

UNIVERSITY COLLEGE LONDON

THE ROLE OF FACILITIES MANAGEMENT WITHIN THE RETAIL SECTOR

Ву

KARL ANTONY SCHINDLER

A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE.

THE BARTLETT SCHOOL OF ARCHITECTURE, BUILDING, ENVIRONMENTAL DESIGN AND PLANNING.

LONDON SEPTEMBER 1998 ProQuest Number: U643551

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



ProQuest U643551

Published by ProQuest LLC(2016). Copyright of the Dissertation is held by the Author.

All rights reserved.

This work is protected against unauthorized copying under Title 17, United States Code.

Microform Edition © ProQuest LLC.

ProQuest LLC 789 East Eisenhower Parkway P.O. Box 1346 Ann Arbor, MI 48106-1346

■ Contents

	of figures and tables stract	v vi
Cha	apter One : Aims and Purpose of the Study	1
1.1	Introduction	1
	1.1.1 Scope of the chapter	1
	1.1.2 Summary of sections	1
	Subject Area	1
1.3	Objectives of the Study	2
Cha	apter Two: Some Consideration of Method	4
2.1	Introduction	4
	2.1.1 Scope of the chapter	4
	2.1.2 Summary of sections	4
2.2	Methodology	4
	2.2.1 Current body of knowledge review	4
	2.2.2 Primary data collection	4
	2.2.3 Sample size / type	4
	2.2.4 Data collection methods	5
2.3	Structure of Report	5
Cha	pter Three : Facilities Management - Strategic	
	Relevance to Organisations	7
3.1	Introduction	7
	3.1.1 Scope of the chapter	7
	3.1.2 Summary of sections	7
3.2	Current Relationships Between Facilities	
	Management and Strategic Planning	7
3.3	The Emerging Role of Facilities Management	8
	3.3.1 The financial factor	8
	3.3.2 The human factor	9
	3.3.3 The change factor	9
3.4		10
	3.4.1 Introduction	10
	3.4.2 Historical information - pre 1991	11
	3.4.3 Strategic change - post 1991	11
2 5	3.4.4 Facilities management function of organisation	12
ა.5	Summary	12

Chap	oter Fou	ur: Non-Strategic Facilities Management - The Risks and Costs for the Core Business	13
4.1	Introdu	ction	13
	4.1.1	Scope of the chapter	13
	4.1.2	Summary of sections	13
4.2	The Ro	ole of Facilities Management within Retail	
	Organi	sations	13
		Introduction	13
	4.2.2	Facilities provision for retailing	14
	4.2.3	The retail working environment	16
	4.2.4	Comment	17
4.3	Primar	y Case-Study Organisation and Facilities	
	Manag	ement Provision	17
	4.3.1	Introduction	17
	4.3.2	The characteristics of strategic decisions	18
	4.3.3	Development of a facilities strategy in support	
		of the corporate strategy	19
	4.3.4	Strategic change - Implications for core business	
		of ineffective facilities management provision	20
	4.3.5	The direct effects of ineffective facilities	
		management provision on the core business	25
4.4	Summ	ary	29
Chap	oter Fiv	e: Outline Description of Case-Study	
		Organisations and Facilities	30
5.1	Introdu	action	30
	5.1.1	Scope of the chapter	30
	5.1.2	Summary of sections	30
5.2	Descri	ption of Case-Study Organisations A - G	30
	5.2.1	Case-study organisation A	30
	5.2.2	Case-study organisation B	31
	5.2.3	Case-study organisation C	31
	5.2.4	Case-study organisation D	32
		Case-study organisation E	32
		Case-study organisation F	33
	5.2.7	Case-study organisation G	33
5.3	Summ	ary	33

Cha	pter Six: Analysis of Sample Case-Study Data	34
6.1	Introduction	34
	6.1.1 Scope of the chapter	34
	6.1.2 Summary of sections	34
6.2	Description of Stages and Method of Analysis	34
	6.2.1 Introduction	34
	6.2.2 Data collection	35
	6.2.3 Method of analysis	35
6.3	Analysis of Data to Determine Current Position of	
	Facilities Management Departments of Organisations	39
6.4	Main Factors / Characteristics that Correspond with Current	
	Position and Approach to Facilities Management Provision	
	within Sample	42
	6.4.1 Introduction	42
	6.4.2 Current position / approach to facilities management	
	provision of sample organisations	42
	6.4.3 Organisational culture and objectives	44
	6.4.4 Comment	49
	6.4.5 Strategic capital expenditure for refurbishment	49
	6.4.6 Organisational size	50
	6.4.7 Characteristic differences between strategically	
	and operationally orientated facilities management	- 4
٥.	departments of sample organisations	51
6.5	Analysis Summary and Conclusions	53
Cha	pter Seven: Report Summary, Results and Conclusions	55
7.1	Introduction	55
	7.1.1 Scope of chapter	55
	7.1.2 Summary of sections	55
7.2	Summary of Subject Area and Objectives of the Study	55
	7.2.1 Subject area	55
	7.2.2 Objectives of study	55
7.3	· · · · · · · · · · · · · · · · · · ·	56
7.4		58
7.5	Report Conclusions / The Future of Retail FM	60

Appendices	
A : Facilities management factors to support	
sales activities survey	64
B : Air-conditioning survey drawing	65
C : Air handling unit efficiency data	66
D : Survey temperature readings	67
E: Data collection questions and assessment criteria	68
F: Data analysis to support diagrammatic representation in	
section 6.3	73
G: Tabulation of sample data results	111
H: Types of organisational culture	113
References	116
Bibliography	

27

51

■ List of Figures and Tables

Fi	gu	res

4.3

6.1

3.1	Elements of strategic management	10
4.1	Main factors for retail customer satisfaction	14
4.2	Facilities management - sales support components	15
4.3	Organisational condition prior to take-over	20
4.4	Strategic changes to organisation	21
4.5	Facilities management structure	22
4.6	Strategic objectives of commercial sales director	22
4.7	Strategic planning process	24
6.1	Levels of activities - strategic / operational	36
6.2	Graphical representation of results example	37
6.3	Theoretical representation of results	38
6.4	Representation of results matrix	39
6.5	Case-study A : results matrix	40
6.6	Case-study B : results matrix	40
6.7	Case-study C : results matrix	40
6.8	Case-study D : results matrix	40
6.9	Case-study E : results matrix	41
6.10	Case-study F : results matrix	41
6.11	Case-study G : results matrix	41
6.12	Size of organisation and facilities management provision	50
Tables		
4.4	a	
4.1	Strategic decisions / implementation issues	23
4.2	Movement of goods : demands and constraints	25

Direct effects of poor ambient environment

General data relating to case-study organisations

■ Abstract

The purpose of the report concerns the strategic relevance of facilities management for organisations. From an examination of a number of case-study organisations within the UK retail sector the report focuses on two primary objectives. To identify the current position of facilities management within the sector in terms of the levels of operational and strategic activities performed by the function of each of the case-study organisations. To identify the primary factors and characteristics that correspond with the identified positions of the facilities management departments. From the results of the investigation produce tangible information to assist an understanding of the current situation to enable facilities management to achieve a higher level of strategic activity within organisations.

CHAPTER 1

Aims and Purpose of the Study

1.1 Introduction

1.1.1 Scope of the chapter

The aim of the chapter is to provide an overview of the subject area and an outline of the primary objectives of the study.

1.1.2 Summary of sections

Section 1.1 - Introduction
Section 1.2 - Subject area
Section 1.3 - Objectives of study

1.2 **Subject Area**

For facilities management a specific sector of the retail industry and building type represents a significant challenge in the provision of effective support of the core business activity. Within the sector a significant number of retail organisations conduct their activities within large site specific 'landmark' buildings which in many cases were constructed around the turn of the century and have yet to benefit from major upgrading and refurbishment. It has been recognised that a number of key factors common to this type of organisation and building type in combination have resulted in the ineffective support of the primary objectives of the organisation. These factors although inextricably linked can be separated into two distinct categories that of physical and management issues.

There are a number of physical demands and constraints common to this type of organisation and facilities. With the age of many of these facilities approaching one hundred years the structure and fabric are beginning to exhibit significant signs of obsolescence. Internally, the combination of obsolescence and poor control exerted over the high levels of 'churn' associated with retail activity has resulted in the building services now major contributors to poor building performance with the inherent implications for the activities conducted within the facility.

Because landmark type facilities are fundamental to the existence of these organisations the opportunities for relocation to a new facility or as a temporary measure to permit major refurbishment are not available. This is further aggravated by recent changes to legislation which have provided retail organisations the opportunity to extend the hours of operation to seven day trading. This time constraint for essential maintenance has in many cases been further affected by the change to the core business by many retail organisations entering the 'hospitality' sector, again extending the usage of the facility.

To provide a solution to the increasing deterioration of building performance due to the obsolescence process and poor development control with the inherent effects on the core business, a strategic approach by the facilities department is required of which the management issues are fundamental to the current difficulties. Although not isolated to the retail sector there remains the problem for facilities management of achieving a strategic fit between the core business and facilities management provision. Currently, there is a huge chasm of misunderstanding between the two groups and thus, the facilities function is forced to remain in a reactive operational mode. Crucial to resolving this dilemma the facilities function must demonstrate how a facilities strategy designed to support the core business strategy could benefit the organisation. This fundamental problem of the separation of the core business from that of the facilities function often manifests itself in the physical symptoms relating to poor building performance of which provide the 'live' issues of the report.

1.3 **Objectives of the Study**

The main thread of the study draws attention to a major issue which is neglected by many organisations, namely the strategic relevance of facilities management. In many organisations the facilities management provision is considered purely to be a operational function. Hence, the facilities departments exist to provide a day-to-day service with little consideration of how facilities management could benefit the core business in the long-term. Senior management within these types of organisations, often fail to recognise the valuable knowledge-base available within the facilities management department that could be utilised during the corporate decision-making process.

To assist an understanding of how facilities management provision can develop its function towards greater strategic relevance, the study has three primary objectives :-

- Current position of facilities management provision : from an analysis of data provided by selected organisations of the type discussed above, examine the level of strategic and operational activities of the facilities management function of each of the case-study organisations their current position
- Identification of causes: from the results of the data analysis determining the current position of facilities management within the sample, identify the specific factors / characteristics associated with the identified position of the function.

Development of facilities management provision : from identifying the primary factors responsible for the position of the facilities management function in strategic and operational terms provide relevant information that may assist facilities management in the development of the function

Ideally, the study would examine facilities management provision across all industry sectors to provide a broad understanding of the subject area. However, due to the limitations of the study the analysis will focus on a particular industry sector and facility type discussed in 1.2

The retail sector and specifically the organisations that operate from site-specific landmark facilities have been chosen for the basis of the study due to their relevance to the subject area. With these type of facilities displaying many of the characteristics that require a strategic approach to facilities management provision if the core business is to be supported effectively.

CHAPTER 2

Some Considerations of Method

2.1 Introduction

2.1.1 Scope of the chapter

The aim of the chapter is to outline the methodology of approach to be used to achieve the objectives stated in 1.3 and outline the structure relating to the various stages the report will take and the research methods to be used.

2.1.2 Summary of sections

	Section 2.1 - Introduction
	Section 2.2 - Methodology
П	Section 2.3 - Report structure

2.2 Methodology

2.2.1 Current body of knowledge review:

The initial stage of the report concerns a review of the current body of knowledge in the area of strategic facilities management provision. With the aim of the section to outline the current thinking within the facilities management discipline as to the relevance of strategic facilities management within organisations.

2.2.2 Primary data collection:

As discussed in 1.3, due the limitations of the study an analysis of facilities management provision across industry sectors is beyond the scope of the report. Therefore, a sample of retail organisations that operate from ageing, site-specific landmark buildings will provide the majority of the data for the study. With in support of the retail sample, two organisations that operate within facilities that share similar characteristics but a different core business activity will be examined to provide a broader analysis of the subject area.

2.2.3 Sample size / type :

- Primary case-study organisation (retail sector): the report analyses a specific retail organisation and associated facilities to provide an in-depth understanding of the subject area.
- Case-study organisations (retail sector): four other retail organisations that operate within similar conditions to that of the primary case-study organisation are to be examined.
- Case-study organisations (hotel sector): two facilities within the hotel sector are to examined due to their site-specific characteristics and similar operating conditions to the retail case-study organisations.

2.2.4 Data collection methods:

To obtain the relevant data in pursuit of the report's objectives the methods to be used are listed below :-

- written enquiries (questionnaires)
- structured interviews
- telephone enquiries

2.3 Structure of Report

- Chapters One: Aims and Purposes of the Study: provides a discussion as to the subject area and objectives of the report
- Chapter Two: Some Consideration of Method: provides the methodology of approach to be used to achieve the objectives of the report. To provide the structure of the report.
- Chapter Three : Facilities Management Strategic Relevance to Organisations : examines the current body of knowledge within the facilities management discipline concerning the strategic relevance of facilities management to organisations. The chapter also provides background information relating to the primary case-study organisation due to the strategic changes adopted by the organisation in recent years which support the discussion in chapter four.
- Chapter Four: Non-Strategic Facilities Management The Risks and Costs to the Core Business: through examples from the primary case-study organisation, the chapter examines in detail the implications for the core business of maintaining an operationally positioned facilities management function and failing to recognise its strategic relevance.

- Chapter Five: Description of Case-Study Organisations and Facilities provides the background information of the organisations to be used during the investigation.
- Chapter Six: Analysis of Sample Case-Study Data examines the data from the
 case-study organisations to determine the current position of facilities management
 in terms of strategic and operational activity. The chapter also analyses the specific
 factors / characteristics that correspond with the current position of the facilities
 management function.
- Chapter Seven: Report Summary and Conclusions: to summarise the subject area and objectives of the report. To provide an outline summary of the report chapters. To summarise and discuss the results / findings of the report.

CHAPTER 3

Facilities Management - Strategic Relevance to Organisations

3.1 Introduction

3.1.1 Scope of the chapter

The chapter supports the purpose and objectives of the report, with central to the report an analysis of data provided by the sample case-study organisations to determine the level of integration between the facilities management provision and the core business reflected by the operational and strategic activities of the function.

The chapter briefly discusses previous research that identified the possible relationships that currently exist between facilities management and the strategic planning process across industry sectors and the most common position of the function within organisations. To include a discussion concerning the reasons for the recent emergence of facilities management discipline.

To illustrate the key role facilities management has in support of the core business, the chapter also outlines the strategic changes implemented by primary case-study organisation A in recent years which are to be used in chapter four to demonstrate the costs and implications for organisations through ineffective facilities management provision.

3.1.2 Summary of sections

Section 3.1 - Introduction
Section 3.2 - Current relationships between facilities management and strategic planning
Section 3.3 - The emerging role of facilities management
Section 3.4 - Case-study organisation A - strategic changes
Section 3.5 - Summary

3.2 Current Relationships Between Facilities Management and Strategic Planning

From research conducted by Professor Peter Barrett at Salford University, a number of possible relationships between facilities management provision and corporate strategic planning were identified. The research was based on a sample of case-studies of different organisational types, the research findings are listed below ¹:-

١

- Administrative linkage: in which facilities management provides day-to-day operational support, but is itself relatively unimportant in the planning process.
- One-way linkage: in which facilities management largely reacts to corporate strategic initiatives.
- Two-way linkage: in which there is a reciprocal and interdependent relationship between facilities management and the corporate strategic planning process. Here facilities management is viewed as credible and important. It is proactive and fully involved in helping guide the development of strategic plans. For example, the facilities manager would be requested to evaluate potential acquisitions and help plan their integration into existing facilities
- Integrative linkage: the highest level of integration in which there is a dynamic, ongoing dialogue, both formal and informal between the facilities management planners and corporate planners. At this level the facilities manager would be involved in all strategic business decisions even those that do not concern the facility function.

From the research, it was found that the second potential relationship, *one-way* linkage was the most common within the various industry sectors and case-study organisations. This supports the view that across organisational types the role of the facilities management provision to a large extent remains in reactive operational mode.

The following section discusses the reasons why commentators have recently begun to promote the benefits for organisations of integrating facilities management within the core business and utilising a valuable resource to gain competitive edge.

3.3 The Emerging Role of Facilities Management

In recent years, many organisations have recognised the potential benefit of effective facilities management provision with the realisation that facilities represent a new and untapped frontier for improving organisation's performance.² The reason for the seachange in the way in which these organisation's view their facilities function has been driven by three interdependent factors, the *financial*, *human* and *change* factors which are described below.

3.3.1 The financial factor:

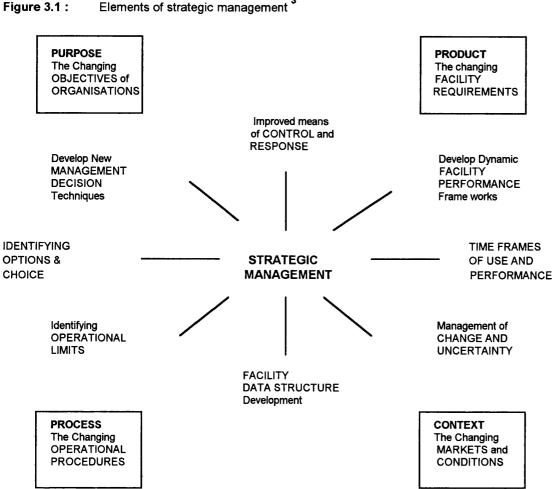
The significance to financial viability of the rising costs of occupying buildings and delivering support services is increasingly recognised. Facilities are an organisation's second largest expense and can account for as much as 15 per cent of turnover. The pressure to reduce costs is usually the main driver of a company's decisions about facilities. They are also the largest item on the balance sheet, typically over 25 per cent of all fixed assets so it is important that they are managed effectively to add value to the organisation.

3.3.2 The human factor:

The linkage between the human resource and the working environment has also been identified as critical to the success of the organisation. With demographic trends suggesting that in Europe, a highly skilled workforce capable of using the potential of advanced technologies may well be in short supply. Therefore more attention has to be paid to ensure that companies can attract and retain the right quality of staff and a package of working conditions including the facilities to support the quality of working life will be a prerequisite for organisations who wish to compete.

3.3.3 The change factor:

Today's organisations operate within an extremely turbulent business environment and with facilities central to any changes adopted by the organisation the role of facilities management is coming to the fore. With over the last decade the speed and unpredictability of change has increased exponentially. Now the impact of change is so widely felt that few organisations or sectors have been left untouched. Companies have been affected by the globilisation of competition, by dramatically shortening production and development cycles, by quantum leaps in technology and by the often frantic intensification of competition. Because of these factors organisations have to continually redefine their corporate strategy to take account of the rapidly changing business environment in which they operate. Figure 3.1 illustrates the main elements of strategic management that organisations have to develop to maintain competitive with the facilities provision highly integrated in the process. The diagram illustrates that organisations operate within changing markets and conditions which will affect the objectives of the organisation. These changes in purpose or objectives of the organisation is likely to alter the product, if so the process or operational procedures must also change. If the core business is to be supported effectively during these changes the facilities management provision must also be able to respond rapidly and effectively with changes to the physical provision and support services.



Elements of strategic management ³ Figure 3.1:

3.4 Case-Study Organisation A - Strategic Change

3.4.1 Introduction

The preceding sections discussed the possible relationships that currently exist between the core business and the facilities management function within organisations and the rapidly changing business environment in which organisations exist. Subsequently, organisations continually redefine their corporate strategy with facilities management central to the process. Section 3.4.4 outlines the strategic changes adopted by case-study organisation A that are to be used in chapter four to demonstrate the implications for the core business of ineffective facilities management due to insufficient integration of the function with the core business planning process.

3.4.2 Historical information - pre 1991

The organisation was originally founded during the mid 1800's in the fashionable district of Knightsbridge of central London as a linen and clothing retailer. Until 1991, the organisation was part of a large UK based retailer with a significant number of national outlets. Because the organisation was not required to perform as a 'stand alone' company the profitability of the company declined significantly over time. As part of a rationalisation process during the economic downturn of the early 1990's, the company was sold to its present owner who viewed the company as a high profile brand name that had yet realised its potential. The acquiring owner also realised that the organisation and associated facilities had been neglected for a considerable period of time with significant investment required to improve its performance necessitating major strategic changes.

3.4.3 Strategic change - post 1991

Since 1991, major changes have taken place within the organisation supported by significant investment which has dramatically improved its financial performance culminating with its flotation on the London Stock Exchange in 1996. This dramatic turnaround of performance was due to a number of factors within the corporate strategy developed by the present management team which are outlined below.

- core business diversification: identifying the growing market of 'hospitality' within
 central London the organisation developed an entire floor previously used for
 support space to provide a restaurant, cafe, bar and foodmarket. Also recognising
 the under-developed men's fashion market in 'designer' labels the basement area
 of the facilities again previously used for support space was developed to enable
 entry into the market.
- improvement in performance of retail space provision: to improve the performance of the retail space provision within the facilities the historical practice of leasing retail space to 'concessions' in return for an annual rent was considerably reduced with area developed for 'own bought' merchandise that provided a higher return.
- improved space utilisation: with the high demand and value of retail space within
 the facilities the organisation invested heavily in increasing the net usable area
 throughout the facilities with all storage, administration, support space relocated to
 other facilities including a newly acquired head office facility close by.
- expansion: supported by investment in the marketing function of the organisation to capitalise on its brand name and raise its profile the organisation increased its outlets with a second store in the north of England and a restaurant in central London. This expansion is expected to continue with a total of four stores within the UK and a chain of restaurants within the London region.

3.4.4 Facilities management function of the organisation

Although the strategic changes adopted by the organisation has resulted in the physical expansion of the facilities with operating hours almost doubled as a result of seven day trading and the hospitality activities increasing the usage to 1.00 am and the volume turnover of the organisation increasing by forty eight per cent in seven years the facilities management function has remained static. Despite the high levels of redevelopment, churn, expansion and the effects of the obsolescence process due to the age of the facilities the facilities management function remains in reactive and operational mode only responding to decisions taken at senior management level without consultation during the strategic planning process. As a result of the current situation the majority of decisions are taken from a space maximisation and aesthetic perspective without consideration to the fundamentals of building management with the inherent implications for the core business.

3.5 Summary

Previous research has shown that from a number of possible relationships between the facilities management function and the core business within organisations the function typically remains in an operational mode in which it generally reacts to corporate decisions without integration during the planning process. Due to the rapidly changing business environment in which organisations operate, organisations are beginning to recognise the potential benefits to be gained from increasing the level of integration of the facilities management function and the corporate planning process. Examples of strategic change adopted by case-study organisation A have been discussed to provide background information to support the discussion concerning the costs and implications for the core business through ineffective facilities management in chapter four.

CHAPTER 4

Non-Strategic Facilities Management - The Risks and Costs for the Core Business

4.1 Introduction

4.1.1 Scope of the chapter

The following chapter aims to outline the key role facilities management provision has in the support of the core business within retail organisations. It discusses the fundamental factors that are the responsibility of the facilities management function within retail organisations which are inextricably linked with the performance of the organisation.

To support the case for a higher level of integration of the facilities management function with that of the core business examples from the primary case-study organisation will be used to illustrate the effects non-strategic facilities management provision has on the primary business objectives.

4.1.2 Summary of sections

Section 4.1 - Introduction
Section 4.2 - The role of facilities management within retail organisations
Section 4.2 - Current approach by case-study organisation to facilities management provision
Section 4.4 - Summary

4.2 The Role of Facilities Management Within Retail Organisations

4.2.1 Introduction

As stated previously, the facilities management profession often voices concerns as to the lack of understanding and communication between the function and core business senior management which is said to be the major cause of the current non-strategic position of the function within many organisations. However, the responsibility for the current situation could be said to be partly within the department itself with the facilities management department not always clear as to the precise nature of the facilities management support required by the core business.

Without a clear understanding of the organisation's primary business objectives it is impossible for facilities departments to be proactive and are likely to remain in reactive and operational mode. For this reason a prerequisite for proactive facilities management provision must be to identify the main factors that link the core business with that of facilities management provision to ensure effective support is provided. To illustrate this vital component of strategic facilities management the main factors that are fundamental to retail organisations that are relevant to the function will be identified for the purpose of reinforcing the loss of benefits to the organisation of maintaining non-strategic facilities management provision. It should be noted that because facilities management provision covers a high number of activities the main focus of the chapter is that of the physical infrastructure and not the support services such as security, portering etc.

To define the required approach by facilities management the definition below accurately depicts the required role of the facilities management function of the case-study organisation type.

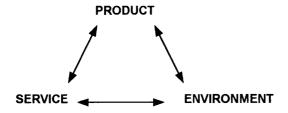
'An integrated approach to maintaining, improving and adapting the buildings of an organisation in order to create an environment that strongly supports the primary objectives of that organisation' 4

4.2.2 Facilities provision for retailing

Although the main focus of the chapter concerns a specific case-study retail organisation the following section outlines the main factors common in facilities provision for retail organisations generally. In the provision of retail facilities the facilities management function has a key role to play in the overall performance of the organisation through the support of its primary objectives.

The majority of retail products are available through a vast array of different suppliers and assuming cost is relatively similar across the sector other factors will determine the profitability of the organisation some of which concern the facilities management function. Figure 4.1 below illustrates the three main factors which the facilities management function should be aware of that combine to provide a successful retailing outlet.

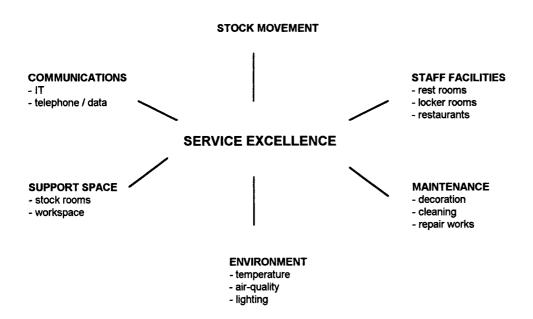
Figure 4.1: Main factors for retail customer satisfaction



As opposed to other sectors of industry such as the office sector, the facilities and associated activities form a direct link between the customer and the organisation of which will affect the customer's perception of the organisation. Fundamentally, the product must satisfy the customer but the process of exchange through the appropriate level of service and within an effective environment are both equally important. From figure 4.1 it could be said that the primary responsibility of the facilities management function is that of the environment element of the model with the product and service elements the responsibility of other functions of the organisation. However, in retail organisations the environment and service elements are highly integrated of which, the facilities management function plays a key role in their performance.

Retail organisations, particularly the type which are the focus of the report pursue service excellence as the main factor for differentiation between competitors due to the wide availability of products. Therefore, the many factors that support the pursuit of 'service excellence' are critical to the success of the organisation. Figure 4.2 below, illustrates the various elements of facilities management provision that in combination support the sales team during their interaction with the organisation's customers, the performance of which will go some way in determining the level of service provided.

Figure 4.2: Facilities management - sales support components



For a retail organisation to achieve the desired level of service excellence the critical resource is that of the human resource. However, a common problem for retail organisations concerns the high levels of staff turnover due to the terms and conditions of employment relatively similar between retailers. This transient workforce adds significant tangible and intangible costs to the organisation.

The tangible costs of sourcing and training replacement staff which can include substantial numbers of temporary agency staff to cover the short-fall in numbers and the less tangible, but a real cost to the organisation of inexperienced sales staff interacting with the customer with the inherent implications for sales performance. The appropriate level of service can only be achieved through a sales team that possesses the correct experience through training and full knowledge of the working practices of the organisation. As stated in 3.3.2, for organisations to attract and more importantly retain the right quality of staff the facilities and support functions can be the determining factors in the decision by members of staff to remain with an organisation. By the nature of retail employment a large percentage of the sales staff are relatively unskilled with limited ambition towards career development, therefore the decision by sales staff to remain with a retail organisation often places the quality of the working environment high on the list of priorities.

The following section discusses the factors that constitute the working environment for retail staff with much of what is to be discussed, also critical to the organisation in terms of the promotion of the organisation to its customers.

4.2.3 The retail working environment

From figure 4.2 the factors identified as critical in support of the core business which are to be discussed in more detail in this section would initially appear to be operational issues in terms of facilities management provision. However, section 4.3 which concerns the primary case-study organisation will illustrate that unless the facilities management provision achieves a significant level of integration with the core business planning process, the performance of these factors is often inadequate with the inherent detrimental effect on core business performance. The factors identified as critical in support of the sales team in pursuit of an appropriate level of service were obtained by way of a survey conducted by the personnel department of the primary case-study organisation. During the survey, twenty two department managers in consultation with their sales team were requested to list in order of priority the main factors relevant to the facilities function that were vital in the support of their day-to-day activities (Appendix A) The results of the survey are listed in order of priority below, with the reasons given for their choice:-

- Staff facilities provision: due to the demands of any anything up to a ten hour day
 interacting with customers on the sales floor, short but frequent rest periods were
 seen as vital in maintaining motivation and productivity. For this reason, the quality
 of the staff facilities, for example staff restaurants, rest-rooms, toilets etc provided
 by the organisation was the most important factor identified by the survey.
- Ambient environment: the combination of the length of time spent on the sales floor by sales staff and equally important customer comfort, a prerequisite for sales performance is the appropriate ambient environment in terms of temperature and air-quality, both vital for maintaining productivity.

- Support space: due to the continuous movement of stock to replenish the
 department, stockroom and workspace was seen as vital in enabling the sales staff
 to process the merchandise without a detrimental effect on the appearance of the
 department.
- Aesthetic quality of department: the visual appearance of the department is seen
 as vital in the promotion of the products displayed. However, due to the relatively
 short life-cycle of retail fit-outs often reflected in the quality of materials used,
 continuous and effective support maintenance is required in terms of decoration
 and small repairs.

4.2.4 Comment

From the preceding sections, facilities management provision within retail organisations has a vital role to play in support of the primary business objectives of the organisation. With service excellence a critical component of the core business the support of the human resource through the provision of an appropriate working environment and support functions are prerequisites for the success of the organisation.

For the facilities management function, it is vital that the linkages between the objectives of the core business and the department are identified and appropriately supported. However, if the department remains in operational mode and has no influence within the core business planning process with decisions taken by core business senior management concerning the management of the facilities this vital support function is often ineffective. To illustrate the impact that ineffective facilities management provision has on the primary objectives of a retail organisation due to an operational position of the function, the following section discusses the primary case-study organisation and the role of the facilities management function.

4.3 Primary Case-Study Organisation and Facilities Management Provision

4.3.1 Introduction

The preceding sections provided a general overview of the role of facilities management provision within retail organisations. The following sections aim to illustrate the criticality of the function within the core business planning process if the primary objectives of the organisation are to be achieved. To do this, the combination of corporate strategy theory and the corporate strategy of the primary case-study organisation will be examined with the facilities management provision central to the discussion. This approach has been adopted due to the primary case-study organisation providing an excellent model for strategic change that has occurred in recent years discussed in 3.4.3 and the implications for the facilities management function. It underpins the main focus of the report that facilities management provision must be integrated into the core business planning process with organisations endorsing the approach.

4.3.2 The characteristics of strategic decisions 5

This section discusses the key characteristics of strategic decisions and places them in the context of the strategic changes adopted by the case-study organisation.

- Scope of an organisation's activities:

Does (and should) the organisation concentrate on one area of activity or does it have many? For the primary case-study organisation prior to the take-over in 1991 it had clearly defined boundaries in business terms of the type of product and activities associated with the organisation. However, the scope of the organisation's activities altered significantly following the take-over. Previously the organisation's core business centred on high fashion retailing for women at the 'designer' end of the market. Although this activity remains central to the organisation's primary objectives, decisions were taken at corporate level to diversify from this area in two ways. The organisation entered the 'food and beverage' market, through identifying the potential growth of 'hospitality' activities in central London. To support this diversification an entire floor within the facilities which previously provided support and administration space was developed to provide a cafe, bar, restaurant and a food market. Also with women's fashion generally having reached saturation point within the market, a decision was taken to exploit the yet developed and growing market of men's fashion. Again large areas of the facility previously used as support space was developed within the basement area to provide the organisation with London's leading- edge retail floor for men.

- Matching the activities of an organisation to the environment in which it operates:

The organisation identified the potential of demand in these to new activities within its environment and diversified accordingly.

- matching the organisation's activities with that of its' resource capability:

In terms of physical resources the existing facilities provided the scope for expansion with the utilisation of space that had previously been used for support space by the organisation. The financial resources for the capital expenditure required for the large-scale redevelopment of the facility was provided by the new parent organisation. For the diversification into men's fashion the organisation through experience built up over many years and with the retailing infrastructure in place was able to adapt to the new activity with only additional management and buying personnel. For the hospitality diversification a new management team which included a director of the activity were brought into the organisation at the initial stage of the planning process.

- major resource implications :

Strategic decisions of the type outlined above often have major resource implications for an organisation. However, the strategic decisions taken by the new parent organisation and the subsequent resources provided were part of the overall strategy behind the purchase of the organisation. It was recognised that the organisation with its strong brand name and history within the retail sector although performing poorly represented an investment into an existing organisation with its potential yet realised.

- strategic decisions will affect operational decisions :

Decisions taken at the strategic level will have implications for the operational decisions within the organisation. Here, operational strategies are concerned with how the different functions of the organisation such as marketing, finance, manufacturing or facilities management provision contribute to the other levels of strategy. This is the key area that concerns the facilities management function of organisations, with, unless the appropriate operational strategy has been developed in support of the corporate strategy, the implementation of change may well be ineffective. Indeed, in most organisations successful business strategies depend to a large extent on decisions which are taken or activities which occur at the operational level. The integration of operations and strategy is therefore of great importance.

4.3.3 Developing a facilities management strategy to support the corporate strategy

It is not sufficient for managers to think of management in some operational or functional context, simply to know their piece of the jigsaw well and trust others know theirs equally as well. Modern organisations exist in a complex environment with increasing demand for fast and strategic responses. The very least that is required of managers is to understand how their piece of the jigsaw fits into the rest in the context of the strategic problems and direction of the organisation. Strategic decisions are likely to demand an integrated approach to managing the organisation. Unlike functional problems there is no one area of expertise or one perspective that can define or resolve problems. Managers therefore have to cross functional and operational boundaries to deal with strategic problems and come to agreements with other managers who inevitably have different interests and perhaps different priorities. If they do not, the effectiveness of strategic management, and particularly the implementation of strategy can be severely impaired.

In the context of facilities management provision, it has been discussed in previous sections the vital role the function has in support of the core business objectives within retail organisations. However, if the facilities management function solely reacts to strategic corporate decisions without integration during the planning process with the assumption that the implications of strategic change in operational terms have been considered the success of corporate strategy may well be impaired. The following section examines the implications for the primary case-study organisation of maintaining an operational facilities management function without the appropriate integration during the strategic planning process.

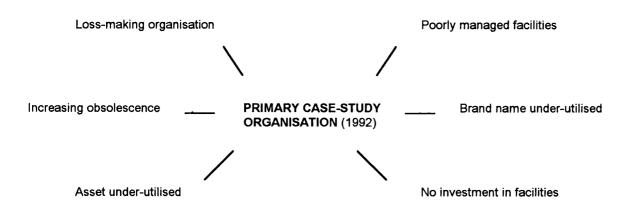
4.3.4 Strategic change: Implications for core business of ineffective facilities management provision

The following sections examine the operational position of the facilities management function within case-study organisation A and illustrates the inherent implications. To understand the current position of the facilities management function within the organisation it is important to view its function within the context of the environment in which it operates.

- culture of organisation :

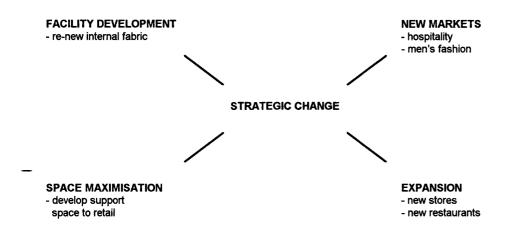
The culture of the organisation plays a vital role in the response of the various functions within the organisation to the strategic changes taken in today's business environment. For the functions within case-study organisation A, a dramatic change in culture has been experienced following the recent take-over. The condition of the organisation prior to the take-over is illustrated in figure 4.3 below

Figure 4.3: Organisational condition prior to take-over



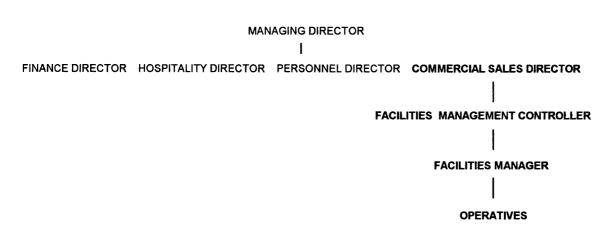
Historically, all aspects of the business were neglected by the parent organisation from which a negative culture evolved. The majority of the functions within the organisation accepted the continuous decline in the performance of the organisation and operated within a low expectation culture. The new parent organisation with its large-scale investment and aggressive financial management provided a change in culture not experienced before. For the facilities management function of which the majority of personnel remained within the organisation following the take-over, the required improvement in performance of the function has presented significant difficulties. With the strategic changes to the organisation made by the new parent company, the infrastructure of the facilities management function was not appropriately developed to provide effective support. The strategic changes to the organisation that require the effective support of the facilities management function are illustrated in figure 4.4.

Figure 4.4: Strategic changes to organisation



The facilities management function had not previously been required to develop operational strategies in support of major changes to the facilities only to maintain the facility within tight budgetary constraints. This purely operational and reactive position of the function was reflected in the overall condition of the facility and the effectiveness of its support services. The strategic changes implemented by the new parent organisation required a significant increase in performance by the facilities management function. However, with the planning and implementation of these strategic changes involving minimal input from the function, significant operational difficulties have arisen. This lack of integration between the function and the core business planning process is partly due to the management structure of the facilities management function. The facilities management structure is illustrated in figure 4.5, from which a conflict of interests becomes apparent.

Figure 4.5: Facilities management structure



The overall responsibility for the facilities management function of the organisation rests with the 'commercial sales director', with this a secondary role to the primary objectives the position demands. Although the strategic decisions taken at this level affect the management of the facilities, the operational issues are passed down the management line for implementation without consultation with the facilities management function. The strategic objectives of the commercial sales director are illustrated in figure 4.6 with the corresponding implementation issues listed in table 4.1.

Figure 4.6: Strategic objectives of commercial sales director



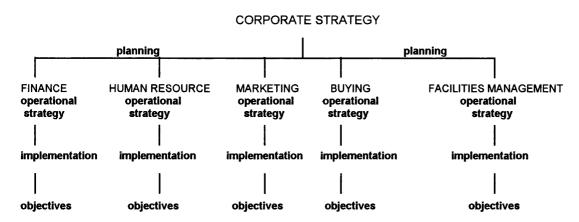
Table 4.1: Strategic decisions / implementation issues

STRATEGIC DECISIONS (CORE)	IMPLEMENTATION ISSUES (FM)
- high levels of 'churn' associated with dept fit-outs to maintain leading-edge in shopfit designs / turnover of brands	- manage risk (refurbishment in occupied buildings) - control of building services installation
- change to core business activities ie : hospitality	- realignment of support services required ie : type of services / hours of operation
- increase operating hours of facility ie 7 day trading / licensing hours for 'hospitality'	- realignment of support services required ie : type of services / hours of operation
- maximise net usable area of facility : development of support space to retail	- stock movement / holding / workspace issues increased requirement for support services
- relocate administration function to new site to permit retail expansion	- multiple site support required
- increased sales staff numbers to meet expansion requirements	- increase staff welfare facilities to match increased demand
- increase volume turn-over (foot-fall) through expansion of facilities / operating hours	- increased usage of facilities : increase in maintenance demand

It can be seen that the primary responsibilities of the head of the facilities management function are those concerning the financial performance of the organisation. This includes the continuous development of the facilities to optimise its potential in terms of turnover. However, the majority of the strategic changes agreed at this level have significant implications for the management and operation of the facilities. If the corporate strategy initiatives are to be supported effectively, the relevant functions of the organisation must develop operational strategies to ensure implementation is successful. This necessitates the integration of the various functions of the organisation in the strategic planning process.

This process is illustrated in figure 4.7 below.

Figure 4.7: Strategic planning process



If the appropriate communication systems are not in place between the functions and the corporate planning level it is unlikely that effective operational strategies will be developed.

For the facilities management function of the organisation, the integration between the department and the strategic level remains somewhat fragmented. Although the strategic changes that have taken place since the take-over have transformed the organisation aesthetically and financially a number of fundamental operational and management problems concerning the facilities remain. Central to the current difficulties faced by the facilities management function is the process in which the continuing development and expansion of the facilities is managed. The development or refurbishment of the facilities is carried out on a micro level that is, each area is considered in isolation of the overall facilities provision, the macro level. driven from a space maximisation and aesthetic perspective with little consideration of how the developed space interacts and functions within the overall facilities provision. This type of approach has serious implications for the management of the facilities in two ways. Firstly, the operational support services provided by the facilities management function has not the appropriate infrastructure in place to support the core business function effectively. Despite the expansion in the physical retail space provision of the facilities during recent years and the subsequent increase in activity, the facilities management resources remain at the levels prior to the take-over. Secondly, this type of approach has serious consequences for the building services of the facilities. With the historical lack of investment in the facilities reflected in the overall condition of the fabric and building services, combined with the ad-hoc installation of services in recent years, the performance of the building is far from adequate.

The following section examines these issues further and illustrates the detrimental effects that these problems have in support of the facilities management objectives identified in section 4.2.

4.3.5 The direct effects of ineffective facilities management provision on the core business

The following section illustrates by way of examples the effects strategic changes have on the effective management of facilities if operational strategies are not developed in support of the changes. The examples used correspond to a large extent with the factors identified in 5.2 that are critical in support of the primary objectives of the organisation.

Example 1: The effects of unsupported expansion of facilities

The primary element of the corporate strategy following the take-over of the organisation concerned the poor efficiency of the net usable area of the facilities. With large areas of the facilities occupied by administration and support functions neglecting the high value of retail space in central London. Once the potential for expansion was identified, a continuous programme was implemented to develop all available space to retail space to improve the financial performance of the organisation. As a result of the development programme, the volume turn-over of the organisation almost doubled in five years. This dramatic increase in volume turn-over has had significant implications for the management of the activities carried out within the facilities. Despite the main objective of the corporate strategy to optimise the retail space provision, no operational strategies were developed in consideration of the effects of these changes. A particular problem for the facilities management function following the expansion concerns the movement of goods, waste etc in support of the primary objectives of the organisation.

Table 4.2 illustrates the demands and constraints associated with the expansion.

Table 4.2: Movement of goods: demands and constraints

DEMAND	CONSTRAINTS
- volume turn-over doubled	no expansion of loading bay facilitiesno increase in goods lift provision
- new activities (Food & Beverage)	- no 'clean' and 'dirty' lift provision
- high levels of refurbishment works (24hr)	 shared goods lift facilities no increase in operating hours of loading bay / goods lift facilities (noise restriction- residential area)
- increase in 'holding area' requirement	- reduction in 'holding area' provision
- increase in 'support space' requirement (process goods)	- reduction in 'support space' provision
- efficient movement of goods	- no increase in 'distribution' personnel

As can be seen from table 4.2, the dramatic expansion of the organisation's activities have not been matched by the corresponding expansion of the facilities required to provide effective support, in some cases a reduction in facilities has occurred. Because of this, a number of significant operational difficulties have arisen as shown below:-

- delays in movement of stock
- stock-loss damage to goods
- poor waste disposal (hygiene and fire hazards)
- storage of goods in inappropriate areas (fire hazards)
- mixed fashion / food & beverage / waste / contractor's equipment, waste, materials etc (hygiene)
- traffic management issues loading bay constraints
- pressure on sales team : no support / holding areas
- housekeeping issues (24hr congestion)

Due to the lack of integration between the core planning process and the facilities management function, operational strategies to counter the difficulties discussed were not developed. Including the health & safety implications in relation to the above, a number of other factors identified as critical in support of the sales personnel are also impaired with the inherent implications for the core business activities.

Example 2: Management of building services

Within retail facilities that are subjected to high levels of churn associated with department fit-outs, the management of the building services is critical if detrimental effects to the core business are to be avoided. When we talk about building services, there are a whole range to be considered which are listed below.

- building services :
 - A/C system
 - sprinkler system
 - data / communication
 - fire protection
 - electrical distribution
 - water / sewage

To illustrate the implications of failing to develop a facilities strategy in terms of building services to support the high levels of development within the case-study organisation one of these services will be discussed, albeit the principals can be applied to the remainder! The building service to be discussed is that of the air-conditioning system due to the direct impact of the system on the core business as discussed in 4.2.3. Much research has been conducted in the area of the effects of temperature and air-quality on productivity in the workplace, showing a definite correlation.

From the survey conducted within the case-study organisation discussed in 4.2, the sales team within the organisation placed the ambient environment second in the list of priorities that supported day-to-day activities. Also, in a retail environment it is not only the organisation's staff that are affected by the ambient environment but equally important its customers. Because of the nature of fashion retailing, the seasonal merchandise displayed is often mid-way through the preceding season. For example, the autumn and winter collection will be displayed during the summer months and the summer collection during the end of the winter months. For this reason it is critical the appropriate ambient environment is provided to avoid customer discomfort and the inherent loss of sales through sampling merchandise that is not intended for the current season. Table 4.3 summarises the direct effects of poor ambient environment provision in a retail environment.

Table 4.3: Direct effects of poor ambient environment provision on core business

STAFF ISSUES	CUSTOMER ISSUES
low productivitystaff turn-overhigh absenteeismhigh sickness levels	 personal discomfort poor perception of organisation return business implications

The effects of the factors listed in table 4.3 all constitute a cost to the organisation in some form or another. Again, similar to example 1, the developments of the retail space provision within the case-study facilities were implemented without a facilities strategy concerning the management of the internal building services. Each area is developed in isolation of the overall facilities provision with the main focus of the corporate planning process concerned with the usage of space and the aesthetic quality of the fit-out. With no control exerted over external contractors in terms of building services installation, the services have evolved 'organically' over time to the detriment of the internal space they support.

To illustrate the current situation within the case-study facilities and defend the facilities management function from senior management criticism in relation to the poor ambient environment an in-house survey of the a/c distribution system was conducted. Although the accuracy of the survey and associated data cannot be relied upon for professional use it serves as a 'management tool' to promote the need for greater integration of the facilities management function within the development planning process. An example of the survey drawings and associated data are provided in appendix B, C, and D.

From the example survey drawing, the original design of the a/c system provided a airhandling unit in each quarter of the retail floor with proportionate distribution ducting to evenly supply cooling to each quarter. As a result of the continuous churn associated with department fit-outs over a period of time and with no control exerted over external contractors during the installation of building services, the current system bears no resemblance to the original specification. The rigid insulated ductwork has been altered on an ad-hoc basis resulting in cooling now provided disproportionately across the retail floor. To support the graphical representation of the problems associated with the cooling distribution system approximate calculations were used to determine the efficiency of the air-handling units per quarter of the retail floor. (Appendix C) From the data, although the 'duty' for each air-handling unit is the same with no particular differences in the areas the system supports the provision of cooling is now extremely uneven. To add to the uncontrolled installation of air-conditioning ductwork, there are also quality and appropriateness of use issues concerning the materials used. Extending from the rigid ductwork uninsulated flexible ductwork which should not exceed one metre in length has been installed to suit the current development area at the time. With the ceiling void used as a 'return air' plenum a significant proportion of cooling within the flexible ductwork is lost as the temperature within the void raises the supply temperature. Also, with the absence of 'dampers' it is impossible to commission or regulate the supply to the space.

The current situation of the distribution system would not present too many difficulties for cooling if the system was oversized for the heat loads within the space. However, cooling difficulties are worsened by a second but related issue concerning the heat loads generated by lighting installations, again installed uncontrolled. With a significant percentage of the retail floor consisting of 'concession' departments, each company at the design stage of the proposed fit-outs attempts to increase the visual appearance of the department in relation to surrounding and competing departments through increased lighting levels. Despite of the age of the air-handling units approaching twenty five years with the design specification to meet the heat loads at the time of installation and commissioning no consideration is given as to the cooling capability of the system and the heat loads generated by new lighting installations. The net result of the current approach is extreme temperatures in large areas of the retail floor. The system to maintain temperature levels that are barely acceptable is run at full load twenty fours hours a day throughout the year with the obvious operational costs to the organisation. Appendix D illustrates the temperatures within a sample floor that were taken during the course of one month as part of the survey to identify the reasons for the current cooling difficulties. From the data, although the external temperatures are relatively low the space temperatures are not conducive to the activities conducted within the space.

4.4 Summary

It has been shown that for facilities management to provide effective support of the primary objectives of an organisation the function must clearly identify the linkages between itself and the core business. This is particularly important with modern organisations operating within a complex environment, redefining their corporate strategy on a regular basis to maintain competitiveness becoming the norm.

An integral part of strategic changes adopted by organisations are changes to the physical provision of facilities and operational procedures in which facilities management plays a key role. If the facilities management function operates at a purely functional level only reacting to strategic decisions taken during the core business planning process the implementation of changes are likely to suffer operational difficulties. Therefore, an integrated approach is required with all functions of the organisation developing operational strategies in support of the corporate strategy.

For facilities management, the primary case-study organisation provides a good example of the implications and costs to the organisation of failing to utilise the function appropriately. The following chapter provides a brief description of the sample case-study organisations that are to be used for analysis to identify the current position of the facilities management function within the sample in chapter six.

CHAPTER 5

Outline Description of Case-Study Organisations and Facilities

5.1 Introduction

5.1.1 Scope of the chapter

The purpose of the following chapter is to provide an overview of the case-study organisations which provided the information / data that is to be used for analysis to achieve the objectives of the report.

5.1.2 Summary of sections

Section 5.1 - Introduction.
Section 5.2 - Description of case-study organisations A - G
Section 5.3 - Summary.

5.2 Description of Case-Study Organisations A - G

5.2.1 Case-study organisation A

Case-study organisation A is a world-renowned high fashion retailer located in the fashionable district of Knightsbridge in central London. The facilities were constructed during the mid 1800's although additions and adaptations have taken place during its existence. The current facilities consist of 250,000 ft² over seven floors of trading.

The core business although primarily fashion retailing has a number of 'food and beverage' activities located on the fifth floor of the facilities. In support of both elements of the core business the organisation employs over twelve hundred staff. Of these staff numbers thirty are directly employed by the facilities management function of the organisation with two management positions with the remainder operatives within the function.

The organisation in recent years has adopted an expansionary position within the retail sector to utilise its high profile brand name. From a single site in Knightsbridge, the organisation now has a number of facilities including a head office facility close to the flagship, a new store in the north of England and a restaurant in central London. The organisation also has plans for further expansion with new store within the UK and a chain of restaurants within the London area.

The organisation is one of many owned by the current chairman of a larger organisation based in Hong Kong and although the case-study organisation was floated on the London Stock Exchange in 1996 the chairman remains the majority shareholder. The flotation reflects the culture of the organisation whereby its development and expansion is part of an entrepreneurial approach taken by the chairman and associated management team.

In terms of financial performance the UK organisation has a turnover in excess of £120m per annum and is currently one of the best performers of its industry sector, reflected in the proposed further expansion of the organisation.

5.2.2 Case-study organisation B

Case-study organisation B is a well known 'luxury' goods retailer located in Regent Street of central London one of the most famous shopping streets in the world. Its facilities date back to the early 1920's although some areas are considerably older. In total the facilities consist of over 100,000 ft² of retail space in which six hundred staff are employed.

The control of the organisation remains with members of the original founding family of which in recent years has created a number of problems for the management of the organisation reflected in its financial performance. It is currently is facing a significant dilemma with the core business requiring urgent development but restricted by the insufficient capital available due to its performance. An integral part of the organisation's development is the improvement of its facilities provision which have been neglected over a considerable period of time.

The organisation provides a good example of poorly managed facilities partly as a result of the failure to recognise the potential benefits to the organisation of effective facilities management. The function historically has been integrated and controlled by the security function with the results heavily criticised by historic building authorities. This is reflected by a proposed change to the management structure of the organisation with the organisation now actively seeking to employ a professional facilities manager to improve the situation.

5.2.3 Case-study organisation C

Case-study C, is probably the most famous department store in the world and not only operates as a retailing organisation it is also a major tourist attraction for overseas visitors staying in London.

The facilities located in a prime position in Knightsbridge in central London consist of over 1.6m ft² of retail space in which over four thousand staff are employed by the organisation. With a turnover in excess of £500m per annum the number of staff employed and the physical size of the facilities, it is the largest single-site organisation of the sample case-study organisations.

The organisation is currently owned and controlled by a single individual whose vast wealth provides the necessary investment for the development of the organisation and particularly its facilities which were constructed around the turn of the century. This available capital is reflected in the sophistication of the facilities management function of the organisation to meet the continuous and significant improvement programme for the facilities.

5.2.4 Case-study organisation D

Case-study organisation D located in 'Oxford Street' within central London was at the turn of the century, the largest building ever designed as a single shop. The facilities consist of some 1.2m ft² of retail space in which over three thousand staff are employed which produces a turnover in excess of £300m per annum.

The organisation and facilities are currently at the final stages of redevelopment that stem from a 'master plan' devised in 1992 with development costs of over £50m for each year of the six year master plan. Part of the major redevelopment of the organisation and facilities required significant investment in the facilities management function of the organisation to meet the demands of the strategic changes proposed in 1993. As a result, the facilities management function is highly sophisticated and is an integral part of the core business.

5.2.5 Case-study organisation E

Case-study organisation E is the 'flagship' department store for a large UK based retailer. The Store is located in London's Oxford Street and consists of over 250,000 ft² in which approximately one thousand staff are employed with a turnover in excess of £80m per annum. The facilities represents the newest construction within the sample case-study organisations with the store built during the 1950's. A significant part of these facilities are currently used for the administrative function of the organisation although future plans include the relocation of these functions due to the high value of retail space in this location. Due to the size of the organisation with a large number of outlets across the UK, the management of its facilities is supported by a regional based facilities management department although the flagship benefits from a site based facilities management team and to a large extent operates independently with the exception of strategic changes that have significant implications for its physical use.

Of the retail case-study sample, case-study E, represents the only corporate organisation that has a large property portfolio of which has implications for the approach used for facilities management provision. Although the above facilities and associated facilities management function is the main focus during the report, consideration is given to the approach to facilities management by this type of organisation, with the greater centralisation of the function.

5.2.6 Case-study organisation F

Case-study organisations F and G are both hotel organisations located in central London. Although the primary aims of the report focuses on the facilities management provision within the retail sector, the hotel sector was chosen to broaden the analysis of the report due to the similarities of the demands of both sectors on the facilities management function. In both types of organisations, the facilities represent a direct interaction between the organisations and its customers.

Case-study organisation F constructed at the turn of the century consists of three hundred and twenty accommodation rooms plus the usual hotel facilities. The size of the facilities are unknown due to the insufficient building data within the facilities management department. Two hundred and fifty staff are employed by the organisations of which eight are employed by the facilities management department with a significant number of other functions outsourced. Unlike the second hotel organisation within the sample, case-study organisation F hires out its facilities and services for major functions to support its primary core business by utilising the benefits of large landscaped gardens overlooking Hyde Park. This is reflected in the turnover of the organisation of some £25m per annum compared to case-study G which is of a similar size but has a turnover of only £7m per annum.

5.2.7 Case-study organisation G

Case-study G is the second hotel organisation within the sample, it is located in the 'Mayfair' district of central London and consists of over 235,000 ft² and three hundred rooms in which three hundred staff are employed, four within the facilities management department. The facilities were constructed during the 1920's and in recent years has undergone extensive refurbishment to main its position as a premier hotel facility in central London. As stated in 5.2.6 the turnover of £7m for the organisation is considerably lower than that case-study F as the organisation does not benefit from the external facilities available in case-study G. The facilities management department would appear significantly undersized for the facility but the numbers stated are for the team employed directly by the organisation with a large perentage outsourced.

5.3 Summary

This chapter has provided a brief outline description of the sample case-study organisations to be used within chapter Six, the analysis section of the report, to achieve the stated objectives of the report. From the analysis, greater detail concerning the sample case-study organisations, particularly in relation to the facilities management function will be provided.

CHAPTER 6

Analysis of Sample Case-Study Data

6.1 Introduction

6.1.1 Scope of the chapter

From an analysis of the data provided by the sample case-study organisations concerning the facilities management function within the organisations the chapter has three main objectives.

- To determine the current position of the facilities management function within the organisations in terms of operational and strategic activities performed.
- To identify the primary factors and characteristics that determine the current position of the function within the organisations.
- To identify the different characteristics between the strategically and operationally orientated facilities management functions.

6.1.2 Summary of sections

Section 6.1 - Introduction
Section 6.2 - Description of the stages and method of analysis
Section 6.3 - To examine the current position of facilities management within sample case-study organisations through the method of analysis discussed in 6.2
Section 6.4 - To identify the main factors / characteristics that correspond with the current position of facilities management provision within the sample case-study organisations
Section 6.5 - To identify the different characteristics of the strategically and operationally orientated facilities management functions
Section 6.6 - Analysis summary and conclusions

6.2 Description of Stages and Method of Analysis

6.2.1 Introduction

To enable the current position of the facilities management function within the sample case-study organisations to be analysed pre-determined questions were formulated to determine the levels of strategic and operational activities within the function. The range of sample including that of the primary case-study organisation to be used during the analysis are five retail organisations that operate within similar facilities type and two hotel organisations to provide a broader analysis. An explanation of the data collection method, analysis method and objectives are given in the following sections.

6.2.2 Data collection

Once identifying the sample organisations to be used to achieve the research objectives of the report two sets of questions were developed to provide data from which the analysis would be conducted.

Primary questions :

The first set of questions the 'primary' questions are in the form of a questionnaire to be completed by a senior member of the facilities management function of each of the sample case-study organisations. These primary questions are based on typical characteristics of facilities management departments and a range of possible functions performed by the department. From these characteristics and range of possible functions, methods, and techniques employed by the department the levels of operational and strategic activities in relation to the management of the facilities can be determined. For each answer / response a number is attached to a predetermined scale for both levels of operational and strategic activity. The method of positioning the response / answer to a predetermined question on the scale will be discussed and illustrated in an example in section 6.2.3 concerning data analysis.

Secondary questions :

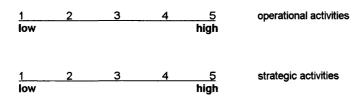
Following the completion of the questionnaire (primary questions) structured interviews were arranged with the participating member of the case-study organisations. With the purpose of the structured interview to check the response / answer to the primary questionnaire and secondly to obtain data concerning a second set of questions (secondary questions). The secondary questions are more general to the organisation and facilities management department with the purpose of the data to identify key factors and characteristics that are common to the current position of the department identified by the analysis of the primary questions. The methods of analysis used for the data obtained during the collection process are discussed and supported with examples in section 6.2.3.

6.2.3 Methods of analysis

Stage 1:

As outlined in 6.2.2 the answers / response given to the questions developed for the primary questionnaire are given a number on a predetermined scale for both operational and strategic levels of activity within the department. The scales used for determining the levels of operational and strategic activities range from 1-5 for each scale which are illustrated in figure 6.1 below.

Figure 6.1: Levels of activities - operational / strategic



For example, a facilities management department which employs a specific 'planning' function within its team structure would indicate a strategic approach to its' activities with planning a key characteristic of strategy and therefore the response would score higher on the strategic scale. Conversely, if no specific planning function is in place but planning is only performed in terms of determining the annual budget, proposed developments etc, the sample department would score higher on the operational scale than the strategic scale. It must be stated that the choice of position on each of the two scales is based on the interpretation of the answers / response by the researcher from knowledge and experience of facilities management provision and not a predetermined method of control. To some extent the limitations of the control of this element of the data analysis impairs the accuracy of the results. However, with the data presented within a matrix the results will be adequate to achieve one of the primary objectives of the report, the identification of the general position of facilities management provision within the sample organisations. An example of the process for the analysis of the primary data is provided below.

Example

Question: Is there a specific planning function within the department?

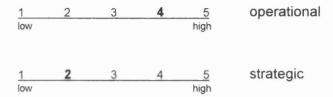
Response: No there is not a specific planning function within the FM department,

but issues such as determining the annual budget, planning proposed

developments and formulating planned preventive maintenance

contracts require frequent planning activities.

Scale: strategic / operational level of activity



Results: Without a specific planning function within the department with planning

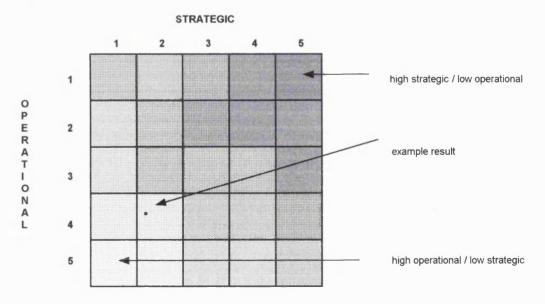
activity only performed to achieve particular objectives the operational

score would be higher than the strategic score.

The results of the appropriate score on each scale is then plotted on the corresponding position on the matrix, in this case a score of 4 for operational related activities and 2 for the level of strategic activities is given.

These results are illustrated in figure 6.2 below.

Figure 6.2: Graphical representation of results example



Stage 2:

Once all the results are plotted on the matrix indicating the current position of the facilities management function of the case-study organisations a second stage of analysis will be conducted. By changing the points on the matrix to letters corresponding with the case-study organisations which indicate its current position a comparison will be made from the secondary question data. The objective of this second stage is to identify any key characteristics associated with the case-study organisations and facilities management function that are common to the position of the function, the second objective of the report. An example of stage 2 of the analysis is provided below.

Example

Theoretical results of stage 1 of the analysis for case-study organisations A and B

Figure 6.3: Theoretical representation of results

Case-study organisation B

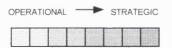
Example results indicate greater operational activity in case-study organisation A and higher levels of strategic activity in case-study B. The results of the first stage of the analysis may correspond with the data from the secondary questions through a comparative analysis such as the physical size of the facilities, the position of the head of the function within the management hierarchy or the turnover of the organisation. The primary and secondary questions that were used for the data collection process are listed in appendix E with a brief outline of the assessment criteria used.

6.3 Analysis of Data to Determine Current Position of Facilities Management Departments within Sample Case-Study Organisations.

Using the method of analysis described in section 6.2.3 figure 6.4 below represents the results of stage one of the investigation - the current position of facilities management departments within the sample case-study organisations. The answer / response to the primary questions provided by the sample case-study organisations and the relating position on the matrix scales can be found in Appendix F.

Figure 6.4: Representation of results matrix

		STRATEGIC				
		1	2	3	4	5
	1					******
O P E R	2		•		******	
A T I O	3					
N A L	4			••		•
	5					



From figure 6.4 the results from stage 1 of the analysis would appear to indicate a relatively even distribution of operational and strategic characteristics within the facilities management function of the sample case-study organisations. To identify which case-study organisations correspond with the operational and strategic characteristics from the first part of the study, the results from the organisations will each be shown on a separate matrix. The seven case-study organisations with the results of the first part of the analysis are shown below in figures 6.5 to 6.11 with the points on the matrix changed to the corresponding case-study letters.

Figure 6.5: Case-study A: results matrix

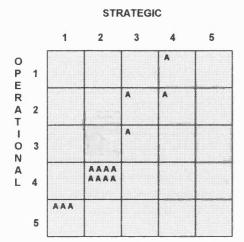


Figure 6.6: Case-study B: results matrix

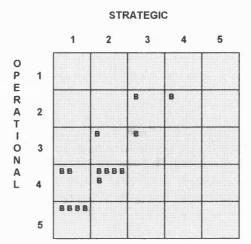


Figure 6.7: Case-study C: results matrix

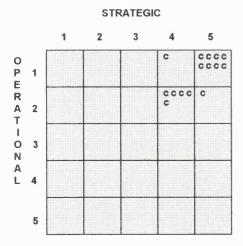
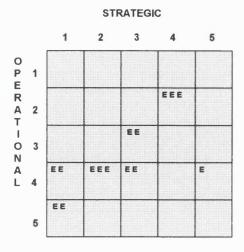


Figure 6.8: Case-study D: results matrix

			STR	ATEG	IC	
		1	2	3	4	5
O P E	1				D D	DDDD DDDD D
OPERAT	2		D		DDD	
I O N A L	3					
L	4					
	5					

Figure 6.9: Case-study E: results matrix

Figure 6.10: Case-study F: results matrix



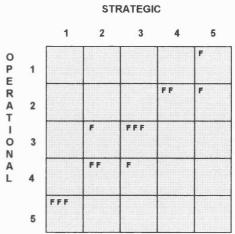


Figure 6.11: Case-study G: results matrix

			S	TRATEC	SIC	
		1	2	3	4	5
OPERATIONAL	1					9.6
	2			G	G G G	
	3			G G		
	4		G	G		
	5	666				

From the analysis with the results for each organisation shown on a separate matrix varying levels of operational and strategic activities within the facilities management departments become apparent. Section 6.4 examines the differences between the organisations and their facilities management function that correspond with the approach adopted.

6.4 Main Factors / Characteristics that Correspond with the Current Position and Approach to Facilities Management Provision within Sample Case-Study Organisations

6.4.1 Introduction

From the results of the data analysis it is possible to identify a significant number of differences between the sample organisation's approach to the management of facilities. However the purpose of the section is not solely to list the differences identified as this is possible by examining the data results in appendix F, it is to discuss the primary factors that are most likely responsible for the differences in approach. However, during the discussion concerning these primary factors many of the differences in approach to facilities management provision will be covered. Parts of the discussion are not exclusively based upon the data provided by the sample organisations but in part, on the knowledge of the retail organisations which stem from experience within the retail sector, the majority of which is available within the trade press.

6.4.2 Current position / approach to facilities management provision of sample organisations

From figures 6.5 to 6.11 the results indicate three main positions of the facilities management function. The matrix corresponding with each of these positions are shown below.

High operational / low strategic approach to facilities management provision

Figure 6.5: Case-study A: results matrix

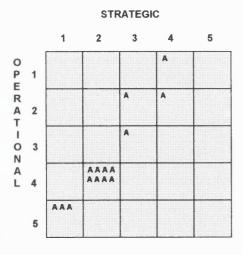


Figure 6.6: Case-study B: results matrix

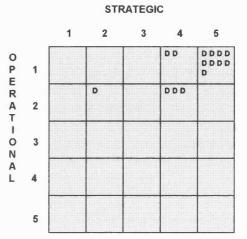
			STR	ATEGI		
		1	2	3	4	5
O P E R A	1					
R A T	2			В	В	
I O N A L	3		В	В		
A	4	BB	8888			
	5	8888				

• High strategic / low operational approach to facilities management provision :

Figure 6.7: Case-study C: results matrix

STRATEGIC 1 3 4 5 2 CCCC OPERATI 1 cccc c 2 0 3 N A 4 5

Figure 6.8: Case-study D: results matrix



 Combination of both strategic and operational approach to facilities management provision:

Figure 6.9: Case-study E: results matrix

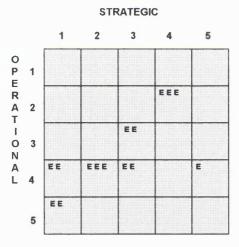


Figure 6.10: Case-study F: results matrix

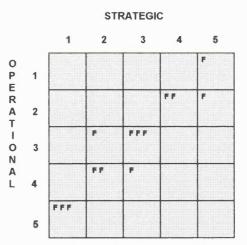
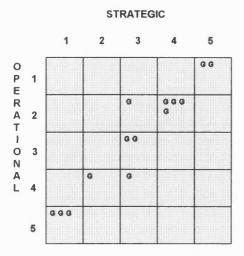


Figure 6.11: Case-study G: results matrix



With three different positions of the facilities management function within the sample organisations function illustrated in terms of levels of strategic and operational activities the sections below discuss the primary causes of the identified positions.

6.4.3 Organisational culture and objectives

Although the potential benefits of effective facilities management provision for organisations are well documented within the discipline the requirement or decision to invest and develop the facilities management function may be driven by certain fundamental factors within the organisation. Two primary and interrelated factors are suggested to be the catalyst or prerequisites for an organisation to choose to invest in the development of the facilities management function. It is believed the culture and objectives of the organisation must be compatible to reverse the view of the function as a non-core overhead to a function that has strategic relevance which adds value to the organisation. This section examines the culture and objectives of the sample organisations to illustrate the relationship between these factors and the position of the facilities management function. The culture aspect of the discussion is based on Charles Handy's theory of organisational culture⁶ an outline of which is provided in appendix H

• Organisation A:

From figure 6.5 organisation A displays high operational characteristics in its approach to facilities management provision. This current position of the function is largely the result of the culture and objectives of the organisation. The culture of the organisation is one of a power culture emanating from the chairman and managing director both long-term friends from a Hong Kong / Chinese background. The chairman currently owns a large number of independent organisations throughout the world, mainly in Asia.

Typically, the parent organisation targets ailing companies that display the potential for rejuvenation through short-term investment supported by aggressive financial management. Case-study organisation A provides such an example. Following the take-over of the organisation in 1992 when the company's profitability had declined to critical levels, massive investment was introduced which in six years has transformed its profitability illustrated by its flotation on the London Stock Exchange in 1996. From the flotation with the chairman maintaining a majority shareholder position the capital raised has been invested in the expansion of the organisation, again improving its financial performance.

Commentators within the industry sector suggest that the objectives of the current chairman are relatively short-term based on previous acquisitions and disposals of companies. This supports the current approach to the facilities management provision within the organisation. Despite massive investment to improve the performance of the retail activities discussed in 3.4, the required investment in the facilities management function has not been forthcoming with the inherent implications for the operation of the facilities. It has been recognised within the industry that the year-on-year improvement in sales performance is mainly due to the continuous development of space previously used for support functions to retail space. With the net usable area of the facilities at maximum efficiency commentators and city analysts are waiting to see if the financial performance of the organisation can continue to improve solely on sales performance. The continuing lack of investment in the infrastructure of the facilities and support functions suggests short-term objectives of current owner of the organisation with a highly profitable disposal not too far away.

From organisation A it can be seen that the objectives of the senior management play a major role in the level of integration the facilities management function achieves with the core business. If the objectives are purely for profit maximisation in the short to medium-term with disposal of the organisation likely, the investment in the facilities management function not only will affect the balance sheet but is also not a factor in the overall corporate strategy.

Organisation B :

Organisation B is currently suffering from significant decline in its performance. With an eighty year tradition as a fine goods retailer and a prime location in one of the most famous shopping streets in the world, that of Regent Street in central London, the industry is surprised to see such a deterioration performance culminating in concerns as to its future. The organisation is controlled by members of the original founding family from which a power culture has evolved over time. Many commentators view the structure of senior management consisting of a large number of family members as the root cause of the current situation within the organisation. The combination of the absence of professional management, personal disagreements between the family and no strategic direction has resulted in the stagnation of the organisation.

An example of the current crisis within the organisation was the much publicised cancellation of a multi-million pound redevelopment scheme for the facilities. Considerable funds were necessary to release the organisation from contractual arrangements with the parties involved in the redevelopment.

Over many years the organisation operated without a long-term corporate strategy, instead relying on its existing customer base which has declined due to competition from other stores within the capital. Without the formulation of a corporate strategy concerning the development of the organisation it is not surprising the view of facilities management provision remains archaic. The function is currently integrated and controlled by the security function of the organisation. With over 100,000 ft² of prime retail space, six hundred employees and a turnover of £50m per annum, the inadequate facilities management provision has resulted in significant difficulties in relation to the facilities. Recently historic building authorities have heavily criticised irreparable damage to the 'Tudor' elements of the facilities through poorly controlled alterations. This has resulted in the company now actively seeking a qualified facilities manager to reverse the current trend and appease the historic building authorities.

In an organisation that operates within a culture of mismanagement without any strategic direction in terms objectives relating to its core business, it is unlikely the potential benefits of effective facilities management provision would be recognised and developed accordingly. With organisation B displaying these characteristics it is of no surprise the data results indicate a predominately operational approach to facilities management.

Organisation C :

The culture and objectives of organisation C are fairly unique both within the sample organisations and the industry sector. It is unique due to its recognition as the most famous department store in the world and the type of culture within the organisation as a result of the objectives of the current owner. In terms of culture, the organisation displays characteristics of both power and role cultures. The power culture characteristics emanate from the central figure of the organisation's the current owner. The management style of the owner is infamous within the sector with personal control exerted in all aspects of the organisation. Unlike the chairman of organisation A with infrequent visits to the organisation during the course of a year. The chairman of organisation C virtually resides within the facilities and is highly visible demonstrated by a daily 'store walk' with a large entourage. However, the organisation also displays many authoritarian and bureaucratic characteristics, with rules and procedures the hallmark of its management.

In terms of organisational objectives, although the organisation is highly profitable due to the continuous development of its core business and expansion into many other activities using the brand name as a vehicle for promotion, there are a number of other objectives which are not solely commercial but more personal to the chairman. With a vast personal wealth and a taste for publicity the chairman uses the organisation to increase his notoriety throughout the world and the much publicised attempts to obtain British citizenship which has become highly political in recent years.

For the facilities management function the culture and objectives of the organisation which stem from the current owner provide it with the resources that are the envy of many facilities management departments within the sector. From the data results the department displays a highly strategic approach to its activities.

This strategically orientated position of the function can be explained simply by two interrelated factors that were identified during the data collection process. In terms of resources it was stated that the financial and personnel elements of the function were 'over-resourced' a highly unusual situation. This relates to a quote by a senior member of the facilities management team who stated "the current owner views the facilities as an extension of his home and takes a personal pride in developing the facilities to a standard more in common with a private residence".

Organisation D :

Organisation D exhibits high levels of strategic activities within the facilities management function. The approach adopted is a direct effect of the culture and objectives of the organisation. The organisation steeped in history and tradition periodically undertakes significant change to meet the changes to the environment in which it operates. It views the existence and development of the organisation over the long-term, an important characteristic ingrained in the culture of the organisation by each chairman.

The long-term stability of the organisation has resulted in a role culture evolving over time. All the functions within the organisation adopt a highly organised an professional approach to their activities. This is mainly due to the organisation continually operating within a strategic framework with an overall corporate strategy supported by operational strategies developed by all key functions. An example of this approach is demonstrated by the development of a six 'master plan' in 1992 to develop the core business in line with changes to its market. It was recognised that to maintain its position within the industry sector as one of Europe's leading department stores changes to its core business to meet new demands in fashion were required to include major redevelopment of its facilities to support this change.

The development and implementation of the six year master plan, in which £50m per year was earmarked for refurbishment of the facilities required a strategic approach to the management of the process. To achieve these objectives the facilities management function benefited from significant investment and is now highly sophisticated and provides effective support of the primary objectives of the organisation. These high levels of strategic activities within the function are illustrated in figure 6.8 and from the data results in appendix F.

From organisation D, again it can be seen that the culture and objectives of the organisation are the determining factors in the approach adopted to facilities management provision. In this case it was recognised that to achieve the objectives of the corporate strategy effective support by the function during the management of the development of the facilities was required necessitating a strategic approach.

Organisation E :

The results data illustrate a relatively balanced approach in terms of the strategic and operational activities of the facilities management function. The organisation represents the only large corporate type organisation within the sample with a significant number of facilities across the UK. It was expected a multi-site organisation would exhibit higher levels of strategic activity within the facilities management function. However, again the culture and objectives of the organisation go some way to explain the current situation.

The organisation was originally founded in the early part of the century and has over time developed a significant and loyal customer base. However, for a number of years the performance of the organisation has been in slow decline. Recently the organisation embarked on a long-term development programme to refurbish its facilities in pursuit of a new image to regain market share.

The organisation displays the characteristics of a role culture with the strength of the organisation within its various functions, it is also highly bureaucratic and therefore slow to change. It is believed that the facilities management function that is separated into two distinct operations, that of the regional and site-based is currently developing the functions in recognition of the potential benefits of effective facilities management provision for the organisation. It would appear the development of the regional facilities management function with its higher levels of strategic activities has yet to filter through to the site-based function which would explain the results of the data. The historical approach to facilities management provision by the organisation is reflected to some extent in organisation A. Previously owned by organisation E the condition and operation of organisation A's facilities were extremely poor at the time of the disposal which indicates the facilities management function of organisation E was ineffective.

The culture and objectives of the organisation are not dissimilar to organisation D, with the organisation currently operating within a strategic framework in pursuit of developing the core business. Due to the size of the organisation and its bureaucratic culture developing functions such as the facilities management need to be viewed from a long-term perspective. The data results indicate the process of developing facilities management is under way but has yet to be implemented at individual site level.

Organisations F and G :

Both organisations represent the hotel sector of the sample and therefore require a different approach to facilities management provision. The results from the analysis of the data indicate both strategic and operational characteristics in relation to the activities of the function. This is due to the different objectives of hotel organisations to the retail sector and subsequently the demands for facilities management. Inherent with the fast moving retail sector is continuous churn within the facilities in support of the core business requiring an effective and fast response by the function. Whilst changes to the facilities provision within the hotel sector are significantly less frequent, unless the organisation has a large property portfolio which is likely to expand and contract over time requiring strategic facilities management support.

Both sample organisations operate from single sites reflected in the activities of the facilities management function. The objectives of this type of organisation are to provide high quality accommodation provision with effective support services. For facilities management to support these objectives the focus will be on the quality of the support services and the maintenance of the facilities. This day-to-day activity of the function supports the operational characteristics, whilst the characteristics which produce higher strategic scores relate to the medium to long-term management of the facilities, the continuous improvement of the day-to-day support and the importance of the function from the viewpoint of senior management.

6.4.4 Comment

Despite the potential benefits of effective facilities management for organisations, the data analysis demonstrates that the function within the sample organisations is at varying stages of development. It has also been shown the culture and objectives of an organisation can be the determining factors in the approach adopted by organisations to facilities management. Two other factors identified from the data analysis also would appear to be the key drivers in the decision of organisations to develop the facilities management function in support of the organisation, which are discussed in sections 6.4.5 and 6.4.6.

6.4.5 Strategic capital expenditure for refurbishment

The data analysis results indicate a correlation between the strategic refurbishment and development of facilities and higher levels of strategic characteristics exhibited by facilities management activities. It would appear that organisations recognise the criticality of the ability of the organisation to manage long-term development of its facilities effectively. Obviously it is possible to employ external resources to manage this type of activity, but organisations that adopt a long-term perspective would appear to support the view that the benefits of retaining control within the organisation outweigh the costs of developing the appropriate in-house function. With this type of activity managed within the organisation the understanding of culture and requirements of the organisation are greater than that of external parties, irrespective of the quality of the briefing process. The in-house approach is also more likely to be more costeffective over the long-term, with the end result of the activity in terms of the expectations of the organisation significantly closer, a fundamental problem within the construction industry, and the client. With the function developed appropriately, the benefits are also available for the future requirements. Supportive evidence from the data results are provided below.

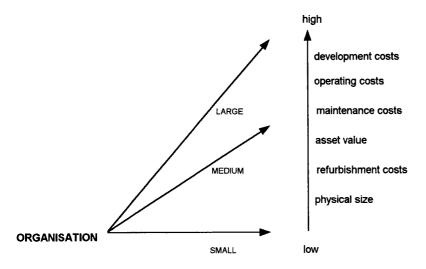
Organisations C and D are both currently undertaking long-term development and refurbishment work to their facilities provision which is supported by the strategic characteristics of the facilities management function within the organisation. Organisation E is also undertaking similar activities, albeit the strategic characteristics of the facilities management function are less significant due to the reasons given in 6.4.3.

Organisation A, although also involved in development and expansion of facilities does so on a year-on-year basis without a long-term strategy for reasons previously discussed with this reflected in the operational characteristics of the facilities management function. The development process is largely managed by external consultants with little input from the facilities management function. Organisation B which displays high operational characteristics within the facilities management function historically has not developed the organisation or its facilities reflected by its current dilemma. However as discussed in 6.4.3 plans to develop the facilities have recently been aborted at significant cost to the organisation due to releasing it from contractual arrangements. Organisations F and G both single-site hotel organisations refurbish and develop on an infrequent basis reflected in the reduced requirement for strategic facilities management provision and subsequently the characteristics of the function in the data results

6.4.6 Organisational size

Although an effective strategically functioning facilities management department is beneficial to most organisations, the data analysis indicates strategic activities of the function are more prevalent within larger organisations. This is most likely due to the financial implications of operating and developing large facilities or a portfolio of property. Figure 6.12 illustrates the correlation between the size of the organisation and the financial implications.

Figure 6.12: Size of organisation and financial implications



From the sample organisations case-study organisations C and D which display the highest levels of strategic activity by the facilities management function are also the largest organisations within the sample with the exception of organisation E of which the reasons for results of the data analysis and approach to facilities management have previously been discussed. Table 6.1 provides a comparison of the various sizes of the sample organisations.

GENERAL DATA		CA	SE-STUDY	ORGAN	SATIONS		
	Α	В	С	D	E	F	G
TURNOVER	120m	50m	500m	300m	80m	25m	7m
AGE OF FACILITIES (years)	100	70	100	90	50	100	80
NO' OF EMPLOYEES	1200	600	4000	3000	1000	250	300
SIZE OF FACILITIES (ft²)	250,000	100,000	1.6m	1.2m	240,000	n/a	235,000
NO' OF FM EMPLOYEES	30	10	200	30 °	22	8	4
OPERATING HOURS (Days)	7	7	6	7	7	7	7
* all non-management outsourced							

With the primary factors that are suggested to be responsible for the various levels of strategic and operational activities identified within the sample organisations the final section of the analysis examines the differences within the facilities management departments resulting from the position of the function.

6.4.7 Characteristic differences between strategically and operationally orientated facilities management departments of sample organisations

The facilities management departments of the sample organisations which adopt a strategic approach to their activities differ from the operationally focused departments in a number of ways. However it is believed one of these identified differences between the way in which the departments function is responsible for the remainder. The key difference is that of the level of 'influence' the function can exert within the organisation. The degree of influence although difficult to quantify appears to depend upon the position of the head of the function within the managerial hierarchy of the organisation.

From the analysis data the facilities management departments which display the highest levels of strategic activity benefit from representation at board level within the organisation. From this position the head of the function has the ability through position power to articulate the benefits for the organisation of effective facilities management and secure the appropriate resources to develop the function accordingly.

A close examination of the analysis data provided in appendix F demonstrates the correlation between the level of influence the function achieves within the organisation and the position of the head of the function in terms of the managerial hierarchy. Organisations C and D in which the function benefits from representation at board level displays consistent high scores for strategic activity compared with the remainder of the sample. The exception to this is with organisation A in which the function also achieves representation at board level.

However as discussed in 4.3.4 the head of the function has a combined role to include 'commercial sales director' from which a conflict of interests arises in conjunction with inappropriate training / qualifications in relation to the management of buildings. This is reflected in the low score for strategic activity by the facilities management department.

As stated at the beginning of the section from a board position the facilities director has the ability to secure the appropriate resources to develop the function through articulating the benefits for the organisation of effective facilities management provision. The appropriate development of the department is reflected in the characteristics listed below of which to a large extent differ from the operationally orientated facilities management functions within the sample.

- resources: both organisations C and D enjoy either appropriate resource levels in terms of personnel and financial resources or as organisation C stated these factors are over-resourced
- specific planning functions: organisations C and D are the only organisations within the sample that benefit from a specific planning function within the facilities management department
- computer-based information systems (CIS): with building data / information fundamental factors for the strategic management of facilities organisations C and D view computer-based information systems as vital in support of their activities. With the exception of Building management systems (BMS) the remainder of the sample failed to invest in these type of systems
- facilities management related training programmes: organisations C and D are the only organisations that provided facilities management related training programmes for the department
- facilities management techniques / methods: across the sample the use and frequency of use of techniques / methods such as condition surveys, energy audits, benchmarking, space planning etc vary considerably, however organisations C and D both employ the majority of these techniques at a greater frequency then the remainder of the sample
- development of 'facilities' strategy: although the majority claim to develop a
 facilities strategy in support of the organisation, organisations C and D develop
 facilities strategies for three years and six years respectively, with the majority of
 the remaining sample developing an annual facilities strategy
- facilities management involvement in the planning process: the range of responses to the level of involvement by the function during the planning process for proposed strategic change that concern the facilities provision varies between organisations. However, with the exception of organisation A organisations C and D are the only organisations which stated the level of involvement of the function is very high. Organisation A 's similar response reflects the board position of the head of the function but does not reflect in the overall approach by the function for reasons previously discussed.

6.5 Analysis Summary and Conclusions

A method of analysis was devised to determine the levels of strategic and operational activities within the facilities management function of a seven organisations. The objectives of the analysis were two-fold. Firstly to identify the current position of the facilities management function in terms of their strategic or operational approach to the management of facilities. Secondly to identify the primary factors responsible for the corresponding position of the function. The results from the analysis showed three main positions for the seven sample facilities management departments. Two departments displayed highly strategic activities, two highly operational and three displayed a combination of both strategic and operational activities. For the three departments which displayed a combination of strategic and operational activities, two were from the hotel sector. For the two hotel sector departments, the analysis indicated the low scores for strategic activities related to the different demands for the function during the course of the management of the organisation's facilities. Unlike the retail sector, with its high levels of development and churn associated with short-life fitouts and frequent changes to the market, particularly the fashion element of retailing, the hotel sector if a single-site organisation operates within a relatively steady-state environment. Therefore the main focus for the facilities management function tends towards high quality day-to-day support of the facilities and not continuous change to facilities provision.

Taking the hotel sector organisations from the analysis, the results still indicate the three identified positions. From further analysis of the data a number of primary factors would appear fundamental to the positions of the facilities management departments.

It is suggested the primary factors that determine the decision of organisations to invest in the development of the facilities management function that will allow higher levels of strategic activity concern the culture and objectives of the organisation. A number of different cultures and objectives of the sample organisations have been identified. Organisations that are viewed as a short-term vehicle for profit maximisation with costs associated with the development of the facilities department and the infrastructure of the facilities not seen as part of the overall strategy. Other organisations recognise the long-term benefits of investing in the function to meet the objectives of the corporate strategy which often includes significant expenditure for developing the facilities over time. One of the sample organisations demonstrated significant investment in the function and the facilities due to the personal ambition of the chairman who takes great satisfaction amongst other non-commercial reasons in the development of the facilities.

The data analysis also suggests a correlation between developing the facilities management function prior to undertaking significant capital expenditure relating to the development of the organisation. With the recognition that an in-house function developed to manage the development process is more likely to produce results closer to the expectations of the organisation than would be achieved by external parties through a better understanding of the culture and requirements of the organisation

The size of the organisation also would appear to determine the approach taken by organisations concerning facilities management provision. The increase in size of the organisation brings with it the inherent increase in costs associated with operating large facilities, with effective facilities management producing greater cost savings and therefore the development of the function beneficial to the organisation.

The data analysis also identified the different characteristics and activities performed by the strategically and operationally orientated facilities management functions once the primary factors had determined the approach adopted. However the data indicates that two interrelated factors are primarily responsible for the differences. The two factors concern the position of the head of the function within the managerial hierarchy which determines the degree of influence the function exerts within the organisation. The departments which displayed the highest levels of strategic characteristics and activities both benefited from representation at 'board' level within the organisation. From a position of director the head of the function has the ability through position power to articulate the potential benefits of effective facilities management for the organisation and subsequently secure the appropriate resources to develop the facilities management function.

In summary, the analysis has shown that the position and subsequent activities of the facilities management function within the sample organisations in terms of strategic or operational support of the core business is dependent upon two key factors. Firstly, the culture and objectives of the organisation determines the levels of strategic and operational activities of the function required by the organisation. Secondly, if a strategically functioning facilities department is required, the influence of the department through its position within the managerial hierarchy determines the sophistication and types of strategic activities performed.

CHAPTER 7

Report Summary, Results and Conclusions

7.1 Introduction

7.1.1 Scope of the chapter

The following chapter has three main objectives. To briefly redefine the subject area and the objectives of the study. To provide a brief outline summary of the chapters within the report. To discuss and provide conclusions concerning the findings from the objectives of the report.

7.1.2 Summary of sections

Section 7.1 - Introduction
Section 7.2 - Summary of subject area and objectives of the study
Section 7.3 - Outline summary of report chapters
Section 7.4 - Report Results
Section 7.5 - Report conclusions / The future of retail facilities management

7.2 Summary of Subject Area and Objectives of the Study

7.2.1 Subject area

The main thread of the report concerns the strategic relevance of facilities management for organisations. The facilities management discipline although developing at an increasing speed still voices concerns as to the failure of many organisations to recognise the potential benefits to be gained through strategic facilities management provision. Many facilities management departments function at a predominately operational level with low levels of integration with the core business. Although the function has the primary responsibility for the operational aspects of facilities provision, maintaining a non-strategic approach with no input during the corporate planning process can have significant implications for the core business and strategic planning. With the increasingly changing business environment in which organisations operate necessitating the frequent redefining of the corporate strategy which typically affects the facilities provision, a higher level of integration of the function within the core business planning process is now a prerequisite for the success of an organisation.

7.2.2 Objectives of study

The main objective of the study is to provide information to assist an understanding of the reasons facilities management within organisations typically maintains an operational approach during the management of facilities despite the valuable knowledge and expertise within the department that could be utilised more effectively at a strategic level. With a greater understanding of the reasons for the current situation the facilities management function within organisations are better equipped to develop a method or strategy to improve the level of integration with the core business. To achieve this objective a particular industry sector was chosen due to its fundamental characteristics which require a strategic approach to facilities management. The fast-moving retail sector and in particular retail organisations that operate within large site-specific 'landmark' buildings provide an example of an industry and facility type which because of the environment in which they operate a strategic approach to facilities management is required if effective support is to be provided.

To understand why facilities management provision maintains a predominately operational approach the analysis section of the report had two main objectives. Firstly from a pre-determined method of analysis to identify the current position of the facilities management departments within the sample in terms of their strategic and operational activity. Secondly, identify the key characteristics / factors which determine the approach adopted by the sample organisations.

7.3 Outline Summary of Report Chapters

Chapter One - Aims and Purpose of the Study: the content of chapter one was discussed within the preceding section.

Chapter Two - Some Consideration of Method: chapter two discussed the methodology to be taken by the report to achieve the stated objectives it also described the structure of the report.

Chapter Three - Facilities Management - Strategic Relevance to Organisations: within the chapter previous research was discussed concerning the current relationships between facilities management and strategic planning. The research supported the fundamental purpose of the report by identifying the most common relationship between the function and strategic planning from a number of potential relationships. It found that typically the 'one-way' linkage in which the function largely reacts to strategic initiatives dominated - an operational position.

The chapter also discussed the reasons why facilities management is beginning gain greater recognition in some organisations with its support at strategic level. This change in the way in which these organisations view the function has been driven by a number of factors. These factors include the financial aspects of occupying buildings with the continuous drive to reduce costs of which effective facilities management can support. The increasing demands and expectations of employees for a higher quality of working environment a key issue in the ability of organisations to attract and retain the appropriate quality of staff. And of paramount importance for modern organisations today the support by the function during strategic changes taken by the organisation in response to the environment in which it operates.

With the management of strategic change an increasing part of the ability of an organisation to remain competitive and fundamental to the content of the report the final section of the chapter discussed strategic change in relation to one of the sample organisations. The discussion provided background information to be used in the examples of implications for the core business of non-strategic facilities management in chapter four.

Chapter Four - Non-Strategic Facilities Management - The Risks and Costs for the Core Business: the main focus of chapter four concerned the linkages between the primary objectives of the core business of retail organisations and the facilities management function. Although based on retail organisations the principals discussed can be applied to most industry sectors and organisations.

The first part of the chapter discussed a key factor which to a large extent is responsible for the predominately operational position of facilities management and of which the function is partly responsible. It is suggested that the current poor communication and misunderstanding between the facilities management function and the core business is often due to the function not precisely clear as to the primary objectives of the organisation and its role in support of these objectives. To support this, the direct linkages between the facilities management function and the primary objectives of a retail organisation were illustrated. It was demonstrated that unless effective support of these linkages is provided by the function significant detrimental effects occurred for the core business activity.

The second part of the chapter discussed how the linkages between facilities provision and the core business are affected by strategic decisions taken by core business management. The discussion was based on an organisation from the case-study sample to enable 'live' issues to reinforce and demonstrate how strategic decisions taken without the integration of the facilities management function affected the operation of facilities and subsequently the organisation's primary objectives.

It was shown that the strategic decision-making process is becoming increasingly more vital in today's turbulent business environment in which organisations have to continuously redefine their corporate strategy. The facilities provision of organisations are typically central to any strategic change. This is a particular issue for the fast-moving retail sector with high levels of churn and development associated with retail activities. It is therefore critical that the facilities management function is highly integrated with the core business planning process to inform decision-takers as to the effects of strategic decisions and subsequent change for the operational aspects core business that otherwise may not be understood.

Chapter Five - Outline Description of Case-Study Organisations and Facilities: chapter five provided a description each of the case-study organisations to include historical information, the type of core business and current activities, financial information and general data concerning the facilities. The purpose of the information is to provide information to support an understanding of the organisations during the analysis chapter of the report.

Chapter Six - Analysis of Sample Case-Study Data: chapter six was central to the overall report. From an analysis of data / information provided by the sample organisations it had two main objectives that are fundamental to the report. Firstly with previous research demonstrating that the facilities management function within organisations typically adopted an operational position the current position of the function within the retail sector was to be determined to ascertain if the sector supports this norm. Secondly with the current positions identified further analysis was conducted to identify the primary factors / characteristics that correspond with the identified positions. The purpose of the second stage of analysis was to provide tangible data that could assist facilities management to develop a strategy to improve the level of integration between itself and the strategic planning process.

The method of analysis included a series of questions in the form of a questionnaire and structured interview in participation with a senior member of the facilities management department of the sample organisations. The questions used were devised from typical functions, methods and techniques performed by facilities management departments of which demonstrate operational and strategic activities. The response / answer to each question was given a position on a scale for the levels of strategic and operational activity. The given position on the scale was based on the interpretation of the interviewer from a knowledge and experience in the field of facilities management. With all the response / answer data collated the positions on the scale were transferred to a matrix. From the matrix designed to illustrate a position in terms of the levels of strategic and operational activity performed by each facilities management function an overall position of the departments could be determined. To provide a more precise view of a position on the matrix in relation to an organisation the points on the matrix were replaced with corresponding case-study 'letters' and shown on a separate matrix. From further analysis of the data it was possible to identify the key factors / characteristics that correspond with the identified position of the facilities management function for each organisation. The results of this stage of the analysis are discussed in 7.4 -Report Results.

7.4 Report Results

From the analysis of data discussed in 7.3 concerning chapter six the results demonstrated a number of factors and characteristics of which are discussed in turn below.

Strategic and operational positions of facilities management departments of sample case-study organisations: the results of the data illustrated in figures 6.5 to 6.11 in section 6.4.2 demonstrated the three primary positions of the facilities management departments. Two of the case-study departments demonstrate a high operational / low strategic approach to facilities management. Two demonstrate a low operational / high strategic approach and three of the sample a combination of both approaches.

- Primary causes of identified positions: supporting data and general knowledge of the sample organisations suggest that culture and objectives of an organisation are the primary drivers that determine the approach adopted to facilities management provision. Examples demonstrated that some organisations view the development of the organisation from a short-term perspective. With a corporate raider culture and objectives devised for short-term profit maximisation the investment and development of the facilities management function is unlikely. This is due largely to the benefits of a strategically positioned function as a result of its development have to be viewed over the medium to long-term. Other examples demonstrated that the organisation through tradition operated within a corporate strategic framework that adopts a long-term perspective of the organisation's development. Within these type of organisations the facilities management function has benefited from investment and development indicated by its strategic position. One example which demonstrated low strategic activity is suffering from organisational stagnation as a result of the absence of a corporate strategy due to the culture of the organisation. The organisation is owned and controlled by members of the original founding family who are unable to agree on the direction and development of the organisation. The organisations that display a combination of both strategic and operational activities do so for different reasons. One of the organisations represents the only large corporate example. It is a multi-site organisation with retail outlets across the UK. It displays strategic characteristics at regional level and operational characteristics at site level. Due to its culture with it highly bureaucratic it would appear the development of the facilities management function is ongoing but has yet to filter through to the site-base departments. The other two examples that display a combination of characteristics are from the hotel sector. In these cases it would appear the demands on the facilities management provision is somewhat different than that of the retail sector. Because strategic change involving the facilities provision is infrequent unlike the retail sector the approach is largely operational. However the functions that support the day-to-day activities are fairly sophisticated of which reflects in the strategic characteristics.
- Secondary causes of identified positions: the data results are also indicative of a correlation between strategic capital expenditure for refurbishment as a result of the development of a facilities strategy and the level of strategic activity within the facilities management department. This characteristic predominately exists within the organisation that also displays a culture of a long-term perspective in the development of the organisation and associated facilities. From discussions with these types of organisations it would appear the main factor for this approach is due to the organisation recognising the benefits of retaining control over large-scale development by the facilities management department. Because the facilities department understands the culture and requirement of the organisation the results of major refurbishment and development are typically closer to the expectations of the organisation that would otherwise be achieved by external parties.

Another secondary cause concerns the *physical size* of the organisation. The organisations that displayed the highest levels of strategic activity were also the largest within the sample.

This would appear to be due to the financial implications of operating and developing large facilities or property portfolio. With the asset value and costs of operating these types of facilities significant items on the 'balance sheet' effective facilities management will have a major impact through cost savings

• Characteristic differences between strategically and operationally orientated facilities management departments: from the data results there are a significant number of differences between strategically and operationally orientated facilities management departments. However the data indicates that these differences in approach to facilities management provision which are listed in 6.4.7 are the direct result of two interrelated factors. The level of influence and the position of the head of the facilities management department within the managerial hierarchy of an organisation are significant factors in determining the approach by the function. The reason for this is most likely due to the ability of the head of the function from this position to articulate to his peers the potential benefits of effective facilities management for the organisation. From this the appropriate resources are likely to be forthcoming which enables the development of the function indicated by the higher levels of strategic activity.

7.5 Report Conclusions

The primary objective of the report was to investigate the validity of the current view within the facilities management discipline that facilities management predominately maintains an operational position within organisations with the strategic relevance of facilities management confined to leading-edge organisations. Because the benefits of a strategically functioning facilities management department are greater within industry sectors associated with frequent strategic change and with facilities management central to the process, the retail sector which displays this characteristic was chosen for the investigation.

The retail sector due to the fast-moving nature of its activities, in particular the 'fashion' element of retailing provided an a good example of frequent strategic change. For retail facilities management the strategic changes forced upon the organisation by its environment have a significant impact on organisation's facilities provision requirement. The retail sample organisations chosen for the investigation are all considered to be major players within the specific retail market in which they operate. Because of this, the investigation and subsequent results were considered to be a good representation of the retail sector.

From the resulting investigation it is the opinion of the report that the view that the strategic relevance of facilities management is largely confined to leading-edge organisations is a too simplistic assessment of the current position of facilities management provision. With the retail sample considered to be leaders within their market of operation and results indicating a range of positions of facilities management in terms of strategic and operational activity a more detailed examination of the data was deemed necessary.

Further analysis conducted by the report suggests a number of factors determine the approach to facilities management endorsed by organisations. The factors and characteristics identified as the main drivers for the current position of facilities management within the organisations cannot be viewed in isolation but as interrelated ingredients that in various combinations determine the function's position. However their is one primary factor that is fundamental to the position of the function endorsed by the organisation. This factor concerns whether an organisation requires strategically functioning facilities management. Does this approach match the culture and primary business objectives of the organisation? The determining factor between the culture / objectives of the sample organisations and the position of the facilities management function would appear to be a 'time' element.

The investment and development of the facilities management department required to alter its orientation from that of a predominately operational function to that of a strategic approach cannot be viewed as a short-term objective, nor can the benefits for the organisation of this action. The benefits of a strategically functioning facilities management department are likely to be over the medium to long-term due to the long-vity of the built environment. Subsequently, organisations that have developed a culture that requires the long-term development of the organisation are more likely to develop the function. Conversely, as illustrated by one of the case-study organisations although a leading-edge organisation it has for reasons previously discussed short-term objectives in relation to its primary business with this reflected by its highly operational approach to facilities management.

Inherent with a culture that demands a long-term perspective in relation organisational development is that of the development of an appropriate corporate strategy. Fundamental to a corporate strategy are the operational strategies developed by the key functions of the organisation to include facilities management. The organisations that supported a strategically functioning facilities management department demonstrated the existence of a 'facilities strategy' a key characteristic of strategic facilities management.

The report also indicated that high levels of sophistication and a strategic approach adopted to facilities management by an organisation depended on the level of 'influence' the function has within the organisation. The level of influence depended on the position of the head of the function within the managerial hierarchy. The strategically position departments benefited from representation at 'board' level from which the benefits of facilities management could be articulated to key members of the organisation and the appropriate resources secured.

To summarise the findings of the report, the position of facilities management within the case-study organisations depended on a number key but interrelated factors. The organisation will endorse an appropriate position of the function to meet its primary business objectives. If the organisation views organisational development over the long-term it is more likely to invest and develop the facilities management function.

Organisations that take a short-term view tend to support an operational position of the function because the benefits of its development for the organisation are medium to long-term by nature. The differences between the two approaches are the development of a facilities strategy a prerequisite for supporting a long-term corporate strategy and the levels of influence the function has within the organisation which is determined by the position of the head of the function.

For the future of facilities management within the retail sector. Due to a number of key factors associated with its activities of which have been discussed within the report, the majority of organisations will eventually recognise the strategic relevance of the function in support of their core business if a competitive position is to be maintained. Because these organisations operate within a fast-moving business environment requiring frequent strategic change, an effective response by the facilities management function will be vital with higher levels of integration within the strategic planning process critical.

Inherent with retailing, the vast majority of products are widely available within the sector, therefore differentiation will depend largely on the service levels of the organisation. Although not initially obvious, effective facilities management provision has been shown to be central to this objective. Basically, the facilities of a retail organisation and the support functions form a direct link between the organisation and its customers, the perception of which is fundamental to *repeat business*.

The retail sector is generally following a similar approach to facilities management as other industry sectors, with the sector leaders recognising the value of effective facilities management with others likely to follow over time.

■ Appendices

List of Contents

Appendix A: Facilities management factors to support sales activities

Appendix B: Air-conditioning survey drawing

Appendix C: Air handling unit efficiency data

Appendix D: Survey temperature readings

Appendix E: Data collection questions and assessment criteria

Appendix F: Data analysis results to support diagrammatic representation

in section 6.3

Appendix G: Tabulation of sample data results

Appendix H: Types of organisational culture

Appendix A: Facilities Management Factors to Support Sales Activities Survey

Twenty two department managers of the primary case-study organisation were requested to conduct a survey within their department, to determine which factors are the most critical in support of their day-to-day activities, which are the responsibility of the facilities management department.

The managers were requested to consult their team and produce figures for the priority of the factors provided.

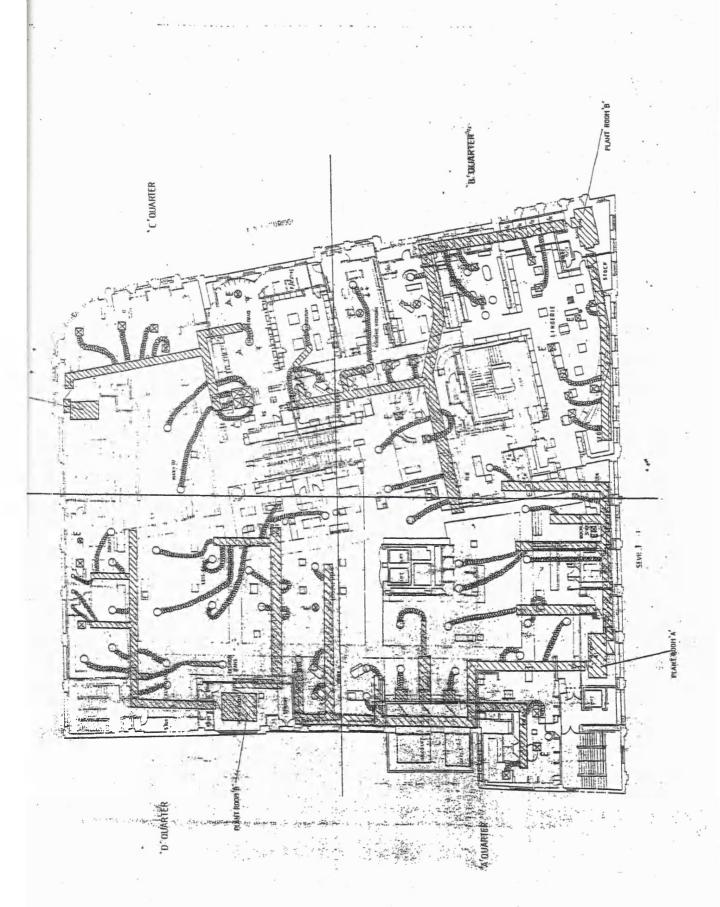
The list of factors are shown below, with the results of the survey.

Support Space :	21%
Ambient Environment :	26%
Aesthetic Quality of Department :	15%
Staff Facilities Provision :	38%

The survey conducted, produced the list of factors in the priority shown below.

- Staff Facilities Provision 1.
- **Ambient Environment** 2.
- 3. **Support Space**
- **Aesthetic Quality of Department** 4.

Appendix B: Air-Conditioning Survey Drawing



Appendix C: Air Handling Unit Efficiency Data

The data below supports the graphical representation in appendix B

The information below, attempts to illustrate the efficiency of the four air handling units on the third floor of the primary case-study facilities.

It is not known what the appropriate efficiency figure for 'net internal area' to 'gross internal area' should be for retail provision, but the third floor has been estimated from available drawings to be 82 per cent, i.e. net internal area less all core elements of floor (plant, lifts stairs etc.) - see table below

Table 1 - Third Floor Calculations

Floor	Gross internal GIA sq.m	Core	Plant	Stairs	Lifts	Net Internal Area NIA sq.m	NIA / GIA %
			157.3	315.9	206.7		
3rd	3802.0	679.9				3122.1	82%

Table 2 is an approximate calculation on the area in square metres that each of the air handling units serve

The table headings describe :-

- The Net Internal Area 'planned' each air handling unit serves 25% of the total NIA on the 3rd floor.
- The Net Internal Area 'actual' is an approximate calculation of the actual area served by each air handling unit
- a/p is the 'actual' over 'planned area of coverage

Table 2 - Planned Versus Actual Area Coverage for 3rd Floor Plant

	NIA	NIA				a/p%
	Planned	Actual	Plant	Stairs	Lifts	
Plant						
Α	780.5	1062.2	41.4	54. 7	161. 7	136%
В	780.5	725.3	44. 8	49.9		93%
С	780.5	463.1	34.9	37.8	45.0	59%
D	780.5	871.5	36. 2	173. 5		112%

Results

- AHU A: handles 36% more area than planned
- AHU C: handles 41% less area than planned
- AHU B & D are slightly outside their operating area

Appendix D:

INDOOR AIR TEMPERATURE

FLOOR:

Grd/1st/2nd/3rd/4th/5th

WEEK:

3

DATE:

22/5/98

DAY	ZONE A					ZON	EΒ			ZONE C					ZONE D										
DAT	TIME	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
Monday	2.00 pm	26.9	27.2	27.6	28.5	2 6 .1	26.4	23.9	25.5	24.5	24.8	24.5	24.3	20.7	20.8	20.4	21.0	19.5	20.3	24.9	24.5	25.1	25.6	25.0	24.6
Tuesday	2.00 pm	27.9	26.7	29.5	26.7	27.6	28.9	25.2	25.4	24.7	24.5	24.2	24.2	21.2	21.1	20.4	21.9	21.1	20.4	25.0	25.1	25.1	25.5	25.8	24.0
Wednesday	2.00 pm	25.1	25.8	28.1	26.4	25.7	26.5	24.8	24.6	23.8	23.6	24.0	23.8	19.7	19.9	18.8	20.6	19.7	19.4	24.7	23.7	24.7	25.7	25.2	23.6
Thursday	2.00 pm	26.0	25.6	28.1	27.2	25.6	26.3	25.0	25.0	24.2	24.3	23.8	23.5	19.8	19.5	19.0	20.2	19.8	18.9	24.8	24.5	25.0	26.2	25.4	23.8
Friday	2.00 pm	26.1	26.7	27.3	27.4	26.5	26.2	24.6	25.8	24.3	25.1	23.8	24.2	21.5	20.1	19.4	21.0	19.8	19.6	24.6	23.8	25.2	26.0	25.8	24.4
Saturday	2.00 pm	26.4	27.7	29.5	28.0	26.2	26.5	24.8	26.3	25.1	25.6	24.4	24.6	21.8	21.2	20.6	22.3	20.4	19.9	26.1	24.2	26.0	26.8	26.3	25.0
Sunday	2.00 pm	25.5	26.5	28.2	27.8	25.8	26.7	24.2	25.4	23.9	25.2	23.7	24.0	20.9	20.4	18.7	21.6	20.2	19.3	24.6	24.0	25.8	25.8	25.5	24.8

Appendix E: Data Collection Questions and Assessment Criteria

- Primary questions
- 1. Is there a specific planning function within the facilities management department?

If a separate and specific planning function is in place within the department a higher level of strategic approach to the department's activities would be indicated with 'planning' a key characteristic of strategy. Without a specific planning function and with only infrequent planning activities performed for the purpose of issues such as the determination of the annual budget, proposed developments etc, a higher level of operational activity would be indicated.

2. Are there any computer-based information systems (CIS) used by the facilities management department?

With data / information a key characteristic of strategic management of facilities, the use of systems such as CADFM, computerised help desks etc, would indicate a strategic approach to the function of the department. Without any form of CIS it is likely the department adopts a more operational position unless a sophisticated and comprehensive 'hard copy' system is in place.

 How is the facilities management budget determin 	ed?	?
--	-----	---

zero-based	
annual percentage increase	
other	

A zero-based method would indicate a higher level of planning of expenditure for facilities and therefore, a more strategic approach. An annual percentage increase method, would indicate a minimal relationship with the development of a facilities strategy and strategic management of the associated facilities.

4. Are any of the following techniques / methods used by the department in the management of the facilities, if so, what is the frequency?

	REGULARLY	INFREQUENTLY	N/A
Full condition surveys :			
Post-occupancy evaluations :			
Energy audits :			
Benchmarking:			
space planning :			
Disaster prevention & recovery :			

For the strategic management of facilities, information / data, are prerequisites for informing the corporate decision-making process, if the above methods are used by the department a strategic approach is indicated. If none of the above activities are performed or are infrequent an operational approach to the management of the facilities is likely.

5. Are any training programmes specifically designed for facilities management personnel, provided / funded by the organisation?

The provision of specifically designed training programmes for the management personnel of the function indicates the value of the function to the organisation with investment in the development of the its managers.

If training courses are only provided to maintain the competency level of technical personnel or the management training consists only of general courses such as 'time management' etc, an operational culture is indicated.

6. What skills do you believe are most appropriate for facilities managers in the provision of effective facilities management support of the organisation? ie management, technical, financial etc.

A financial / management response would indicate a higher strategic approach to the function of the department, with the ability to 'buy in' the required technical skills. A technical response indicates that the day-to-day operation of the facilities is the main function of the department with the likelihood, that the management of the department, has developed their career from a technical position within the organisation.

7. What is the training / qualifications of the managers within the facilities management department?

POSITION	FINANCE	CONSTRUCTION	HUMAN RESOURCE	RETAIL	OTHER (please state)

- finance :

A financial background would indicate a higher level of strategic activity within the department, by way of the characteristics of financial training and approach to the management of the department.

70

- construction related :

A professional qualification, particularly relating to the management of facilities would indicate a more strategic approach to the management of the department. However, a technical qualification related to the industry may indicate an operational approach, particularly, if career progression involved a move from a technical position to that of a management position without the appropriate management training.

- retail / human resource :

This type of background / qualification, would indicate either the facilities management function is integrated within another function of the organisation or these types of managers have taken on FM responsibilities over period of time indicating a likely operational approach.

8.		cilities management department develop a facilities strategy to corporate strategy of the organisation - if so, what is the frequency ?
	ANNUALLY:	
	1-2 YEARS :	
	OTHER:	
	NOT AT ALL:	п

The responses to the above indicates the level of integration with the core business and subsequently, the levels of strategic and operational activities of the facilities management department.

9. How frequently, does the facilities management department meet with 'board' level management?

REGULARLY:	
INFREQUENTLY:	
NOT AT ALL :	

The frequency of the interaction of the facilities management function with the core business senior management indicates the level of strategic management adopted by the department and organisation.

10.	organisation's	s facilities, wha	nt / strategic change associated with the t is level of involvement during the planning / he facilities management department ?.						
	PLANNING		IMPLEMENTATIO	<u>N</u>					
	VERY HIGH:		VERY HIGH :						
	HIGH:		HIGH:						
	MEDIUM:		MEDIUM:						
	LOW:		LOW:						
	VERY LOW:		VERY LOW:						
	NONE:		NONE:						
mana	gement depart		e core busines	s plannir	ng process,a	of the facilities nd therefore, the			
11.	•	tage of the ove an annual basi	•	vision witi	hin the faciliti	es, is affected			
The re	esponse to the	above will indic	cate two main	factors :-					
	levels of act higher levels	s on the facilition in the control of the facilities of activity, recont of the facilities	t in relation to to quiring a more	the facilit	ies on an anı	nual basis - the			
		available, cond on of the facilitie approach.							
12.	,	on, what level o attach to the fa? ?	•						
	VERY HIGH:								
	HIGH :								
	MEDIUM:								
	LOW:								
	VERY LOW:								
						ch to its function,			

n, nin the lower range.

13. What communication systems are in place between the facilities management function and core business senior management?

The frequency / type of communication systems between the function and the core business senior management would indicate the level of integration and operational / strategic approach by the department.

14. In terms of resources, ie financial / personnel, what is the level of provision provided by the organisation?

FINANCIAL	PERSONNEL	
over resourced	over resourced	
appropriately resourced	appropriately resourced	
under resourced	under resourced	

The levels of resources provided by the organisation indicates the value of the function to the core business and in relation with some of the responses to previous questions, indicate the operational / strategic position of the function.

15. Briefly describe the function of the facilities management department, in relation to the organisation.

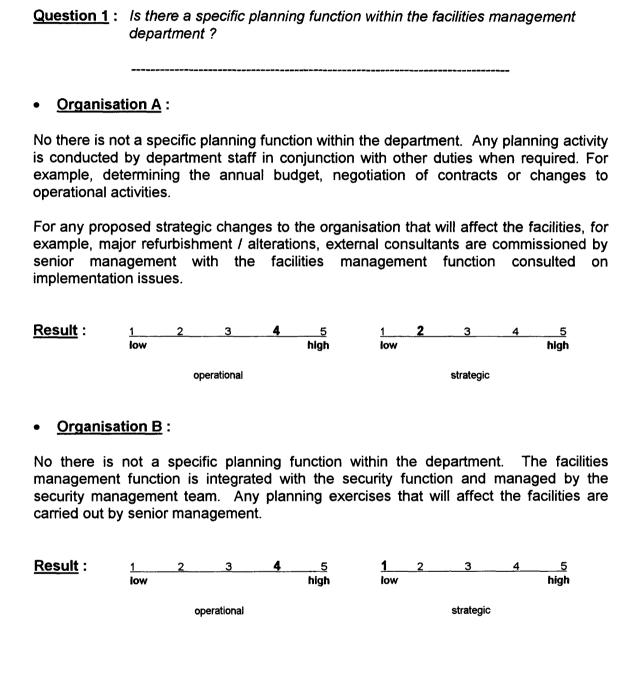
During the response, key factors that indicate the current position and types of activities performed by the function are to be recorded.

For example:

- strategic : planning / development of facilities strategies / continuous improvement of the support provided by the function / informing the core business decision making process etc.
- operational : day-to-day operation of the facilities / reacting to senior management decisions / cleaning operations etc.
- Secondary questions
- 1. Core business
- 2. Turnover
- 3. Number of employees (organisation)
- 4. Number of employees (facilities management department)
- 5. Size of facilities (ft²)
- 6. Age of facilities
- 7. Position of head of facilities management (organisational management structure)
- 8. Facilities management activities outsourced / in-house
- 9. Does the organisation develop a 'master plan' for business development?

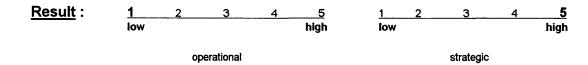
73

Appendix F: Data Analysis Results to Support Diagrammatic Representation in Section 6. 3



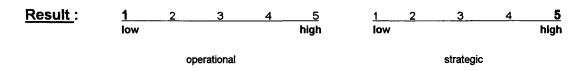
Organisation C :

Yes, there are two planning functions within the facilities management department. Both the architectural and the engineering departments have a specific planning team with overall management provided by the Director of Technical Services



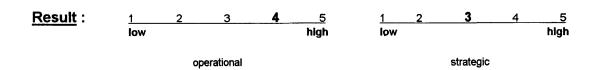
• Organisation D:

Yes, there is a specific planning function within the facilities management department. The planning function consists of members of both the architectural and engineering functions of which is integrated with the facilities management finance / accounts function. Overall responsibility for the planning function is shared between the Development and Logistics Directors.



• Organisation E:

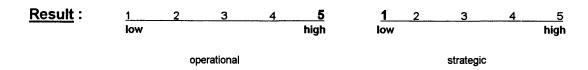
No, there is not a specific planning function within the site-based facilities management department. Due to the size of the organisation, any facilities related planning activity is performed by the regional facilities department. However, for major development related work, the required skills are bought in from external contractors under the control of senior management and consultants.



• Organisation F:

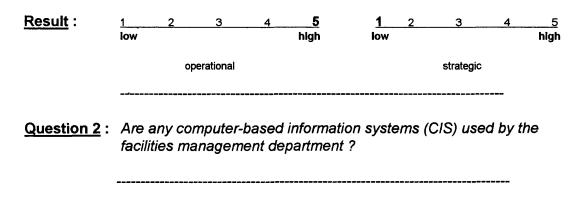
No, there is not a specific planning function within the facilities management department. Any small-scale changes to the facilities provision are controlled by senior management in consultation with the facilities management department.

For major refurbishment, acquisitions, which are infrequent, the process is managed by board level management with Consultancy support with the facilities management function involved during implementation.



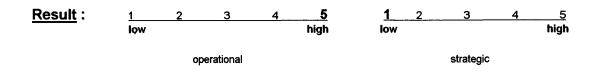
Organisation G :

No, there is not a specific planning function within the department. The department compliment is small with only two management positions with overall control, that of the Chief Engineer. Any minor planning activity is performed by the head of the department, with any strategic change planning managed by core business senior management and from required skills bought in when required.



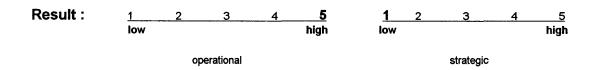
Organisation A:

With the exception of a 'building management system' in operation on one floor of the facilities, there are no computer-based information systems used by the department.



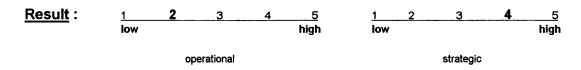
Organisation B :

There are no computerised-based information systems in use within the facilities management department. The insufficient building data is currently causing concern, particularly with the age and condition of building service with failure of services increasing and difficult to locate for repair.



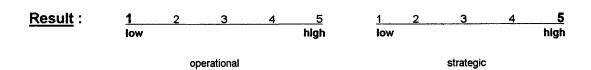
• Organisation C:

To assist the operation of the facilities, the department uses a building management system for environmental control, a computer-aided design (CAD) department for updating floor plans due to high levels of churn, and a database for all plant and equipment.



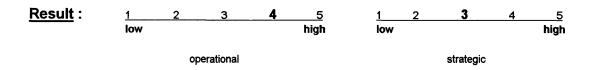
Organisation D :

The department operates a computerised 'help desk', to enable prioritisation of works and the ability to monitor response times to meet agreed service levels. With high levels of churn a four man computer-aided design (CAD) department provides up-to-date information to assist senior management in the utilisation of retail space. There is a computerised database for a facility asset register for all plant and equipment which also provides schedules for planned preventative maintenance.



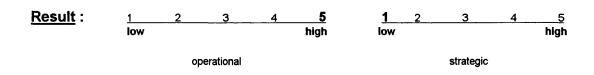
Organisation E :

There are no computer-based information systems in operation within the department, although there are proposals currently being developed for the installation of a building management system. All building data is held by the regional facilities department but with high levels of churn and development the facility data held by the site-based department is inaccurate.



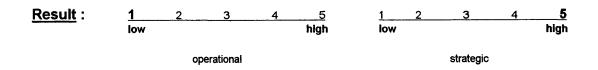
• Organisation F:

There are no computer-based information systems used by the department, the lack of building data is currently the main concern of the facilities management function, particularly with the age of the facilities with increasing failure rates. Proposals have been developed for a full condition survey of the building to provide the starting point for collating the appropriate building data.

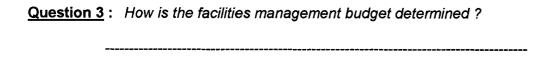


• Organisation G:

The facilities management department currently uses a building management system (BMS), a property management software package and a telephone based computerised help desk.

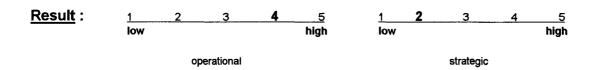


7	0
1	Ö



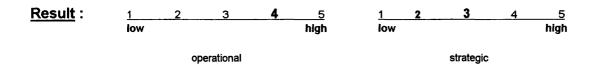
• Organisation A:

The facilities management budget is determined by a annual percentage increase with capital for development considered separately on an annual basis. The performance of the core business during trading periods (quarterly) will the determine expenditure possible from the annual budget. For example, if capital expenditure has been agreed during the formulation of the annual budget for plant and equipment replacement poor trading figures can result in the cancellation of works.



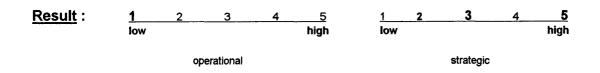
• Organisation B:

The operational budget for the facilities management department is determined on a annual percentage increase but a three year plan is developed for major capital expenditure concerning the facilities.



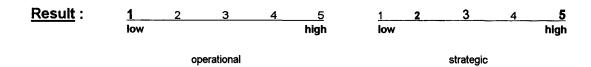
• Organisation C:

All outsourced functions are based on a one year contract which are analysed annually to ensure competitiveness with each contract based on a annual percentage increase. The facilities management budget in general is zero-based, to include a three year capital expenditure plan.



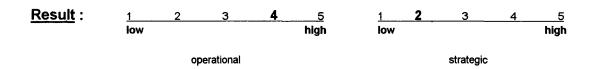
Organisation D:

The majority of the Facilities management functions are outsourced, a three year contract with an annual percentage increase is used. For the remainder of the budget, a zero-based method is used. Capital expenditure is part of a six year 'master plan'.



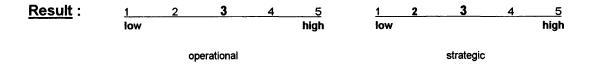
• Organisation E:

An analysis of existing contracts is conducted annually, but in general the facilities management budget is determined by way of a annual percentage increase with major capital expenditure determined within a separate budget annually.



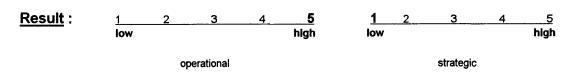
• Organisation F:

All outsourced functions are one year contracts which are reviewed annually with a percentage increase for new contracts with existing suppliers. The remainder of the budget is determined using a zero-based method. For redevelopment capital, the regional facilities management department develops a two year capital expenditure budget.



• Organisation G:

With a recent refurbishment of the facilities, the condition is appropriate for a percentage increase method for determining the facilities management budget, with little capital expenditure required for the foreseeable future



<u>Question 4</u>: Are any of the following techniques / methods used by the facilities management department, if so, what is the frequency?

		REGULARLY	INFREQUENTLY	N/A		
	Full condition surveys :					
	Post-occupancy evaluations :					
	Energy audits :					
	Benchmarking :					
	space planning :					
	Disaster prevention & recovery :		0			
• <u>Or</u>	ganisation A :					.
		REGULARLY	INFREQUENTLY	N/A		
	Full condition surveys :			1		
	Post-occupancy evaluations :			1		
	Energy audits :			1		
	Benchmarking:			1		
	space planning :	1				
	Disaster prevention & recovery :		1			
Result		4 <u>5</u>	12	3	4	5
	low	high	low			high
	operational		s	trategic		
• <u>Or</u>	ganisation B :					
		REGULARLY	INFREQUENTLY	N/A		
	Full condition surveys :		•			
	Post-occupancy evaluations :			✓		
	Energy audits :			✓		
	Benchmarking:			1		
	space planning :	✓	0			
	Disaster prevention & recovery :		۵	✓		
Result		4 5	1 2	3	4	5
	low	high	low			high
	operational		s	trategic		

• Organisation C:

	REGULARLY	INFREQUENTLY	N/A
Full condition surveys :		✓	
Post-occupancy evaluations :	1		
Energy audits :		•	
Benchmarking:	✓		
space planning :	✓		
Disaster prevention & recovery :	1		

 Result :
 1
 2
 3
 4
 5

 low
 high

1 2 3 4 **5** low high

operational

strategic

• Organisation D:

					REG	ULARLY	INFR	EQUENTLY	N/A		
	Full condit	ion surve	ys:					✓			
	Post-occu	pancy ev	aluations	s :			✓				
	Energy au	dits :				1					
	Benchmarking:							✓			
	space plan	nning :				✓					
	Disaster p	reventior	& recov	ery:				✓			
Result	•	1 low	2	3	4	5 high	1 low	2	3	4	<u>5</u> high
			ор	erational				;	strategic		

• Organisation E:

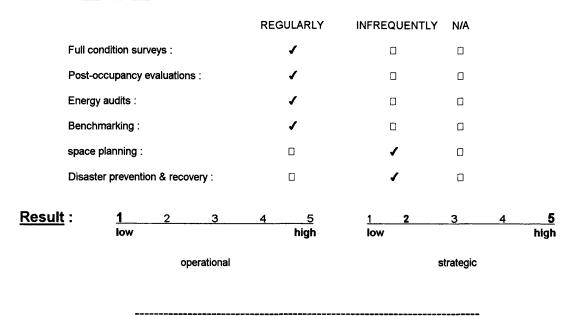
					REG	BULARLY	INF	REQUENTLY	N/A			
	Full cond	lition sur	veys :					✓				
	Post-occ	upancy e	evaluation	s:					1			
	Energy a	udits :				✓						
	Benchmarking : space planning : Disaster prevention & recovery :							✓				
						1						
								✓				
Result	:	1 low	2	3	4	<u>5</u> high	<u>1</u>	2	3	4	<u>5</u> high	
	operational								strategic			

• Organisation F:

			REGI	JLARLY	INFRE	QUENTLY	N/A		
	Full condition surveys :					✓			
	Post-occupancy evaluation	s:					1		
	Energy audits :			✓	I				
	Benchmarking:				I		1		
	space planning :				1		✓		
	Disaster prevention & recovery :				✓				
Result	: <u>1 2</u>	3	4	<u>5</u> high	1 low	2	3	4	5 high
	oş	perational				s	trategic		

	١
α.	š

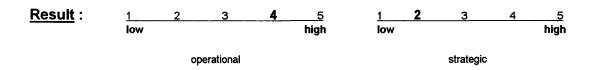




<u>Question 5</u>: Are there any training programmes specifically designed for facilities management personnel, provided / funded by the organisation?

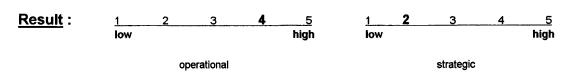
• Organisation A:

No training programmes / courses provided for facilities management personnel. Option for management personnel to participate in retail management courses, ie. time management, commercial awareness, health & safety etc.



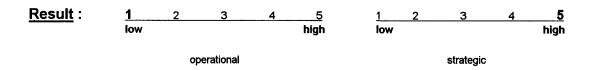
• Organisation B:

No training programmes / courses provided for facilities management personnel. Option for facilities management personnel to participate in retail management courses, health & safety, manual handling, risk assessment etc.



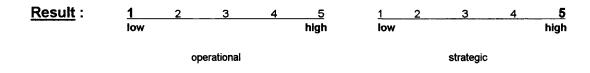
• Organisation C:

Two members of facilities management department currently undertaking external post-graduate facilities management courses. Statutory training for engineers conducted annually. All members of facilities management department undertake health and safety, risk assessment courses. Any relevant retail management courses are available to management personnel of the department.



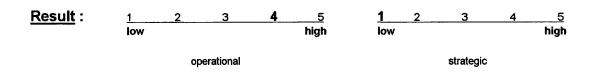
• Organisation D:

One member of the facilities management team is currently undertaking an external post-graduate facilities management course. Although engineering function outsourced, contractually, all engineers must undertake regular training courses. All facilities management personnel must undertake health & safety related courses on a regular basis. Management members of the team are provided with the opportunity to suggest appropriate external courses with funding provided if deemed relevant to function.



• Organisation E:

General management courses are available to facilities management personnel that are part of the organisation's training programmes. For example, assertiveness, disciplinary procedures, health & safety etc. No specific facilities management courses are provided.



• Organisation F:

Organisation employs a full-time training manager with facilities management personnel able to participate in any relevant training programmes. No facilities management related courses available.

 Result :
 1
 2
 3
 4
 5
 1
 2
 3
 4
 5

 low
 high
 low
 high

• Organisation G:

No specific facilities management training provided, only health & safety related courses

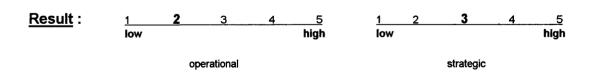
 Result :
 1
 2
 3
 4
 5
 low
 high
 low
 high

operational

Question 6: What skills do you believe are most appropriate for facilities managers in the provision of effective support of the organisation ie management / technical / financial etc?

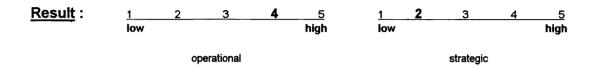
• Organisation A:

Management skills are the most appropriate for facilities managers due to the interaction with significant numbers of organisation staff from all levels on a day-to-day basis. However, technical skills are also important to enable an understanding of the technical aspects of maintaining and operating a facility.



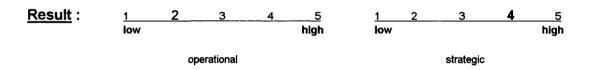
Organisation B:

The primary skills required for a facilities manager relate to technical and construction management skills as these skills separate the facilities manager from the general management within the organisation.



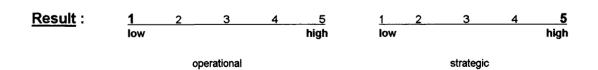
Organisation C:

For a facilities manager to be effective, a combination of management, technical and financial skills are all important. However, management and financial skills are essential for the management of a proactive facilities management department with technical skills available from other members of the function, therfore only an understanding of technical issues is required.



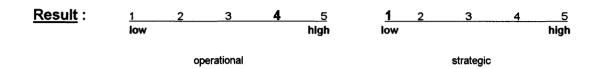
• Organisation D:

In large facilities management departments, the appropriate skills depend largely on the position of the facilities manager and the function headed by the individual. For senior facilities managers, a combination of management, financial and technical skills in this order are prerequisites for a facilities manager to be effective. The ability to manage a diverse range of people from all levels, within financial constraints imposed by the organisation and sufficient knowledge of the technical aspects of facilities requires a highly skilled individual which is a valuable resource for any organisation.



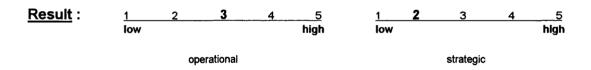
• Organisation E:

Technical skills are the most appropriate for facilities managers as the primary role of the facilities manager is to ensure the building operates according to the requirements of the users, in a safe manner. Experience provides the necessary management skills, required for interacting with the core business staff and external parties.



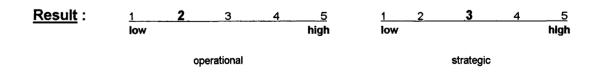
• Organisation F:

The ability to understand the construction process and the technology associated with managing facilities are the most appropriate skills for a facilities manager. The core business management primary demand from the function is the ensuring the facilities operate in a manner suitable for the core business activities within the facilities. People skills are also vital due to the wide range of interaction with other parties that support the organisation.



• Organisation G:

Due to the variety of the responsibilities a facilities manager has in the course of his duties, management skills are vital for the people aspects of the role. But the operation of facilities also requires a good understanding of technical matters. An ability to understand the financial relationship of facilities and the overall organisation is also an important skill.



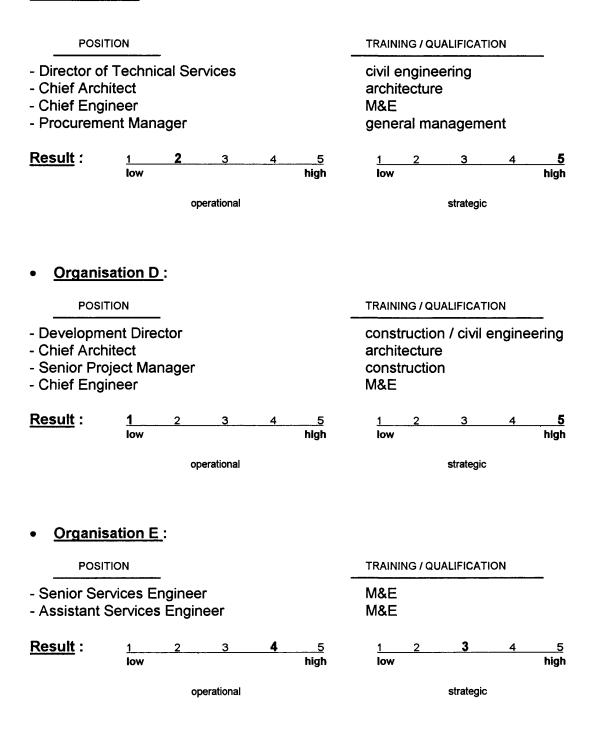
strategic

Question 7:	What are the training / qualifications of the managers within the facilities
	management department ?

POSITION	FINANCE	CONSTRUCTIO	ON HUMAN RE	ESOURCE RETAIL OTHER			se state)
• <u>Organis</u>	ation A :						
POSIT	ION			TRAINII	NG / QUALI	FICATION	
CommerciaFacilities CFacilities M	ontroller	rector (Head	of FM)	retail	managei managei ruction /	ment	
Result :	1 2	3	4 5	1	2	3 4	<u>5</u>
	low		high	low			high
		operational			sti	rategic	
• <u>Organis</u>	ation B :						
POSIT	ION			TRAINII	NG / QUALI	FICATION	
- FM / Secur	ity Manage	er		militar	y / secui	rity	_ _
Result :	4 2	2 3	4 5	1	2	3 4	5
<u>ivesuit</u> .	low	<u>S</u>	high	low	۷	. V4 _	high

operational

Organisation C:



<u>Organisa</u>	ation A	2	ANNU 1-2 YE OTHE	ARS: R: TALL: ALLY: ARS:		1 low	2	3		higt
<u>Organisa</u>	 ation A	:	1-2 YE OTHE NOT A ANNU 1-2 YE OTHE	ARS: R: TALL: ALLY: ARS:					ne me	əquer
<u>Organisa</u>	 ation A		1-2 YE OTHE NOT A ANNU 1-2 YE OTHE	ARS: R: TALL: ALLY: ARS:					ne me	əquer
<u>Organisa</u>	 ation A	:	1-2 YE OTHE NOT A ANNU. 1-2 YE	ARS: R: TALL: ALLY: ARS:					ne me	əquer
Organisa	 ation A	: :	1-2 YE OTHE NOT A	ARS: R: TALL:				·	ne me	əquer
			1-2 YE OTHE	ARS:					ne me	equer
			1-2 YE OTHE	ARS:		on aregy,		, what is t	ne ne	equer
			1-2 YE	ARS:		ouratogy,		, what is t	ne ne	equei
			ANNU	ALLY:	0	oiraiogy,		, what is a	ne ne	equei
						or, arogy,		, 111101101	ne ne	equei
estion 8 :		 the fa	erational cilities n support							
<u>sult</u> :	1 low	2	3	4	5 high	1 low	2	3	4	5 higl
acilities Ma	anager					consti	uctic	on / M&E		
POSITI	ON					TRAINI	NG/Q	UALIFICATIO	N	
<u>Organisa</u>	ation G	:								
		ор	erational					strategic		
	1 low	2	3	4	<u>5</u> high	1 low	2	3	4	hig
						consti	ructio	n / M&E		
	eer							UALIFICATIO		
POSITION TO SERVICE SUITE :	-									

• Organisat	ion B :		ANNUA	ALLY:	1						
			1-2 YEA	ARS:							
			OTHER	₹:							
			NOT AT	T ALL :							
Result:	1	2	3	4	5		1	2	3	4	5
	low				high		low				high
		opera	tional						strategic		
• Organisat	ion C ·		ANNUA	11 7 ·							
<u> </u>			1-2 YEA								
			OTHER			(3 year)					
						(o year)					
			NOT AT	I ALL:							
Result:	4	2	2	4	_		4	•	3	4	5
<u>Nesult</u> .	1 low	2	3	4	5 high		1 low	2	3	4	high
		opera	tional						strategic		
 Organisat 	ion D :		ANNUA	LLY:							
			1-2 YEA	ARS:							
			OTHER	₹:	✓	(6 year	'master	plan'	and supporting	g facilitie	es strategy)
			NOT AT	T ALL :							
	_										_
Result:	1 low	2	3	4	5 high		1 low	2	3	4	5 high
		opera	tional		-				strategic		
		opeia	Condi						5 a.o.g.lo		

	ope	erational					strategic		
Result :	1 2 low	3 4	5 high	ı	1 ow	2	3	4	5 high
		NOT AT ALL :							
		OTHER:							
		1-2 YEARS :	_						
• Organisat	tion G:	ANNUALLY:	1						
	ope	rational					strategic		
	low		high	I	ow				high
Result:	1 2	3 4	5		1	2	3	4	<u>5</u>
		NOT AT ALL :							
		OTHER:	1	(3 year)					
		1-2 YEARS :							
• Organisat	tion F :	ANNUALLY:	0						
	ope	rational					strategic		
ivesuit .	1 2 low	3 4	5 high	l	ow	2	3	_4	<u>5</u> high
Result:	1 2	2 4	-			•	•	4	_
		NOT AT ALL :							
		OTHER:							
		1-2 YEARS :	1						
• Organisat	tion E :	ANNUALLY:							

Question 9:		egularly of direc		he fac	cilities n	nana	gem	ent d	epartme	nt mee	et with the
			REGULA	RLY:							
			INFREQU	UENTLY	/ :						
			NOT AT	ALL :							
• Organisat	ion A :		REGULA	RLY:		✓	(He	ad of Fu	unction - Coi	mmercial	Director)
			INFREQUENTLY:			В					
			NOT AT	ALL:							
Result :	1 low	2	3	4	5 high		1low	2	3	4	<u>5</u> high
		opera	tional						strategic		
• Organisat	<u>ion B</u> :		REGULA	RLY:							
			INFREQU	JENTLY	′ :						
			NOT AT	ALL:		✓	(only	retail s	enior manag	jement)	
Result:	1 low	2	3	4	<u>5</u> high		1 low	2	3	4	5
	low	opera	tional		mgn		IOW		strategic		high
• <u>Organisat</u>	ion C :		REGULARLY:			√		nd of Fu vices)	nction - Dire	ctor of To	echnical
			NOT AT	ALL:							
Result :	1 low	2	3	4	5 high		<u>1</u> low	22	3	4	<u>5</u> high
		opera	tional		-				strategic		-

•	<u>Organisat</u>	tion D :		REGUL	ARLY:		✔ (Head	of Fur	nction - Dev	elopment	Director)
				INFREC	UENTL	Υ:						
				NOT AT	ALL:		0					
Re	esult :	1 low	2	3	4	<u>5</u> high	<u>1</u>	ow	2	3	4	5 high
			opera	tional						strategic		
•	<u>Organisat</u>	tion E :		REGUL	ARLY:							
				INFREC	UENTL	Y :						
				NOT AT	ALL:		✔ (only	Genera	i Manager /	middle n	nanagement)
Re	esult :	1 low	2	3	4	5 high		<u>1</u>	2	3	4	<u>5</u> high
			opera	tional		··· 9· ·	•			strategic		g
•	Organisat	tion F :		REGUL	ARLY:		✓ .	(two	meeting	gs per mont	h)	
				INFREC	UENTL	Υ:						
				NOT AT	ALL:							
Re	esult :	1 low	2	3	4	5 high		<u>1</u> ow	2	3	4	5 high
			opera	tional						strategic		
•	Organisa	tion G :		REGUL	ARLY:		1	(wee	kly mee	etings)		
				INFREC	UENTL	Υ:						
				NOT AT	TALL:							
Re	esult :		2	3	4	5		1	2	3	4	5
		low				high	I	ow				high
			opera	tional						strategic		

Question 10: For a proposed development / strategic change associated with the facilities, what is the level of involvement by the facilities management department during the planning process?

			PLANNI	ING IN\	OLVEME	<u>NT</u>				
			VERY H	IIGH :						
			HIGH:							
			MEDIUN	M :						
			LOW:							
			VERY L	.ow :						
			NONE :							
	-									
• Organis	sation <i>A</i>	<u>4</u> :	PLANNI	ING IN\	/OLVEME	<u>NT</u>				
			VERY H	IIGH :	√ (H	lead of Function	- Commer	cial Sales Dire	ector - combi	ned role)
			HIGH :							
			MEDIUM	M :						
			LOW:							
			VERY L	ow:						
			NONE :							
Result :	1	2	3	4	<u>5</u>	1	2	3	4	<u>5</u>
	low				high	low				high
		орега	ational					strategic		

•	<u>Organisat</u>	ion B :		PLANNIN	NG INV	OLVEMENT	- -				
				VERY HI	GH:						
				HIGH:							
				MEDIUM	:	0					
				LOW:		✓					
				VERY LO	ow:						
				NONE :							
Res	sult :	1 low	2	3	4	5 high	<u>1</u> low	2	3	4	<u>5</u> high
			opera	tional					strategic		
•	<u>Organisat</u>	<u>ion C</u> :		PLANNIN	NG INV	OLVEMENT	<u>.</u>				
				VERY HI	GH:	✔ (He	ad of Funct	ion - Dir	ector of Te	chnical S	ervices)
				HIGH :							
				MEDIUM	:						
				LOW:							
				VERY LC	ow:						
				NONE :							
Res	sult :	1 low	2	3	4	<u>5</u> high	<u>1</u> low	2	3	4	<u>5</u> high
		.5**	opera	tional		3			etrategic		

• Organis	ation D	<u>)</u> :	PLAN	PLANNING INVOLVEMENT								
			VERY	HIGH:	✔ (Head of	Functi	on - Dev	elopment	Director)		
			HIGH	:								
			MEDI	UM:								
			LOW	:								
			VERY	LOW:								
			NONE	Ξ:								
Result:	1	2	3	4	5		1	2	3	4	5	
	low				high		low				high	
		ор	erational						strategic	:		
• Organis	ation E	:	<u>PLAN</u>	NING IN	VOLVEM	ENT						
		•		'HIGH:								
			HIGH			/ regional	EM d	nartmer	nt not site	e-based Fl	M denado	ont \
			MEDI			(Tegional	r ivi ui	spartiner	it - Hot Site	-baseu i i	vi departii	ient)
			LOW									
				LOW:	_							
			NONE	= :								
Result :	1	2	3	4	5		1	2	3	4	5	
	low				high		low				high	
		ор	erational						strategic			

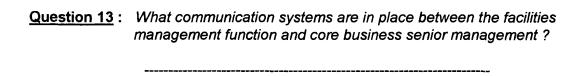
• Organis	ation F	:	PLANNING IN	/OLVEMENT					
			VERY HIGH :						
			HIGH :						
			MEDIUM :	•					
			LOW:						
			VERY LOW:						
			NONE :						
Result:	1	2	3 4	5	1	22	3	4	5
	low			high	low				high
		ор	erational				strategic		
• Organis	ation G	:	<u>PLANNING INV</u>	/OLVEMENT					
Organis	ation G	:	PLANNING INV	/OLVEMENT					
• <u>Organis</u>	ation <u>G</u>	:							
• <u>Organis</u>	ation <u>G</u>	:	VERY HIGH :						
• <u>Organis</u>	ation <u>G</u>	:	VERY HIGH :	0					
• <u>Organis</u>	ation <u>G</u>	:	VERY HIGH : HIGH : MEDIUM :						
• <u>Organis</u>	ation G	:	VERY HIGH : HIGH : MEDIUM : LOW :						
• <u>Organis</u>	1	:	VERY HIGH: HIGH: MEDIUM: LOW: VERY LOW:		1	2	3	4_	<u>5</u>
			VERY HIGH: HIGH: MEDIUM: LOW: VERY LOW: NONE:		<u>1low</u>	_22	3	4	5 high
	1	2	VERY HIGH: HIGH: MEDIUM: LOW: VERY LOW: NONE:			2	3 strategic	4	<u>5</u> high

	What percer affected by o				vision within	the facilities are
	0 - 25% 	26 - 50% 	51% + 		No Data □	
• <u>Organisatio</u>	on A :	0 - 25%	26 - 50% □		51% +	No Data
	2 DW	3 4	<u>5</u> high	1 low	2 3	4 <u>5</u> high
	opera	tional			strategio	
• <u>Organisatio</u>	o <u>n B</u> :	0 - 25% •	26 - 50%		51% + □	No Data □
Result: 1	2 ow	3 4	5 high	1 low	2 3	4 <u>5</u> high
	opera	tional			strategio	
• <u>Organisatio</u>		0 - 25% √ 6% - 1997)	26 - 50%		51% +	No Data □
Result: 1	2	3 4	<u>5</u> high	1 low	2 3	4 5 high
	opera	tional			strategio	;
• <u>Organisatio</u>	_	0 - 25% ✓ ment unsure of fig	26 - 50% Dure)		51% + □	No Data □
Result: 1	2 ow	3 4	<u>5</u> high	1 low	2 3	45 high

•	<u>Organisat</u>	<u>ion E</u> :	(0 - 25% □	26 - 50% □		51% +		No Da	ata
Re	esult :	1 low	2 ;	3 4	<u>5</u> high	1 low	2 s	3 trategic	4	<u>5</u> high
							_	gio		
•	<u>Organisat</u>	ion F :	(0 - 25% □	26 - 50% □		51% +		No Da N/A (hotel	
•	Organisat	ion G :		0 - 25% □	26 - 50%		51% +		No Da N / A (hotel	
Qu	iestion 12 :		gement on ?		el of importa ne services (
				HIGH :						
			ı	MEDIUM :						
			ı	LOW:						
			,	VERY LOW:					_	
•	<u>Organisat</u>	<u>ion A</u> :	,	VERY HIGH :						
			1	HIGH :						
			I	MEDIUM :	1					
				LOW:						
			,	VERY LOW:						
Re	esult :	1 low	2 ;	3 4	<u>5</u> high	1 low	2	3	4	<u>5</u> high
			operatio	onal			s	trategic		

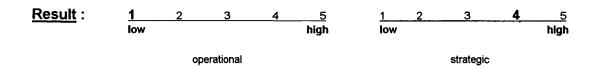
• Organisa	tion B:	VERY HIGH :					
		HIGH :					
		MEDIUM:					
		LOW:	✓				
		VERY LOW:					
Docult :	4 0	o 4	_	4	2	4	-
Result:	1 2 low	<u> 3 4 </u>	5 high	low	23	4	5 high
		operational			strategi	•	
• Organisa	tion C:	VERY HIGH:					
		HIGH:	✓				
		MEDIUM:					
		LOW:	B				
		VERY LOW:					
Result :	<u>1</u> 2	3 4	<u>5</u>		2 3	4	<u>5</u>
	low		high	low			high
		operational			strategi	•	
• Organisa	ation D ·	VERY HIGH :					
Organioe		HIGH:	√				
		MEDIUM:	0				
		LOW:	0				
		VERY LOW:					
Result:	1 2 low	3 4	5 high	1 low	2 3	4	5 high
			ıngı	i.OW			yıı
		operational			strategi	0	

							HIGH:	VERY		<u>ion E</u> :	<u>Organisati</u>
				el)	(regional leve	✓	:	HIGH			
							UM:	MEDI			
					(site level)	✓	:	LOW			
							LOW:	VERY			
5 high	4	3	2		<u>1</u>	5 high	4	3	2	1 low	
mgn				· • • • • • • • • • • • • • • • • • • •		ıngı.				,OW	
		strategic						rational	oper		
						,	HIGH :	VEDV		ion E ·	<u>Organisati</u>
						√				<u> </u>	Organisati
								HIGH			
								MEDI			
								LOW			
							LOW:	VERY			
<u>5</u>	4	3	2		<u>1</u>	<u> </u>	4	3	2	1	
high				W	lo	high				low	
		strategic						rational	oper		
							HIGH :	VERY		<u>ion G</u> :	<u>Organisati</u>
							:	HIGH			
						1	UM:	MEDI			
							:	LOW			
							LOW:	VERY			
_	4	3	2 .		<u>1</u>	5 high	4	3	2	1 low	
<u>5</u> hiah				•		9		rational			
5 high		strategic									
-											



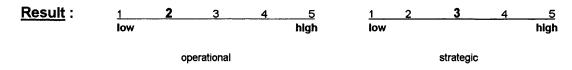
• Organisation A:

- head of facilities management Director level / continuous interaction at board level
- weekly development meeting facilities management controller and members of retail middle management / relevant director
- weekly meetings / unscheduled facilities manager / retail middle management



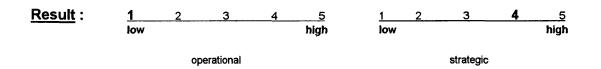
Organisation B:

- weekly meeting head of facilities management (security) / retail director
- unscheduled meetings head of facilities management (security) / retail middle / senior management



• Organisation C:

- head of facilities management Director level / continuous interaction at board level
- weekly meeting head of facilities management / retail senior / middle management



-	^	•
7	41	•
	u	-

	_		_			_
_	∩-~	20	ica	ti a	n	n
•	Org	all	ısa	นบ		v,

- head of facilities management Director level / continuous interaction at board level
- weekly meeting facilities managers / retail senior / middle management
- regular unscheduled meetings facilities managers / senior / middle management

 Result :
 1
 2
 3
 4
 5
 1
 2
 3
 4
 5

 low
 high
 low
 high

• Organisation E:

- weekly meeting - Facilities Manager / General Manager / retail middle management

 Result :
 1
 2
 3
 4
 5
 1
 2
 3
 4
 5

 low
 high
 low
 high

• Organisation F:

- weekly meeting - Chief Engineer / General Manager / middle management

 Result :
 1
 2
 3
 4
 5
 1
 2
 3
 4
 5

 low
 high
 low
 high

operational strategic

• Organisation G:

- weekly meeting Facilities Manager / General Manager / middle management
- daily meeting (short) Facilities Manager / middle management

 Result :
 1
 2
 3
 4
 5
 1
 2
 3
 4
 5

 low
 high
 low
 high

operational
strategic

Question 14: In terms of resources (financial / personnel), in your opinion, what is the level of provision?

			FINANCI	AL			PERSONN	EL		
		over resou	rced			over res	sourced			
		appropriate	ely resour	ced		appropr	iately resource	ed 🗆		
		under reso	ourced			under re	esourced			
	Organias			=======================================						
•	<u>Organisa</u>			FINANC				PERSONNEL		
		over resou				over res				
		appropriate	ely resour	ced		appropr	iately resource	ed 🗆		
		under reso	ourced		1	under re	esourced	1		
Re	esult :		2	3	4	5	1 2	2 3	4	5
		low				high	low			high
			operat	ional				strateg	jic	
•	<u>Organisa</u>	tion B :		FINANC	IAL		F	PERSONNEL		
		over resou	rced			over res	ourced			
		appropriate	ely resour	ced		appropr	iately resource	ed 🗆		
		under reso	ourced		✓	under re	esourced	1		
Re	esult :		2	3	4	5		2 3	4	5
		low				high	low			high
			operat	tional				strateç	gic	
•	<u>Organisa</u>	tion C :		FINANC	IAL		F	PERSONNEL		
		over resou	rced		1	over res	sourced	1		
		appropriate	ely resour	ced		appropr	iately resource	ed 🗆		
		under reso	ourced			under re	esourced			
Re	esult :		2	3	4	5	12	2 3	4	5
		low				high	low			high
			operat	tional				strateg	jic	

•	<u>Organisat</u>	tion D:	FINANCI	AL			PERSO	ONNEL		
		over resourced			over resoure	ced				
		appropriately resour	ced	1	appropriatel	y resour	rced	✓		
		under resourced			under resou	ırced				
Re	esult :	1 2 low	3	4	<u>5</u> high	1 low	2	3	4	5 high
		opera	itional					strategic		
•	<u>Organisat</u>	tion E :	FINANCI	AL			PERSO	ONNEL		
		over resourced			over resoure	ced				
		appropriately resour	ced	✓	appropriatel	y resour	rced	✓		
		under resourced			under resou	ırced		0		
Re	sult :	<u>1</u> 2	3	4	<u>5</u>	1	2	3	4	<u>5</u>
		low			high	low				high
		opera	tional					strategic		
•	Organisat	tion F :	FINANCI	AL			PERSO	ONNEL		
		over resourced			over resour	ced				
		appropriately resour	ced	✓	appropriatel	y resoui	rced	✓		
		under resourced			under resou	ırced				
Re	esult :	<u>1</u> 2	3	4	<u>5</u>	1	2	3	4	5
		low			high	low				high
		opera	tional					strategic		

|--|

strategic

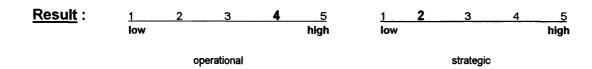
<u>Organisa</u>	tion G :	FINA	NCIAL			PER	SONNEL		
	over resourced			over res	sourced				
	appropriately reso	ourced	1	approp	riately resou	rced	1		
	under resourced			under r	esourced				
Result :	1 2 low	3	4	<u>5</u> high	<u>1</u>	2	33	4	5 high
	оре	erational					strategic		
	: Briefly desc in relation to				e facilitie	s ma	nagemer	nt de,	partment
• <u>Organisa</u>	tion A :								
Key response	es by interviev	vee :-							
 continuous maintaining maintain pla provide sup 	support of sale improvement aesthetic appart and equipreport to shopfit goods and vertely issues	to 'till-ta earand ment tting co	ake' - ir ce of fa	cilities	pace uti	lisatio	on (densi	ty)	
Result :	1 2 low	3	4	<u>5</u> high	1 low	2	3	_4	5 high

operational

Organisation B:

Key responses by interviewee :-

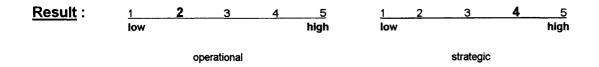
- main function of department to provide effective daily support of retail activities
- security : stock loss / staff security
- health & safety issues
- general housekeeping (vital)
- maintenance of plant and equipment



• Organisation C:

Key responses by interviewee :-

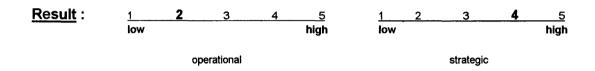
- continuous development and improvement of facilities in response to obsolescence major factor with one hundred year old facilities
- maintenance and replacement of building services failure prevention
- energy management
- store planning and design
- health & safety (particularly fire prevention)
- general housekeeping
- reduce operating costs through continuous efficiency improvements



• Organisation D:

Key responses by interviewee :-

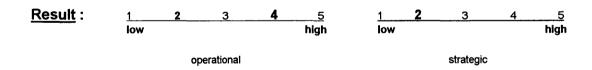
- management of facilities strategies, in support of six year corporate 'master plan'
- the operation of the facilities :-
- maintain / repair / replace plant and equipment
- housekeeping
- ensure the safety of staff and customers
- provide effective support to sales function
- continually improve response times via 'help desk'



• Organisation E:

Key responses of interviewee :-

- ensure facility fit for use
- support sales team :-
- department moves
- cleaning
- decoration and repairs
- movement of goods
- health & safety issues
- support development contractors
- security issues



Organisation F :

Key responses of interviewee :-

- 'trouble shooting' responding to staff/ customer calls
- maintenance / repair / replacement of plant and equipment
- energy management
- maintain high quality levels in general housekeeping
- health & safety issues conform to current legislation
- support events / functions of organisation procure equipment etc.

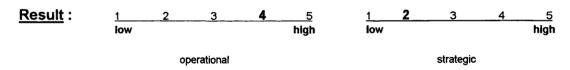
 Result :
 1
 2
 3
 4
 5
 1
 2
 3
 4
 5

 low
 high
 low
 high

• Organisation G:

Key responses of interviewee :-

- property management
- housekeeping (critically important)
- maintain building services prevent 'down- time'
- react to staff / customer complaints customer service vital
- energy management
- health & safety



Appendix G: Tabulation of Sample Data Results

QUESTION	ORGANISATION	OPERATIONAL	STRATEGIC
1	Α	4	2
1	В	4	1 1
1	B C	1	1 5 5 3
1	D	1	5
1			3
1 1	E F	5	1
1	G	4 5 5	
	9	3	
2	A	4 5 2	2
2	B C	5	1
2	С	2	4
2	D	1	5
2	E	4	3
2	F	5	1 1
2	G	5 1	5
3	Ä	4) j
3	_ ^ _	3	2
2 2 2 2 2 2 3 3 3 3 3 3 4 4	B C		4 5 3 1 5 2 2 5 5 2 3 1
3	<u> </u>	1	5
] 3	D E F	1	5
3	E	4 3 5 5 5	2
3	F	3	3
3	G	5	1
4	A	5	1 1
ا ا	R	5	i
4	B C	1	<u> </u>
1 4	0.6		5 4 3 2 5 2 2 5 5 5
4	D	1	4
4	E F G	3	3
4	F	4	2
4	G	1	5
5	Α	4	2
5	В	4	2
5	С	1	5
1 5	D	1	5
1 5	F	4	ĭ
5 5 5 5 5 5 5	E F		1
ا ج	G) <u> </u>	
		ם כ	1
6	A	5 5 2 4 2 1	3 2 4 5
6 6 6	В	4	2
6	С	2	4
	D	1 1	
6		4	1
l 6	F	3	2
1 6	G	, j	3
l ,	Δ	4	2
\ ' 7		7 5	4
'		0	
<u> </u>	<u> </u>	2	ا 5
<u> 7</u>	D	1	5
7	E	4	5
7	F	4	3
6 6 7 7 7 7 7 7	EFGABCDEFG	3 2 4 5 2 1 4 4	2 3 2 1 5 5 5 3 3
1		·	
L	L		

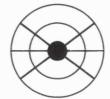
QUESTION	ORGANISATION	OPERATIONAL	STRATEGIC
8 8 8 8 8 8 8 8 8 9 9 9 9 9 9 9 9 9 9 9	АВСОШГ ФАВСОШГ ФАВСОШГ ФАВСОШГ ФАВСОШГ ФАВСОШГ ФАВСОШГ ФАВСОШГ Ф	521121521511522241123353225 44223323121143244122234422444	145545431551444255433134212144353434423422544442244222

Appendix H: Types of Organisational Culture

• The power culture :

A power culture is frequently found in small entrepreneurial organisations. This culture depends on a central power source, with rays of power and influence spreading out from a central figure. They are connected by functional or specialist strings, but the power rings are the centre of activity and influence. See figure A for graphical illustration of culture type.

Figure A: Power culture



Control is exercised by the centre largely through the selection of key individuals, by occasional forays from the centre or summonses to the centre. It is a political organisation, in that decisions are taken largely on the outcome of a balance of influence, rather than on procedural or logical grounds. There are few rules and procedures and little bureaucracy.

Within this type of organisation, individuals will prosper and be satisfied to the extent that they are power orientated, politically minded, risk-taking and rate security as a minor element in their psychological contract.

Size is a problem for power cultures. The web can break if it seeks to link too many activities; indeed, the only way the web organisation can grow and remain a web is by spawning other organisations. Maximum independence is given to the individual heads of linked organisations, usually keeping 'finance' as the one string that binds them to the central web.

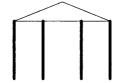
These cultures place a lot of faith in the individual, little in committees. They judge by results and are tolerant of means. Often seen as tough or abrasive, though successful they may well suffer from low morale and high turnover in the middle layers, as individuals fail or opt out of the competitive atmosphere.

The role culture :

The role culture is often stereotyped as bureaucracy. But bureaucracy has come to acquire a pejorative note in common parlance, so 'role' will be used during the outline of the culture.

Figure B illustrates the structure of the role culture, seen as a 'Greek temple'.

Figure B: Role culture



The role organisation rests its strength in its pillars, its functions or specialities. These pillars are strong in their own right; the finance department, the purchasing department. The work of the pillars and the interaction between the pillars is controlled by:-

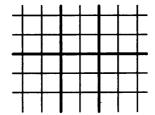
- procedures for roles, eg job descriptions, authority definitions
- procedures for communications, eg required sets of copies of memoranda
- rule for settlement of disputes, eg appeal to lowest crossover points

They are co-ordinated at the top by a narrow band of senior management, the pediment. It is assumed that this should be the only personal co-ordination needed, for if the separate pillars do their job, as laid down by the rules and procedures, the ultimate result will be as planned. The role or job description is often more important than the individual who fills it, Individuals are selected for satisfactory performance of role, and the role is usually so described that a range of individuals could fill it. Performance over and above the role prescription is not required, and indeed can be disruptive at times. Position power is the major power source in this culture, personal power is frowned upon and expert power tolerated in its proper place. The rules and procedures are the major method of influence.

• The task culture:

The task culture is job or project orientated. Its accompanying structure can be represented as a 'net' as illustrated in figure C.

Figure C: Task culture

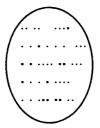


Much of the power and influence lies at the interstices of the net, at the knots. the socalled 'matrix organisation' is a structured form of the task culture. The whole emphasis of the task culture is on getting the job done. To this end the culture seeks to bring together the appropriate resources, the right people at the right level of the organisation, and to let them get on with it. Influence is based more on expert power that on position or personal power, although these sources have their affect. Influence is more widely dispersed than in other cultures, and each individual tends to think he or she has more of it. This culture is extremely adaptable. Groups, project teams, or task forces are formed for a specific purpose and can reformed, abandoned or continued. The task culture therefore is appropriate where flexibility and sensitivity to the market or environment are important. You will find the task culture where the market is competitive, where product life is short, where speed of reaction is important. But the task culture finds it hard to produce economies of scale or great depth of expertise. Control in these organisations is difficult. Essentially control is retained by the top management by means of allocation of projects, people and resources. Vital projects are given to good people with no restrictions on time, space or materials. But little dayto-day control can be exerted over the method of working or the procedure without violating the norms of the culture. Top management concentrates on resource allocation decisions and hiring and placing of key people.

The person culture :

The fourth culture is an unusual one. It will not be found pervading many organisations, yet many individuals will cling to some of its values. In this culture the individual is the central point. If there is a structure or an organisation it exists only to serve and assist the individual within it. If a group of individuals decide that it is in their own interests to band together in order to follow their own bents, to do their own thing, and that an office, a space, some equipment or even clerical and secretarial assistance would help, then the resulting organisation would have a people culture. Barristers' chambers, architects' partnerships, hippy communes, social groups often have this 'person' orientation. Its structure is as minimal as possible, a 'cluster' is the best word for it, or perhaps a 'galaxy' of individual stars. Figure D illustrates this concept.

Figure D: Person culture



References and Bibliography

References

- 1. P Barrett: 1995: Facilities Management: Blackwell Science: p 55
- 2. P Barrett: 1995: Facilities Management: Blackwell Science: p 82
- University College London: M.Sc Facility & Environment Management:
 1998: Module 8: Unit 8.9: Decision Aids & Systems for Facilities
 Management
- 4. P Barrett: 1995: Facilities Management: Blackwell Science p xi
- 5. G Johnson / K Scholes : 1993 : Exploring Corporate Strategy : Prentice Hall : p 5 -10
- 6. Charles Handy: 1993: Understanding Organisations: Penguin Books: Chapter Seven

Bibliography

- G Johnson / K Scholes : 1993 : Exploring Corporate Strategy : Prentice Hall
- 2. A Williams / P Dobson / M Walters : 1996 : Changing Culture New Organisational Approaches (2nd Edition) : Institute of Personnel and Development
- 3. R Pettinger: 1994: Introduction to Management: Macmillan
- 4. P Barrett: 1995: Facilities Management: Blackwell Science
- 5. R Moss Canter: 1996: The Change Masters: International Thomson Business Press
- 6. B Williams Associates : 1996 : Facilities Economics : Building Economics Bureau
- 7. Financial Times: 1997: Mastering Management: FT Pitman Publishing
- 8. D Torrington / L Hall: 1991: Personnel Management: Prentice Hall
- 9. University College London: M.Sc Facility & Environment Management: 1998: Module 8: Unit 8.9: Decision Aids & Systems for Facilities Management