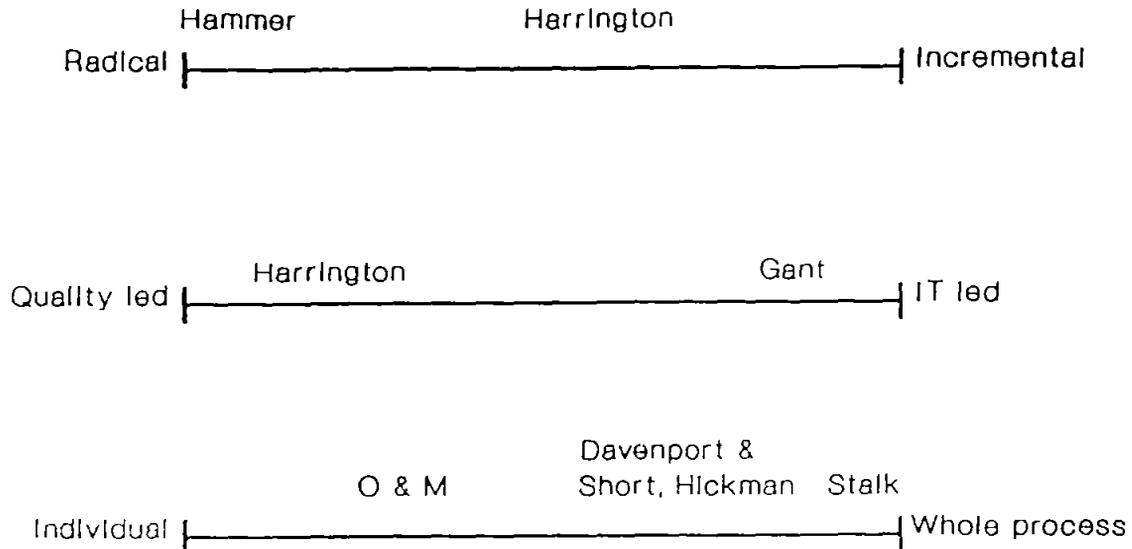


Figure 2 Scales of Business Process Re-engineering activity

Hammer's intervention strategy, which he has referred to as the "neutron bomb" approach to business improvement represents one extreme of a wide spectrum of opinion regarding the most appropriate BPR strategies for firms to adopt. Hammer states, for example, that firms can only hope to achieve radical performance improvements using Business Process Re-engineering methods which strive to "break away from the old rules about how we organise and conduct business." He states that re-engineering cannot be accomplished in small or cautious steps but must be viewed as an "all-or-nothing proposition."

Davenport shares this view but concedes that, in practice, most firms will need to combine incremental and radical improvement activities in an ongoing quality programme. He states that before striving for process innovation, a firm will ideally (though not necessarily) attempt to stabilise a process and begin continuous improvement. Here Davenport echoes Imai (9) who points out that, in contrast to more radical Western approaches to organisational change, Kaizen focuses on managerial, group and individual continuous improvement. The Japanese philosophy does not replace or fundamentally change the status quo, however, and Imai asserts that firms should consider the radical change option as soon as Kaizen's marginal value begins to decline. In turn, continuous improvement efforts should follow as soon as any programme for radical change has been initiated.

At the other end of the spectrum, Harrington (3) takes a more incrementalist and less IT dominated view. He prefers to use the term Business Process Improvement which he defines as a "systematic methodology developed to help an organisation make significant advances in the way in which its business processes operate".

Despite the existence of a growing body of work in the field, however, very little guidance is currently available outside the large consultancy organisations on how to carry out re-engineering programmes. In particular,

Bartezzaghi et al (10) have noted a general lack of conceptual models and operating tools to support any process re-engineering. Similarly, Heynes (11) cautions that, in the absence of any agreed, correct modelling techniques and languages for describing business processes, IS departments increasingly appear to be using their "mechanistic" systems development models to model business processes.

Others focus much more on an IT driven intervention. For example, Gant (2) sees BPR as simply "the redesign of processes to take advantage of the enormous potential of information technology". This approach tends to identify BPR with traditional systems analysis and design and software engineering. These approaches concentrate attention on developing a requirements definition, entity relationship models, normalised database designs and eventually software solutions, applying all this within existing (usually functionally orientated) organisations. The process focused approach concentrates first on identifying the business processes, then analysing and re-engineering each process. From this perspective, Information Technology (IT) ceases to be the focus of the analysis and design exercise and firms should delay consideration of integrated software solutions until business process re-engineering is complete.

The scope of the intervention can vary from a single individual to the whole process. In the type of change where an individual within a function seeks to improve his or her part of the process, improvements are essentially small in scale, internal in scope, low in risk and operational in outlook. Some interventions may be group based. Such change tends to be wider in scope than individual improvement, yet it is still essentially operational in nature, entailing minimal risk to the organisation and can be regarded as incremental change.

Process Improvement (Harrington) and Business Process Re-engineering (Hammer) again focus on the whole process but have a wider scope than the removal of waste. Harrington takes an incremental view whilst Hammer's approach is more radical, and questions whether the status quo is relevant to the future system. A reduced number of activities, organisational and job re-design and new developments in Information Technology such as Document Image Processing (DIP), workflow management or expert systems may be used. This type of change seeks to reduce the number of activities by up to 90% and addresses real strategic benefits.

Business re-engineering (rather than Business Pr Re-engineering) looks at the improvement of the (already process focused) organisation to exploit its capabilities in a way which leads to the growth of business in new and different areas. Stalk et al (12) define capabilities based competition as the ability to capitalise upon "the organisational practices and business processes in which capabilities are rooted". Such a capabilities focus identifies a set of strengths in core processes which enables companies to compete in entirely different competitive environment.

It is important at this point, after establishing different types of BPR intervention, to differentiate process focused approaches from traditional Organisation and Method (O&M) analyses. There are clearly fundamental similarities between O&M and the lower levels of process improvement e.g. personal. group based etc. These approaches do not focus on the whole process, they may be systematic i.e. "methodical arranged according to a plan" but not systemic "of or affecting a whole system" Hitchins (13). They do not focus on the whole process and the integration of work between functions. This holistic approach is the key to achieving the substantial benefits many have claimed for BPR.

#### CASE STUDY A BUSINESS PROCESS RE-ENGINEERING METHODOLOGY

A number of authors and companies (IBM, Xerox, etc) have proposed, in very general terms, the stages of a BPR methodology. The bank has established a similar five stage approach to BPR:

- 1 Develop strategy - developing a vision, critical success factors and stretch goals
- 2 Identify key processes - related to critical processes guided by the strategic phase. Also define performance factors.
- 3 Analyse existing processes - this includes modelling the existing process.
- 4 Develop an improvement plan - involves redesign and strategic reengineering.
- 5 Implementation - develop/build prototypes, gaining commitment, developing IT support systems.

Stage 1 is regarded by both TSB and Plymouth as the crucial phase in the business process re-engineering cycle. It is very important to develop a vision of what the process should look like two reasons: it provides a definitive blueprint for where you want to be, and it defines the amount of analysis that must be carried out in Stage 3. Without a vision, there is a great danger in over analysis which results in "analysis paralysis." Techniques and tools that could be used as this stage include Brainstorming, Lateral Thinking, Syntectics and Affinity Diagrams. It is also possible to utilise Soft Systems methods which would provide a more complete understanding of the process.

### Payroll Process

The case study involves the payroll process at TSB. Up to this point the authors have completed the first three stages of the Business Process Re-engineering methodology. The objective was to reach a point where a number of options could be put forward for major improvements to the process. The payroll process was facing a number of difficulties, not least with the continual threat of outsourcing.

Phase 1. The first element of this phase was to brainstorm a vision of what a world-class payroll process should look like, and the critical success factors that would make this possible. This stage was also when the stretch goals for radical process improvement in terms of cost, quality and time were set.

Phase 2. The next phase of the process was to identify the key processes within payroll and to define the performance factors or metrics that were crucial to the overall performance. These included ratios and percentages of

- \* Total population to payroll staff
- \* Transactions to payroll staff
- \* Transactions to total population
- \* Queries rate

The first metric defines the size of the payroll unit to the population that it serves, the second defines the amount of work that the staff have to do and the third metric determines the number of different activities that the process operates. Within the process, a core of four key activities were identified - Starters, Change of details, Leavers and Pay employees. These core activities were surrounded by a large number of activities and processes that were secondary to this core.

After measuring the key performance metrics it was then possible to benchmark these against a variety of organizations. The information that we found at these other organizations was then used to look at the overall performance of the system at TSB. It is important to determine why others are better rather than just establishing that their performance is superior.

Phase 3. The approach to modelling used in Phase 3 has been based on a combination of IDEF<sub>0</sub> and flow charting. IDEF<sub>0</sub> is fast becoming the standard process modelling technique and is used within variety of service industry companies including ICL, IBM, Natwest, TSB, Portman, Scottish Power and is the modelling base for the BPR offerings of most of the main consultancy firms such

as Coopers and Lybrand and Wang. A complete description of the methods and of IDEF<sub>0</sub> and an analysis of its contribution to modelling complex systems is provided in Maull (14).

As stated earlier the authors have yet to begin the final two stages of the process re-engineering methodology.

## CONCLUSIONS

This paper has attempted to summarise the major influences affecting the approach to Business Process Re-engineering developed by the authors. The drive is to develop process that are both efficient and effective. One of the key mechanisms is the identification and modelling of processes. The approach that has been adopted is based around modelling existing processes and then seeking to re-engineer them. The authors have adopted a systematic approach which incorporates a number of techniques for generating ideas, Benchmarking and process modelling (IDEF<sub>0</sub>).

The authors have found that this approach to managing and improving business processes is effective in delivering the required information about the process before deciding on how to implement the improvements. It can also deliver a number of alternatives to improvement, from the incrementalist to the radical approach. The approach used on the payroll process has shown that this methodology is both flexible and robust and can deliver a range of tangible benefits.

## REFERENCES

- 1 Hammer, M interview with Vogl AJ, June 1993, Across the Board,
- 2 Gant, JG, 1992, Work Management: the next step in imaging, CIO Journal, 60-69
- 3 Harrington, HJ, 1992, Business Process Improvement, McGraw-Hill
- 4 Davenport, TH, 1993, Process Innovation: Reengineering Work Through Information Technology, Harvard Business School Press
- 5 Davenport, TH, Short, JE, 1990, The new Industrial Engineering: Information Technology and Business Process Redesign, Sloane Management Review, Summer
- 6 Hickman, LJ, 1994, Technology and BPR: Identifying Opportunities for Competitive Advantage, SABRE, Wiley, 177-192
- 7 CIM-OSA, 1989, CIM-OSA Standards Reference Architecture, AMICE ESPRIT
- 8 Hawkins, JMH (compiler), 1984, Oxford Paperback Dictionary, OUP.
- 9 Imai, M, 1986, Kaizen: The Key to Japan's Competitive Success, McGraw-Hill
- 10 Bertezzaghi, E et al, 1993, Modelling the Lead-Time of the Operations Processes, in Services Operations, Operations Management Association UK, 117-124
- 11 Heynes, C, 1993, BPR: Who does What to Whom? SABRE, Wiley, 33-40
- 12 Stalk, G et al, March-April 1992, Competing Capabilities: The new rules of Corporate Strategy, Harvard Business Review
- 13 Hitchin, DK, 1992, Putting Systems to Work, Wiley
- 14 Maull, R, 1986, An evaluation of the Contribution of the ICAM Definition Method - IDEF<sub>0</sub>, to the analysis and design of CIM systems, PHD Thesis, available from the University of the West of England at Bristol.

Mull R S, Childe S J, Weaver A M, Bennett J, Brown P, O'Brien J, High S.

The role of IDEFo in Process Re-engineering

in

Case S, Newman S T (Eds.). (1994) *Advances in Manufacturing Technology VIII, Proceedings of the Tenth National Conference on Manufacturing Research*, Loughborough, 13-15 September.

'Dr Roger Maull, 'Dr Stephen Childe, 'Mr Adam Weaver  
''Mr Jan Bennett, 'Mr Paul Brown, 'Mr Jim O'Brien,  
''Mr Simon High.

*'School of Computing, University of Plymouth, Plymouth PL4 8AA*

*''Teaching Company Centre, University of Plymouth, Plymouth*

This paper will review the role of IDEF<sub>n</sub> as part of a re-engineering programme. It will concentrate on the key analysis phase of a BPR methodology and suggest that IDEF<sub>n</sub> is particularly suited to modelling within this phase. The features and attributes of IDEF<sub>n</sub> are described and the paper will conclude by detailing an example of an IDEF<sub>n</sub> model used by the authors in a re-engineering project in a small engineering company addressing the problem of engineering change.

## Introduction

Business Process Re-engineering (BPR) is becoming a key enabler of the 1990's for companies seeking to achieve competitive advantage. BPR offers the opportunity for sustained competitive advantage through radical reductions in lead time and cost and substantial service level improvements. Increasing attention is being paid to BPR by many manufacturing companies including Lucas, IBM, ABB, BAe, HP and Rank Xerox.

Despite the widespread interest there is a lack of conceptual models and operating tools to support any process re-engineering (Bartezzaghi, Spina and Verganti 1993). Similarly, Heynes (1993) cautions that, in the absence of any agreed, correct modelling techniques and languages for describing business processes, IS departments increasingly appear to be using their "mechanistic" systems development models to model business processes.

Consequently, despite the widespread interest in BPR there is evidence that some companies are not obtaining the benefits from BPR that were initially envisaged (Hammer 1991). The authors believe that without a clearly defined methodology and guide to good practice there is a danger that failure to achieve envisaged benefits will become increasingly common.

## BPR Methodology

A number of authors (Davenport and Short 1990, Kaplan and Murdock 1991) and companies for example, IBM (Snowden 1991) have proposed, in very general terms, the stages of a BPR methodology. The authors have distilled from these what they believe to be a good composite BPR methodology consisting of five phases. These are:

- Phase 1 Create/Identify corporate, manufacturing and IT strategies
- Phase 2 Identify key process(es) and performance measures
- Phase 3 Analyse existing process(es)
- Phase 4 Re-design process(es)
- Phase 5 Monitor and continuously improve new process(es)

For those wishing to read an excellent overview of the entire BPR process, the authors have produced a working paper defining each stage in considerable detail. This paper will continue by focusing upon the development of methods for what the authors regard as the key phase of the methodology - phase three.

### Phase 3 Analyse Existing Processes

This phase defines key business processes and identifies possible opportunities for re-engineering by comparing corporate objectives and business drivers within the defined processes.

The first activity is to carry out a key process profile. This profile attempts to understand process flow in terms of activities/tasks/steps performed, cycle times for products/services produced, individual task timings, redundant tasks or steps, delays and work volumes

In our view, in order to provide a basis for incremental and radical change it is necessary that some comprehensive effort be made to analyse existing processes. This may best be achieved through the development of a process model. A number of possible modelling tools exist which could be used at this stage. The most widely used techniques include flow charting (Oakland 1989) Role Activity Diagrams (Ould 1993) and IDEF<sub>0</sub> (Le Clair 1982). There is insufficient space to provide an analysis of each of these methods, this paper will now concentrate on describing the most widely used technique - IDEF<sub>0</sub> and its application to analyse a process in a manufacturing company.

### ICAM Definition Method

IDEF<sub>0</sub> consists of three to six boxes. Three is felt to be a reasonable minimum (a diagram of two can usually be incorporated into a higher level diagram) and six a maximum because of individual cognitive limitations. The graphical language of IDEF<sub>0</sub> uses boxes and arrows coupled together in a simple syntax. Boxes

on a diagram represent activities. The arrows that connect to a box represent real objects or information needed or produced by the activity. The side of the box at which an arrow enters or leaves shows the arrow's role as an input, a control or an output.

The strength of IDEF<sub>n</sub> is that it is a tool designed for modelling processes and in our view it is relatively easy to use (though more difficult than flow charting). It uses a structured set of guidelines based around hierarchical decomposition, with excellent guidance on abstraction at higher levels, if used well this ensures good communication and a systems perspective. It is also becoming the defacto standard modelling tool for business process modelling.

The main weaknesses in using IDEF<sub>n</sub> are that some users claim it is too complex to use and that it is not possible to produce a detailed software specification directly from the IDEF<sub>n</sub> diagrams, thus its use in linking stages three and four is very limited.

#### Case study

The application of IDEF<sub>n</sub> is illustrated in Figure 1. Here we can see an example of IDEF<sub>n</sub> applied in a small engineering company based in Plymouth. The sub-process that the authors analysed was engineering change. There are six key activities A11..A16. The first activity is to filter the engineering change proposal, the key control on the filtering process are the company policies on acceptable engineering change requests. The marked drawings are then used to input a hypothetical effectivity date into the CAPM system. At this stage the effectivity date is always 1999 ie some future date. The drawing and engineering notices are then used by the draughtsman to produce the changed drawings which are then evaluated by supply for a true effectivity date. Supply will assess their stock levels and if, for example, they have a large stock of material affected by the drawing change they will request that the effectivity date be pushed out as far as possible. The feedback loop is to the product engineer who has to interface with the customer to identify whether the proposed effectivity date is acceptable. This activity produces an effectivity in date for the new part and also an effectivity out date for the existing part which is entered on the Bill of Materials. The final activity is where the drawing and engineering notices are appraised and signed off for implementation by the product engineer.

#### Discussion and Conclusions

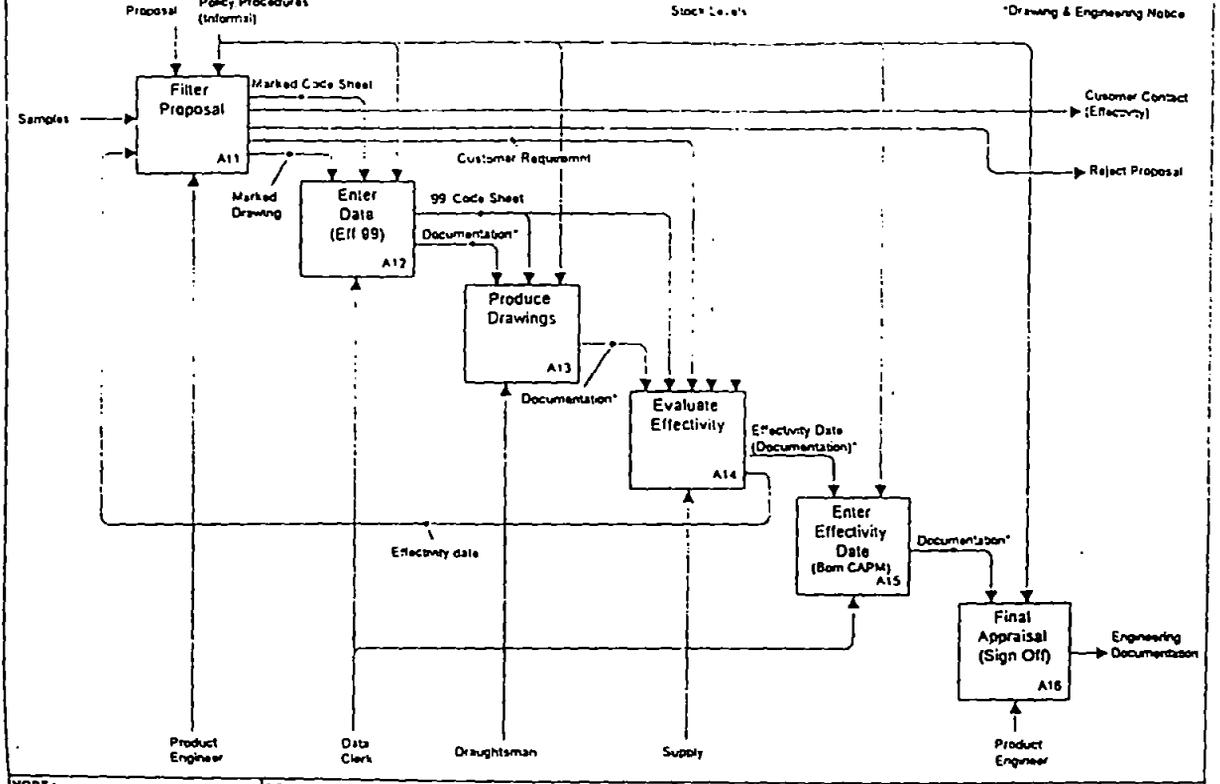
The IDEF<sub>n</sub> models are useful in identifying areas for improvement in three main ways. Firstly, they act as a means of understanding the process. The IDEF<sub>0</sub> models developed of the process were the first time that the process had been modelled in such detailed manner. Secondly, because of the hierarchical nature of IDEF<sub>n</sub> the models are useful in communicating this understanding of the process to senior executives. In essence, because IDEF<sub>n</sub> insists on consistency amongst levels yet allows for abstraction of terms, the models can be shown to strategic meetings where radical re-engineering decisions are made. Thirdly, the models allow an analysis of

the process to take place. The team are currently engaged on developing a specification of a methodology for BPR which will take the IDEF<sub>n</sub> models and indicate areas for radical and incremental improvement.

#### References

- Bartezzaghi E, Spina G and Verganti R, Modelling the lead-time of the operations processes, in Johnston R and Slack N D C, (Eds). Service Operations, Operations Management Association UK, 1993, pp117-124
- Davenport T H and Short J E. The new industrial engineering: information technology and Business Process Redesign. *Sloane Management Review*, Summer 1990
- Hammer M in Shocking to the Core, *Management Today* August 1991
- Heynes C, Presentation at British Computer Society BPR Conference, London, 29 June 1993
- Kaplan R B and Murdock L, Rethinking the Corporation: Core Process Redesign. *The McKinsey Quarterly*, 1991 No 2
- Le Clair S, *IDEF The method, architecture the means to improved manufacturing productivity*, SME technical papers, Society of Manufacturing Engineers 1982
- Oakland J S, *Total Quality Management*, Butterworth 1989
- Ould M, Process Modelling with RADs *IOPENER* The Newsletter of the IOPT club Volume 2, Number 1, 1993.
- Snowden D, Business process management and TQM. *Proc. 4th International Conf. on TQM*, IFS Publications, June 1991

USED AT:	APPROVED:	DATE: 03/22/94	REWORKING	READER	DATE	CONTEXT:
	PROJECT:	REV:	DRAFT			<input type="checkbox"/>
	NOTES: 1 2 3 4 5 6 7 8 9 10		RECOMMENDED			<input type="checkbox"/>
			PUBLICATION			<input type="checkbox"/>



MODE: A1	TITLE: Engineering Change (No Tooling)	NUMBER:
----------	--	---------

## COPYRIGHT STATEMENT

This copy of the thesis has been supplied on condition that anyone who consults it is understood to recognise that its copyright rests with its author and that no quotation from the thesis and no information derived from it may be published without the author's prior consent.

✓ Signed..... *Paul Zouren*.....  
Date..... *19/12/1997*.....