

**A Study of Organisational Response to the Management of
Operational Property Assets and Facilities Support Services
as a Business Resource - Real Estate Asset Management**

Volume One

By

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Abstract

A Study of Organisational Response to the Management of Operational Property Assets and Facilities Support Services as a Business Resource

- Real Estate Asset Management

Then Shiem-Shin, Danny

The research was driven by three objectives:

- to clarify the nature and strength of the link between strategic business planning and the contributory role of the corporate real estate assets;
- to model the management processes that are necessary for a proactive approach to real estate provision and their ongoing management as operational facilities; and
- to develop an integrated management development model for real estate asset management that is built on continuous improvement.

The underlying aim of the study is to develop models and frameworks that justify and provide for the competencies necessary for the continuous alignment of the operational real estate assets to changing business requirements. The above research objectives were operationalised by investigating three related organisational variables - structure, processes and competencies.

The main findings reflect a situation in which organisations are looking to optimise on all its business resources. The dynamics of the market place and the pace of technological development are forcing many organisations to look at their operational assets more closely. The evidence from the case studies organisations supports the following:

Structure - It is not so much the positioning in terms of closeness to corporate management, but the level of influence that real estate/facilities executives have on the corporate decision making processes that relate to operational facilities issues.

Processes - A proactive management approach must provide for procedures that incorporate the strategic business intentions in facilities dimensions and be in a position to provide solutions to business needs.

Competencies - It is incumbent upon the real estate/facilities department to understand the nature of the business they are supporting and develop competencies that support the corporate strategic intent.

The research proposes an integrated resource planning framework that incorporates the requirements of three principal business resources; people, technology and property. The proposed framework regards Real Estate Asset Management, REAM, as an integrative planning and management process that considers the outcome in operational facilities provision as matching the requirements of people, technology and property; to consciously create the desired workplace environment as defined by real estate variables (via the strategic facilities brief) and facilities services variables (via the service levels brief). The proposed framework was validated against a panel of experts practising in the field of real estate and facilities management.

The contribution in knowledge in the field may be viewed in terms of a critical examination of the role of operational facilities as a business resource and the implications this has on the practice of real estate asset management in an organisational setting.

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Glossary of Terms

Many different terms are used in dealing with the management of property related activities. In the context of this thesis, a distinction is made between the management of *operational property* and the management of *investment property*. The management of investment property is concerned mainly with portfolio planning in order to maximise an annual rental or a capital sales receipt financial return. Operational property is mainly used to enable an organisation to achieve its main business functions or roles. The occupation and management of this kind of property is mainly concerned with the achievement of the organisation's main functions/roles and the cost of property utilisation. This research focuses on the management of operational property.

This glossary provides an easy reference of terms used in this thesis and should be read in conjunction with the discussions on Definition of Terms in Chapter 2, Section 2.1.2; pp. 23-33.

The following list of terms are used as possible 'substitutes' for one another.

- building / property / facilities;
- property assets / real estate assets / physical resource / real estate resource;
- property portfolio / real estate portfolio / corporate asset base / physical resource base / physical asset base;
- operational assets / operational real estate assets / operational property.

The following 'management-related' terms associated with the above list are discussed under Definition of Terms in Chapter 2:

Terms commonly used to denote the management of activities associated with the running of buildings in occupancy by organisations in carrying out their business processes:

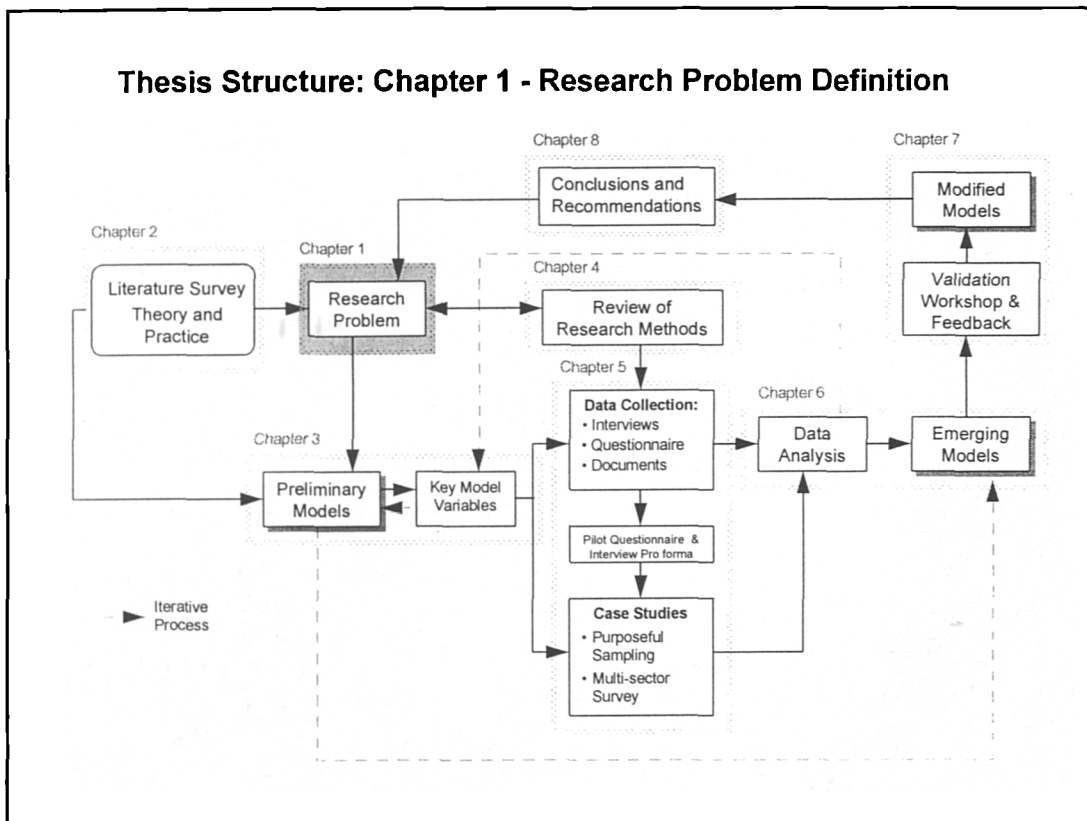
North America real property portfolio management / real property asset management / operational property asset management / corporate real estate management / corporate real estate asset management / fixed asset management / facilities management.

United Kingdom: property management / estate management / asset management / building management / operational asset management / facilities management.

For the purpose of this thesis, Real Estate Asset Management, REAM, is defined as *'the management of the corporate real estate resource comprising of the provision and ongoing management of operational real estate assets and the delivery of associated facilities support services, as an enabling role to fulfil corporate business objectives'*.

Chapter 1

Introduction - Overview and Definition of Research Problem



Chapter 1: Introduction

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1. Overview and Definition of Research Problem

1.1 Introduction

The acceptance of property (real estate) assets as a business resource by senior management is by no means obvious. In many organisations the role of operational property is still considered no more than a cost to business, an overhead that does not warrant serious management considerations. This view persisted when the world economy was buoyant and business optimism was bright. The prolonged depression in world trade in the 1970s and from the mid 1980s onwards brought about a renewed awareness in controlling the costs of businesses. For many large corporations, the revelation of the fact that after staff costs (salaries), the next highest category of costs are facilities-related costs, has reinforced the strategic importance of property(or real estate) as a business resource and the need to manage the resource as effectively and efficiently as possible.

This new awareness has brought about a much needed management focus on measures to ensure the corporate real estate portfolio are matched as closely as possible to operational requirements and asset occupancy costs are managed and controlled. The perceived role of real estate assets in business and their effective management is increasingly seen as a strategic dimension in business planning. This research is an attempt to clarify the nature and strength of the link between strategic business planning and the contributory role of the corporate real estate assets.

1.2 Contribution to Knowledge

This study has focused on developing models and frameworks to explain the role of the corporate operational real estate assets from a resource management perspective within a business management context. In this respect, the outcome from the study cannot be seen as definitive, but rather, as adding to the understanding of the increasingly important role of using the physical working environment as a lever for promoting organisational change. The desired outcome from the practice of Real Estate Asset Management

(REAM) in any organisation is to maintain strategic relevance, by attempting to continuously match the demand for functional space by business units, with the existing real estate portfolio (i.e. the supply), by the provision of appropriate enabling working environment for the business processes and users.

The pace of change brought on by intense global competition and rapid technological developments in recent years have meant that the assumption of stability in steady growth is no longer true. This change has particular significance on the ongoing management of the operational real estate assets, and premises occupancy costs. A key role of REAM within any organisation is the ability to respond to shifts in the corporate business strategic direction and its likely impact on the existing real estate portfolio, measured in spatial dimensions of physical assets, as well as, financial consequences of ownership and occupation. The derivation of appropriate supporting facilities strategies that are continuously aligned with strategic business intentions is clearly an essential outcome of the practice of REAM. This study has attempted to provide models and frameworks that operationalise the practice of REAM in order to fulfill this requirement.

The original contributions to knowledge are seen as:

- Contributing to the conceptual thinking in an area of management that hitherto, has been almost exclusively the domain of practical realists whose focus have been and still very much, transactional oriented and reactive in response. In particular, the promotion of a shift from regarding corporate real estate assets as purely a *business overhead* to a *business resource* that impacts on the performance of the other principal business resources of people, technology, information and finance.
- Raising corporate awareness to the strategic role of the real estate resource as the creation and provision of enabling workplace environments in the pursuit of organisational effectiveness, and efficiency in the utilisation of a key business resource. In conjunction with information technology and innovative furniture design, the real estate resource is increasingly seen as a lever for promoting organisational change through the configuration of the workplace

to support users' tasks and organisational processes.

- The acknowledgment of the need for a more proactive approach to the provision and ongoing management of the corporate real estate assets and support services in an organisational setting sets a number of prerequisites which are required to support a shift from a current reactive approach. Communication between stakeholders involved in the process is the key and having the correct level of in-house competencies to perform an *intelligent client role* is critical in maintaining a continuous constructive dialogue between strategic management and operational asset management.
- The study highlighted a growing body of techniques used in the evaluation of real estate issues and facilities support services procurement to assist in the strategic assessment of the corporate real estate resource. This development stresses the importance of having an adequate information management system for the recording, analysis and reporting of operational assets and support services performance. Increasingly, the volatility of the external marketplace can result in sudden shifts in the corporate strategy, dictating a need to perform dynamic modeling (i.e. scenarios) on the existing capabilities of the real estate portfolio in order to arrive at the most appropriate facilities support strategies.
- The mapping of internal competencies on an incremental basis, on key aspects of REAM, provide a useful management development tool for continuously monitoring the effectiveness of the practice of REAM in individual organisations; as well as, charting focused improvement on areas of perceived weaknesses within a continuous improvement framework.

A more detailed discussion of the above contributions is included in the concluding chapter.

1.3 Rationale and Need for Research

During the period up to the mid 1970s, buildings were seen very much as a necessary, but relative 'static' factor of production, required to house the production processes. It was generally regarded as a 'sunk' business costs which could not be avoided. The prevailing view held then was that the

costs associated with building occupancy are part of the business production process are therefore necessary *business expenses*. The level of management associated with controlling this group of facilities-related costs are not regarded as demanding nor sophisticated to necessitate specialist skills or senior management attention.

The oil crisis of the mid 1970s had the immediate impact of raising awareness of the need to manage occupancy costs in terms of the energy component of occupied buildings. The focus on monitoring energy consumption in occupied buildings had the effect of bringing the 'space' dimension of building to the fore. Up until then, the capital costs of the building construction had been the major concern in any building investment evaluations. The energy crisis, therefore, can be said to be largely responsible for raising the general awareness amongst building owners, business managers and occupiers, of the need to consider the economics of building occupancy in terms of the streams of recurring costs, e.g. energy, repairs and maintenance, etc. associated with keeping the buildings concerned in continuous operation.

The boom and bust of the property market in the 1970s and mid 1980s caught many companies off guard. The combination of over commitments in long-term leases made at a time of optimistic high growth expectations, followed by a prolong period of general economic recessions and stagnation, have resulted in a situation of surplus capacity in real estate provision for many organizations. For many large corporations, the coincidence of a fall in revenue with a consistent raising trend in occupancy costs, had resulted in a dramatic shift in senior management focus in their efforts to contain business operating costs.

The rapid pace of technological development particularly in the information technology sector has, and is increasingly having a considerable impact on the design and subsequent use of buildings. Far from being regarded as a necessary evil, for an increasing number of organizations, there is a growing acceptance that buildings (being operational assets) must now be managed as a valuable business resource, just like people and technology. There is also a growing consensus that investment decisions associated with the provision and subsequent management of operational assets must consider the interplay

between property (the physical resource), technology (the technical sophistication of the supporting infrastructure in terms of essential building services, and the task supporting technology) and people (the end users of the facilities in carrying out their value-adding roles). This acknowledgment of operational property (or real estate) as a business resource has resulted in a growing awareness of the need to *manage the business' operational asset base over time*.

The last decade has also seen the growth of the service industry. One of the ramifications of the growth of the service culture, which has a direct impact on the property management industry, has been the emergent of *facilities management* as a professional discipline in North America initially, and latterly in UK and Europe. As part of an emerging service industry, the facilities management market has grown considerably within the property services sector, estimated to be worth £16 billion per annum¹ providing facilities-related support services and management expertise to organizations with large operational real estate portfolio. The growing trend of contracting out (or outsourcing) of non-core support services, far from diminishing the managing role of the organization's real estate asset base, reinforces the strategic importance of aligning the physical asset base to the organization's business plans.

It is within the context of the above developments and their implications on business management that the focus of the research is aimed at the key issue of: *How do organizations manage their real estate asset base against a business environment that is increasingly competitive and constantly changing?*

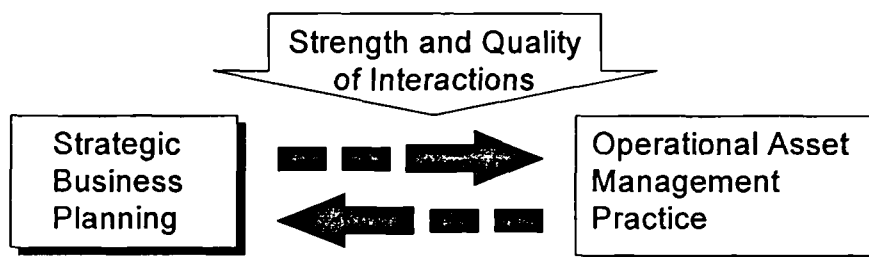
At the same time, there is also a growing acceptance that the workplace environment is becoming a crucial component in the drive to improve productivity of the organization's most expensive resource - its employees. Together with information technology, the management of the real estate asset base is increasingly regarded as an important leverage in the strategic management of the workplace environment aimed at improving overall organizational effectiveness.

¹ Centre for Facilities Management(CFM) - UK FM Market Trends Survey. 1991

The significance of the strategic role of the real estate assets to corporate performance can be seen in a recent influential research report by The Industrial Development Research Foundation, IDRF (1993)², where the corporate real estate asset is termed as *the fifth resource*, after the traditional resources of people, technology, information and capital.

The need for research in this area arises from a desire to understand and explain the crucial linkages between strategic business planning and operational asset management as illustrated in Figure 1.1

Figure 1.1: The Crucial Links



1.4 The Research Problem

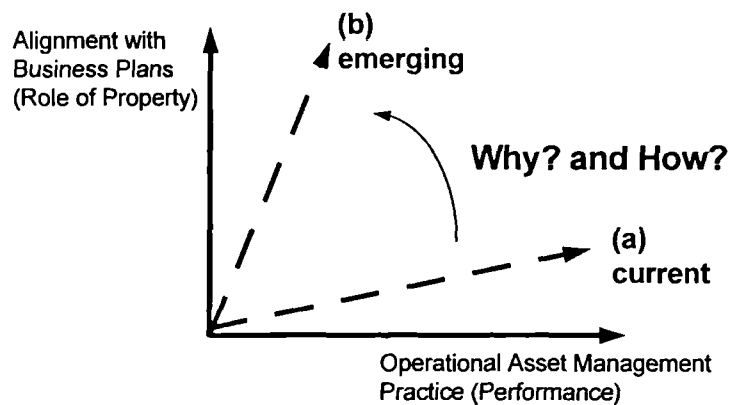
The starting point of the research is to develop a conceptual framework for modeling the role of operational real estate assets in business. The research aims to provide a clearer understanding of the perceived role of operational property assets in medium and large corporations and how this corporate perception impact on and influence the quality of management of their operational asset base.

A principal research proposition is that there is a direct relationship between the quality of operational asset management and the prevailing perceived views of the role of operational property by corporate (senior) management. The corollary is that unless property (real estate) is regarded as a business resource, the practice of operational asset management is likely to be characterized by a reactive regime where decisions are typically sub-optimal as a result of lack of awareness of the organization's strategic intent and lack of full knowledge of the asset base (represented by line (a) in Figure 1.2). The research is aimed at

² IDRF (1993), *Strategic Management of the Fifth Resource: Corporate Real Estate -Report of Phase One - CRE 2000*.

identifying factors that promote (or hinder) the proper consideration of real estate issues at senior management level that is characterised by a closer alignment with strategic business direction and a proactive real estate asset management (REAM) regime (represented by line (b) in Figure 1.1).

Figure 1.2: Research Proposition



The motivation for the research problem identified has developed from a number of sources:

- The personal interest in the areas of, strategic asset management, maintenance management and facilities management by the author.^{3,4,5}
- A number of published reports in the area of property(real estate) management and facilities management in North American, Europe and UK., highlighting the growing awareness of the critical role and need for more effective management of the corporate real estate assets.^{6,7,8}
- The growing concerns by senior management of the raising trend in occupancy costs and the need for more strategic consideration of the role of the corporate physical resource in strategic business planning.^{9,10,11}

³Then, D S S, (1990) A strategic approach to budgeting for built assets management. *Proceedings of Facilities Management International - Managing the Maintenance Budget*, April 1990, Glasgow. Decision Support Systems - A Framework for Effective Budgeting for Built Assets", *Building Maintenance and Modernisation - Worldwide*, Vol.2, pp.1211 - 1221, Singapore.

⁴Then, D S S, (1994) Facilities Management - The relationship between business and property", *Proceedings of Joint IFMA / EuroFM International Conference on Facility Management - European Opportunities*. Brussels, Belgium, May 7-9 1994

⁵Then, D S S, (1995) Asset Management and Maintenance, *Facilities Management*, Vol.2 No.2, 1994 pp.10-12 and Dec. Vol.2 No.3. Feb. 1995. pp.7-9.

⁶Lloyd, B. An effective property strategy - the key challenge for the 1990s. *Facilities* Vol.10 No.12, 1992, pp 9-12

⁷Joroff, M.L. Corporate Real Estate 2000 - management strategies for the next decade. *Corporate Management*. May/June 1992. Vol.161 No.3 pp.1-6.

⁸Avis, M. Managing operational property assets. *Facilities* Vol.8 No.5, 1990, pp.11-16.

⁹Pertz. Redefining Strategic Facilities Planning. *Facilities* Vol.13 No.1, 1995, pp.16-24.

A number of research reports in recent years^{12,13,14,15} indicate that one of the weakest link in the management of the corporate physical asset base is that between senior management (i.e. finance directors / corporate planners who are responsible for the organization's strategic business planning and direction) and those tasked with the provision and management of the operational asset base and its associated support services over time (i.e. the property / facilities management department). One of the research objectives is to investigate the nature of this link between senior management (who are responsible for strategic business planning) and operational asset managers (who are charged with the provision and ongoing management of the appropriate operational asset base necessary for achieving the corporate business plans). The objective is to develop a framework for mapping the key roles and interfaces that will lead to an enhanced integration between the corporate strategic business planning processes and operational asset management.

For the purpose of this study, the area of interface between strategic business planning and operational asset management is term *Real Estate Asset Management* or REAM.

The term *Real Estate Asset Management* (REAM) deserves some explanation. The term has the advantage of encapsulating three key aspects that taken together, influence the perceptions of the main stakeholders that bring the physical assets (i.e. buildings) into being and their management over time. The three key aspects that make up the fundamentals of operational asset management are:

¹⁰ Kimmel, P.S. The changing role of the strategic facilities plan. *FM Journal*, May/June 1993, pp.36-39.

¹¹ Sracel, H. Aligning Corporate Real Estate with Company Goals. *Facilities Design & Management*. Nov 1994, pp.48-53.

¹² Zeckhauser, S. & R Silverman (1983) "Rediscover Your Company's Real Estate" *Harvard Business Review*, January-February, pp.111-117.

¹³ Veale, P.R. (1989) "Managing Corporate Real Estate Assets: Current Executive Attitudes and Prospects for an Emergent Management Discipline" *The Journal of Real Estate Research*. Vol.4, No.3, Fall, pp.1-22.

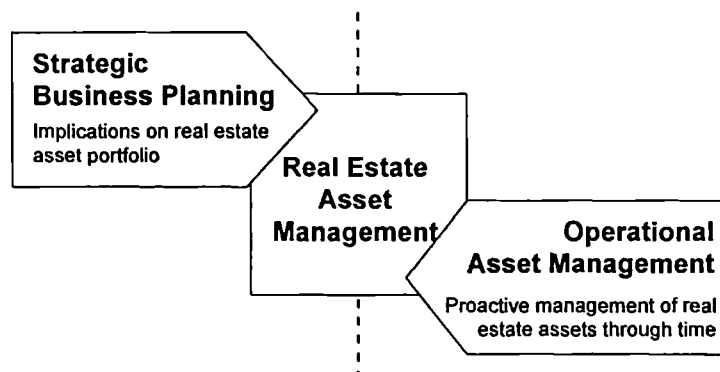
¹⁴ Avis, M., Gibson, V. & Watts, J. (1989), *Managing Operational Property Assets*, Department of Land Management and Development, University of Reading

¹⁵ Arthur Anderson (1993), *Real Estate in the Corporation: The Bottom Line from Senior Management*. Arthur Anderson & Co. SC.

1. *Real Estate* - denotes the *buildings and land* as a physical product, normally requiring substantial capital investment and has a durable physical life-span of decades.
2. *Assets* - denotes the economic worth of the physical product in value terms, both in terms of exchange (financial) value, and use (functional) value. In the context of this study, the emphasis will be on the value of the *assets in operation* required to support the fulfillment of business processes.
3. *Management* - denotes the need to have processes that maintains and/or enhance the asset worth as a enabling resource to achieving business objectives. The emphasis here is on *management over time* of the corporate asset base, that is, maintaining relevance to strategic intent.

The scope of REAM, therefore provides an ideal platform for acting as a conduit for integrating *core business information* from strategic management and *facilities information* from operational management. The use of the term also avoids any ambiguities caused by using terms like Facilities Management, Portfolio Management or Property Management, which varies considerably in content and scope.¹⁶

Figure 1.3: Real Estate Asset Management (REAM)



REAM describes the management of processes which interpret core business strategic intent in terms of operational needs in spatial dimensions of appropriate facilities in order to fulfill business objectives. REAM encompasses within its scope, the processes which provide for the appropriate operational

¹⁶ Please refer to Glossary of Terms, and Definition of Terms, Chapter 2, section 2.1.2; pp. 23-33.

asset base and its associated facilities-related support services, as dictated by the business requirements. The context of REAM is illustrated in Figure 1.3.

1.5 The Theoretical Framework

The buildings which businesses occupy, are at the same time, a working environment, a physical structure and a fixed asset that may have a substantial impact on a company's capital structure. Real estate assets, represents a key resource in which the annual cost of owning and/or occupying and maintaining the asset can be the second most significant cost to a business after staff costs. In terms of asset value, property can account for up to one-third of the total corporate value in the balance sheet. But despite their strategic importance, a number of surveys^{17,18,19} have revealed a wide variation in perceptions of senior management about the role of the property resource and the impact they will have on the business's bottom line.

A primary area of investigation is the study of organisations in the management of their operational real estate asset base and the provision of associated facilities-related support services. The unit of analysis is the organization and the key management staff that are involved with the provision and management of operational facilities. The research will investigate the management processes associated with the provision and subsequent management of the operational real estate assets over time.

The theoretical framework for the proposed research will draw from the existing and evolving knowledge base of the following key areas or disciplines:

- general business management,
- building economics,
- strategic asset management and facilities management; and
- models, systems thinking and process analysis

¹⁷ Veale, P. *Managing corporate real estate assets: a survey of US real estate executives*. Laboratory of Architecture and Planning. MIT. 1988.

¹⁸ Avis, M., Gibson, V., and Watts, J. *Managing operational property assets*. University of Reading, Department of Land Management & Development. 1989.

¹⁹ Arthur Anderson, *Real estate in the corporation: The bottom line from senior management*. 1993.

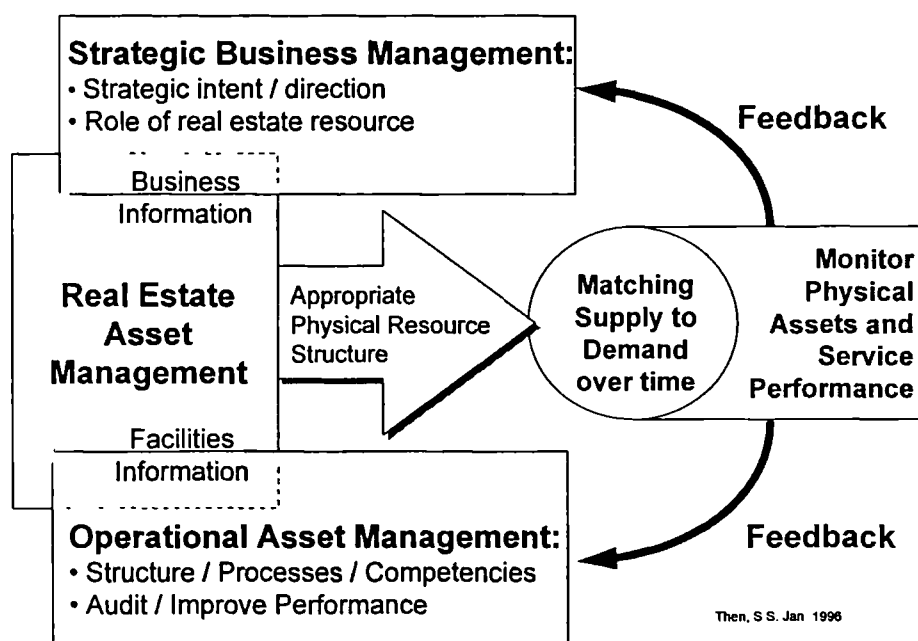
Related cognate areas will include:

- strategic management and corporate strategy
- performance management.

1.6 The Research Propositions:

The focus of the research is the process linkages that are essential to promote integration between 'business information' from senior management processes, and 'facilities information' from the operational levels. The desired outcome from REAM is an appropriate real estate portfolio structure that is aligned with the organisation's business development strategy - matching supply to demand as illustrated in Figure 1.4.

Figure 1.4: The Context of Real Estate Asset Management



This research is driven by three main research propositions :

Research Proposition 1 - that a strategic view of the role of the supporting physical resource provides the planning framework for linking corporate demand for facilities (functional space) and related services to the ongoing management of the operational real estate assets.

The planning framework is based on the matching of real needs for facilities services to the most appropriate operational real estate asset base measured in terms of value and service. The perceived role of operational property assets in

the context of the business is taken as a key determinant.

The principal objective is to define the nature of the link between strategic business planning and operational asset management. For the purpose of this research Real Estate Asset Management, REAM, is defined as the area of interface between strategic business planning and operational asset management as illustrated in Figure 1.3 above. The following criteria are considered as essential elements in an integrated practice of REAM:

- The quality of link between strategic business planning and operational asset management is directly related to senior management's perception of role of property(physical assets) in the context of business management.
- The quality of link between senior management and operational asset management is also related to the latter competencies and readiness to participate at the strategic level.

The research proposition supports a business resource management approach that reflects a growing awareness by senior management of the strategic role of the operational assets as an enabling resource to achieve the corporate goals.

Research Proposition II - that a process model for the proactive management of operational real estate assets and their associated facilities support services can be evolved with the emphasis on management over time.

The research supports the proposition that proactive management in REAM must be supported by the following appropriate organisational elements of : structure, processes and competencies.

The following criteria are taken as evidence for supporting a proactive stance in REAM:

- The quality of information available on the existing physical asset base (measured by the ability to describe assets' operational attributes and to specify the required users' service expectations) is a critical pre-requisite for improving communication between senior management and operational asset management. Adequate and accessible asset knowledge base as the basis for proactive evaluations.
- The appropriate type and level of professional skills and competencies in order to influence senior management and develop the capabilities to continuously align the physical resource base to business strategic intent and promoting a service culture build on performance measurements and continuous improvements.

- The operational mode of the asset management processes must evolve to accommodate the shifting business agendas - i.e. managing the physical asset base over time being the main driver. Ability to provide strategic options in meeting changing business direction.

Research Proposition III - that the practice of REAM can be mapped as an incremental developmental management model that seeks to integrate the demands arising from strategic business decisions to the delivery of operational facilities and associate support services as a dynamic management process.

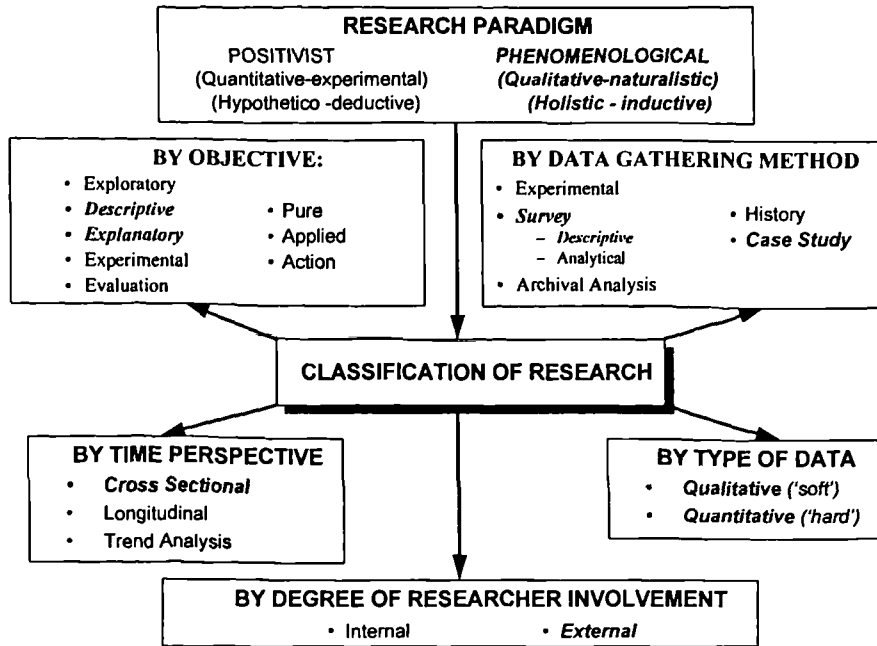
The research aims to answer the *why* to the research proposition I, and the *how* to research propositions II and III

1.7 The Research Approach

A review of the principles governing *quantitative* and *qualitative* research methods was conducted with the objective of selecting the most appropriate approach for this research topic. A research typologies comprising of the following categories: research paradigms, objective, data gathering method, time perspective, type of data and degree of researcher involvement; was developed as a filtering mechanism for considering the advantages and disadvantages of each category within each typology.

Using the research typologies framework, the parameters governing the chosen research design are indicated in Figure 1.5 by ***italics-bold*** font type. It was considered that the most appropriate research design for the research at hand would be based on a qualitative research approach. A case study approach is adopted using interviews and questionnaires as the principal means of data collection. The unit of analysis is the organisation that owns or leases operational property for the purpose for carrying out its core business activities. In order to provide cross validation of the results, a cross-sectional survey was carried out in order to cater for any differences across different industrial sectors. The problem of access to respondents dictated a purposeful sample that optimise on opportunity contacts. A detailed discussion of the research design is given in Chapter 5.

Figure 1.5: Research Typologies Framework



The case studies conducted comprise of respondents from the following industry sectors:

1. Manufacturing (N=4)
2. Banks and Financial Institutions (N=11)
3. Professional Services Companies (N=7)
4. Communication, Utilities and Distribution Companies (N=4)

A three-part analysis was adopted to meet the separate requirements of data analysis for each of the research proposition. For *research proposition I*, the questionnaires from the respondents provided some quantitative data for mapping the *strategic awareness* of senior management and *strategic readiness* of operational management. For *research propositions II and III*, the emphasis on process analysis and model development were met with a combination of systems methodology and model building.

The objective being to develop models that are robust enough to explain the real world, as reflected by the case studies, as well as providing a benchmark for highlighting process deficiencies and competencies gaps as potential targets for incremental improvement.

1.8 The Research Outcomes

The outcomes of *research proposition I* are twofold:

1. The development of a framework to explain senior management perceptions of the role of property assets in strategic business planning and how they impact on the performance of operational asset management.
2. The development of a model for linking *business information* from strategic business planning to *facilities information*, with the objective of promoting dialogue and communication in order to enhance the link between the core business planning processes and REAM. The outcome of the process model is to match supply of, to demand for, functional space to fulfill the corporate business objectives. Performance is measured in terms of fitness-for-purpose, flexibility and appropriate costs of provision.

The outcome of *research proposition II* is a series process models that map the key components of REAM and their main requirements. The focus being on proactive management of the operational real estate assets and their associated facilities support services with the emphasis on managing the corporate physical assets as a business resource.

The outcome of *research proposition III* is the development of a set of competencies matrices for key attributes within the emerging field of real estate asset management - the focus being on providing a management development tool for continuous improvement.

A more detailed discussion of the above research outcomes is given in Chapter 8.

1.9 Limitations of the study

In terms of limitations of the study, the following are cited:

- Limited resources, particularly in time available between work and funding of travel and ancillary expenses.
- Access to senior management in respondent organisations is a problem that is not uncommon in management research. The general apathy by senior management to the purely functional role of operational assets is clearly

reinforced by current financial conventions of treating facilities-related costs as a cost to business, rather than as a business resource which can be potentially harness to improve the corporate effectiveness and image, both externally and internally.

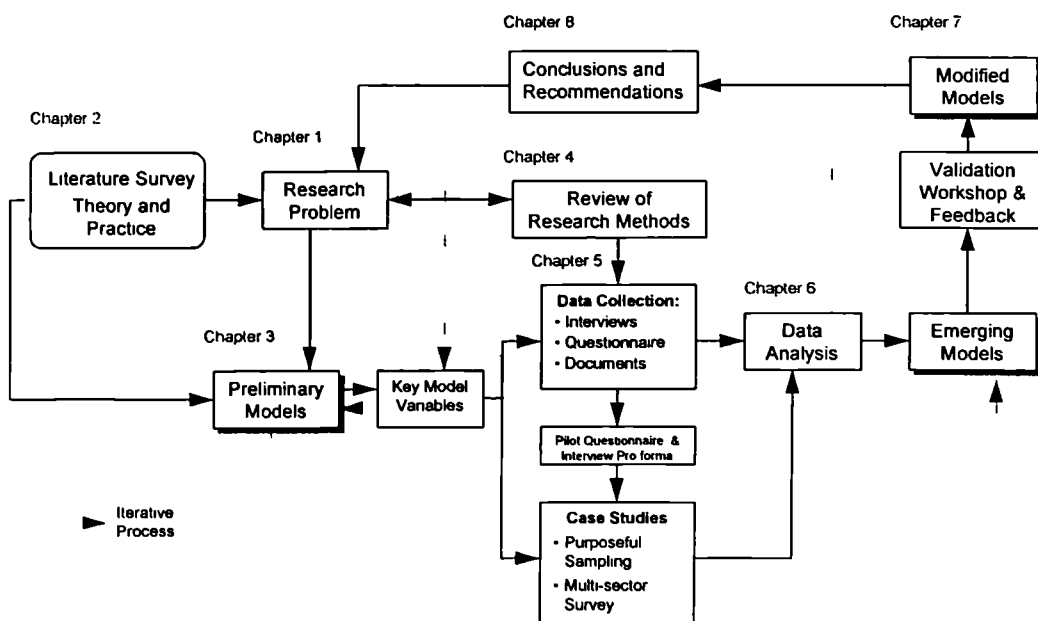
- The study could benefit from a wider validation of the models and frameworks, particularly in the form of workshop presentations as a means of raising senior management awareness to the need to proactive management of the real estate resource and associated facilities services. In particular, the potential of the models and frameworks generated by the study being used in organisations as action research projects will be valuable.

1.10 The Structure of the Thesis

This chapter has introduced the area of study and provided an overview of the research propositions, the research methodology and outcomes from the study. The chapter concludes with a description of the structure of the thesis, outlining the flow and context of the others chapters to follow.

The overall methodology framework and thesis structure of the research undertaken is summarised in Figure 1.6.

Figure 1.6: Thesis Structure and Research Framework



Chapter 2 reviews relevant literature specific to the area of study and related cognate areas. The objective of this chapter is to provide the theoretical and economic backdrop within which the practice of Real Estate Asset Management is currently based. It argues that there is growing awareness by the larger corporations of regarding operational real estate assets as an enabling resource that should be considered at the strategic business planning level. At the same time, there is growing realisation among property and facilities executives who are charged with the delivery of the functional space to support core business plans, that their participation at the strategic business planning levels is not obvious, nor seen as critical, to core business. It is the interactions between corporate management and operational asset management and how the corporate operational real estate assets are managed over time that form the focus of this research. This chapter provide the context upon which the research problem has emerged and the justification for its further investigation.

Chapter 3 discusses the development of theoretical or preliminary models and frameworks to explain and understand the nature of the current interactions between corporate strategic management and operational asset management. The concept of Real Estate Asset Management (REAM) as *the informed interface* bridging the business concerns and facilities concerns is introduced. A model of REAM, its components, and interface between strategic and operational dimensions are proposed. The derivation of the model framework, which relied on published empirical data as well as the author's knowledge in the area, is explained. The models and frameworks also form the basis for the design of the data collection tools and data analysis techniques, which are the basis of the next chapter.

Chapter 4 provides a comprehensive review of research principles and research methods. The differences in approach between the quantitative and qualitative paradigms are considered and a research typologies framework is developed to further classify research by objective, by data gathering method, by time perspective, by type of data and by degree of involvement by the researcher. Systems approaches and model development also add to the methodological mix that are possible in designing a suitable research strategy. The chapter

concludes by considering issues relating to the evaluation of a research strategy.

Chapter 5 provides a more focused discussion of the decision processes relating to the chosen research strategy for the current study. The decision to use a qualitative research approach is 'mapped' against the research typologies framework developed in Chapter 4. The emphasis on theory generation or model building from qualitative empirical data led to a fuller discussion of the procedures of grounded theory in data collection and data analysis. The chapter provides a description of the design of data collection tools - i.e. a combination of structured interviews and questionnaire survey. The justification of using a purposeful sampling technique applied to a multi-sector survey of case studies organisations is described.

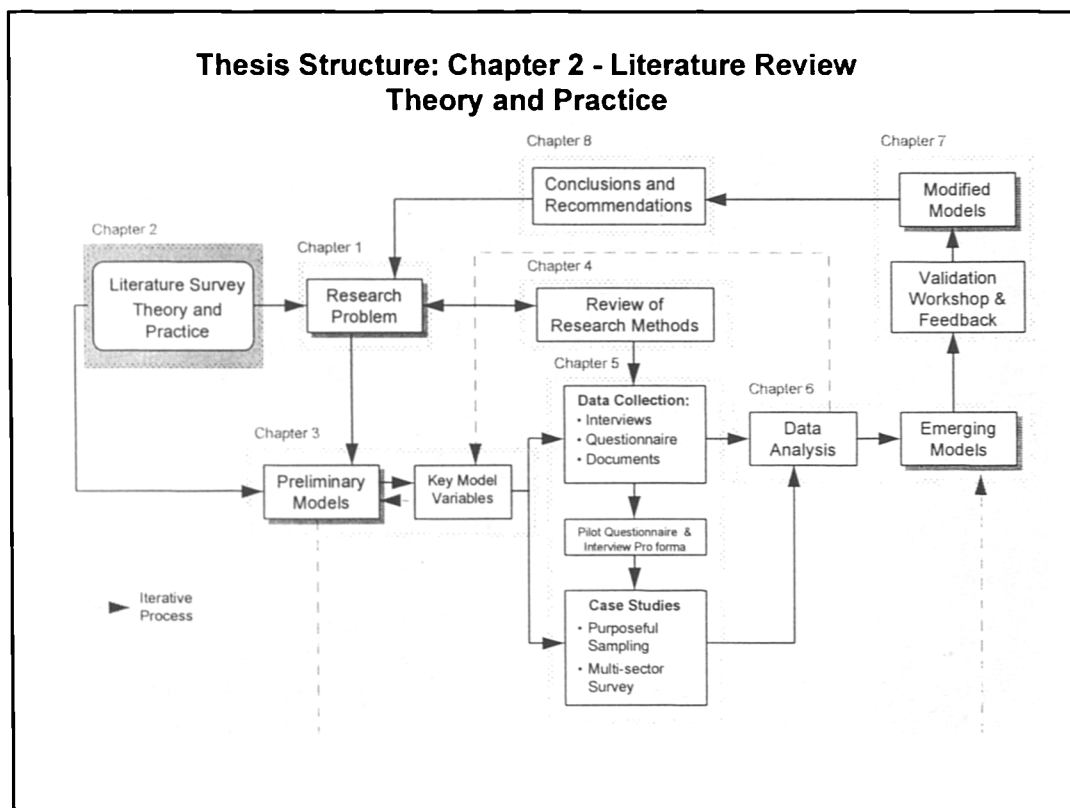
Chapter 6 comprises the reporting of the data analysis from the case study respondents and how the results impact on the preliminary models developed in Chapter 3. The process of model development is an iterative one, as illustrated by the broken line loop in Figure 1.6 above.

Chapter 7 describes the rationale of the validation and feedback workshop. The purpose and format of the validation process is explained and the results from the participants of the workshop and extended postal validation presented.

Finally, **Chapter 8** discusses the implications of the results from the whole study against the research propositions posed in Chapter 1. The strengths and weaknesses of the models and frameworks resulting from the study are considered and recommendations for further work in the area are given.

Chapter 2

Literature Survey - Theory and Practice



Chapter 2 - Review of Relevant Literature

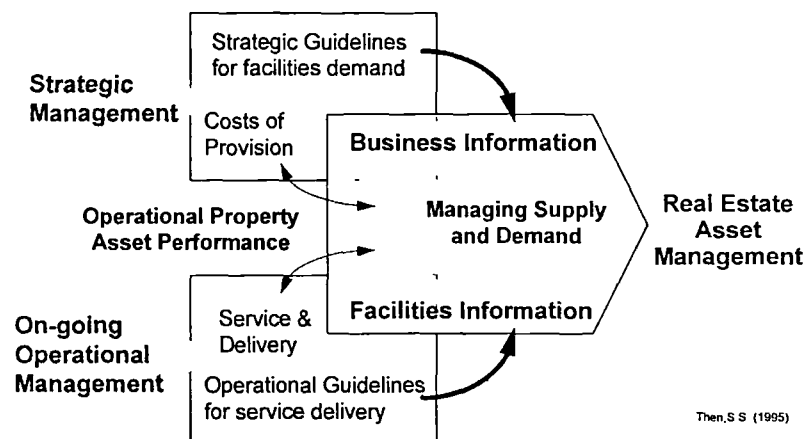
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2. Review of Relevant Literature

2.1 Introduction

The broad overview of the introductory chapter introduced the *term Real Estate Asset Management (REAM)* as the area of interface between the corporate business planning processes and the operational asset management. The importance attached to this interface is central to this study as the quality of interactions is seen as a key determinant that impacts on the outcomes from the ongoing operational asset management processes measured in terms of appropriate supporting facilities and associated facilities support services. In this respect, a further elaboration of the context of REAM is considered appropriate. (see Figure 2.1)

Figure 2.1: REAM as the Informed Interface



As the ensuing literature evidence will support, the relationship between business management and the supporting role of operational property, that is the property they require to undertake their main activities, is often not properly defined at the strategic level, resulting in operational policies that do not clearly reflect the contribution of property assets in terms of the organisation's overall performance, measured in terms of improved profitability, productivity and customer satisfaction. In the last fifteen years or so, a number of studies have explored the role of the operational property in both the private and public sectors, and the management practice associated with operational property assets. This review aims to draw together the emerging themes from these studies; both in the UK and abroad, especially from North America. The changing role of operational

property within the context of business management will be examined. In particular, how corporate management perceive the part played by the supporting infrastructure that provide the workplace settings, and whether they see the operational property as a strategic business resource, are taken as important variables in this study. In other words, this study is aimed at developing a framework to better understanding and explain how organisations respond to the management of operational property assets as a strategic business resource.

Figure 1 above proposes a framework for considering the linkage between strategic business planning and operational asset management. The objective is to provide a bridging and *informed interface* where the *overlapping issues* of strategic business management (i.e. strategic goals and concerns) and operational management (i.e. tactical goals and concerns) are reconciled.

In order to manage the physical asset base over time, there must be a two-way linkage between strategic intent and operational delivery. REAM is seen as an integral component of corporate business planning with the key objective of providing the best match of demand for, and supply of, functional serviced space as a supporting business resource. REAM provides a communication platform for constructive dialogue in which the cost of provision of real estate resource (a strategic management concern) is balanced against the quality of services received by the end users (a tactical concern). The ultimate goal being a set of supporting property strategies that are continuously aligned with the strategic business intent or direction. As an integrating tool, it provides a platform for reconciling between *business information* and *facilities information*.

At the strategic level, it must strive to interpret business plans in terms of facilities provision, in line with or ideally, ahead of projected demand. Performance focus taken at this level relates to measures aimed at establishing the appropriate property portfolio mix to support the achievement of the corporate business goals. The outcome at this level will, very often, result in rationalisation of the whole corporate real estate infrastructure. At the tactical level, the focus of *Operational Asset Management* is centred at the individual site or building level, primarily concerned with delivery of facilities-related support services. The management efforts at this level is very much customers (users/occupiers) focused.

2.1.1 Introduction to Scope of Review and Justification

The literature review will cover the practice and theories related to the provision and ongoing management of the corporate physical assets. The scope of REAM is defined, in the context of this study, as incorporating issues and matters that directly affect decisions in the *provision* of functional space to support core business initiatives and *the associated facilities support services* that are required to provide the required functional space. The facilities-related services are defined as those support services that directly impact on the provision and utilisation of the space within the occupied buildings. These facilities-related services are taken to include issues relating to occupation costs management, real estate strategies, space planning and management, asset maintenance and renewal. In this respect, other facilities management support services like catering, reception, car fleet management, etc. are excluded.

This review of literature will attempt to trace the evolving role of operational property assets and their management practice against a background of rapid technological change and changing emphasis in management thinking about how best to manage business resources in the fulfillment of corporate objectives.

The review of published literature is structured in three parts:

Part A: a historical overview of the role of operational property (real estate assets) and their ongoing management by non-property companies.

Part B: a theoretical overview of the economics of operational property in the context of resource management and whole-life asset management.

Part C: an overview of management development affecting the practice of REAM.

The main purpose of the literature review is to set the context against which the research problem has been derived. It should be pointed out at the outset that the field of study in the management of operational real estate assets as a business resource is a relatively new one, attracting attention from academic and professional institutions only from the start of the 1980s. Since then, a number of compelling factors have forced many organisations to look more

seriously at their corporate real estate resource and the way they are managed over time and how they should be provided in the future.

The literature review will cover the period from the beginning of the 1980 to date, which saw major fluctuations in the real estate market and the rapid growth accompanied by structural changes in the supply side of the facilities management market in North American and in U.K. The same period also saw a prolonged economically depressed market in the economies of North America and Western Europe which has the impact of intensifying competition on a global scale.

One of the consequences of the intense competition is the scrutiny on costs of running a business. For the larger companies, financial pressures have often resulted in the lay off of large number of employees as part of their strategic move to reduce operating costs. This strategy, however, has had the effect of creating surplus operational properties which continue to attract financial commitments either due to remaining lease covenants or repairs liabilities. The pace of technological development especially in computing and communication technologies, have also rendered many older buildings becoming obsolete or needing large capital injection for refit or refurbishment work to bring them to an acceptable functional standard comparable to new buildings coming into the market.

Set against the depressed economic trend of the last decade or so, many large companies are faced with the prospect of a period where revenue growth performance are unlikely to be as optimistic as in the past. A number of factors have been cited for this projection. Stagnant or slow growth in the North American and Western European economies caused by major structural changes to many traditional manufacturing industries as a result of automation. At the same time, rapid growth is experienced in the 'new age' industries of telecommunication, electronic and computing, driving a corresponding growth in the servicing sectors of the economies.

The same decade also spawned a wave of management thinkers who popularised management concepts like excellence¹, quality², reengineering³, management of change⁴, benchmarking⁵, and provide us with visions of the new workplace⁶; which when taken together have had a major influence on the mindsets of 'captains of industry' in their views of how best to run an organisation and manage its resources. It has often been said that in recent times, that the only thing that is *constant* in today's business environment is *change*. In this respect, the impact of change on the role of operational property as a supporting physical asset to business has been equally dramatic when viewed in terms of the changing trends to the traditional office workplace and manufacturing settings. It is the response by corporate management to their operational real estate assets during this period of rapid change and the emerging management practice that is the main focus of this review.

2.1.2 Definition of Terms

An early resolution to a clear definition of key terms is important to avoid confusion of interpretation. The activities of property occupation and utilisation and their management cover a potentially broad scope of activities under many different terms, which are also not helped by professional institutions' labeling based on specific sets of disciplines. The choice of *Real Estate Asset Management* is not to add to the confusion, but to avoid using any existing terminology which are likely to be somewhat tainted along strict professional divide. The justification for adopting REAM has been explained in chapter 1.

¹ Peters, T. & Waterman, Jr. R.H.(1982) "*In Search of Excellence*"; and with Austin, N. (1985) "*A Passion for Excellence*".Fortana.

² Hunt, V.D. (1993) "*Managing for Quality - Integrating quality and business strategy*", Business One Irwin; Chang, Y.S.;Labovitz, G. and Rosansky, V. (1993) "*Making Quality Work*" Harper Business; to name but a few.

³ Hammer, M. & Champy, J.(1993) "*Reengineering the Corporation - A manifesto for business revolution*", Nicholas Brealey Publishing; and Champy, J. (1995) "*Reengineering Management - The mandate for new leadership*". Harper Business.

⁴ Kanter, R.M.(1988) "The Change Masters", and (1989) "When Gaints Learn to Dance", Routledge.

⁵ Bendell, T., Boulter, L. & Kelly, J.(1993) "*Benchmarking for Competitive Advantage*" Pitman Publishing; Karlot B. & Ostblom, S.(1993); "*Benchmarking - A signpost to excellence in quality and productivity*". John Wiley & Sons; to name but a few.

⁶ Handy, C.(1989) "*The Age of Unreason*" and (1994) "*The Empty Raincoat*", Hutchinson; and Semler, R.(1993) "*Maverick - the success story behind the world's most unusual workplace*", Arrow Business Books.

The following brief review of terminology has one common theme, they all relate to buildings and land, as a physical product with a specificity of design, form, construction methods, and location. In an organisation setting, buildings represent the operational space for housing the people, machinery and business' production processes. In many instances, the terms used can be substituted without causing ambiguities; the subtle differences lies in the emphasis which the author wishes to project. For example, between the terms; 'physical resource' and 'property asset', the former is appropriately used to describe buildings in the context of business management, while the latter would more effectively conjure the need for long-term management in terms of asset management. In this respect, the following list of nouns are used as 'substitutions':

- building / property / facilities;
- property asset / physical resource / real property / real estate resource;
- property portfolio / corporate asset base / physical resource base;
- operational property / operational real estate asset.

It is a more complicated when we consider the 'management' aspects associated with activities of property occupation and utilisation and their management.

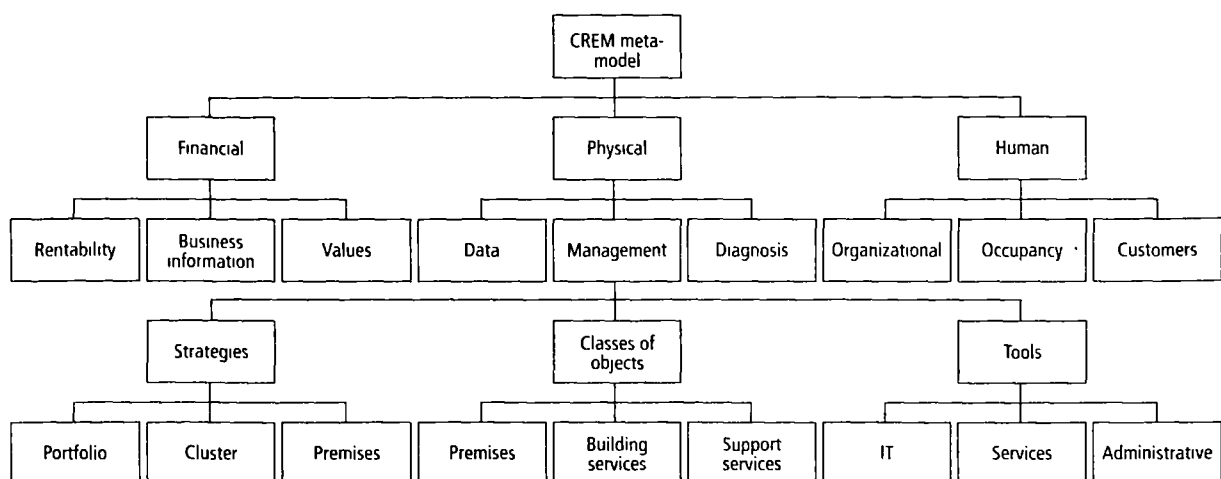
Bon⁷ illustrates the diversity of terms used when in introducing his own terminology "*real property portfolio management*"; also mentioned several alternative and related terms: namely, "*property management*", "*estate management*", "*asset management*", "*fixed asset management*", "*operational property asset management*", "*corporate real estate management*" and "*real property asset management*". The above are North American derivatives. In the U.K. the following related terms are commonly used when dealing with the management of property-related activities in organisations that are not primarily in the property business, but use property to produce or distribute other goods and services: "*property management*", "*building management*", "*operational asset management*" and "*facilities management*".

⁷ Bon, R. (1991) Real Property Portfolio Management.or what the client of building services needs to do to ensure satisfactory building performance in Bezelga,A and Brandon,P.(Eds). *Management, Quality and Economics in Building.*, E & FN Spon, pp.1001-1010

Rather than attempting to define each variant of the above terms, a broad classification of the likely scope of activities associated with the provision and subsequent management of operational property will be developed. Such a classification will also be useful in mapping the particular concerns of individual organisations in relation to property-related issues, in line with the type of business and state of maturity of its product cycle, and conditions of existing operational facilities.

Lopes⁸ in his studies, developed a meta-model for corporate real estate management that comprises three main classes: physical, financial and human aspects (see Figure 2.2), which is closely aligned with Bon's three strategic aspect within *Real Property Portfolio Management (RPPM)* of: physical, financial and organisational. Physical management focuses on occupant safety, health, and comfort; financial management focuses on the effective utilisation of an organisation's resources; and organisational management focuses on occupancy efficiency and effectiveness. Bon also emphasised that RPPM covers the entire range of activities concerning portfolios of buildings and land holdings; investment planning and management, financial planning and management, construction planning and management, and facilities planning and management.⁹

Figure 2.2: Structure of CREM Framework



⁸ Lopes, J.L.R. (1995) A meta-model for corporate real estate management. *Property Management* Vol.13, No 4, pp29-35.

⁹ Bon, R. (1991) op.cit. pp.1002-3.

Bon(1991) also developed the concept of the real property portfolio structure as comprising of stand-alone building, clusters (e.g. a manufacturing complex) and portfolio. Lopes(1995) developed the concept further by relating key property-related activities to the portfolio structure as levels of management concerns as shown in Figure 2.3.

Figure 2.3: Main Areas of Activities in CREM¹⁰

Activity	Management level		
	Portfolio	Cluster	Premises
Real estate administration, finance and law	●	◐	○
Acquisitions, dispositions and leases	●	◐	○
Design, construction, renovation, engineering	●	◐	○
Space management	○	●	◐
Support services	○	●	◐
Building services management and maintenance	○	●	◐
Building management	○	◐	●
Building maintenance (fabric)	○	◐	●

Key: ● Level in which the activity has major importance
 ◐ Level in which the activity has secondary importance
 ○ Level in which the activity has little importance

Veale (1989) in suggesting *Corporate Real Estate Management(CREM)* as an emergent management discipline, listed the following as main concerns:

- Organisational strategy (for real estate department)
- Fixed asset investment strategy
- Corporate space management and planning
- Life-cycle physical management of buildings
- Real estate accounting and reporting
- Work productivity and the physical environment
- Building operations management
- Strategic acquisition, development, and disposition.¹¹

Nourse (1990) emphasised managerial real estate as a study of how to manage real estate as a complement and input into the production of other goods and services. Corporate real estate asset management(CREAM) is the acquisition,

¹⁰ Lopes, J.L.R. (1995) op cit. pp.30

¹¹ Veale, P.R. "Managing Corporate Real Estate Assets: Current executive attitudes and prospects for an emergent management discipline". *The Journal of Real Estate Research*. Fall 1989. pp.19-20.

management, and redeployment of real property to implement user objectives. The activities of CREAM may be grouped under six functions: planning, site selection, financing, management, redeployment, and negotiating. It is the way that these functions are organised and carried out in practice that will reflect the management approach¹².

Brown, Lapies and Rondeau (1994)¹³ in their book focusing on developing policies, procedures, and forms necessary to direct and control corporate real estate operations, divide the scope of corporate real estate management into five basic areas: administration; financial and strategic planning; leasing and purchasing property; managing and maintaining property; and property disposition.

In the U.K., the term "property management" or "estate management" tends to be associated with the more limited concerns of property managers; such as lease management, rent collection or tenants relations, which tend to focus on individual buildings or properties. Some of the earlier writers like Stapleton (1981)¹⁴, Scarrett (1983)¹⁵, focusing on the management procedure, which is borrowed from 'general management', define "property management" as activities in providing the direction and supervision to obtain property interests by the procedures of forecasting, planning, commanding, coordinating and controlling. These functionally driven interpretations have one major failing in that they do not take full consideration of the dynamics of the today's business environment.

Avis, Gibson, Watts (1989) in their study to obtain basic data and a broad picture of the situation in the UK on the management of operational property assets, found that in both the public and private sectors the approach is generally reactive. Based on the data from their study, they classified the

¹² Nourse, H.O. (1990), *"Corporate Real Estate Asset Management"*. Prentice-Hall Inc. pp.5-10.

¹³ Brown, R.K., Lapies, P.D. & Rondeau, E.P. *"Managing Corporate Real Estate - forms and procedures"*. John Wiley & Sons, Inc. pp.4-5.

¹⁴ Stapleton, T. (1981) *"Estate Management Practice"* The Estate Gazette Ltd. pp.17-30.

¹⁵ Scarrett, D. *"Property Management"* E & FN Spon Ltd. pp.2-5.

management of operational property under five main types of work:¹⁶

- Basic property work - repairs and maintenance, energy conservation, refurbishment, lease renewals, rent reviews, planning permission, easements and wayleaves, rating and valuation;
- Strategic property work - acquisitions, identification of surplus property, disposal, redevelopment, space use and allocation;
- General management - strategic planning, performance monitoring and general management of people and budgets;
- External organisation work on property issues - managing external relationships with government, local authorities, politicians and the public; and
- Non property management work - such as dealing with general complaints and queries.

Edwards and Seabrooke (1991) classified the practice of operational property management as either a “conventional reactive” approach characterised as the simple routine administration of individual properties; or a “modern proactive” approach which stresses the strategic elements guided by innovative methods aimed at realising the effective, efficient and economic use of the property assets.¹⁷

Following a similar theme, a number of other writers like Roberts(1991)¹⁸, Toland(1991)¹⁹, Lloyd(1992)²⁰, Varcoe(1992)²¹, Then(1994)²²; have all stressed the need for operational property to be aligned to the business requirements and the need for greater flexibility, both in the provision of appropriate operational facilities, as well as the appropriate support services required within the facilities. This calls for a clearer understanding of the specific needs of the business that the operational property is designed to support.

¹⁶ Avis, M., Gibson, V. & Watts, J. (1989), “*Managing Operational Property Assets*” University of Reading, Department of Land Management & Development. pp.67-76.

¹⁷ Edwards, V. & Seabrooke, B. (1991) “Property peoperty management”, *Property Management*, Vol.9, No.4. pp.373-384.

¹⁸ Roberts, S (1991) “How property can help organisations achieve ther objectives”, *Facilities*, Vol.9. No.3, pp.7-12.

¹⁹ Toland, S. (1991) “Strategic Management of Buildings”, *Facilities*, Vol.9. No.2, pp.13-15.

²⁰ Lloyd, B. (1992) “An Effective Property Strategy”, *Facilities*, Vol.10. No.12, pp.9-12.

²¹ Varcoe, B.(1992) “The Property Influence”, *Facilities*, Vol.10. No.12, pp.18-23.

²² Then, D.S.S.(1994) “Facilities Management - The relationship between business and property”, *Proceedings of EuroFM/IFMA Conference on Facility Management European Opportunities*, Brussels, pp.253-262.

Within an organisation, the quality of interaction and dialogue between the operating business units and staff charged with supplying the workplace settings is clearly an important factor.

The term “facilities (or facility) management” has gained widespread use in North America, UK and latterly in Europe, but there is as yet no consistent definition of its scope of activities.

The United States of America Library of Congress provides an initial definition that is often quoted to explain the breadth of the field:

“The practice of coordinating the physical workplace with the people and work of the organisation; integrates the principles of business administration, architecture and the behavioral and engineering sciences”

The International Facility Management Association (IFMA) definition clearly implied that a major part of facilities management activities are inextricably tied to the provision and ongoing management of an organisation’s built assets and their facilities-related support services as supporting working environment.

“Facility management is a distinct management function and, as such, involves a well defined and consistent set of responsibilities. Simply stated, it is management of a vital asset - the organisation's facilities. Facility management combines proven management practices with the current technical knowledge to provide humane and effective work environments, It is the business practice of planning, providing, and managing productive work environments...”

(IFMA Official Statement on Facility Management).

The British Institute of Facilities Management (BIFM) adopts a definition which emphasises the multi-disciplinary nature of the role of facilities managers with extensive responsibilities for providing, maintaining and developing services ranging from property strategy, space management and communication infrastructure to building maintenance, administration and contract management.

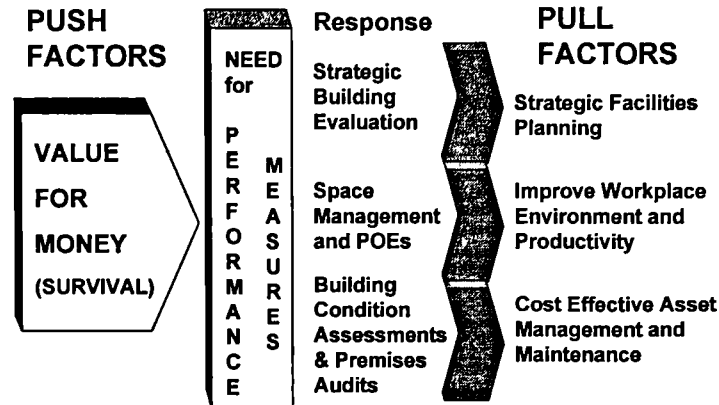
Facilities Management is the integration of multi-disciplinary activities within the built environment and the management of their impact upon people and the workplace. Effective Facilities Management is vital to the success of an organisation by contributing to the delivery of its strategic and operational objectives..”

(British Institute of Facilities Management, BIFM)

The potential scope of activities that are subsumed within the definitions offered by IFMA and BIFM is, however, not necessarily reflected in the range of services offered by suppliers in the facilities management market, who tended to define their service(s) within the narrow confines of the particular service(s) they specialised in.

In the U.K. the market for facilities management services appears to have developed to cater for three interrelated areas associated with the management of operational property as illustrated in Figure 2.4.²³

Figure 2.4: Facets of Facilities Management Market



The search for value for money has had one important implication for the whole spectrum of industries selling products and services of all kinds - the need to describe (specify), to measure (performance criteria) and to quantify (price) the output (end product). In terms of operational property management, the response for more effective utilisation of the built assets has been on three main areas: (1) strategic evaluation of the real estate portfolio which has led to the development of strategic facilitates planning in many of the larger organisations; (2) space management and post occupancy evaluations which have been driven by the need to maximise utilisation at the workplace; and (3) premises audits and condition assessments which have risen the awareness and need for cost effective long-term asset management.

The above developments have prompted a number of writers (for example, Balch,1994²⁴ ; Then,1994²⁵ a,b; Varcoe,1995²⁶ .) to stress the need for corporate

²³Then,D.S.S. (1994) "Facilities Management - The relationship between business and property", *Proceedings of EuroFM/IFMA Conference on Facility Management European Opportunities*, Brussels, pp.259.

²⁴Balch,W.F. "An integrated approach to property and facilities management". *Facilities*, Vol.12. No.1, pp.17-22.

²⁵Then, S.S. (a)"Property as an enabling resource to business", *Facilities Management*, August 1994, Vol.1 No.6, pp.4-7; (b)"People, Property and Technology - managing the interface". *Facilities Management*, October 1994, Vol.2 No.1, pp.6-8.

²⁶Varcoe, B. "A Key to unlock the future". *Facilities Management*, June 1996, Vol.3. No.5, pp.6-8.

management to consider their operational assets as a business resource and integrate its consideration within the strategic business planning processes.

In their attempts to define the potential skills base of facilities management, Then and Fari(1992) provided a matrix for classifying tasks that are associated with the property-related aspects of facilities management as shown in Table 1. The columns divisions reflect increasing strategic involvement as we move from a *project tasks*' role to an *executive responsibilities* role. The row divisions reflect the management levels of strategic, tactical and operational²⁷.

The range of tasks covered within the matrix may be carried out in an organisation either by a facilities manager or by any individual or individuals who may not be recognised as being facilitates related. Every item within each cell of the matrix represents a category of decisions that have to be made at various management levels with skills required to make them and implement them or to assess their effectiveness and performance.

Table 2.1: Matrix of Facilities Management Tasks

	Executive Responsibilities	Management Roles	Project Tasks
Strategic	<ul style="list-style-type: none"> • Mission Statement • Business Plan 	<ul style="list-style-type: none"> • Investment Appraisal • Real Estate Decisions • Premises Strategy • Facilities Master Plan • IT Strategy 	<ul style="list-style-type: none"> • Strategic Studies • Estate Utilisation • Corporate Standards • FM Operational Structure • Corporate Brief.
Tactical	<ul style="list-style-type: none"> • Corporate Structure • Procurement Policy 	<ul style="list-style-type: none"> • Setting Standards • Planning Change • Resource Management • Budget Management • Database Control 	<ul style="list-style-type: none"> • Guide-line Documents • Project Programme • FM Job Description. • Prototypical Budgets • Database Structure
Operational	<ul style="list-style-type: none"> • Service Delivery • Quality Control 	<ul style="list-style-type: none"> • Managing Shared Space • Building Operations • Implementation • Audits • Emergencies. 	<ul style="list-style-type: none"> • Maintenance Procurement • Refurbishment/ Fitouts • Inventories • Post Occupancy Audits • Furniture Procurement.

Two aspects that have seen rapid development over the last decade are asset management and maintenance, and space planning and management.

Asset management is a term that attracts two distinct meanings depending on whether the term is used in the broader context of financial investments by

²⁷ Then, D.S.S. & Fari, A.(1992) "A Framework for defining Facilities Education". Facilities Management - Research Direction". Ed. Barrett,P. pp.15-22.

banks and financial institutions, or in the narrower context of operational property management where the main concerns are with protecting and possibly enhancing the value of the built assets in use. It is the latter aspects that is the concern of this study. Flanagan et al.,²⁸ Marshall and Ruegg,²⁹ Bon,³⁰ Spedding,³¹ Holmes,³² and Then,³³ among others, emphasise the importance of taking a whole-life view in the management of maintenance and components renewal of built assets based on performance monitoring feedback analysis.

Space planning and management is an area of activity that made a major inroad especially in the office environment where the impact of technological development in computing and communications have spawned a number of alternatives to the traditional enclosed and open-plan layouts. The drivers for change for the above have not been exclusively cost reduction, but the growing realisation that providing a supporting workplace environment to employees' tasks that leads to improved productivity should be the main corporate objective. The theme has been advocated by writers like Duffy, Liang and Crisp(1993);³⁴ Becker and Steel (1995),³⁵ Marmot and Eley,³⁶ among others, emphasising the growing importance of providing the right type of workspace within premises to support tasks performed by employees. The acceptance of the economic fact that every square metre of occupied space has to be paid for, and the space occupied by staff is directly related to the tasks he/she is performing rather than status, have resulted in many of the larger corporations with large headquarter premises and distributed portfolio to relocating and consolidating their

²⁸ Flanagan,R., Norman,G., Meadows,J. & Robinson,G.(1989) *Life Cycle Costing - theory and practice*. BSP Professional Books.

²⁹ Marshall,H.E. & Ruegg,R.T. (1990) *Building Economics -theory and practice*. Van Nostrand.

³⁰ Bon,R. (1989) *Building as an Economic Process*. PrenticeHall.

³¹ Spedding,A. (1987) *Building Maintenance, Economics and Management*, Editor, Spon.

³² Holmes,R. (1988) "A Systematic Approach to Property Condition Assessment" in *Whole-Life Property Asset Management*, Editor The,D.S.S. pp.140-150.

³³ Then,D.S.S. (1994/1995) "Asset Management and Maintenance - Part 1 and 2" *Facilities Management*. Part 1, Vol.2. No.2, pp.10-12; Part 2, Vol.2 No.3, pp.7-9.

³⁴ Duffy, F., Liang, A. & Crisp, V. (1993) "The Responsible Workplace - the redesign of work and offices". *Estate Gazette*.

³⁵ Becker, F. & Steel, F. (1995) *Workplace by Design - mapping thehigh-performance workscape*. Josey-Bass Publishers.

³⁶ Eley, J. & Marmot, A. (1995) *Understanding Offices*. Penguin Books.

operations into fewer locations. At the same time, they are taking the opportunity to change the hitherto entrenched culture of “status with space” by introducing new concept like desksharing, non-territorial offices, hoteling and teleworking(working from home).

2.1.3 Summary

The above examination of the various terms commonly used to define the scope of the management of operational real estate assets, although varying in their contents in respect of the processes or functions they cover, do suggest a comprehensive range of activities, spanning from site selection through to monitoring of ongoing occupancy costs. Depending on the nature of the business being supported, the size and condition of the real estate portfolio, and the range of property related services provided; the scope of activities may include: considerations of ownership, location and use; acquisition and disposal; valuation and long-term asset management; occupancy costs and space management; information systems and investigating alternative options, etc. In the main, two main categories of roles are discernible from the range of activities associated with REAM:

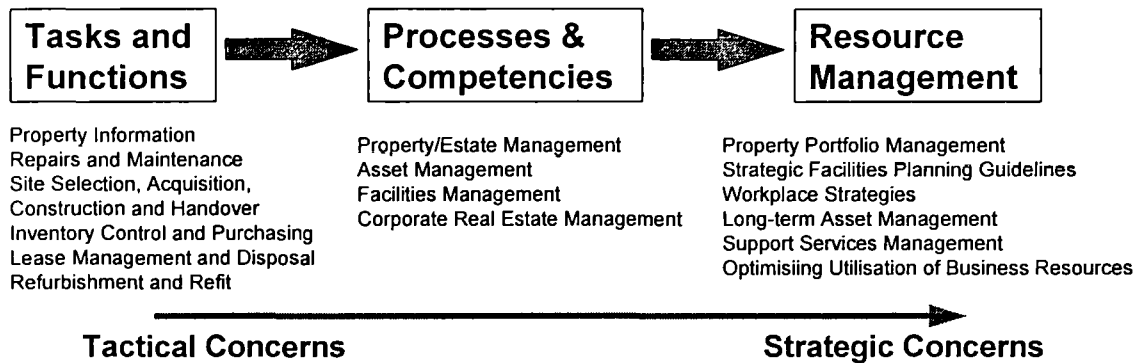
1. activities related to the role of providing the appropriate buildings (i.e the corporate operational asset base measured in terms of *functional space*) required by the organisation to carry out its core business activities, and
2. activities related to the role of the ongoing management and servicing of buildings in use (i.e. the workplace environment).

The first facet is essentially concerned with the role of “*facilities provision*”, while the second facet is concerned with the role of “*facilities support services management*” of property-related support services. Successful resource management, should consider these two facets as one overall issue.

Another observation that has become apparent is the clear shifts in focus as the area of real estate asset management gradually matures. It is already discernible from the review of definitions above that the initial preoccupation with *tasks and functions* have given way to an emphasis on *processes and their management*; with the latest phase in the last five years or so, on *resource*

integration with the emphasis on provision of enabling working environment where the issues of people, processes and property are elements of the same problem seeking a common solution. Figure 2.5 illustrates this development.

Figure 2.5: Changing Focus in Real Estate Asset Management



Source: Then S.S. (1996)

2.2 Historical overview of the state of operational real asset management practice

All businesses require real estate or facilities to operate from. This section of the literature review is aimed at providing a historical overview of the role of operational assets in organisations which either owned or leased, or both; and require them to support their core activities. In particular, published empirical evidence of the perceptions of senior management on how they view the role of their operational infrastructure and how their attitudes impact on the management practice of the operational assets will be covered. Because research in this area of study is relatively new, an early decision was made to extend the coverage of literature search to cover similar studies undertaken in other countries in Europe, North America and Australia. This section of the survey will be structured to present two aspects: (1) evidence supporting the under management of the corporate operational property assets, and (2) evidence supporting the growing recognition of operational property as a business resource.

2.2.1 Evidence of under management of corporate asset base

Zeckhauser and Silverman(1981) in their influential study on “Corporate Real Estate Management in the United States”, were the first to raise the corporate awareness of serious under-management of the real estate assets:

*“corporate real estate, the buildings and land owned by companies that are not primarily in the real estate business, typically accounts for 25 percent or more of a firm’s total asset. Despite this enormous value, it remains an undermanaged asset. Just 40 percent of American firms clearly and consistently evaluate the performance of real estate. The method of evaluation, or lack of it, is unrelated to a company’s structure, and is probably explained by the mixture of personalities, strategies, and management styles”.*³⁷

A similar trend was reported in another study at The Massachusetts Institute of Technology (MIT) by Veale(1987) on a survey of real estate executives in the US:

*“One of the most significant conclusions of the MIT study is that many corporate real estate managers do not have adequate information on their real estate assets. The lack of informed decision making and awareness characterized nearly every dimension of corporate real estate management examined. In general, under-management is a better descriptor of the situation than mismanagement. These assets are not necessarily managed poorly but are, in many cases, not managed to their full potential.”*³⁸

Although there was a gap of six years between the Harvard and MIT surveys, there appeared to be little change in the fact that corporate real estate assets are generally under-managed, and as a result, sub-optimisation in the utilisation of the real estate resource still appeared to be prevalent in many organisations. The similarity of the survey results confirmed the conclusions of each. However, they raised an important question: Why do organisations persistently under-managed its real estate assets?

Another survey study by Gale and Case(1987)³⁹ covering thirty selected large firms in fifteen industries, also revealed that many corporate managers continue the neglect found in the earlier studies.

³⁷ Zeckhauser, S. & Silverman, R. (1981) “Corporate Real Estate Asset Management in the United States”. *Harvard Real Estate, Inc.* pp. iv.

³⁸ “ Veale, P. R.(1989) “Managing corporate real estate assets: current executive attitudes and prospects for an emergent management discipline” *Journal of Real Estate Research* .1989, Vol.4 No.3, pp. 16.

³⁹ Gale, J. & Case, F.(1989) “A study of Corporate Real Estate Resource Management”. *Journal of Real Estate Research* .1989, Vol.4 No.3, pp. 23-34..

In his book, Bon (1989) cited three reasons to explain why most organisations do not perceive themselves as in the real estate business and as a consequent, real property is by and large under-managed:⁴⁰

1. the relationship between cost and value of real property is not fully recognised by senior management;
2. at any given time-interval, the multitude of activities regarding the utilisation and operation of real property typically require significantly greater resources than do new investments projects; and
3. the communication between top-level executives and real property managers is generally poor.

More recently, the Arthur Anderson Survey(1993)⁴¹ provided more insight into the views of senior management and corporate real estate executives on the role of the corporate real estate resource. The study was aimed at two principal groups of executives; senior managers and corporate real estate(CRE) executives. The objectives of the study are to provide a broad assessment of current and future management attitudes, practices and forecast for companies, and the implications they have for the professionals who manage and support the corporate real estate process.

One striking findings from the Arthur Anderson survey is that senior management and corporate real estate executives appear to have different views about what the corporate real estate function should be doing, as well as the impact these efforts can have on the bottom line.

Many business executives are not aware of the potential impact of the CRE function and the degree to which CRE management can contribute towards business goals. Senior business managers do not generally see CRE as central. They view profitability, quality, productivity, and market share as the most important goals. They do not generally recognise CRE's impact on these

⁴⁰ Bon, R. (1989) *Building as an economic process - an introduction to building economics*. Prentice Hall. pp.115-116.

⁴¹ Arthur Anderson (1993), "Real Estate in the Corporation: The bottom line from senior management" (1993). pp.7-8.

goals and highlight customer sales, marketing, and finance functions as the primary ones. Most significantly for the CRE executives:

"Corporate real estate is not generally viewed as making a significant contribution to competitive advantage. Nor do many senior managers perceive a need to link strategic real estate planning and business planning."⁴²

On their part, CRE activities are not generally integrated into the business structure. In particular CRE departments cite a lack of collaboration with the Board, finance and human resources departments. This lack of access to senior management is regarded by CRE executives as an area of concern which can only be improved with filling the current skills and experience gaps that is prevalent in CRE departments. On the other hand, information is key to senior management's understanding of real estate. Yet many CRE departments indicate they do not produce regular reports on real estate performance to senior management.

In the main, the Arthur Anderson(1993) survey clearly shows that the lack of involvement by CRE executives in business planning and senior management's lack of understanding of real estate are highlighted as important impediments to improving real estate performance.

Numerous other writers reported a similar trend of low perception and low priority given to the real estate and facilities functions by senior management of many companies. reported. For examples, McDermott (1994),⁴³ Apgar IV(1995),⁴⁴ and Hamer(1996).⁴⁵

The above review has been confined to literature from North America, principally the USA. It was not until the mid 1980s that operational property came under considerations in the United Kingdom where the initial focus was mainly on

⁴² Arthur Anderson (1993), *"Real Estate in the Corporation: The bottom line from senior management"* (1993). pp.7.

⁴³ McDermott,K.(1994), "Real Estate - the neglected asset", *Facilities Design & Management*, March/April 1994. pp.26-29.

⁴⁴ Apgar,IV,M.(1995) "Managing Real Estate to Build Value", *Harvard Business Review*, Nov-Dec. pp.162-179.

⁴⁵ Hamer,J. (1996) "The Crunch of Major Trends ... and how to benefit from them". *Facilities Management*. Vol.3 No6, pp.4-6.

public sector organisations including the National Health Service⁴⁶ and local⁴⁷ and central government.⁴⁸

Table 2.2 and 2.3 list the major surveys conducted on various management aspects of operational property in the private sector within the last ten years the UK and Europe, and North America. A tabulated summaries of the main findings of the major reports are included in Appendix A.

The first study in the United Kingdom to consider how operational property are managed by the private sector organisations was the report by Avis, Gibson and Watts (1989), "Managing Operational Property Assets"⁴⁹. Two years later, Debenham Tewson Research (1992)⁵⁰ conducted a similar study which examined the importance of property to major non-property companies in the UK. This was followed by a study by Graham Bannock and Partners Ltd (1994)⁵¹ to investigate the views held of property assets by finance directors of large UK public companies and how these assets are managed in practice.

After a gap of six years, Avis and Gibson (1995)⁵² conducted a follow-up study to their earlier research to establish the extent, complexity and dynamic nature of the real estate resource and how it was managed. It is worth noting that these two studies by Avis and Gibson, provided an opportunity to compare changes over the six year interval, much in parallel to the Harvard's study(1981) and MIT's study(1987). In additional, there was also the Arthur Anderson's report(1995)⁵³ which provided a European dimension to companies' view of operational property and their management.

⁴⁶ Department of Health and Social Security (1982) *"Underused and Surplus Property in the National Health Service"*, HMSO. London.

⁴⁷ Audit Commission (1988) *"Local Authority Property - A Management Overview"* HMSO London.

⁴⁸ Cabinet Office Efficiency Unit (1994) *"Review of the Management of the Government's Civil Estate"*.

⁴⁹ Avis, M., Gibson, V., & Watts, J. (1989) *"Managing Operational Property Assets"*. GTI

⁵⁰ Debenham Tewson Research. (1992) *"The Role of Property - managing cost and releasing value"*.

⁵¹ Graham Bannock & Partners Ltd., (1994) *"Property in the Boardroom - a new perspective"*. Hillier Parker.

⁵² Avis, M., Gibson, V.(1995), *"Real Estate Resource Management,"* GTI

⁵³ Arthur Anderson (1995), *"Wasted assets? A survey of corporate real estate in Europe"*. Arthur Anderson.

Table 2.2: Major Survey Reports on Management of Operational Property - UK & Europe

Source and Title of Report	Survey Sample	Main Survey Findings
U.K. & Europe Surveys		
Managing Operational Property Assets. Avis, M., Gibson, V., & Watts, J. GTI. (1989).	230 organisations (28.75% response rate, evenly split between private and public sector);	The overall picture was one of reactive then proactive property management. There was clear evidence that property was only seriously considered by organisations when they were under severe profit or cost constraints.
The Role of Property - managing cost and releasing value. Debenham Tewson Research. (1992)	Based on interviews 100 major companies.	Only on rare occasions does property receive explicit treatment in corporate plans. More often than not property is viewed as incidental, as an asset which requires little management, generates cost but has little or no value.
Property Management Performance Monitoring. Oxford Brooks University & University of Reading. GTI.. (1993)	In-depth case study of the property monitoring procedures of three large organisations	The report cautions that the whole area of monitoring organisational property assets is relatively new and recent research efforts is necessarily a first step towards understanding best practice and therefore, not definitive.
The Property Cycle - The management issue. Ernst & Young. (1993)	Combination of telephone and interviews. Senior executive of 61 organisations comprising of three types of organisations: property funders, developers and a range of occupiers of commercial property	Though nearly half of the occupier respondents considered the cyclical progression a major shortcoming of the property market, few had a property strategy for their operations that amounted to more than "we'll find the space when we need it".
Property in the Board Room - a new perspective. Graham Bannock & Partners Ltd., Commissioned by Hillier Parker (1994)	Personal interviews with 12 finance directors and other directors of UK companies from the private sector. A postal survey of 111 property managers.	Apart from companies whose core business are directly tied to the property assets, the perception of the role of property is seen as a cost of business rather than a business resource that requires strategic attention by senior management.
Real Estate Resource Management Avis, M., Gibson, V. (1995) . GTI.	155 organisations (>25% response rate, evenly split between private and public sector);	The findings establish that the real estate resource for organisations in the study is extensive, complex and dynamic. However, real estate still lags behind other key resource areas in terms of attention given and performance achieved.
Shaping the workplace for profit. Gallup. Commissioned by Workplace Management. (1996)	200 Financial Directors and Managing Directors/CEOs across a broad spectrum of business.	Given the general acknowledged link between the workplace environment, employee satisfaction and profitability, senior managers do appear to be missing an opportunity to manage the working environment for competitive advantage.
The Milliken Report: Space Futures. The Henley Centre. Commissioned by Milliken Carpet. (1996)	Telephone survey of 200 facilities managers and 50 architects/designers, plus 10 in-depth interviews.	Space management must play a bigger part in overall business development, becoming a strategic rather than an operational issue.
Wasted Assets? A survey of corporate real estate in Europe. Arthur Anderson(1995)	20 companies in 8 European countries in three sectors: financial services, manufacturing and retail/ distribution. Base on interviews with senior property executives.	Many companies are missing opportunities to reduce cost and enhance performance because they give limited attention to managing their property assets.

Table 2.3: Main Survey Reports on Management Aspects of Operational Property - North America

Source and Title of Report	Survey Sample	Main Survey Findings
North American Surveys		
Corporate Real Estate Management in the United States. Zeckhauser, S. & Silverman, R., Harvard Real Estates Inc. (1981)	300 US companies, 22% response rate. Multi-sector survey.	Despite their enormous value, corporate real estate assets are under-managed.
Managing Corporate Real Estate Assets: A survey of US real estate executives. Veale, P.R., Massachusetts Institute of Technology. (1987)	284 organisations not primarily in the real estate business, 15% response rate.	The under-management of corporate real estate assets are hampered by lack of adequate information on the real estate portfolio and senior management regarding real estate as a cost rather than as a resource.
Real Estate in the Corporation: The bottom line from senior management" Arthur Anderson. (1993).	726 US & Canada companies, 6.2 % response rate; plus 50 interviews. Multi-sector survey	Clear differences in the way senior management and corporate real estate (CRE) executives regard the CRE function.
Strategic Management of the Fifth Resource: Corporate Real Estate. Report of Phase One CRE 2000 - Executive Summary Joroff, M., Louargand, M., Lambert, S., Becker, F. (1993). The Industrial Development Research Council (IDRF).	The CRE 2000 research project was partly funded by The Industrial Development Research Council (IDRC) and industrial sponsorships for major Fortune 500 corporations in North America. Input into the project was provided by a broad-based group known as the CRE 2000 Commission whose membership is select, yet diverse, and represents major corporate real estate leaders as well as service providers and public sectors leaders.	This first CRE 2000 report examines the emerging role of the real estate resource in large corporations by: <ul style="list-style-type: none"> • interpreting the impact of corporate change on the requirements for real estate strategies; and • identifying innovative strategies that corporate real estate leaders are using to organise in order to align the real estate resource to fulfill corporate objectives. The report produced a five-stage corporate real estate developmental descriptive model.
Corporate Real Estate 2000. Phase Two CRE 2000 Reports: <ol style="list-style-type: none"> 1. Reinventing the Workplace by Joroff, M. & Becker, F. 2. Toolkit: Reinventing the Workplace by Joroff, M., Becker, F. & Quinn, K. 3. Generating High Performance - Corporate Real Estate Service by Lambert, S., Poteete, J. & Waltch, A. 4. Decision Support by Cameron, I. & Duckworth, S. 5. Managing the Reinvented Workplace by Sims, W., & Joroff, M. The Industrial Development Research Council (IDRF).	As above	Phase Two of the CRE 2000 Research produced five(5) separate reports which focus on disseminating 'best practice' tools. The findings are based on a series of case studies and workshops about state-of-the-art developments in the areas of corporate real estate management.

What is significant is that the findings from all the above cited reports highlighted a consistent lack of awareness and understanding by most senior managers of the role of property and the contribution this resource could make to their organisation's success. Throughout the last decade there appears to have been some improvements as demonstrated by the studies by Avis and Gibson(1995), but they still remain a significant proportion of companies (up to 40%) which do not regard their operational assets as a significant resource that needs to be considered at a strategic level in their corporate business plans. The situation is aptly summarised as follows:

"Many organisations are not clear as to the role of property within their overall structure and as a result the professional team, in-house or external, are often expected to work without a clear and unambiguous brief, and their work is not always integrated into the activities of the organisation as a whole."

..... There still remains, however, a large number that continue to look at cost only and not at either the quality of property management and advice, or the role of property in relation to the organisation's activities. This area requires more independent analysis and research"⁵⁴

2.2.2 Growing Recognition of Property as a Business Resource

A common theme that emerged from the recommendations of the studies reviewed in the last section is that there is a growing need to raise the awareness of the contributory role of the operational property assets at senior management levels of companies. There is a common consensus among senior property/facilities executives that the best way of raising corporate management awareness is to sell the role of operational property as a business resource, regarded in the similar light, as human resource and technology are now regarded as key business resources.

In presenting their conclusions to their study, Zeckhauser and Silverman (1981) labeled the corporate real estate as "the undermanaged asset", and predicted that:

the 1980s will certainly witness a change in attitude towards corporate real estate among senior executives, who will shift their emphasis from facilities management to asset management. Their motivation for change will be the need for investment capital and a growing awareness among board members, external financial analysts, and stockholders for the true asset value of corporate real estate. The successful executive will have to manage real property assets as effectively as any other corporate asset. Top

⁵⁴ Avis, M. et al (1993) "Property Management Performance Monitoring". GTI. pp.87.

management performance will come to depend in no small part on real estate performance.⁵⁵

To improve the current situation, they suggested that the company structure and strategy may dictate either operating real estate as a *cost centre* or a *profit centre*, but should attempt to reflect the true cost of occupancy by having an adequate property management information system. They recommended that at a minimum, companies must carefully track the performance of their real estate assets, and it is vital to know what the actual costs associated with owning, leasing, and operating real estate. In a follow-on article in the Harvard Business Review, based on the same study, Zeckhauser and Silverman (1983)⁵⁶ identified seven steps that a company can take to make better use of their real estate assets:

- Determine property assets,
- Set clear, achievable goals,
- Select appropriate activities,
- Reorganise the real estate group,
- Clarify responsibilities
- Choose consultants carefully, and
- Set up real estate information systems.

In aligning the role of property assets to business, they stressed that every corporation should review and adjust its real estate policies to reconcile operating activities with contemporary real estate values and opportunities.

Veale's(1987) study at MIT, noting that the management of an organisation's physical resources - its buildings and land - receives little attention within business schools at the time, called for a real need to address the persistent under-management of the corporate real estate assets by recognising corporate real estate management as *an emerging discipline*.

*"Corporate real estate management must move towards developing a strategic approach involving principles and practices of general management to develop a proactive, comprehensive, and portfolio-wide decision-making process"*⁵⁷

⁵⁵ Zeckhauser, S. & Silverman, R. (1981), op cit. pp. 14-16.

⁵⁶ Zeckhauser, S. & Silverman, R. (1981), "Rediscover your company's real estate", *Harvard Business Review*, pp.111-117.

⁵⁷ Veale, P. R., "Managing corporate real estate assets: current executive attitudes and prospects for an emergent management discipline." *Journal of Real Estate Research* .1989, Vol.4 No.3, pp. 1.

Companies need to pursue strategic real estate response in concert with the unique missions of each firm and in concert with existing corporate space needs and existing real estate market opportunities.”⁵⁸

The Arthur Anderson(1993) survey findings, whilst confirming a communication gap between senior management and CRE executives, however, suggests that:

“a wide horizon of opportunities for many corporations to benefit from managing real estate as a financial asset with a substantial impact on economic performance. These opportunities are of crucial importance as many companies struggle to reduce costs, increase market share and make better use of capital.”⁵⁹

The survey also cited *‘meeting the needs of the business units’* as the most important CRE activity to corporate success and profitability. This concern is reflected by senior management’s emphasis on the need for efficient and innovative work environments, with flexibility for expansion and contraction; and the growing pressure to reduce business operating costs.

In responding to the above senior management’s demand, the study strongly recommends that CRE departments will need to make substantial changes to align the real estate function with the operations of the business units.

“CRE executives will need to retool the CRE function to managers who are capable of identifying ways in which real estate actions can contribute to a company’s operating efficiency. These include:

- *Better understanding of business units operations and ways in which real estate decisions can enhance profitability.*
- *Developing and evaluating real estate actions based on returns on assets rather than focusing exclusively on costs.*
- *Creating information systems that not only support better decision-making by the CRE group, but also with how the company measures performance in its primary area of business.”⁶⁰*

The clear message emerging from this study is that CRE executives must acknowledge that operational property assets are a business resource. In order to response to changing business practices, the range and scope of CRE activities necessarily extent beyond merely providing technical solutions to problems arising, but to ensure that the corporate real estate assets effectiveness is maximised and occupancy costs minimised.

⁵⁸ Veale, P. R.,(1987), op cit. pp.19.

⁵⁹ Arthur Anderson (1993), *“Real Estate in the Corporation: The bottom line from senior management”* (1993). pp.7.

⁶⁰ Arthur Anderson (1993), op cit. pp.34.

A similar trend can be discerned in the U.K. from the two studies by Avis and Gibson (1989, 1995). The growing awareness of property as an organisational resource between the intervening six years can be seen in part by the changing economic context under which organisations are operating. The 1989 report was research and published as the property market reached a peak. The economy was buoyant and demand for property, fueled by private sector growth, outstripped supply. Under an economic climate of demand chasing supply, property became a significant asset and costly commodity for all types of organisations. The start of the 1990 saw a downturn in the property market which has largely continued through to the present. Rental and capital values of property, both commercial and residential, have declined by some 40% from the 1989 peak.

The change in the economic and property cycle can thus be summarised as having moved from a situation in 1989 where the main concern was with tracking asset values and ensuring that the property value was fully exploited, to one in 1996 where minimising property costs and maximising its utility are now the main focus. Two of the major problems for property investors and occupiers caused by the economic downturn which are particularly evident in the office sector are:

- a significant vacancies in poor quality space; and
- a considerable amount of over-renting apparent in leases concluded in the late 1980s and early 1990s.

For many major corporation who hold substantial operational property holdings, the above twin pressures have had the impact of causing senior managers to start to scrutinise this, hitherto, neglected resource. At the strategic level, this has led to the need to answer fundamental questions like: what is the nature, size, location and occupancy pattern of the current corporate real estate portfolio ? It is the failure to answer this fundamental question satisfactorily that has prompted many organisations to realise the importance of having a proper inventory of their existing real estate portfolio as a prerequisite to identifying a clear operational property strategy. There are evidence from the literature surveyed that support a growing recognition of need to consider the corporate

property asset as a strategic, and sometimes crucial, resource for the continued well being of the company.⁶¹ The development of strategic facilities planning will be considered in more detailed at a later session.

The drive to reduce operating costs has, in recent years, shifted from the initial focus on reducing overall staff numbers (headcount reduction) to initiatives aimed at reducing occupancy costs. The drive to reduce occupancy costs has resulted in management scrutiny of two main aspects of operational property management - the amount of space occupied by business units and the utilisation of existing spaces. These recent concerns are reflected in two recent reports which focused particular attention on the future shape of the workspace and the strategic importance of effective space management to the overall business success.

The Gallup Report "Shaping the Workplace for Profit" (1996),⁶² stresses that every business now has to be as flexible as possible, needs to reduce costs and maximise productivity, and the importance for organisations to establish clear premises-related strategy that takes into consideration new working practices and exploitation of new technologies.

The Milliken Report "Space Futures" (1996)⁶³, also emphasises the need for organisation to view space management as a strategic issue that is integral to the corporate agenda.

The above reports reinforce an important shift in the way operational property are being viewed by some of the more enlightened organisations; that the unit of measure of real estate asset utilisation is *space* - the type, quality of serviced space in relation to the tasks they are supporting. A similar theme is also carried in a number of North American reports.

One of the most influential publications in the last five years that helped to raise the importance of effective management of the corporate real estate asset in North America is *The Corporate Real Estate 2000 (CRE 2000) Phase One*

⁶¹ Kimmel, P. (1993); Hornik, J. (1993); Nutt, B. (1993); Then, S.S. (1994); Perts, S. (1995);

⁶² Gallup. (1996) "Shaping the Workplace for Profit." Commissioned by Workplace Management.

⁶³ The Henley Centre (1996) "The Milliken Report: Space Futures." Commissioned by Milliken Carpet.

Report. The CRE 2000 project had two goals: (1) to develop strategies for aligning corporate real estate management with overall corporate and business unit objectives, and (2) to develop the knowledge and tools to do it. The output of the research project was published in two phases. A brief review of the key findings of the reports is described here.

The CRE 2000 Phase One Report⁶⁴ addressed four major areas: organisation, finance, information and workplace strategies. The investigation produced a five-stage evolutionary model through which corporate real estate units and service providers can be viewed. Each stage brings new pressures to develop innovative workplace strategies; new responsibilities and skills that are added to those mastered at earlier stages, and improve cash flow. Each stage also defines a real estate unit's current capabilities, the direction it can evolve next, depending on corporate needs, and how to measure its financial performance. Figure 2.6 illustrates the competency shifts from the *Taskmaster* stage to the *Business Strategies* stage.

In the five-stage evolution from *Taskmaster* to *Business Strategist*, the corporate real estate unit must interact with an increasingly complex array of stakeholders. Starting with the allocation of a fixed resource base at Stage 1, the model evolves to the point where the real estate function leverages existing resources to support the corporation's strategic intent. A more detailed description of the features of the 5-stage model is provided in Table 2.4.

The significance of the CRE 2000 Phase One five-stage evolutionary model lies in its portrayal of a framework for creating a strategy for change in the management of operational real estate assets and facilities services. In mapping the competence shifts necessary as the real estate unit or department develops in scope and in maturity in line with the growth of the corporation, the model provides a developmental route for senior management and real estate executives to consider the potential role and contribution of operational assets to the core business and how the resource will be procured and managed.

⁶⁴ Joroff, M., Louargand, M., Lambert, S. & Becker, F. (1993) *Strategic Management of the Fifth Resource: Corporate Real Estate. Report of the Phase One - Corporate Real Estate 2000*. The Industrial Development Research Foundation (IDRF).

**Figure 2.6: The CRE 2000 Five-stage Evolutionary Model
for Corporate Real Estate Development**



IDRF - Corporate Real Estate 2000 - phase one report (1993), pp.27

It is worth noting that the Phase One report has labeled 'real estate' as the potential *fifth corporate resource*, after the other four major corporate resources of *capital, people, technology* and *information*. It is also significant that the report choose to define corporate 'real estate' as comprising of '*land, building and work environments*'.⁶⁵ The inclusion of the *work environment* adds a wider dimension to the scope of real estate beyond the level of real estate portfolio, by including issues relating to utilisation of space within the corporate workplace environment. This view reinforces the author's proposition that the issue of *facilities provision* and *facilities service management* cannot be considered in isolation since they are in fact, one whole issue, when a corporate view of the resource is taken.

Another important aspect of operational assets which demands they should be considered as a strategic resource is their potential impact on the financial performance of the company that owns or uses the assets.

⁶⁵ Joroff, M., Louargand, M., Lambert, S. & Becker, F. (1993) op cit. Preface page.

Table 2.4: Close-ups of the Five Stages⁶⁶

Stage	Features
Stage 1: <i>The Taskmaster</i>	The primary goal is to provide facilities that support normal business activities. Senior management is minimally involved except for periodic reviews of corporate real estate's performance. <i>Stage 1 requires strong technical abilities.</i>
Stage 2: <i>The Controller</i>	This stage involves enhancing cost-effectiveness and other benefits from real estate assets: efficient space at the lowest possible cost, and use of basic inventory and cost control methods used throughout the corporation. Senior management is more directive. <i>Stage 2 adds the requirements of greater analytical skills, especially accounting.</i>
Stage 3: <i>The Dealmaker</i>	'Dealmaker' refers to solving problems for business segments. This stage creates more financial and organisational value in company assets, structuring innovative projects to lower costs and generate income. This requires more consistent and effective communications with other units. <i>Stage 3 adds the requirements of strong project-related negotiation ability and imaginative problem-solving skills.</i>
Stage 4: <i>The "Intrapreneur"</i>	This stage integrates corporate real estate with both line and executive management in strategic planning activities for business units, responding to competitors' occupancy strategies. Business segments become real estate customers. They offer market rents for space. Like another other estate business, the real estate department competes to serve business units. Thus, the focus shifts from the building and facilities to the portfolio, and embraces both the unit's and corporation's missions and planning processes. The real estate function coordinates with other corporate entities such as human resources, information services, sales and marketing, as well as employees and external customers. <i>Stage 4 adds the requirements of management and financial expertise, along with technical and people skills.</i>
Stage 5: <i>Business Strategist</i>	In this stage, real estate executives adopt the viewpoint of senior executives. Their mission is to support a diverse global workforce in a business environment characterised by rapid, unprecedented change. At this stage, the real estate department response to trends that influence the corporation's competitive position and add value by anticipating business trends, monitoring and measuring their impact, and developing company-wide occupancy strategies with business units to enhance productivity and integrate space requirements. <i>Stage 5 require a global view of the corporation's initiatives, attitudes that welcome change as the agent of progress, and the ability to encourage innovation in the work of line managers.</i>

Nourse(1990) emphasises the way that real estate is managed can affect corporate strategy and measures of performance such as shareholder value, the debt/equity ratio, and market share which are ultimately reflected in the company's balance sheet, income statement and their credit rating. Corporate real estate asset management is the acquisition, management, and redeployment of real property to implement user objectives and in the process increase the value of the main business or businesses of the corporation.⁶⁷

⁶⁶ Joroff,M., Louargand,M., Lambert,S. & Becker,F. (1993) "Strategic Management of the Fifth Resource: Corporate Real Estate. Report of the Phase One - Corporate Real Estate 2000. Executive Summary. The Industrial Development Research Foundation (IDRF). Abstracted from pp.10-11.

⁶⁷ Nourse, H.O. (1990), "Corporate Real Estate Asset Management".Prentice-Hall Inc. pp.1-2.

In a competitive, financial and capital (and increasingly global) market where shareholders' value reigns supreme, takeovers which are propelled by the desire to drive out inefficiencies are unlikely to lose favour. In contrast, companies with an indifferent record of managing assets will always be fair game for predators from outside their industry. Since various research from both sides of the Atlantic Ocean⁶⁸ indicate that the real estate assets worth of companies can typically average from 25 to 40 percent of the total corporate asset value in the market, it stands to reason that their proper management must directly affect the company's overall performance.

2.2.3 Summary

The above historical review of the state of operational real estate asset management practice in USA and UK revealed striking similarities in the attitudes held by senior management in many companies, and the problems and issues faced by real estate and facilities professionals.

It is apparent that from the survey that over the decade from the mid 1980s, there is a growing awareness of the need to 'manage' the corporate physical assets in order to optimise its utilisation and economic value. At the same time, the lack of reliable and accurate information of the corporate real estate portfolio and the low priority perception held by senior management have led to a growing acknowledgment that the interaction between senior management and operational asset management represents the weakest link between strategic business management and operational asset management.

In the main, it can be discerned from the published literature that one of the biggest impediment to a greater recognition of the role of operational property assets by senior management is the lack of formal dialogue or access to the strategic intent of the core business units. This situation that persisted and still persists in many organisations are both, a result of ignorant and apathy on the part of senior or core business managers; as well as operational asset management's inability to provide appropriate measures that demonstrate the

⁶⁸ Zeckhauser, S. & Silverman, R. (1981); Veale, P. (1989), Martin, A. et al. (1989, 1995).

crucial roles and contributions of the operational assets to the overall corporate performance.

At the same time, it is also apparent that there is a growing unease among senior management in large corporations with substantial operational property assets that the current management approach of the real estate resource must be 'retool' to provide inputs on the real estate and facilities dimensions to corporate strategic intentions in core business development plans.

The next section will review the economic rationale underlying the provision and the ongoing management of operational real estate assets as an economic resource to supporting the fulfillment of corporate business objectives.

2.3 Theoretical Overview of the Economics of Buildings

Building owners generally wish to lower costs or increase profits. To accommodate this buildings must be located, designed, engineered, constructed, managed, maintain, and operate with an eye to the economic consequences of these decisions. In other words, improving the economic efficiency and operational effectiveness of buildings is at the heart of operational real estate asset management.

Corporate decisions concerning operational requirements can impact on various stages of the life cycle of a building; from the need to create more operational space, to refurbish or upgrade an existing space or disposing of surplus requirements. Ideally, each of these building-related actions should be arrived at through economic evaluation of options. However, in reality (supported by evidence from section 2.1) very often, suboptimum decisions are the norm.

Building economics emerged as a distinct field only in the mid-1970s, induced by the so-called energy crisis. The fragmentation of the building professions, the building process, and the built environment is one of the fundamental problems of the building industry today. Building economics provides a unifying framework for the study of building as an purposeful and rational human activity.

*"Building economics is about economising the use of scarce resources throughout the life cycle of a building from conception to demolition. This includes human resources needed for building management. The management of building services - consisting primarily of the use of space and the amenities provided in it - represents one of the scarce resources that needs to be economised. This is an economising problem, which may be defined as that of allocating resources among competing ends over an interval of time."*⁶⁹

2.3.1 Building as an Economic Process

In the ensuing discussion on building as an economic process, the author wishes to acknowledge the pioneering writings of Bon(1989)⁷⁰ and his related work in corporate real estate management.⁷¹

Two related concepts that are of particular importance in this study are:

1. the concept of time in building economic decisions, and
2. the concept of change which necessitates a dynamic view of management of operational property.

The above dimensions are clearly described by Bon(1989) in his book:

*"... an economic understanding of time is central in building economics. Building takes time, and building life cycles span many decades. As time and change are intrinsically bound, building activity is fraught with genuine or unavoidable uncertainty. The economic agents engaged in the building process therefore learn as they act in real time. ..."*⁷²

It is the fact that buildings are at the same time, long-lived capital goods with the special feature of locational rigidity, as well as, creatures of time, and thus of change; that pose unique challenges to professional charged with their management over time.

*"Buildings undergo continual alterations as they are adapted to the needs of their owners. In turn, these needs evolve in response to continually changing economic conditions. As these changes cannot be fully foreseen, building must be designed and constructed so that they may be adapted to a wide range of conditions that may be encountered in the underlying economic process. Adaptability requires continual attention on the part of building management."*⁷³

⁶⁹ Bon, R.(1989) *"Building as an Economic Process - an introduction to building economics"* Prentice-Hall, Inc., pp.5

⁷⁰ Bon, R.(1989), op cit.

⁷¹ Bon, R. "Real Property Portfolio Management: economy, quality and time," in *Quality for Building Users Throughout the World, Proceedings of the Eleventh CIB Congress, Paris, 1993, Theme 3, Vol.2, pp. 211-221.*

⁷² Bon, R.(1989) op cit., pp. xii.

⁷³ Bon, R. (1989), op cit. pp.4.

The economics of operational property will focus on buildings in use. An economic understanding of building utilisation and operations is essential for an explanation of the building process as a whole. The ensuing review will cover current and emerging thinking of buildings as an economic resource to business by exploring the following aspects:

- understanding nature of the product,
- understanding and defining demand,
- understanding the supply market dynamics,

2.3.1.1 Buildings - nature of the product

As a product, buildings have unique permanency. They consume land, are placed fixed and have long lives, and entail high levels of capital investments. At the same time the future use of buildings cannot be forecast with certainty.

The decisions of building design are wide-ranging covering a numbers of issues:

- physical issues - space, structure and services;
- human issues - purpose, use and environment;
- financial issues - development value, capital and recurring costs; and
- aesthetic issues - overall form and appearance (image).

Nutt (1988) in his paper on "The Strategic Design of Buildings"⁷⁴, clearly highlighted the weaknesses of the traditional linear approach based on the RIBA Plan of Work in dealing with the above issues. He advocated that the traditional approach is in need of an additional and dynamic dimension - a strategic component is required. Nutt suggests that there are three basic situations for strategic design of buildings:

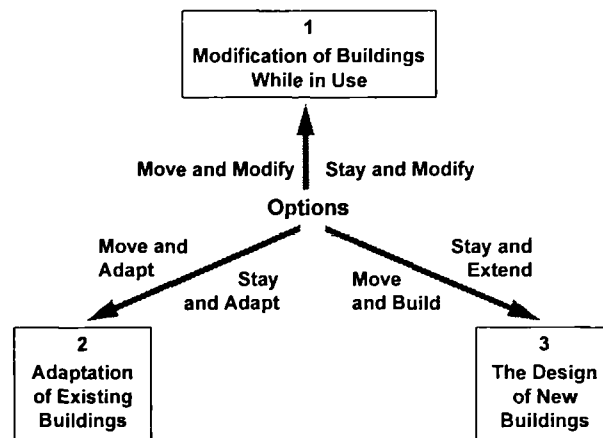
1. the modification of buildings while in use;
2. the adaptation of existing buildings; and
3. the design of new buildings.

These three circumstances create six basic options for an organization that wishes to improve its operational asset base. A key emphasis is that the three

⁷⁴ Nutt, B. (1988) "The Strategic Design of Buildings", Long Range Planning, Vol.21, No.4, pp.130-140.

circumstances are interrelated and should be considered in parallel. These are illustrated in Figure 2.7.

Figure 2.7: The Three Circumstances of Strategic (building) Design⁷⁵



Leaman (1991)⁷⁶ in attempting to answer the question: *What is a building for?* asserted the fundamentals:

"Buildings create environmental conditions indoors which are more stable and predictable than those outdoors. In so doing, they enable activities to take place that otherwise would not. A building, just like a company, should help us to do more things and to make things more abundantly and better."⁷⁷

However, in his papers he suggested that in reality, many buildings appear to not to create better conditions; they make things worse. Leaman cited three possible reasons why many buildings have not met their expectations: (i) pace of change of modern organisations, (ii) the inadequacies of the design process, and (iii) the quality of building management. He also added that (i) is a cultural problem concerned with maintaining social stability within an organisation, whereas (ii) and (iii) are often left with reacting to and coping with the consequences of (i). Leaman suggested that consideration of the above three factors - company culture, design and management - must come together and create a different way of thinking about buildings and what they are for; but at the same time acknowledging that each factor is a potential source of constraints on the others. There are evidence in recent years that supports

⁷⁵ Nutt, B. (1988) "The Strategic Design of Buildings", *Long Range Planning*, Vol.21, No.4, pp.132.

⁷⁶ Leaman, A. (1991) "What is a Building for: Part I and Part II. *Facilities*, Vol.9, No.10, pp.13-16; and Vol.9, No.11, pp.16-19.

⁷⁷ Leaman, A. (1991) "What is a Building for: Part I. *Facilities*, Vol.9, No.10, pp.13.

Leaman's view of this emerging awareness by the larger international corporations like IBM, AT&T, and others.

For example, the understanding that cultural change in organisations will, invariably, bring with it implications for the building stock. Hierarchical forms of organisation, which seemed best suited to production-based systems, are in part giving way to flatter lateral structures, seemingly better suited to service-led systems. This is manifested in space planning terms by project team settings in open-plan offices, replacing the corridor-and-office layout of the more traditional status-driven and hierarchical organisational set-up.

In design, in many ways buildings are like organisations. They have an implied hierarchical order which systematically constraints decision options at the lower levels. Table 2.5 illustrates the types of constraints and professional stratification operating at different levels of an office building.

Table 2.5: Types of Constraints and Professional Stratification - Office Building⁷⁸

	Types of constraints (examples)	Professional responsibility (examples)
Location	Geography, climate, local economy, natural resources, labour, social facilities	Planner, developer, organisation executives
Site	Micro-climate, transport, natural resources, landscaping	Architect, landscape architect, surveyor
Shell	Structural load, floor plate, floor to ceiling height, landscaping	Architect, structural engineer
Services	Service load, IT integration, health standards, safety standards, comfort	Architect, mechanical engineer
Setting	Space, support equipment, interaction, communication, work functions	Facilities manager, interior designer, space planner
Workstation	Privacy, control, task performance, comfort, IT and support equipment	Facilities manager, departmental manager, individuals

Decisions at any level affect the levels beneath and act as constraints on what is possible functionally. One of the reasons why so many recent buildings do not work well is that too much constraint is inadvertently or deliberately designed into the higher levels in the hierarchy - the building fabric and the services, for instance. This often leaves the occupants at the lower levels with a greatly

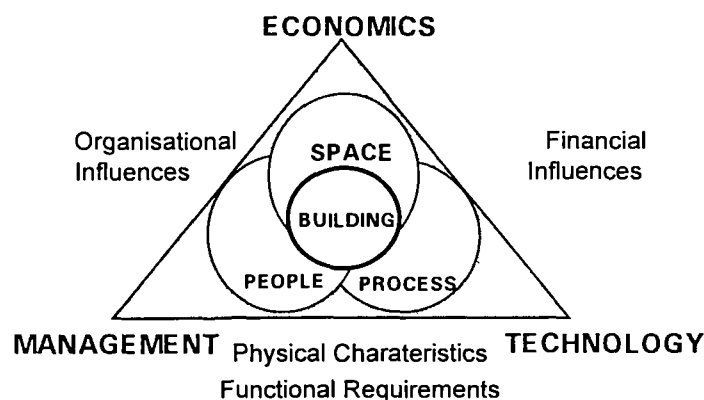
⁷⁸ Leaman, A. (1991) "What is a Building for: Part I. *Facilities*, Vol.9, No.10, pp.15-16.

reduced ability to utilise the spaces where they work to full effect.

The absence of vertical integration in the design process also contributes to this problem with constraints. The stratification of the professions at various building levels does not necessarily leads to an optimal design outcome. For example, it is possible that decisions (on the shell design, for instance) have critical effects on performance at other building levels, without designers fully understanding how or why.

There is an increasing awareness by business organisations that buildings are necessary not for their own sake; they are necessary as a supporting resource to provide *functional spaces* to house *the business processes* and to provide appropriate workplace for the *people* (users) within the organisation. Figure 2.8 illustrates the role of building in an organisational context.

Figure 2.8: Role of Building⁷⁹



As a supporting corporate physical asset, whether owned or leased, buildings attract liabilities if not properly managed. Prudent asset management is therefore a necessary requirement in order to ensure optimum utilisation of the resource; to sustain its continued functional suitability, and to protect or even enhance the built asset's intrinsic worth. In this respect, the economics of operational asset management can be viewed from several perspectives; in terms of its exchange (financial) value, its operational (cost) value, its organisational (utilisation) value, or a combinations of all three value variables.

⁷⁹Then,D.S.S. "People,Property and Technology - Managing the Interface", *Facilities Management*, October 1994, pp.7.

The long product-life of buildings and their locational fixity may conjure a notion of inflexibility. In reality, buildings are creatures of time, and thus of change. As a dynamic business resource, the focus on buildings in use requires ongoing management, continually adapting to provide affordable and appropriate services to their owners and users, whose needs change as economic conditions change. Figure 2.8 above, provide a clear illustration of the scope for option evaluations in meeting the dynamics of the business environment which organisations must operate within.

2.3.1.2 Buildings - defining the operational demand

For many organisations, defining the operational demand in physical and spatial terms is not necessarily an obvious process. The process of *facilities provision* is often not seen as part of the strategic business planning process. Very often the decision making processes relating to provision of operational facilities tended to gravitate towards site selection (location issues) and the building form (design and construction issues), rather than on what, and how, the functional space should be designed to support the core business processes (nature of business). While some organisations explicitly consider how a specific real estate transaction relates to their real estate strategy, the vast majority not only fail to make this consideration, they do not even have a formal real estate strategy. A primary reason most businesses do not have a formal real estate strategy is that the real estate strategies that organisations might pursue have not been explicitly articulated. Consequently, most businesses proceed implicitly concerning their real estate requirements, inevitably miscalculating and failing to consider the appropriateness of a specific real estate transaction in the context of the organisation's real estate strategy. More seriously, lacking consensus about what the corporate real estate strategy is, such organisations pursue transactions without a strategic context, and consequently risk taking real estate actions that are inappropriate to the organisation's overall business strategy.

Surveys of corporate managers (considered in section 2.1 above and summarised in Appendix 1) have revealed a curious ignorance and lack of interest in relating their operational property assets to the overall strategies guiding their business.

However, there are increasing evidence (considered in section 2.2 above) that there is a growing awareness of the need to consider 'fitness for purpose' at a strategic level. This emerging recognition has been forced upon many organisations as a result global competition. One consequent in real estate asset management is the need to continuously align the organisation's physical asset base to the corporate strategy of the organisation. In recent years, this has given rise to the development of what is commonly termed as 'strategic facilities planning' - the emphasis being on aligning the corporate real estate asset base to the strategic intent of the organisation by a systematic evaluation of anticipated operational space demand, the key facilities attributes and requirements based on the business operational needs. The acceptance of the need to strategically plan for facilities provision is crucial in bridging the much needed dialogue between the key stakeholders involved in the strategic facilities planning process - business units managers who initiates the demand cycle, and the property/facilities departments or divisions which are charged with the facilities' delivery and ongoing management of the resultant functional space. The development of strategic facilities planning will be considered at a later section.

The theoretical backdrop that explains the economics of buildings provision and their management over time in an organisational context has been offered by Bon (1989) when he argued that

*"the conventional capital theory tends to overemphasize the importance of decisions concerning new investment. The focus needs to shift to capital utilisation and operation. An approach that renders the entire domain of real property utilisation and operation comprehensible and manageable in therefore of great potential value to various types of organisations."*⁸⁰

More significantly, Bon (1987) was one of the first to advocate that the life-cycle costing methodology (based on standard discounting principles) should be extended to monitor buildings in use at a portfolio (entire building stock) level in order to provide economic options to owners and/or users throughout the building life cycle.

⁸⁰ Bon, R.(1989) "Real Property Portfolio Management: economy, quality and time." in *Quality for Building Users throughout the World, Proceedings of the 11th CIB Congress, Paris, 19-23 June, Theme 3, Vol2, 1989, pp.213-214.*

In advocating an urgent need for research in what he termed as “Real Property Portfolio Management”⁸¹ (RPPM), Bon argued that one of the causes of real property undermanagement is that those who manage do not know in sufficient detail what is going on at the bottom of the hierarchy. RPPM focuses on buildings and land in use, but it also concerns the acquisition and disposal of properties, together with financing strategies associated with these activities - such as whether to own or lease particular pieces of property. In order to improve RPPM, a feedback loop must first exist between the performance of real property and managerial action, that is, between the demand for and supply of building-related services. Bon suggested the use of *building performance indicators*⁸² as measures on both the demand side and supply side. However, at the same time, he cautioned that the role of building performance indicators is to *guide* managerial action, and that neither the definition nor the measurement of indicators can ever be perfect; the indicators can at best *indicate* where the managers’ attention needs to be directed. “A systematic watch of building performance indicators offers many opportunities for discovery and learning” aimed at “incremental improvement”⁸³. The focus being on the provision of tools that would help monitor and change an organisation’s real property portfolio in the right direction.

In assessing operational space demand at the portfolio level, Bon advocated a space accounting and planning system that captures changes over time. “Useful space” is seen as a scarce resource at the disposal of an organisation. In this respect, space needs (that is, demand for building-related services) must be determined on the basis of a plan. At any point in time, any unit area of space used for the organisation’s operations can be in one of nine states: build,

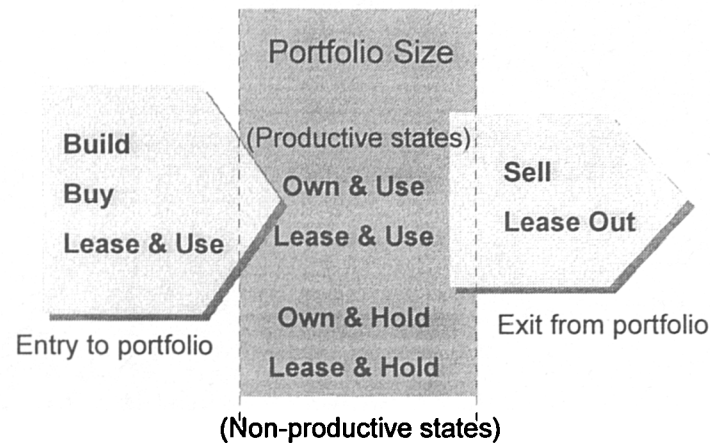
⁸¹ In his later articles, Bon adopted the term “Corporate Real Estate Management” (CREM) instead of “Real Property Portfolio Management (RPPM); for examples, *Facilities*, Vol 10 No.12, 1992. pp. 13-17 and Vol 12 No.5, 1994. pp. 9-10.

⁸² For examples of building performance indicators, refer to Bon, R. (1989) op cit. pp.214 and Bon.R., et al. “Property Performance Management: from theory to management practice”, *Facilities*, Vol.12 No.12. 1994 pp.18-24.

⁸³ Bon, R. (1989), “Real Property Portfolio Management: economy, quality and time.” in *Quality for Building Users throughout the World, Proceedings of the 11th CIB Congress*, Paris, 19-23 June, Theme 3, Vol.2, 1989, pp.216...

rebuild, own and hold, own and use, lease out, sell, buy, lease and use, and lease and hold.⁸⁴ (see Figure 2.9)

Figure 2.9: Determinants of Real Estate Portfolio Size⁸⁵



It may enter the portfolio via three states, “build”, “buy” and “lease and use” and it may leave the portfolio via two states, “sell” and “lease out”. These five states attract most attention from top-level executives, as they affect the portfolio size. From a vantage point of the organisation’s space use, only two states, “own and use” and “lease and use” are productive.

The space accounting system described by Bon, with its emphasis on the choice of transition paths, provides a useful tool for monitoring changes in demand over time. The stream of resources available to an organisation will determine the maximum rate at which transitions from one state to another can be made, that is the supply of building-related services over time. State transitions can also be represented along the time dimension.

The above framework provides a sound basis for evaluating the consequences of alternative scenarios for an organisation’s operational property portfolio and the resulting managerial actions aimed at matching supply to demand by aligning the real estate asset strategy to the organisation’s corporate strategy.

⁸⁴ Bon, R.(1989) op cit. pp 216

⁸⁵ Adapted from Bon, R. (1989), op cit. pp.216, Figure 2.

2.3.1.3 Buildings - management of adaptability and flexibility

At the portfolio level one of the key concerns of managing the corporate asset base is the maintenance of a continual capability to adapt to changing economic conditions, that is to ensure alignment and relevance with the corporate strategic direction. The management of adaptability and flexibility of the corporate building stock is essentially one of managing the speed of response in supply and/or disposal of the built assets. In this respect, it is essential to take a 'resource' view of entire corporate building stock when evaluating strategic options or choices.

Bon(1989) suggests that issues relating to the management of adaptability and flexibility can be viewed at three different management levels (i.e. management of - individual buildings, cluster or group of buildings, and the portfolio as a whole) as well as, from three distinct aspects (i.e. physical, organisational and financial). Table 2.6 summarises the focus of managerial attention at each level.

Table 2.6: Management of Adaptability and Flexibility⁸⁶

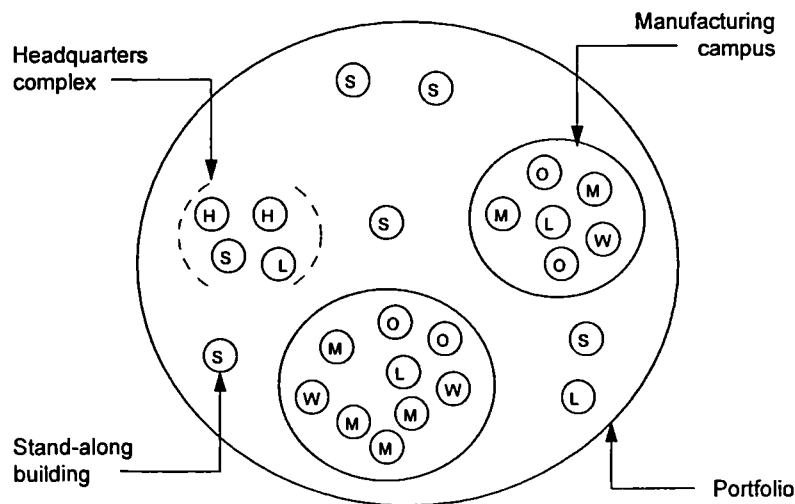
Aspects Management level	Physical Issues	Organisational Issues	Financial Issues
Building level	<ul style="list-style-type: none"> Physical forms and building attributes, e.g. column spacing, no. of floors, etc. 		
Cluster/Group level		<ul style="list-style-type: none"> Overall spatial distribution of departments / divisions within buildings and site Site layout, physical adjacencies, expansion potential 	
Portfolio level			<ul style="list-style-type: none"> appropriate mix of owned & leased facilities in response to changes in economic conditions geographical distribution of facilities

Shaded areas indicate predominant issues

⁸⁶ Abstracted from Bon, R.(1989) *Building as an Economic Process - An introduction to building economics*. Prentice Hall, pp. 122-125.

Bon (1989) aptly illustrated the concept of the portfolio structure “as a structured collection of buildings, together with the associated parcels of land, as well as land available for future development.” Figure 2.10 shows an example comprising of range of building types: manufacturing (M); manufacturing support offices (O); research laboratories (L); warehouses (W); headquarters offices (H); and sales offices (S). Each building is represented by a small circle; manufacturing campuses are denoted by larger circles; the headquarters complex is represented by a dashed circle, indicating that the buildings are geographically dispersed; and the largest circle denotes the portfolio as a whole.

Figure 2.10: Real Property Portfolio Structure⁸⁷



Duckworth(1993) provided a slightly different cognitive construct of real property portfolio analyses in terms of the *breadth* and *depth* of a real property managers’ understanding of portfolio characteristics. Breadth can be thought of as a manager’s cross-sectional understanding of the portfolio performance: the knowledge of how buildings compare across the portfolio. Depth can be thought of as a manager’s time-series understanding of the portfolio performance: the knowledge of how buildings in the portfolio perform over time. Duckworth uses this properties-time dimensions to distinguish between four *real property portfolio perspectives* (Figure 2.11).

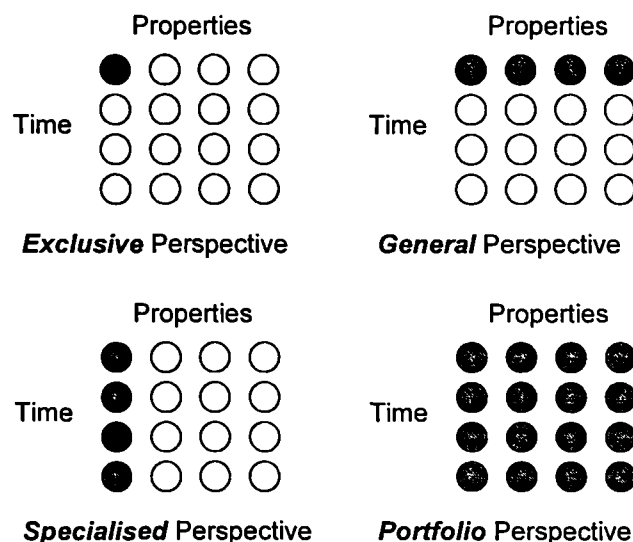
An *exclusive* perspective of portfolio characteristics focuses attention on one

⁸⁷ Bon, R.(1989) *Building as an Economic Process - An introduction to building economics*. Prentice Hall, pp. 124..

building at a time and only use current data in their analysis (i.e. property-by-property and moment-to-moment basis). A *general* perspective of portfolio characteristics also analyses current data, such as occupancy costs for the current business quarter, but in the context of other buildings in the portfolio (i.e. cross-section of portfolio and moment-to-moment basis). A *specialised* perspective of portfolio characteristics focuses attention on a particular building, but in the context of its past performance such as a study on factors that caused the increase in occupancy costs of a particular building (i.e. property-by-property and time-series basis).

The types of analyses described above only provide a limited perspectives of property portfolio characteristics. The specialised perspectives lacks sufficient breadth, the general perspective lacks sufficient depth, and the exclusive perspective is lacking both dimensions. Duckworth advocates that a thorough understanding of portfolio characteristics must be derived from a mental model that incorporates both cross-sectional and time-series analyses by continually monitoring the performance of the entire property portfolio, that is, the portfolio perspective as illustrated in Figure 2.11.

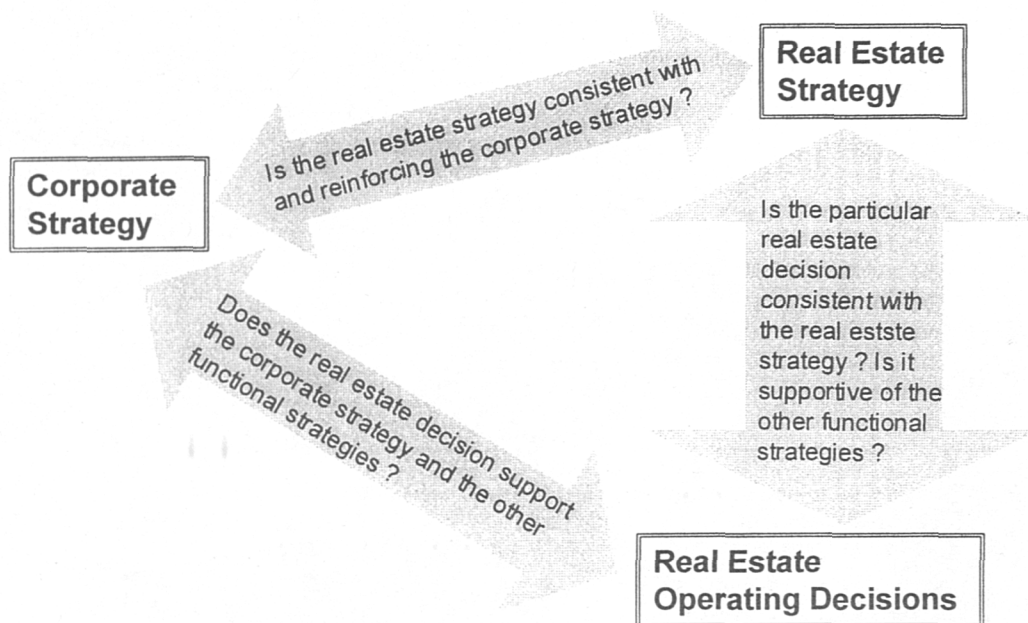
Figure 2.11: Real Property Portfolio Perspectives⁸⁸



⁸⁸ Duckworth, S.L. Realising the Strategic Dimension of Corporate Real Property through Improved Planning and Control System. *The Journal of Real Estate Research*. Vol.8. No.4. Fall 1993. pp.499.

Nourse and Roulac(1993) took a wider view of adaptability and flexibility in real estate asset management by stressing the context of real estate decisions in strategic business management. They emphasised the need for strategy alignment at two levels: (i) strategic alignment between corporate strategy and the real estate strategy, and (ii) operational alignment of real estate decisions and the real estate strategy as illustrated in Figure 2.12.

Figure 2.12: Business Real Estate Decisions in a Strategic Management Context.⁸⁹



2.3.2 Summary

The above brief review of the building as an economic process provides a rational basis for considering the role of building as a supporting resource to businesses. The review also gives an indication of the types of evaluation tools that may be needed to measure the performance of this physical resource at the corporate level.

Studies conducted by Bon (1987, 1989), Duckworth (1993), Nourse and Roulac (1993) in North America; and Nutt (1992, 1996), Bon (1994,1995), and Avis & Gibson (1989,1993,1995) in UK and Europe; are pointing towards a need for

⁸⁹ Adapted from Nourse, H.O. and Roulac, S.E. Linking Real Estate Decisions to Corporate Strategy. *The Journal of Real Estate Research*. Vol.8. No.4. Fall 1993. pp.492.

organisations to take a more strategic view of their real estate assets and to demonstrate their appropriateness (both in terms of financial and functional performance criteria) within their overall corporate strategic plans.

The next section of the literature review will focus on a broad review of management development that impact on the need to improve management effectiveness of this corporate resource - operational real estate assets.

2.4 Theoretical Overview of Management Developments affecting the Practice of Operational Real Estate Assets Management in Organisations

This objective of this section of the literature review is to pull together developments in related areas of management theory and management development that have implications on the practice of business management, in particular, on the procurement and management of business resources. The emerging theme points to an increasing realisation by the larger corporations that there is an urgent need to proactively manage their operational real estate assets in order to maintain relevance and strategic alignment with corporate strategic plans. This realisation of the need for a strategic dimension in facilities provision and the ongoing service management of the corporate operational asset base has not come about without causes and effects. Since the start of the 1990s, technical, professional and academic journal publications in the field of management, property/real estate management and facilities management, have cited numerous research reports and cases of organisations faced with taking drastic measures to re-align their physical assets base to the dynamic and competitive market place.⁹⁰ The ensuing will provide a brief review of the main management and economic drivers that impact on the practice of real estate asset management.

⁹⁰ For examples:

Light, L. & Zigas, D. From Backwater to Blockbuster. *Business Week*, September 11, 1989. pp.46-47.

Albert, A. Editor. America's Structural Business Change: What does it mean for facilities? *Facility Strategies* Special Report. December 1991. pp.4-5,8.

Sager, I. Big Blue's white-elephant sale. *Business Week*, February 20, 1995. pp.36.

Gibson, V. Is Property on the Strategic Agenda? *Property Review*, May 1995, pp.104-107; and Organisation Change and the Property Resource. *Proceedings of RICS Cutting Edge 1995 Conference*. Vol. II, pp.71-378.

2.4.1 Management and Economic Drivers

Businesses thrive on success which when measured in purely economic criteria focuses on efficiency of use of business resources in the production of goods and/or services. This efficiency-driven model of management success owes its origin to the era of scientific management of Taylor and Gilbreth at the turn of the twentieth century. Since then, business executives and managers have been confronted by an array of management tools, each seeking to explain the merits of decision trees, the Delphi techniques, the managerial grid and the Boston Box. They have also been continuously exposed to numerous management concepts by management writers like Drucker, Porter, Mintzberg, Peters, Kanter, and Handy, to name but a few. In short, the last thirty years have seen management thinking in a state of perpetual flux, set against a world economy that has seen wide fluctuations between growth and depression, varying in intensities across continents, and within continents. In a recent article in *Management Today*,⁹¹ four decades of management thinking have been conceptually characterised as follows:

- ⇒ "1960s - Strategy is discovered by the corporate monoliths;
- ⇒ 1970s - The West had nothing to learn from the Japanese;
- ⇒ 1980s - The radical and rational; and
- ⇒ 1990s - Re-engineering the idea."

The appeal of the concept behind "*Reengineering the Corporation - a manifesto for business revolution*" by Champy and Hammer(1993) perhaps, best reflect the pace of change over the past three decades and the relentless quest for new ways of managing businesses in order to provide for flexibility in an increasingly competitive global marketplace. The authors advocate that corporations must undertake nothing less than a radical reinvention of how they do their work.

*"Three forces, separately and in combination, are driving today's companies...: Customers, Competition, and Change (the three Cs). Their names are hardly new, but the characteristics are remarkably different from what they were in the past."*⁹²

⁹¹ An excellent review of changing management trends is provided by an article by Stuart Crainer; "That was the idea that was". *Management Today*. May 1996, pp. 38-42.

⁹² Champy and Hammer (1993), *Reengineering the Corporation - A manifesto for business revolution*. Nicholas Brealey. pp.17.

The three Cs have created a new world for business, and it is becoming apparent that organisations designed to operate in one environment cannot be assumed to work well in another. For example, companies created to thrive during the era of mass production, stability and growth of the 1960s are unlikely to succeed without a drastic rethink in management practice in today's world where customers, competition, and change demand flexibility and quick market response.

One of Champy and Hammer's(1993) key messages in their bestseller is that change has *become constant and is normality, and the pace of change has accelerated*. Acknowledgment of the fact that change has become both pervasive and persistent is crucial. This acceptance of the inevitability of change will have direct implications on how organisations must adapt to survive and prosper in the new competitive environment. More importantly, at the organisational level, how business resources should be organised, procured, and managed to deliver the desired outcomes.

Judicious management of all resources - including real estate assets - will continue to be a major factor for companies seeking to maintain a competitive advantage. In the context real estate asset management, we are concerned with how change impact on two distinct but interrelated processes: *facilities provision* and *the management of operational facilities over time*. The growing importance to all modern organisations of the physical working environment makes the management of these two interrelated processes an increasing concern for senior management.

2.4.1.1 Impact of Change on the Provision of Operational Facilities

Business needs should drive real estate strategies. However, given the non-liquid nature of real estate, companies often find themselves saddled with facilities that once satisfied business requirements but are now inappropriate or obsolete for changing operations, particularly during periods of restructuring and realigning of business practices. Clearly, for many international corporations with large and dispersed operational real estate portfolio, one of the more obvious implications of business downturn following a period of growth, is the legacy of surplus space from a bygone era when prestigious headquarter

complexes and long leases in city centre locations were perceived as a necessary, but often, hidden company overhead. Equally, changing corporate requirements for space will continue to generate a compelling need to deal effectively with surplus assets.¹ For examples, General Motors(GM) and International Business Machines(IBM) are examples of large international corporations, where real estate is an issue of survival as they try to rid themselves of redundant properties that are difficult to sell or recycle.

Rapid technological development, particularly in the computing and telecommunication fields, have also rendered many existing buildings prematurely obsolete, or needed high capital re-investment for modernisation. In addition, raising employees' expectation of the workplace environment, costly and lengthy commuting time to work are factors that employing organisations can no longer ignore. In essence, there is a need for organisations to continuously reappraise their real estate and workplace strategies to ensure their alignment to changing business drivers and operational requirements.

In a review of the potential impact of current management thinking on organisation structures and the design of the workplace, Duffy and Tanis(1993) stated that:

"Never has organisation theory been so rich and inventive as in the 1990s.Never has the contradiction between managerial aspirations and physical reality been so sharp".⁹³

They succinctly placed the context of some of the main emerging management themes from the current group of "new management gurus"⁹⁴ by mapping their implications on the work content and patterns of space use within office buildings - see Figure 2.13.

⁹³ Duffy, F. and Tanis, J. (1993), A Vision of the New Workplace. *Industrial Development Section*, pp427-432.

⁹⁴ Byrne, J.A. (1992), Management's New Gurus. *Business Week*, August 31, 1992, pp.44-52.

Figure 2.13: Organisational Change and Its Impact on the Physical Workplace⁹⁵

<p>The Impact of New Organisation Structures on the Workplace</p>	<p>New ways of working • more interaction • more collaboration • more individual autonomy</p>	<p>New patterns of space use • more group spaces • more shared spaces • more intermittent space use</p>
Michael Hammer: 'Reengineering'	o o	o o
George Stalk: 'Time-based Competition'		o o
David Nalder: 'New Organisational Architecture'	o o	o
Peter Senge: 'The Learning Organisation'	o o o	o
Charles Handy: 'Discontinuous Change'	o	o
Edward Lawler: 'High-Performance Involvement'	o o	o o
Prahalad & Hamel: 'Core Competencies'	o o	o o
Gerald Ross: 'New Molecular Organisation'	o	o o
Shoshana Zuboff: 'Informating'	o o o	o o

This above vision of the new workplace, set against a period of accelerating change and intensifying global competition, implies a strategic rethink at the corporate level; suggesting that investments in space and technology must be integrated into strategic modeling of the business processes and facilities demand variables. For example, AT & T's pioneering of the concept of "virtual office"⁹⁶ for its sales staff represents an impressive demonstration that real estate and facilities restructuring must work in concert with training in cultural changes and systems development support.

⁹⁵ Duffy, F. and Tanis, J. (1993), A Vision of the New Workplace. *Industrial Development Section*, pp. 428.

⁹⁶ The concept of 'virtual office' adopts the principle that for certain tasks, such as sales staff, the traditional assignment of a full-time office to each staff does not represent economic use of space. Instead, sales staff supported by portable equipment (laptops, modems, faxes, and phones) can schedule temporary office space and support when and where they need them through a reservation system, using a network of offices for contacting customers, administration, report production, and team meeting.

In recent years, there are evidence to support that some organisations with large operational real estate holdings are beginning to exploit real estate assets as a strategic opportunity.⁹⁷ A well known example of this is that of IBM:

"Rethinking real estate has become an IBM axiom. After shedding 183,000 employee - 27,000 of them in the past year alone - from a high of 406,000 in 1986, IBM simply doesn't need the rambling space it once did. Consolidating space and subleasing,... accounted for nearly half of the \$6.3 billion in cumulative cost cuts in the past two years. managers now are evaluated, in part on their ability to shrink property bills."⁹⁸

It is clear that there is a growing realisation, all be it among the larger corporations with significant operational property holdings, that their operational real estate supports many facets of a business - organisational change, productivity, customer services and communications - if they are aligned with the business plans. Conversely, if there is a mismatch between demand and supply, there can be a heavy cost burden and a physical barrier to change.

2.4.1.2 The Emergent of Strategic Facilities Planning (SFP)

There have been a number of organisational models employed to link the requirements for the physical infrastructure to the corporate strategic plan. The instrument that is used to establish this link has generally been called the *strategic facilities plan(s)*. The process of deriving this plan is usually referred to as the strategic facilities planning(SFP).

SFP have developed in order to promote the much needed dialogue between corporate planners and real estate/facilities personnel with the objective of aligning real estate decisions to the prevailing corporate strategy. The guiding principle is that the corporate and real estate/facilities plans should be considered simultaneously. SFP represents a new way of thinking about the built environment and its relationship to organisational performance. It is a response to the growing awareness that facilities-related costs represent most companies' second largest operating cost, after staff costs, and their largest capital asset. It is also a reflection that as companies look for opportunities to improve financial performance and competitiveness, a more focused eye will be

⁹⁷ Parshall, S. and Kelly, K.(1993), Creating Strategic Advantage, *Premises and Facilities*. August 1993, pp.11-16.

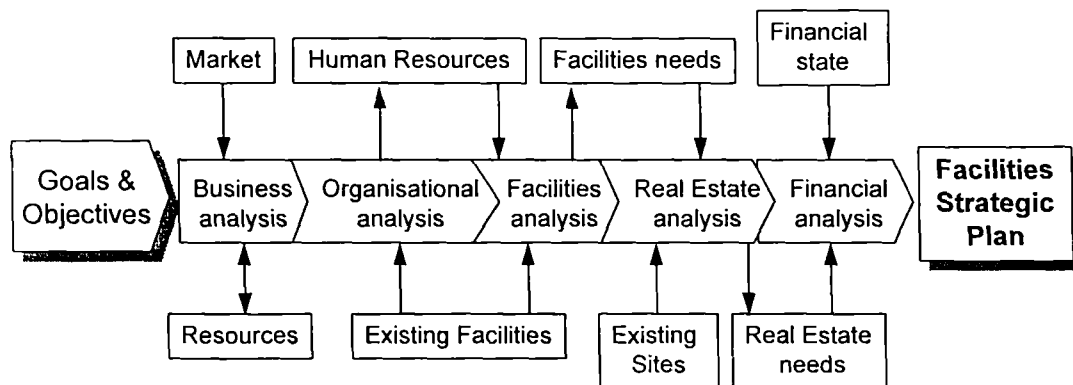
⁹⁸ Sager, I. (1995). Big Blue's white-elephant sale. *Business Week*, February 20, 1995. pp.36.

cast on the effectiveness of the management of the real estate assets and the workplace to support and add value to the core business activities. More companies are realising that their business performance are closely related to how they manage their facilities and workplace assets.

Often the model that is employed is to consider the strategic plan hierarchically - from corporate mission and its facilities implications, resourcing, strategic plans , cost-benefits analysis and implementation. This traditional hierarchical process, although capable of being iterative, tends to be slow and somewhat simplistic.

A linear process model of strategic facilities planning is provided by Swicegood, illustrating the build-up of information as each stage progresses, as well as the linkages to various other components of the corporate business plan. The author stressed that the most important aspect of SFP is the planning process itself and although the step-by-step approach is shown as a linear progression (Figure 2.14), the process is interactive and kinetic - SFP has to be continually revisited and updated to reflect the current business plan of the organisation.

Figure 2.14: Stages in the Preparation of A Strategic Facilities Plan⁹⁹

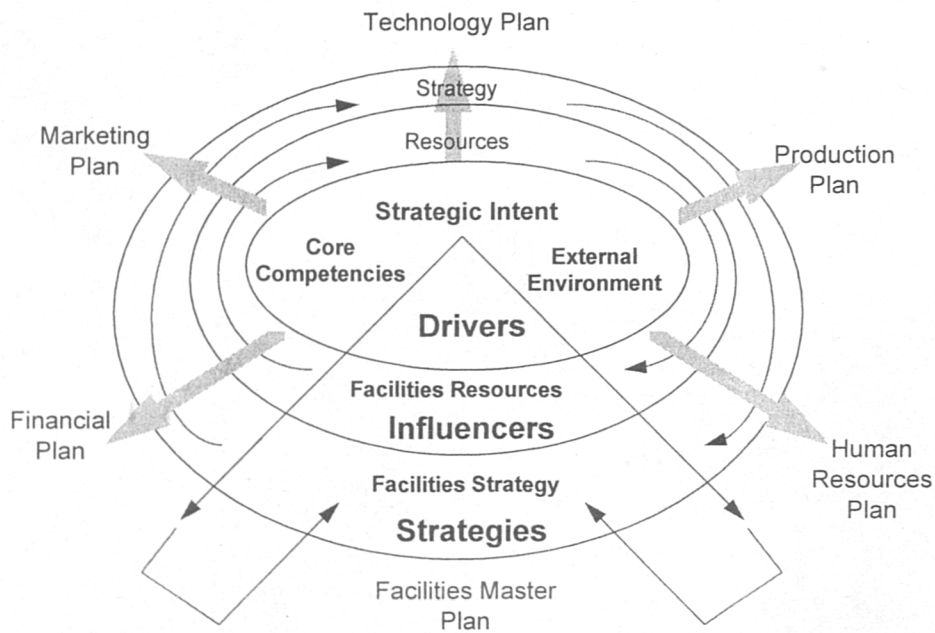


Hornik(1993) provided a conceptualisation of a concentric model linking all strategic variables simultaneously. The model proceeds from independent variables (drivers) to intervening variables (influencers) to dependent variables (strategies) to the resulting “tactical plans.” A feedback loop indicates that this process is repeated until the strategic intent, strategies and plans are reconciled

⁹⁹ Swicegood, S. Strategic Facilities Planning. *Property Management*. Vol.5 No.3. pp. 246.

to resource constraints (influencers). Hornik's model is reproduced in Figure 2.15. This model is unique in that its strategies are considered to be dependent rather than independent variables. The independent variables include strategic intent, core competencies and external environment; variables to which an organisation responds but does not control. External independent environmental variables include demand, competition, regulation and changing technology.

Figure 2.15: Hornik's Concentric SFP Process Model¹⁰⁰



Kimmel(1993)¹⁰¹ provided a detailed description of the evolving role, process and benefits of strategic facilities planning. The ensuing summarises the key features of the strategic facilities planning process.

SFP is not physical planning, it is business planning designed to provide a context for effective decision making by linking organisation goals and strategies with real estate/facilities policies and programmes. It represents senior management's view of how current and future real estate assets are to be

¹⁰⁰ Hornik, J. Increasing competitiveness and financial return: linking organisational strategy with facilities. *FM Journal*. IFMA May/June 1993. pp.7.

¹⁰¹ Kimmel, P.S. The Changing Role of the Strategic Facilities Plan. *FM Journal*. IFMA. May/June 1993. pp. 24-29.

deployed in order to reinforce business objective and planned operations. SFP is the critical link between a company's strategic business plan and the facilities that house all the resources required to make the plan succeed. Although studies conducted by Brandt(1993)¹⁰² and Pertz(1995)¹⁰³, revealed that SFP is practice differently by different organisations, there is a general consensus that SFP is involved with three parallel processes:

- monitoring how current facilities are being used and managed;
- evaluating whether facilities are best serving corporate objectives, and
- anticipating how facilities might better support the organisation and respond to its changing needs.

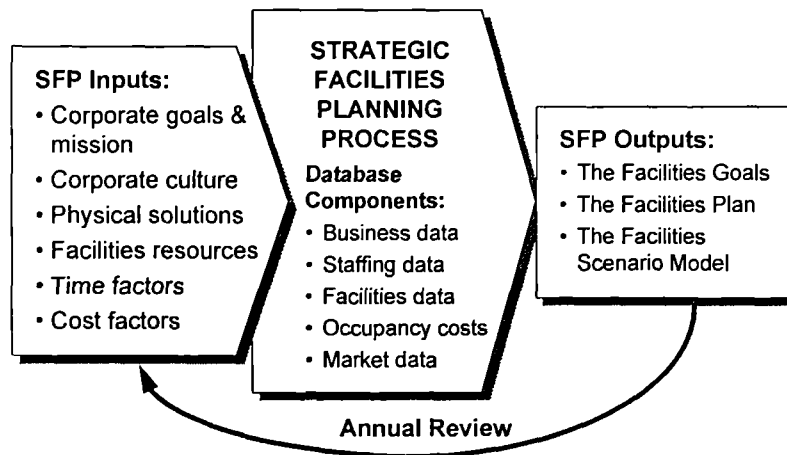
It is crucial to add that underlying the above processes is the assumption that senior management support in terms of personnel(from cross functional divisions), expertise(including external sources) and resources will be available for the ongoing planning, facilities monitoring and periodic shifting of strategies. Achieving the necessary organisational support is critical to the success of SFP in any organisation.

The development of SFP as a management tool can be traced to a response to changes in the global market and economic situation. The period of "planned growth" during the 1980s is being replaced by the volatility at the start of the 1990s where change is the most important variable. Pressures to reduce operating costs and increase efficiency often meant that many real estate/facilities executives are challenged to instantly provide recommendations to accommodate any change. As a result, SFP has developed to become an important modeling tool to input variables, evaluate various scenarios and in order to arrive at the best course of action to take.

Figure 2.16 illustrates the main input requirements to, and outputs from, the SFP process.

¹⁰² Brandt, R. What is Strategic Facilities Planning ? *FM Journal*. IFMA. May/June 1993. pp. 36-39.

¹⁰³ Pertz, S. Redefining strate facilities planning. *Facilities*. Vol.13, No.1. January 1995. pp. 16-24.

Figure 2.16: The Strategic Facilities Planning Process¹⁰⁴

The inputs to the SFP process is clearly multi-faceted requiring data from both business activities, facilities activities and financial evaluations. The developments in automation and software in the field of computer aided facilities management and information systems in recent years have considerably extended the potential for decision support, particularly in scenario modeling.

The outputs from the SFP process can be divided into three parts: facilities goals, facilities plan and facilities scenario model.

- The *facilities goals* show how facilities can help satisfy the corporate strategic plan. They become the link between the real estate/facilities role and the rest of the company, including outside management. Examples of facilities goals include:
 - enhance the corporate public image,
 - develop more productive work environments,
 - attract higher caliber employees,
 - improve ability to accommodate change.
- The *facilities plan* addresses what the real estate/facilities executive thinks will happen to the company in the next few years. The facilities plan can be seen in terms of evaluating and managing the 'current facilities conditions' with a view of the meeting likely 'future facilities conditions' requirements. In order to fulfill this task, Kimmel(1993) suggests that the facilities plan must comprise three elements: facilities strategies, facilities policies and an up-to-date facilities database.
 - The facilities strategies are a set of management decisions that governs the projected use of the company's physical resources for the acquisition,

¹⁰⁴ Adapted from Kimmel (1993) and Brandt(1993).

use and disposal of functional space over time. The agreed strategies indicate how the real estate/facilities role will satisfy the established goals, accommodate projected growth and change and satisfy current needs cost effectively.

- The implementation of the facilities strategies is reflected in the facilities policies and projects. Examples of policy issues include: own vs lease, build new vs acquire existing, consolidate vs decentralise, in-house provision vs outsourcing, implementing space standards or internal charging, etc. Examples of projects arising from facilities policies could include downsize space standards, improve space utilisation, contract out design and maintenance services, or negotiate longer term leases.
- The creation and maintenance of facilities database and the use of information technology tools are fundamental to the SFP process capabilities to provide management information and decision support. There is a need for integration of data sets from a number of resource perspectives, e.g. real estate and facilities, human resources, corporate finance and budgeting, etc. The availability of up-to-date databases and the systems capabilities are particularly important for testing of alternative facilities scenarios, given that no facilities plan can be regarded as 'fixed' in a dynamic business environment. Hence, the need for annual review in order to maintain congruence with the corporate plan.
- The *facilities scenario* model addresses what the real estate/facilities executive thinks could happen to the company. This relatively new component of SFP has evolved largely as a result of the pace of change organisations are having to cope with and the rapid development in information technology, particularly in CAFM systems and more recently, in CIFM systems.

Multiple scenarios can be established based on possible situations for scenario variables which may include personnel, budget, outsourcing, business mergers, acquisitions, etc. The scenario model provides the vehicle for multiple evaluations such as: ability of facilities to support corporate goals; ability of facilities to accommodate corporate functional needs over both short and long terms, etc..

In simple terms, SFP attempts to answer the question: "In what direction should our facilities be heading to best support our operational and financial objectives?" The SFP process creates a forum for the exchange of ideas and brings key players together to discuss issues of overlapping concerns of a business, culture or facilities nature. The overall benefits to the organisation is to provide facilities operations that supports the organisation's long-term objectives.

The development and growing use of SFP as a corporate management tool to relate the physical variables of the corporate real estate assets in business

strategic planning and management is clearly evidence of its gradual acceptance as a strategic resource.

2.4.1.3 Impact of Change on Management of Operational Facilities

The management of operational facilities can be broadly defined as the service delivery end of the facilities provision process, with the focus on the ongoing management of the functional serviced space over time. The scope of facilities support services associated with the operational facilities in an organisational setting is dependent a number of varied factors; for example, size and range of properties within the real estate portfolio, organisational structure, and management approaches.

This area of management activities has seen rapid growth since the 1970s, largely under the 'umbrella' of development and growth of facilities management, as well as the trend toward 'outsourcing' (contracting out) of non-core support services. Formal definitions of facilities management are many, various and sometimes confusing. However, there is an emerging consensus that describes the *scope* of facilities management as covering the ongoing management of buildings, infrastructure and support services (commonly classified as *non-core* support services), and its *role* as the coordination of buildings, processes and people into an integrative system to meet an organisation's business needs. The emphasis on the coordinating role of facilities management is particularly significant against the growing trend of companies using external(outsourced) service providers to deliver a ever widening range of traditionally in-housed support functions.

The above developments are important in terms of their implications on the management of services associated with operational facilities which are generally regarded by the majority of senior managers as an essential, but nevertheless, non-core support functions to the organisation's core business activities.

The conceptual basis upon which the practice of outsourcing has been derived, has its roots in the writings of Drucker, Peters, and those listed above in Figure 13. In the main, two principal strategic approaches formed the basis for procurement evaluations by companies in the sourcing of support services:

1. Concentrate the firm's own resources on a set of "core competencies" where it can achieve definable pre-eminence and provide unique value for customers.
2. Strategically outsource other activities - including many traditionally considered integral to any company - for which the firm has neither a critical strategic need nor special capabilities.¹⁰⁵

The implicit assumption is that when intelligently combined, core competency and extensive outsourcing strategies can provide improved returns on capital, lowered risk, greater flexibility, and better responsiveness to customer needs at lower costs.

The emphasis on the sourcing decision of non-core functions as a *strategic* evaluation process, once again, highlight the need for senior management guidelines as to what are acceptable risks associated with the placement of any hitherto, in-house function, to an external service provider.

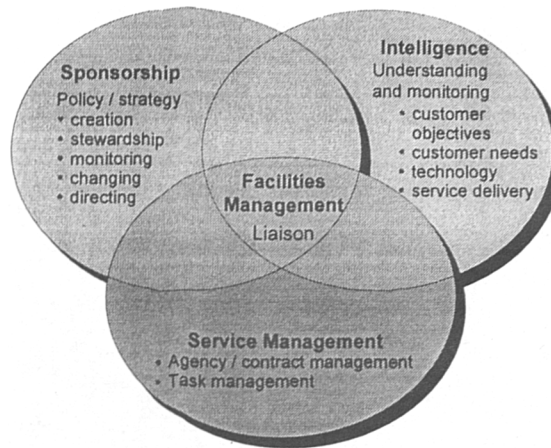
Williams(1995)¹⁰⁶ cautioned that the purpose of outsourcing should not be regarded as predominantly to save money, although this can be a by-product of the process. In stressing the significance of facilities as a vital contributor to business productivity, he pointed out three facets of facilities management - *sponsorship, intelligence and service management*. (see Figure 2.17). In differentiating between core and non-core functions,¹⁰⁷ he stated that the sponsorship and intelligence facets of facilities management representing the 'intelligent client's role' are unquestionably 'core' activities and should be identified and separately established in-house regardless of the location of service management.

¹⁰⁵ Quinn, J.B. and Hilmer, F.G. "Strategic Outsourcing." *Sloan Management Review*. Summer 1994. pp.43.

¹⁰⁶ Bernard Williams, "Intelligent Clients." *Premises and Facilities*, April 1995. pp 32-33.

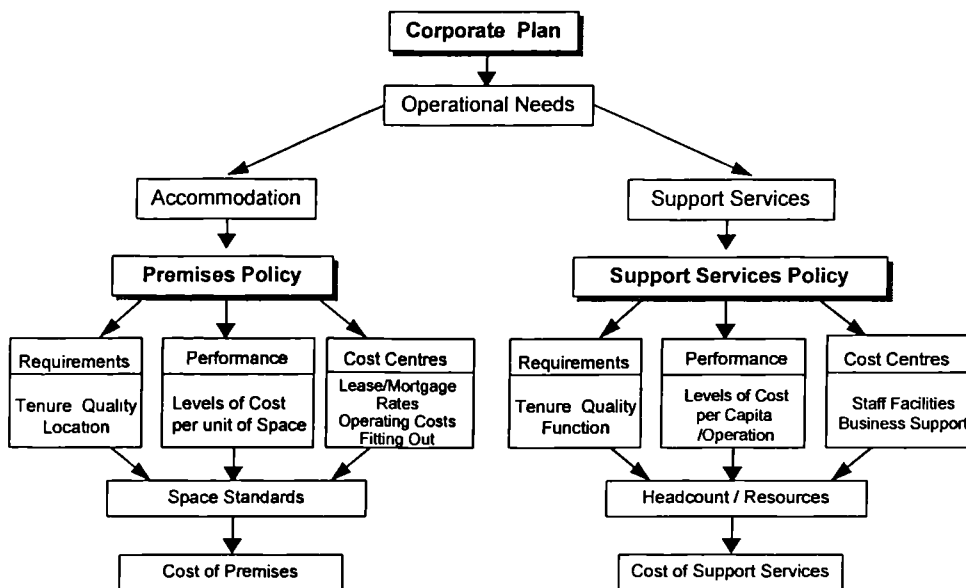
¹⁰⁷ One of the primary reasons for drawing the 'core' vs 'non-core' distinction is to attempt to concentrate the attention of an organisation's management on those activities that; directly contribute to organisation's income or forming an essential part of the end-product of the organisation. The corollary is that any other activity not involving or requiring the core skills of the business could and should be provided and managed by external contractors.

Figure 2.17: Three Facets of Facilities Management¹⁰⁸



Williams(1994) used the term “sponsorship” to emphasize the importance of the need for an organisation’s corporate plan to reflect the facilities dimensions by having a clear premises policy and facilities support services policy. (see Figure 2.18)

Figure 2.18: Facilities and the Corporate Plan¹⁰⁹



The term sponsorship in respect of facilities therefore implies the ownership of responsibility for the facilities provision, the stewardship of the organisation’s policy for the provision, maintenance and allocation of resources for the accommodation and services required to support corporate objectives.

¹⁰⁸ Bernard Williams Associates (1994), *Facilities Economics*. Building Economic Bureau Ltd. Chapter 1.1, pp.1-8.

¹⁰⁹ Op cit. Figure 9 above is an amalgam of Fig.1.1C, pp. 1-5; and Fig.1.1F, pp. 1-8.

Intense competition puts pressures on resource utilisation and performance. Generally, performance measures should deliver information about the effectiveness of processes as well as the actual results or outputs achieved. For many companies, the focus of attention on operational facilities is a direct consequence of an overall scrutiny of costs of running a business. As facilities-related costs are generally second only to employee costs, it is no wonder that costs associated with meeting the demand of functional serviced space for the business are closely examined.

In the management of operational real estate assets, there has been a distinct shift in focus from 'supply management' to 'demand management'.¹¹⁰ Since the 1970s, the role of real estate asset management within corporations has been recognised as one of defining capabilities and performance measures from the supply side of the real estate(property) industry, riding the tides of the property booms and slumps over the two decades that followed with a focus primarily on value rather than cost. Supply management emphasis involved the responsibilities to manage the supply of operational property, that is the focus has been on management of the facilities provision.

Since the late 1980s, demand management has emerged as the challenge for real estate/facilities executives, where the focus is to manage affordably the consumption(utilisation) of the corporate real estate resource. This process transformation in operational real estate asset management is a significant shift in that it signals a change in the competence profile necessary for the corporate real estate/facilities executive of the future. This has been substantiated by the findings of the Corporate Real Estate 2000 research programme¹¹¹ which has shown that estate/facilities executives have to begin to shift their focus from cost reduction and containment to productivity improvement and growth.

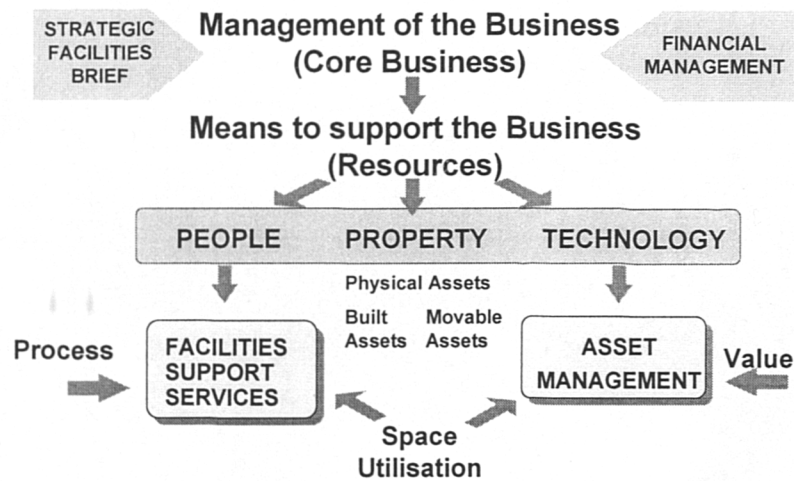
The primary driver of demand management of the real estate resource is meeting the corporate objectives through economic space utilisation. The

¹¹⁰ Chekijian, C. "Demand Management must focus on Corporate Objectives." *Corporate Real Estate Executive*, Feb. 1996, Vol.11, No. 2, pp. 36-37.

¹¹¹ IDRF(1993), *Strategic Management of the Fifth Resource: corporate real estate*. Report of Phase One: Corporate Real Estate 2000.

practice of demand management requires a total resource management approach making use of various management disciplines within the organisation. This view is shared by Then(1994) who regards the functional space as a the outcome of the synergy of three basic organisational resources - people, property and technology. Figure 2.19 illustrates the scope of management of operational facilities as comprising two main groups of services: facilities-related support services aimed at providing users/occupiers with a fully serviced working environment, and facilities-related services aimed at maintaining the integrity of the building fabric and services (asset management).

Figure 2.19: Organisational Resources¹¹²



A principal role of the real estate/facilities executive is to balance the consumption of the interdependent resources of a corporation, of space, people and equipment in terms of the physical (real estate), technological (equipment) and human resources (employees) dimensions. In this respect, the profile of the real estate/facilities executive is changing to one who requires more experience in strategic and operational planning, information technologies, finance, accounting, labour relations and communications. One implication of this increased competence profile is the need to adopt more analytical and collaborative approach - metrics, models and methods - and a creative mentality in order to diagnose the real estate portfolio, analyse occupancy costs, measure real estate's impact on the business and formulate a strategic plan. Such tools

¹¹²Then, D.S.S. "Property as an Enabling Resource to Business." *Facilities Management*, August 1994. pp. 5.

have a common focus: they attempt to fill the current void in measuring the performance of operational facilities, not only in terms of costs to the business; but more importantly, in terms of their 'fit' to the business plans and how the real estate infrastructure can be managed to facilitate company-wide transformation against a backdrop where change is regarded as the norm. These will be separately reviewed in the next section.

2.4.1.4 Developments in Performance Measurement in Business Management

The start of the 1990s have had the impact of causing a rethink, amongst senior executives in a broad range of industries, of how to measure the performance of their businesses. They all recognised that new strategies and competitive realities demand new measurement systems. Eccles(1991) described this recognition as a "revolution":

*"At the heart of this revolution lies a radical decision: to shift from treating financial figures as the foundation for performance measurement to treating them as one among a broader set of measures."*¹¹³

Eccles(1991) cited a number of factors to support why today's organisations are required to monitor a wider range of measures in order to truly assess their performance:¹¹⁴

1. The rise of the quality movement in the 1980s led leading manufacturers and service providers to stress quality as a strategic weapon in their competitive battles. As a result, they have committed substantial resources to develop measures such as defect rates, response time, delivery commitments, and the like to evaluate the performance of their products, services and operations.
2. As competition continues to stiffen, strategies that focus on quality will evolve naturally into strategies based on customer service. Traditional internal measures such as defect rates, are already being supplemented by external data from customers like customer retention rates, market shares and perceived value of goods and services.

¹¹³ Eccles, R.G. "The Performance Measurement Manifesto." *Harvard Business Review*. Jan-Feb. 1991. pp. 131.

¹¹⁴ Eccles, R.G. "The Performance Measurement Manifesto." *Harvard Business Review*. Jan-Feb. 1991. pp. 132-3.

3. The development of competitive benchmarking¹¹⁵ gives managers a much-needed methodology to focus attention on *process* measures and *external* comparative analyses.
4. Information technology has played a critical role in making a performance measurement revolution possible. The dramatic improvements in price-performance ratios in recent years in hardware and to breakthroughs in software and database technology have had the impact of extending the range of measurement options that are economically feasible for many organisations.

The development of performance measurement in business management has followed a path that has been influenced by the general push to improve quality and service, in addition to meeting cost parameters. For many companies, the justification has been acknowledged by senior management that a lack of appropriate performance measurement can act as a barrier to change and improvement.

Hronec(1993) in his book "Vital Signs" defined a *performance measure* as:

*" a quantification of how well the activities within a process or the outputs of a process achieve a specified goal. Performance measures must be developed from the top down in an organisation and must link the company's strategies, resources, and processes."*¹¹⁶

The above definition clearly distinguish that a *process* comprises a series of *activities* designed to produced a product or service (that is, the *results* or *outputs*). Hronec stressed that for any performance measurement system, both *process* measures and *output* measures must be present. One type of measure without the other is only half the picture. The interrelationship between the two sets of measures is illustrated in Figure 2.20. Hronec draws the following analogy of performance measures in an organisation setting:

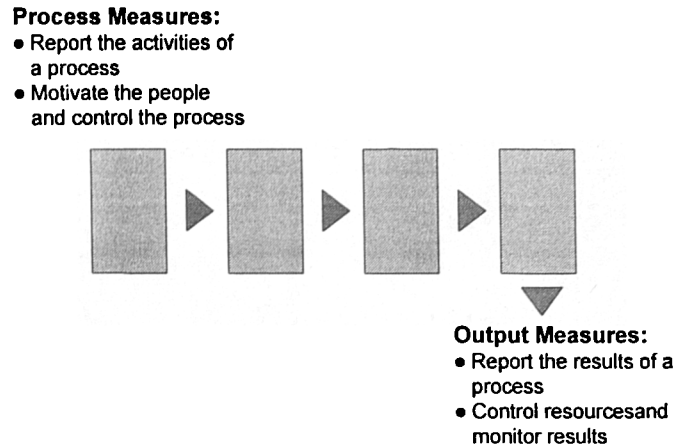
*"Performance measures are the "vital signs" of an organisation. They tell the people in an organisation what and how they're doing and whether they're functioning as part of the whole. They communicate what's important throughout the organisation: strategy from top management downward through the organisation, process results from lower levels upwards to top management, and control and improvement within the process."*¹¹⁷

¹¹⁵ Camp. R. (1989), The Search for Industry Best Practices that lead to Superior Performance.

¹¹⁶ Hronec, S. M.(1993), Vital Signs. AMACOM, pp.6.

¹¹⁷ Hronec, S.M. (1993), op cit. pp. 5.

Figure 2.20: Process and Output Performance Measures



Hronec also listed four potential benefits that can arise as a result from having an appropriate performance measurement system:¹¹⁸

1. Satisfying customers
2. Monitoring progress
3. Benchmarking processes and activities
4. Driving change.

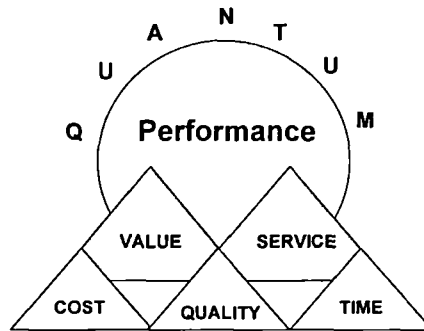
The emphasis on promoting customer satisfaction and driving change accords with the response to external pressures from an increasingly global competitive marketplace. While the emphasis on monitoring progress and benchmarking is a clear reflection on the culture promoting continuous improvement, driven from both within and outside the company.

In conceptual terms, Hronec most useful contribution in the area of performance management is in providing a useful framework for integrating three key categories of performance measures - cost, time and quality - into what he termed as a “family of measures” as illustrated in Figure 2.21.

Hronec used the concept of “goodness” to define the three categories of performance measures:

- Quality quantifies the “goodness of a product or service.
- Time quantifies the “goodness” of a process
- Cost quantifies the economics of “goodness”.

¹¹⁸ Hronec, S. M.(1993), Vital Signs. AMACOM, pp.9-14.

Figure 2.21: Hronec's Family of Measures¹¹⁹

In each case, “goodness” is defined by the recipient or interested party. In the case of quality, its primarily the customer; for time, its primarily management, and for cost, it is the various stakeholders including management and shareholders. As illustrated above, there is also a relationship among these three categories of performance measures. The relationship between cost and quality is a “value” relationship to customers. Correspondingly, the relationship between quality and time is a “service” relationship.

The above brief review of development in performance measurement within the context of trends in business management, and against a competitive marketplace of dynamic change is important in that it sets the background against which senior management within organisations will evaluate the current performance and contribution of their physical workplace environment in fulfilling corporate objectives.

2.4.2 Performance Measurement in Real Estate Asset Management

In recent years, a number of management tools have been found to be particularly useful in areas of strategic evaluations within real estate asset management. Emerging management evaluation tools aimed at assessing the relevance and performance of existing real estate portfolio can be usefully grouped under two broad categories: (1) those that relate to the strategic evaluations of the appropriateness of existing real estate portfolio, and (2) those that relate to the strategic evaluations of the efficiency and effectiveness of the

¹¹⁹ Hronec, S.M. (1993), op cit. pp. 19.

delivery of facilities support services associated with the existing operational asset base.

2.4.2.1 Performance Measurement in Facilities Provision

Major real estate decisions are often made outside the real estate/facilities department, they are driven by business issues which are beyond conventional real estate considerations. Yet every real estate decision has long-term consequences. It is in this respect that performance measures which reflect the integrate role of facilities implications of business decisions taken that are currently lacking; and which has reinforced the peripheral role of the real estate resource. The trend towards widening the scope and range of business performance measures beyond the traditional financial accounting measures, has focused attention on performance measures that embrace aspects of all business resources. The increasingly integrative nature of business resources has also reinforced the need for organisations to have a balance set of financial, as well as non-financial, performance indicators. Whilst the significance of resources like finance, human resource, information and technology have been generally recognised by senior management as key business resource issues, the role of real estate does not, as yet, assumes the same level of recognition in many organisations. However, since the late 1980s, there are increasing evidence¹²⁰ that supports the view propagated by the CRE 2000 Report, that real estate should now be regarded as the 'fifth resource' in business management.

¹²⁰ In a recent article by Apgar IV, M. "Managing Real Estate to Build Value." *Harvard Business Review*. Nov.-Dec. 1995. pp.162-179. The following examples were cited to demonstrate how companies are using real estate as a lever to improve their competitive position:

IBM has saved \$1.4 billion by linking real estate utilisation to business unit performance in a relentless attack on excess space.

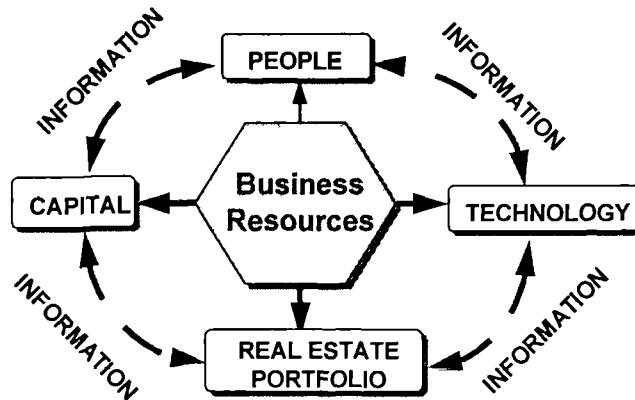
AT&T has exceeded its goal of a \$500 million cost reduction by making senior executives directly responsible for real estate issues and linking decisions about facilities to business strategy.

Chemical Bank has reversed long-term increases in occupancy costs through constant attention to its occupancy-to-operating-income ratio.

Dun & Bradstreet has trimmed \$51 million from annual occupancy costs by identifying synergies between real estate and a wide range of internal technologies and support services.

Sun Microsystems is using real estate as a tool to help it achieve strategic goals; sustaining the organisation's rapid growth depends in part on its skill in expanding capacity.

Figure 2.22: Business Resources



Source: Then, S.S. (1996)

Figure 2.22 above illustrates the interrelatedness of the contributing role of the real estate resource to the other key business resources; capital(finance), people(staff), technology(processes) and information. There is a growing awareness that the provision of an enabling working environment to support the fulfillment of corporate objectives cannot be achieved without a proper synergy of all five business resources. This in turn necessitates that the corporate strategic intent (strategic management) must be clearly communicated so that flexibility in supply can be catered for in real estate strategic evaluations.

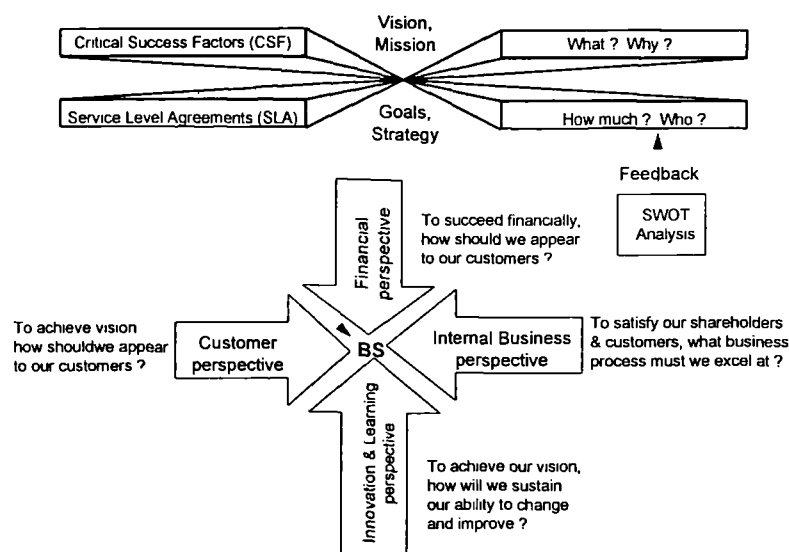
Developments in performance measurement applied to strategic evaluation of real estate at the portfolio level are commonly derived from or linked to strategic management concepts such as corporate *mission statements and vision*, *critical success factors(CSFs)*, and *strengths, weaknesses, opportunities, threats* (SWOT) matrix. More recently, the concept of the *balance scorecard* (BS) has been proposed by Kaplan and Norton(1996)¹²¹ as a means of linking a company's long-term strategy with its short-term actions. In performance measurement, the advantage of the balance scorecard is to supplement the traditional financial measures with criteria that measured performance from three other perspectives - those of the customers, internal business processes, and learning and growth.

¹²¹ Kaplan,R.S. & Norton,D.P. "Using the Balanced Scorecard as a Strategic Management System." Harvard Business Review. Jan-Feb. 1996. pp.75-85.

Lopes(1996) provides a useful visual framework (Figure 23) which integrates the above strategic management concepts. The inclusion of the concept of service level agreement (SLA) provides the crucial link with the company's CSFs which are driven by the organisational mission, vision, goals and main strategies through measures within the BS. The SLAs define the service and quality levels provided to the customers and consequently the level of expenditure to provide these services. The operationalisation of the CSFs is thus made through the SLAs.

The framework is important in that it sets the context within which any decisions on real estate provision and their ongoing facilities services management will be evaluated in terms of their business and operational relevance and their subsequent performance against the four performance perspectives identified in Figure 2.23.

Figure 2.23: The Balanced Scorecard(BS) and its connections with CSF and other Organisational Perspectives¹²²



The practical translation of the above concepts into tools for real estate asset management are almost exclusively confined to empirical examples by practicing organisations and tools developed by specialist consultants advising client organisations. The ensuing review will be confined to strategic evaluation

¹²² Lopes, J.L.R. "Corporate Real Estate Management Features." *Facilities*, Vol.14, No.7/8, July/August 1996; pp.9.

tools which are aimed at deriving the most appropriate facilities infrastructure to support the achievement of the corporate objectives.

The work by Apgar IV(1995a,1995b) is particularly useful in assessing the adequacies of existing corporate real estate portfolio. Apgar's contributions to real estate asset management come in the form of three strategic evaluation tools: (i) the real estate scorecard, (ii) the corporate real estate business-occupancy linkages of functions, time and space and (iii) a structured database for corporate real estate to capture the essential data for detailed analysis to assist business decision making.

- The Real Estate Scorecard (RES)¹²³ provides a means for managers to judge their real estate's effectiveness as a company resource and as a competitive lever (by competitive benchmarking). For each facility a score base on the weighted average of five factors can be derived out of a maximum score of 10. The five factors chosen to provide a snapshot of a company's real estate situation are: *amount*(area) of space used; *price* of the space being used; *grade*(quality) of the existing space; *area*(location) of the properties; and *risk*(financial and environmental) involved in the use of the properties.
- The Functions-Time-Space framework(FTS)¹²⁴ of real estate provides the crucial link which integrates real estate decisions in tandem with basic business issues. By comparing the where, when and why the company's functions are needed, with how and when they are provided, the framework links strategic and operational dimensions to provide a fresh view of space and facilities requirements. Managers (from real estate, human resources and technology) can use the framework to analyse their facilities requirements at two levels: (i) at the company portfolio level (analysis of multiple configurations, ownership structures) and (ii) at the regional planning level (combining portfolio analysis and local action, e.g. coupling technology-

¹²³ Apgar IV, M.(1995a) "Managing Real Estate to Build Value." *Harvard Business Review*. Nov.-Dec. 1995. pp.163-164.

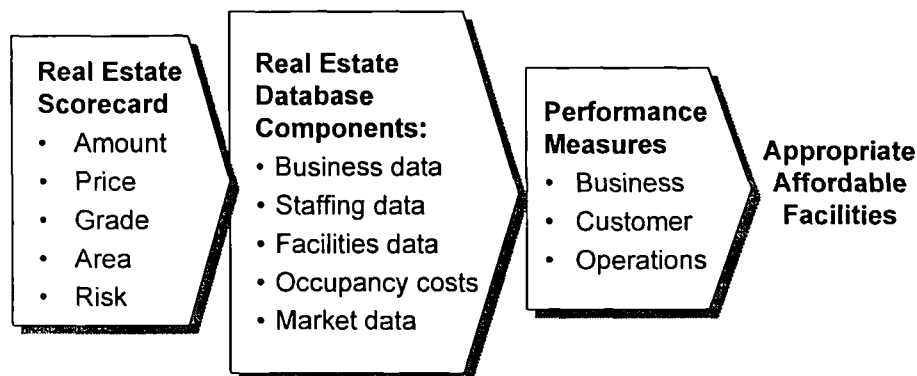
¹²⁴ Apgar IV, M. & Bell, M.A.(1995b) "Managing Real Estate to Leverage Change - The Dun & Bradstreet Case." *Site Selection*. December 1995. pp.935-938.

functions with low-cost space by relocating 'backroom' functions to peripheral sites).

- The 'glue' binding the above elements is a structured real estate database. Apgar proposes a database structure consists of five components: *business data*, *staffing data*, *facilities data*, *occupancy cost data*, and *market data*. The output from the assembled data set will then yield three types of measures that managers can use to inform and support decisions:
 - financial measures - linking real estate to revenues, expenses, assets values and market values.
 - customer measures - relate real estate to productivity, e.g. sales and production units per unit area and occupancy cost per unit.
 - operational measures - focus on capacity and utilisation, e.g. area per person and per desk, number of shifts or hours of operations.

In advocating the above tools in evaluating existing real estate portfolio and assessing future demand, Apgar called for a new approach to real estate management where companies manage real estate for long-term advantage. The underlying message being that companies should consider the management of their supporting physical infrastructure as a potential opportunities to help organisation change, as well as providing facilities that remain affordable and, at the same time, support corporate goals. Figure 2.24 provides a visual summary of Apgar's contribution in corporate real estate strategic evaluation.

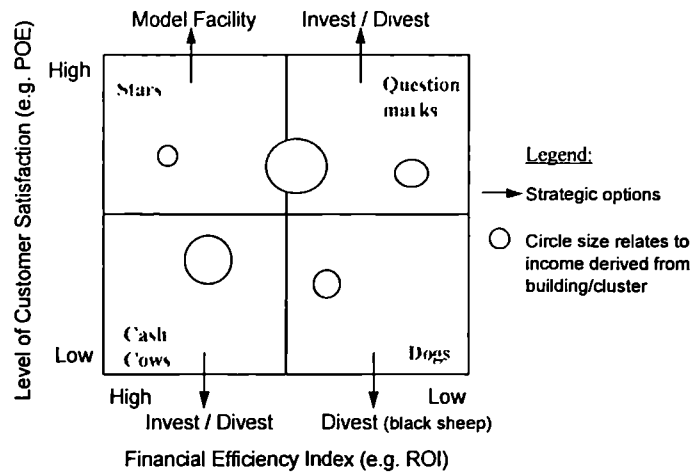
Figure 2.24: Strategic Corporate Real Estate Evaluation Framework - Apgar IV



In his review of corporate real estate management features, Lopes(1996) provided a different view of portfolio review by adapting the Boston Matrix to give an integrated view of customer satisfaction, return on investment (ROI), and

total income resulting from a particular site or a cluster of similar buildings. Figure 2.25 illustrates the application of the Boston Matrix applied to real estate portfolio analysis.

Figure 2.25: Boston Matrix adapted to Real Estate Portfolio Analysis¹²⁵



The building or cluster is classified in each of the four quadrant as:

- *Question marks* - building/cluster with high customer satisfaction levels and low financial efficiency. Do you invest to increase the efficiency with new equipment/materials or divest?
- *Stars* - building/cluster with high customer satisfaction levels and high financial efficiency. Use it as a model building.
- *Cash Cows* - building/cluster with low customer satisfaction levels and high financial efficiency. How is the workforce productivity in this building/cluster? Do you invest to increase comfort with alteration/refurbishment or divest?
- *Dogs* - building/cluster with low customer satisfaction levels and low financial efficiency. Consider high investment on alteration/refurbishment or divest. Use it as the “black sheep” model.

Compared to Apgar’s framework, the above tool offers only a three-dimensional analysis of real estate portfolio with a bias towards identifying the “model facility”.

¹²⁵ Lopes, J.L.R. “Corporate Real Estate Management Features.” *Facilities*, Vol.14, No.7/8, July/August 1996; pp.9-10.

An area of strategic evaluation that has raised considerable attention from senior management in recent years is how real estate decisions impact on the company profitability. The focus on financial analysis with the intention of demonstrating that real estate decisions can have a large impact on a company's profitability has largely centred around real estate occupancy costs. Because of the relatively recent awareness by senior management that costs associated with operational real estate can typically account for 10-15 percent of the total operational costs of a company, profiles of occupancy costs are only starting to be assembled in recent years. As a result, research statistics in this area have been limited apart from those related to life-cycle cost analyses.

Apgar(1993)¹²⁶ is one of the first to highlight the significance of property occupancy costs trend in his paper "Uncovering Your Hidden Occupancy Costs" in the Harvard Business Review; pointing to clear evidence of under-management of this business operating costs. The lack of reliable information in occupancy costs lies in part, to the lack of a consistent definitions of terms on elements of occupancy costs and accounting conventions that do not separately identify such items of operational property expenditures. The same deficiencies are being confronted in the United Kingdom by a number of writers (Varcoe, Williams, etc.)

Apgar's contribution to occupancy costs analysis is in providing a clear framework for understanding the cost drivers behind occupancy cost trends in companies. His "3Ls" framework of occupancy costs analysis involves a detailed investigation of factors associated with three real estate variables: location, layout. and leasing.

Location, embracing the site and its real estate submarket , determines about two-thirds of the base occupancy costs. In certain functions, virtually all of the real estate-related productivity improvements are rooted in location. *Layout*, including building geometry as well as internal configuration, systems, furniture, fixtures and equipment, determines 20-30 percent of the costs, and shapes the

¹²⁶ Apgar IV, M. "Uncovering Your Hidden Occupancy Costs." *Harvard Business Review*, May-June. 1993. pp.124-136.

productivity of nearly all business functions. *Leasing*, represented by the financial arrangement and negotiation of terms, conditions, allowances and risk factors, influences only 5-15 percent of occupancy costs and has no impact on productivity.

Table 2.7: Dun & Bradstreet Corporation Real Estate Portfolio (1993-95)¹²⁷

Dun & Bradstreet Corporate Real Estate Portfolio (1993-95)												
MEASURES	NORTH AMERICA			EUROPE			ASIA-PACIFIC/LATIN AMERICA			TOTAL		
	1993	1995	% CHANGE	1993	1995	% CHANGE	1993	1995	% CHANGE	1993	1995	% CHANGE
Revenue (US\$ millions)	2,939	3,034	3	1,268	1,422	12	504	685	36	4,710	5,140	9
Staff (in thousands)	24	24	(2)	16	13	(18)	8	8	0	47	45	(6)
Square Feet (in millions)	9.1	7.5	(17)	3.6	2.9	(18)	0.6	0.7	14	13.30	11	(16)
Occupancy Cost (US\$ millions)	219	183	(17)	61	49	(19)	29	26	(10)	309	258	(17)
Key Ratios												
Occupancy Cost/Revenue (%)	7	6	(19)	5	3	(28)	6	4	(34)	7	5	(29)
Revenue/Staff (US\$ thousand)	122	128	5	81	111	38	66	82	25	99	115	16
Square Feet/Staff	377	318	(15)	230	231	0	83	88	5	281	250	(11)
Occupancy Cost/Sq F	24	24	0	17	17	(1)	46	36	(21)	23	23	(1)
Occupancy Cost/Staff	9,121	7,727	(15)	3,886	3,848	(1)	3,800	3,140	(17)	6,530	5,766	(12)

© Apgar & Company, Inc., 1995. All Rights Reserved Note: Annual data are rounded.

Through his extensive consultancy work, Apgar also demonstrated convincingly how real estate resources can be effectively managed to affect the financial position of companies, by combining the cost drivers of the “3Ls” with his Functional-Time-Space (FTS) framework described above. An excellent example of the financial benefits resulting from integrating real estate initiatives with business delivery processes is demonstrated by the Dun and Bradstreet case, reproduced in Table 2.7 above.

Evans(1994)¹²⁸ demonstrated the impact of occupancy cost on profitability by analysing the occupancy cost profile over a number years in comparison with the company's gross income(revenue) trend over the same period. A key financial performance indicator for this financial analysis is the ratio of

¹²⁷ Apgar IV, M. & Bell, M.A. “Managing Real Estate to Leverage Change - The Dun & Bradstreet Case.” *Site Selection*, December 1995. pp. 938.

¹²⁸ Evans, M. “The Impact of Real Estate Decisions on Profitability.” *Site Selection Europe* March 1994. pp 28-30.

occupancy to gross income (or “*affordability ratio*”). An example will serve to illustrate the financial significance of relating the occupancy costs to a company’s financial position.

Figure 2.26:(a): Occupancy Cost Profile & Gross Income Profile
 (b): Ratio of Occupancy Cost to Gross Income. Company 1

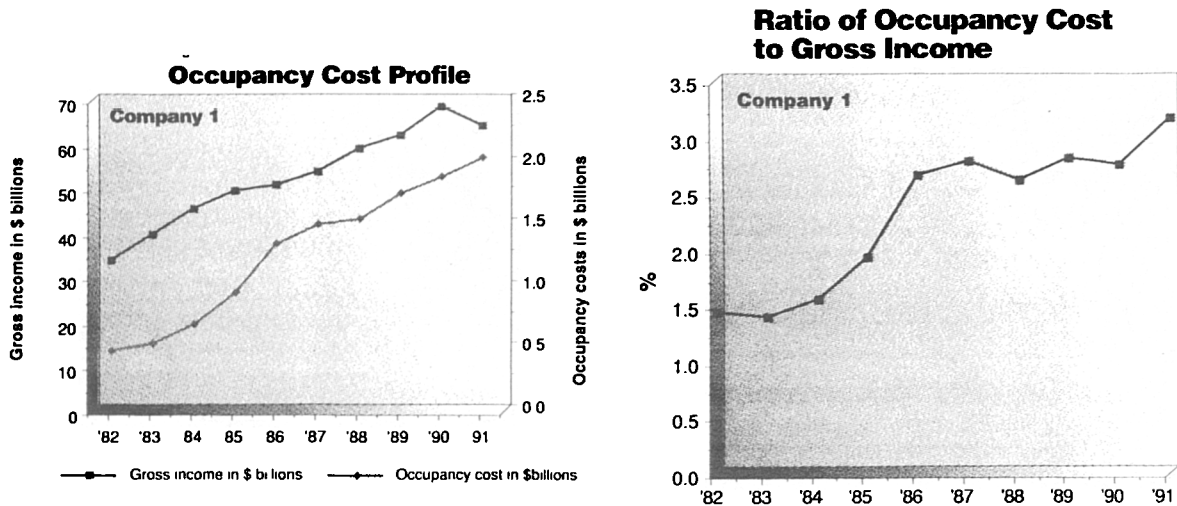


Figure 2.26a shows the profile of an American company’s worldwide income and occupancy cost over the decade from 1982 to 1991. Over the decade, income has grown from US\$34 billion to \$65 billion which represented an 8% compound growth per annum. On the other hand, occupancy cost for the same period grew from \$490 million to \$2 billion which represented a 15% compound growth per annum, almost twice the level at which revenues had grown. The trend of the company’s *affordability ratio* (Figure 2.26b) shows that between 1982 and 1991, the ratio has almost doubled from 1.4% to 3.1%.

If the company concerned had maintained the 1982 ratio in 1991, it could have increased its net income through occupancy cost savings of \$1.1 billion. In the same year (1991), the company’s losses were \$2.8 billion, so the savings would have made a dramatic impact on the bottom line for that year.

The above example shows that monitoring occupancy cost profiles enable managers to identify the trends in cost versus income, and increase management awareness of the importance of the managing real estate related costs and its impact on corporate profitability. By determining the occupancy cost to revenue ratio, and understanding the cost drivers of occupancy costs, strategies can be put in place to control costs, increase earnings and add value to the company.

Another convincing example of how strategic consideration of occupancy costs can improve corporate profitability is demonstrated by Chekijian(1994) as illustrated in Table 2.8.

Table 2.8: Occupancy Costs Performance Analysis¹²⁹

OCCUPANCY COSTS PERFORMANCE MEASURES			
	1975	1995	2000 solution
OPERATING INCOME	100%	100%	100%
OPERATING EXPENSE	80%	80%	75%
Human Resource	45%	40%	40%
Technological Resource	7%	10%	10%
Physical Resource	7%	10%	5%
	= 74% of operating expense.	= 75% of operating expense.	= 73% of operating expense.
OCCUPANCY COST (per person)	100%	200%	100%
Dollars per square ft.	100%	85%	100%
Square ft. per person	100%	150%	75%

The emphasis of the statistics in Table 2.8 is that corporate efforts to control costs and improve profitability lies in the efficient use of space, not in negotiating lower rents, or more generous rent concessions and tenant improvements.

With 1975 as a base, the table projects the cost differences and their effects for 1995 and 2000. It shows no growth in salaries and benefits, but an increase in technological resources. Occupancy costs (in dollars per sq.ft.) show a reduction between 1975 and 1995, taking into account market changes and concessions. But square footage per person (including support space) shows a 50 percent increase between 1975 and 1995. By cutting square footage per person in half by the year 2000, the resulting savings in occupancy costs would have a direct and dramatic bottom-line impact.

The above examples by Apgar, Evans and Chekijian demonstrate the power of systematic analysis and the need to ‘test’ alternative options or ‘scenarios’ in the strategic evaluation of real estate portfolio requirements.

A more detailed discussion of the components of occupancy costs and their management will be considered in the next section. However, at the portfolio level, it must be acknowledged that occupancy cost analysis embrace the evaluation of different real estate/property alternatives, in financial terms, to discover how each property will affect the business. Techniques and appraisal

¹²⁹ Chekijian, C. "Shrink, shrink, shrink that space for big savings, increased profitability, shareholder." *Corporate Real Estate Decisions*. October 1994. pp. 7.

methods used to evaluate alternative options (e.g. lease versus own) will typically include the use of discounted cashflow calculations of all component costs over the anticipated period of occupation.

The above review has concentrated on development in recent years in performance measures aimed at processes linked to assessing the adequacies of existing real estate portfolio against likely operational demands derived from the organisation's strategic plans. In the main, they are evaluation tools to continuously match operational real estate supply to anticipated demand over time. The next section of the literature review will focus on performance measures aimed at processes linked to the ongoing provision and management of facilities support services of the operational real estate portfolio.

2.4.2.2 Performance Measurement in Facilities Service Delivery

The task of matching supply to demand in getting the appropriate real estate asset base in concert with the corporate business plans (i.e. facilities provision) is only one part of the real estate asset management process. The related task of ensuring that the operational asset base performs to the expectations of the users/occupiers is a complex facilities-related service delivery process that involves a number of stakeholders comprising of both, internal and external customers. The focus of management attention here is a constant balancing of priorities: between cost of provision and occupiers' demand, between strategic and operational demands, and between maintaining control and exploiting sourcing opportunities.

The concept of building performance has been fairly familiar to the construction side of the property industry for many years where efforts are concentrated on the technical performance of building materials or building components/systems. Concerns or interests in building performance of 'building in use' is a fairly recent phenomenon.¹³⁰ Research activities have tended to focus on the economics of life-cycle costing of building components and systems¹³¹ and

¹³⁰ Davis, G. & Ventre, F.T. editors. *Performance of Buildings and Serviceability of Facilities*. STP 1029. ASTM. 1990.

¹³¹ Flangan, R., Norman, G., Meadows, J. & Robinson, G. *Life Cycle Costing - theory and practice*. BSP Professional Books. 1989.

more recently, focus on the application of value engineering/management techniques to evaluation of design and renewal/refurbishment projects,¹³² and post occupancy evaluations(POE)¹³³.

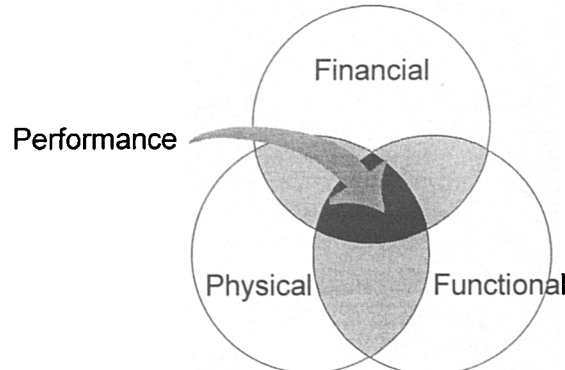
Building performance is normally associated with quality. It is a complex issue because of the subjectivity individuals' can place on numerous aspects of a building-in-use. They are variously concerned with people, processes, places, spaces, support systems, costs, income and profitability. A building's response to accommodating these requirements represents its performance.

Williams(1990) provided a useful definition of performance of building:

*"the contribution made by a building or estate to the functional and financial requirements of the occupiers and the associated physical behaviour of the fabric, services and finishes over time."*¹³⁴

The above definition points to three key aspects of performance of buildings-in-use, functional efficiency, physical efficiency and financial efficiency. Figure 2.27 shows the interrelationships of the three facets of building performance.

Figure 2.27: The Three Facets of Building Performance¹³⁵



Physical performance relates to the behaviour of the fabric, services and finishes embracing physical properties such as structural integrity, internal environment (heating, lighting, etc.) energy efficiency, cleanliness, maintainability, durability and environmental impact.

¹³² Kelly, J. & Male.S. *Value Management in Design and Construction*. E & FN Spon. 1993.

¹³³ Preiser, W.F.E. editor. *Building Evaluation*. Plenum Press, NY. 1989.

¹³⁴ Bernard WilliamsAssociates. "*Facilities Economics*." Chapter 1.2, pp.1-15.

¹³⁵ Op cit. pp. 1-16.

Functional performance is the term used to describe the properties afforded by the building to the benefit of the occupier. Examples are space (quantity and quality), layout, ergonomics, image, ambience, amenity, movement, communications, security, health and safety and flexibility.

Financial performance is a combination of capital and revenue expenditure, rate of depreciation, investment value and contribution to profitability/efficiency. It springs from the physical and functional performance of the building and the way in which it is used.

Clearly, the three facets are inextricably linked, although the significance of this relationship is frequently missed in practice by those whose pre-occupation is with one particular facet only. For example, the *physical* performance variables of buildings has always been considered within the realm of asset maintenance management. The growing recognition of the role of operational physical assets in supporting organisational change to meet business objectives has placed a growing emphasis on the economies of *functional* and *financial* variables of operational buildings.

Davis and Ventre(1990) provided further clarification by making a distinction between the terms, *a building* and *a facility*; and *building performance* and *facility serviceability*¹³⁶.

"A building is a physical artifact, "a shelter comprising a partially or totally enclosed space, erected by means of a planned process of forming and combining materials." Whether it is used or empty, whether it leaks or is weather-tight, it is a physical thing. The concept of facility is something else. "A facility may be within a building, or a whole building, or a building with it site and surrounding environment; or it may be a construction that is not a building. The term incorporates both the physical object and its use".

*In North America usage, the term **building performance** refers to "the behaviour in service of a construction as a whole or of the building components". **Facilities serviceability** is "the capability of a facility to perform the function(s) for which it is designed, used or required to be used".¹³⁷ This capacity is a quality of the facility as a system, including its subsystems, components and materials, and their interactions, such as acoustical, hydrothermal, air purity and economic. The scope of this capability reflects the relative importance of each performance requirement, considered jointly and severally. The definition of durability adds the concept of service life, "the capability of a building,*

¹³⁶ Davies, G. & Ventre, F.T. "Facility Serviceability Standards: current developments". pp.6 in Davis, G. & Ventre, F.T. editors. *Performance of Buildings and Serviceability of Facilities*. STP 1029. ASTM. 1990.

¹³⁷ Note: The authors acknowledged that the definitions within quotation within this reference are quoted from ASTM publication E631-89a. American Society for Testing and Materials, Standard Terminology of Building COstructions.

assembly, component, product or construction to maintain serviceability over at least a specified time."

Thus, the terms facility and facility serviceability address the capability to achieve a specific purpose, while the term building performance applies only to the behaviour in service of a building or its component at a specific moment in time under specified conditions, without reference to its intended use, to its capability to perform for some other use."

During the 1980's the performance approach to specifying what is required of a facility has gained widespread application throughout North America, Europe and Asia. The focus of standards development has moved beyond the performance of building components and subsystems to the creation of standard methods for assessing serviceability of whole facilities.

The concept of facility serviceability finds particular cognizance with organisations taking a *resource* view of the corporate operational real estate assets, and the growing trend in the use of *service level agreements*(SLAs) as the basis of defining economic levels of support services provision.

The above deliberation on concepts relating to the performance aspects of buildings-in-use sets the context upon which the provision and ongoing management of a whole range of facilities support services are provided within organisations. Three areas of concern have dominated senior management's attention in the area of facilities services provision:

- (i) the strategic monitoring of operational real estate occupation costs;
- (ii) the evaluation of service demands and determination of appropriate service levels; and
- (iii) the adoption of the most appropriate procurement strategy to support the smooth operation of the company's core activities.

The ensuing review will attempt to provide a broad review of key developments in the above areas of facilities service provision.

2.4.2.2.1 Components of Occupancy Costs and their Management

The review from the last section clearly highlighted the need for strategic monitoring of occupancy cost trends at the portfolio level given the impact this corporate expense can have on the corporate profitability. This section of the review will look into the component parts of property occupancy costs with a

view of identifying key performance measures and tools that are currently being used to monitor occupancy costs.

For organisations that come to acknowledge the performance of their operational real estate resource as a strategic component of promoting organisational change, and the ratio of property/facilities costs as a proportion of total business operation costs, the control and measurement of their real estate occupancy costs represent a key management function. The focus of performance measurement has been to uncover the main cost drivers of the corporate occupancy costs trend.

The financial significance of operational property as a corporate asset and its costs as a proportion of total business costs is aptly illustrated in Figure 2.28 by Varcoe(1992).

Figure 2.28: Property as a Capital Asset and as a Cost¹³⁸

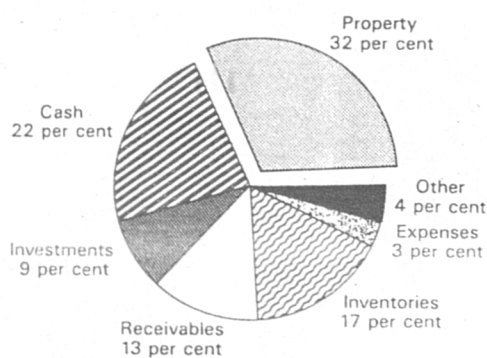


Figure 28a

Property as a Capital Asset (an IT company)

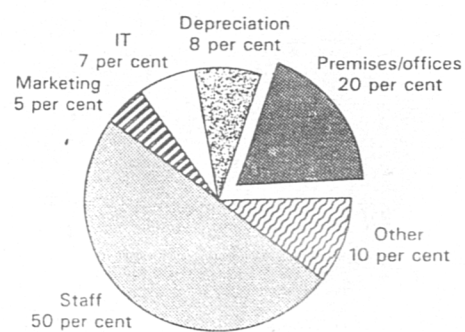


Figure 28b

Property as a Cost (a financial services company)

It is worth noting that for Figure 2.28b, although premises and office costs account for approximately 20 per cent of the total cost profile of the financial services organisation, it also houses a further 50 per cent, i.e. the staff. How well the accommodation provides a working environment that supports and enhances the performance of those staff will therefore have a fundamental effect on the success of the operation.

¹³⁸ Varcoe, B. "The Property Influence." *Facilities*. Vol.10, No.12, 1992, pp. 18.

There are significant variations in current practices in the measurement of cost of occupancy. Many categorisation and measurement practices are too broad resulting in attribution of costs that should be attributed to business units rather than occupancy costs. A clear distinction between accommodation-related costs and business-support costs, as illustrated by Williams(1994) in Figure 2.18, provides a sound basis for considering the overall operational needs in line with the company's corporate plan.

In 1991, the National Association of Accountants (NAA) in USA recommended a chart of accounts for occupancy costs, comprising some 40 categories that provide a useful classification according to generally accepted accounting principles. The Association also provided a definition for real estate occupancy cost:

"Occupancy Cost is the total cost incurred by a company to provide space for the operations of its business units. Occupancy costs can be divided into the costs of operation and costs of providing and maintaining the fixed asset.

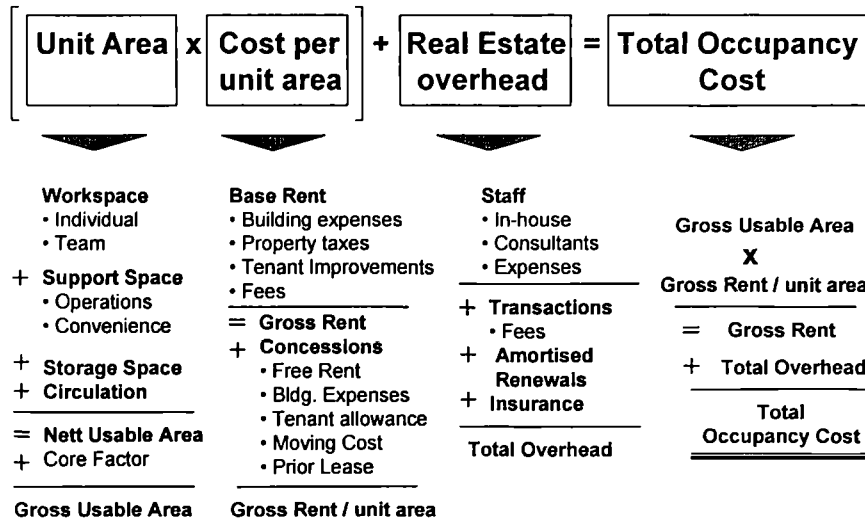
- a. Costs of operation include those items associated with the day-to-day operation of a facility: utilities, management, cleaning, repair, etc.*
- b. Costs of providing the fixed asset include those items associated with construction, ownership, and the long term integrity of the physical structure. Such items include: capital costs, capital improvements, property taxes, insurance and depreciation charges."¹³⁹*

The reference to "to provide space for operations of its business units" is particularly pertinent in emphasizing that the demand for space as a resource is clearly tied to operational requirements. Yet evidence from practice and literature seems to support the view that while corporate accounting systems track some of these costs, they are rarely collected in sufficient detail or organised in a way that allows managers to analyse them readily.

Apgar IV(1993) in "Uncovering your hidden occupancy cost" provided a breakdown of the components that make up the calculation of the total occupancy cost. He cautioned that all costs related to procuring, building, operating, renovating, and ultimately disposal of space must be considered. And all types of administrative and operating space, whether owned or leased, must be covered. (see Figure 2.29)

¹³⁹ NAA(1991), "The Accounting Classification of Real Estate Occupancy Costs." paragraph 9.

Figure 2.29: Components of Occupancy Costs¹⁴⁰



Understanding the elements of occupancy costs for each building is only one dimension of the corporate physical asset base. At the corporate level, it is necessary to identify key trends in the portfolio's attributes as well as emerging cost trends resulting from the current pattern of use and policies relating to the real estate portfolio, as well as monitoring the external market for opportunities to fine tune the existing provision.

The need for objective analytical tools is particularly pressing to assist real estate decision making because business real estate decisions are often based on "perceptions" or "judgments" rather than by fact. Apgar and Bell observed that:

"managers who pride themselves on a fact-based, analytical approach in other functions quickly devolved to opinions when it comes to real estate."¹⁴¹

In order to inform the management decision process, analytical tools must strive to provide further insights, beyond individual 'micro' elements of occupancy costs in order to identify cost drivers that influence the 'macro' occupancy cost trends as reflected by the entire corporate real estate portfolio. It is particularly important to raise management awareness to the relationships over time between occupancy costs and other financial measures by tracking growth rates

¹⁴⁰ Apgar IV, M. "Uncovering Your Hidden Occupancy Costs." *Harvard Business Review*. May-June. 1993. pp.128.

¹⁴¹ Apgar IV, M. & Bell, M. "Managing Real Estate to Leverage Change: The Dun & Bradstreet Case." *Site Selection*. December 1995. pp. 935.

of occupancy costs with those of revenue, income, staffing, and other operating expenses. For example, the total occupancy cost must be related to the number of staff, and space per staff (category of staff) in order to fully explain cost trend. From a manager's perspective, therefore, it is more effective to present the components of occupancy cost as a function of number of employees and space per employee, as shown in Figure 2.30.

Figure 2.30: Cost Drivers of Occupancy Cost

$$\boxed{\text{Number of employees}} \times \boxed{\text{Area per employee}} \times \boxed{\text{Occupancy cost per unit area}} = \boxed{\text{Total Occupancy Cost}}$$

The importance of monitoring the ratio of occupancy cost to gross income (revenue) has been demonstrated by Apgar and Evans in the last section. Naktsu(1993)¹⁴² provides a further level of analysis of this key ratio by linking it to three other related ratios: revenue per employee, space per employee, and occupancy cost per unit area. (Figure 2.31)

Figure 2.31: Occupation Cost Ratios

$$\boxed{\frac{\text{Occupancy Cost}}{\text{Revenue}}} = \boxed{\frac{\text{Headcount}}{\text{Revenue}}} \times \boxed{\frac{\text{Occupancy Cost}}{\text{Space}}} \times \boxed{\frac{\text{Space}}{\text{Headcount}}}$$

By critically examining the variables that impact on each of the variables on the right hand side of the equation, alternative strategic direction can be pursued to achieve a targeted occupancy cost to revenue ratio as a corporate objective. Table 2.9 below shows some examples of strategies that can be taken to effect the desired outcome for each of the ratios.

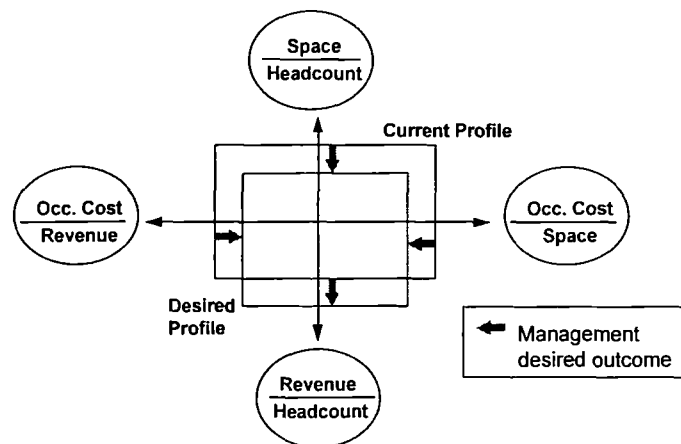
¹⁴² Naktsu, M. "Facility Management Financial Strategy." Presentation slides, October 1993. IBM Asia Pacific.

Table 2.9: Possible Strategic Action to achieve Target Occupancy Cost to Revenue Ratio

Ratio:		
Revenue/Headcount	Occupancy Cost/Space	Space/Headcount
Possible strategies:		
<ul style="list-style-type: none"> • Productivity Programmes • Automation / Information Technology • Restructuring • Reengineering 	<ul style="list-style-type: none"> • Location • Lease / Own • Lease Terms / Ownership costs • Life-cycle Asset Management 	<ul style="list-style-type: none"> • Utilisation Pattern • Space Budgeting • Layout • Innovative Office Initiatives

The desired management outcome resulting from actions taken in relation to one or a combination of the ratios in Table 2.9 above is graphically illustrated in Figure 2.32.

Figure 2.32: Mapping Profile of Occupancy Cost Ratios



The importance of the above relationships can be viewed in terms of at least three perspectives:

- I. To the real estate/facilities executive, the set of ratios provide the much needed dimensions for relating the real estate resource and its utilisation to the nature and content of the business processes it is supporting. They present the essential statistics that provide the 'macro' view that clearly reflect the integral role of the real estate resource in supporting the core business processes.
- II. To the corporate managers, the set of ratios serve to bridge the language barrier between strategic management and operational management. By monitoring the movement of the ratios, senior management can consider various strategic options in order to achieve the desired outcome in the

occupation cost to revenue ratio by considering the variables that impact on the other three ratios.

III. In terms of resource management, the set of ratios provide a clear basis for monitoring the variables affecting Apgar's 3Ls: Location, Layout and Leasing.

The above analytical tools provide a useful basis for demonstrating how the operational real estate assets can be managed to leverage change, transforming traditional work settings into new, efficient and flexible working environments. Perhaps more importantly, by restructuring the existing occupancy cost profile throughout the corporate portfolio, financial resources may be realised to support corporate objectives.

An encouraging emerging trend is the rapid development of computerised systems aimed at making the tasks of data collection and data analysis easier and more economical. The development of decision support tools in the area of real estate and facilities management can be clearly traced through the availability of numerous computer-aided facility management software systems (CAFM) in the 1980s. More recently, the appearance of computer-integrated facility management (CIFM)¹⁴³ which allows quick and easy access to all facility-related information, supports the trend towards more rigorous analysis of real estate utilisation and performance as a corporate asset.

2.4.2.2.2 Assessing Facilities Support Services - Demand Assessment

The delivery of facilities support services is an area of management that has evolved rapidly over the last decade in the UK. It is the service management component of Williams's three facets of facilities management; sponsorship, intelligence and service management.¹⁴⁴ Its rapid development can be charted in parallel with the growth of facilities management as a professional and a growth sector within the construction/property and service industry sectors. The growing trend of companies adopting business strategies that promote the concept of concentrating on core business/core skills, have had the effect of

¹⁴³ Hoppmann, M.A. "The ins and outs of CAFM and CIFM." FM Journal. September/October 1996. pp.7-13.

¹⁴⁴ Refer to section 2.4.1.2, Figure 17, pp. 68.

favouring partial or total “outsourcing” (i.e. the contracting out of support services that were provided by in-house staff to external service providers) of non-core support services. In many respects, the growing trend in the use of external service providers to deliver a growing range of support (but nevertheless essential) services; has reinforced the concept of the *intelligent client function* (ICF) within the corporate management structure. In this respect the author is in full agreement with Williams’s emphasis that the functions encompassed within the two facets of ‘sponsorship’ and ‘intelligence’ must provide the framework within which service management will be delivered.

It is unlikely that there will be a consensus as to what activities facilities management should or should not embrace. For the purpose of this study it is necessary to consider the scope of facilities services and the way that they relate to corporate objectives and impact on performance - whether measured in terms of profit, efficiency or both. In this area, Williams’s interpretation of operational needs as comprising of two distinct but interrelated processes; *accommodation* and *support services* is particularly appropriate. Table 6 lists most of the cost centres commonly identified in practice.

As the focus of this study is concerned with the provision and ongoing management of the corporate accommodation resource, much of the emphasis will be placed on services listed on the left-hand side of Table 2.10 above. However, it is acknowledged that in arriving at a corporate procurement strategy for facilities support services, the distinction between premises and support services should not hinder any potential economic advantages that may result from the ‘bundling’ of appropriate service packages. Another qualification is that demand assessment is taken at the level of overall direction and co-ordination of all premises-related services rather than a particular service or task.

This section of the review will concentrate on an evaluation of the main requirements of the processes involved in support service evaluations and service levels specification, rather than on the specifics in relation to each individual service. The approach taken is partly influenced by the general lack of literature relating to this emerging area as they are applied to real estate asset management. Available literature tended to be anecdotal and case

oriented rather than conceptual. This part of the review aims to build up a conceptual framework that sets the context of the service management aspects of facilities support services to the strategic evaluation of facilities provision covered in the section 2.4.2.1.

Table 2.10: Facilities Services and Cost Centres¹⁴⁵

Accommodation (Premises)	Support Services
Property (real estate asset) <ul style="list-style-type: none"> • Rents • Rates • Insurance • Depreciation • Service Charge Component Projects <ul style="list-style-type: none"> • Design • Supervision • Cost Control Operating Costs <ul style="list-style-type: none"> • Maintenance of fabric • Maintenance of services • Cleaning / housekeeping • Energy • Waste Disposal • Internal Landscaping • External Landscaping • Service Charge Component 	Security <ul style="list-style-type: none"> • Reception • Guarding Staff Support <ul style="list-style-type: none"> • Catering • Recreation / Social & Trade Union Facilities • Health, Safety & Welfare Business Support <ul style="list-style-type: none"> • Reception / porters / messengers • Storage / archiving • Communication Systems • Data & IT Support • Office Furniture • Stationery, Printing & Reprographics • Office Moves (churn) • Motor transport • Disaster Recovery

Management developments in the area of service demand evaluation, taken against a trend in the last decade of a shift from internal services to external service providers, have centred on two aspects: (a) definition and quantification of appropriate service levels associated with the necessary facilities support services, and (b) evaluation of what support services are to be retained in-house or outsourced to external service providers.

(a) Service Level Definition and Agreements

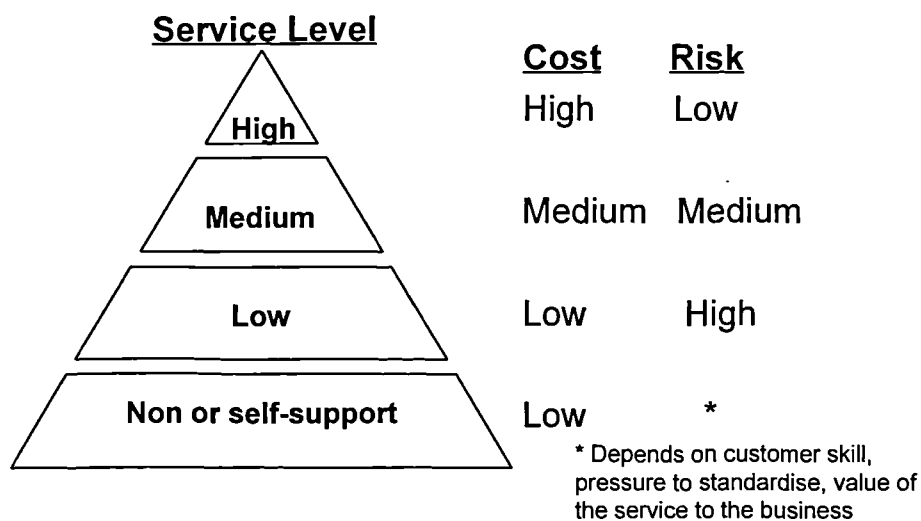
The concept of defined service levels in the area of real estate asset management is relatively new. The promotion of their use was a direct result of the implementation of internal charging by in-house service departments to business units within organisations, in both the private and public sector. For

¹⁴⁵ Adapted from Bernard Williams Associates (1994) "Facilities Economics." pp.1-3 to 1-4.

the real estate or facilities executives, the practice of internal charging, for the first time, places the onus on them to define and cost the services they have been providing to their 'internal customers' (i.e. the users of the services within the corporation). More significantly, the shift forces the in-house functional departments as service providers to move from a culture of reacting to business units' demand as their *raison d'être*, to one in which the service culture governs the transactions between service provider and the customer, as service purchaser. This much needed change in culture has been built upon the basis of negotiations between the parties concerned on a level of service provision that is directly related to the cost and quality of provision.

Hiles(1993) uses a pyramid model to define service level and value. The model identifies four levels of service from Level Zero (the customers are on their own) to Level Four (highest quality service) - Figure 2.33.

Figure 2.33: Service Support Characteristics¹⁴⁶



Level Zero may apply to areas where customer expertise exceeds that of the service supplier, or to non-critical areas. Level Four may apply to mission critical or high-value services. In general, the higher the level of service, the higher is the service costs and the lower the risk of loss of service; the lower the level, the cheaper the service but the greater the risk of loss of service. In evaluating individual service demand, management is prompted to establish the quality of

¹⁴⁶ Hiles, A. (1993) *Service Level Agreements - managing cost and quality in service realtionships*. Chapman & Hall. pp.3.

service appropriate to its *needs*, as opposed to *wants*. In other words, the evaluation process defines the minimum service requirements.

Using the above model, Hiles defined a service level agreement (SLA) as:

*" an agreement between the provider of a service and its customers which quantifies the minimum quality of service which meets the business need."*¹⁴⁷

Key words within the above definition require qualification:

- It is *an agreement* - it is negotiated and involves a growing understanding of the needs and constraints on each side, probably resulting in compromise.
- It *quantifies* the level of service - metrics are designed which both parties to the SLA agree represent the quality of service as delivered.
- Delivered quality is the *minimum* acceptable - anything above the minimum may be excess and therefore probably result in unnecessary cost. But the service delivered has to be acceptable to the customer.

Hiles's definition of SLA explicitly states the appropriate service level that management will opt for is the minimum level.

Pratt(1994) provided a wider definition of service level agreement by suggesting that there is an element of choice which provides for both increases and decreases in the level of provision, stressing that flexibility is essential if the business is to be able to respond quickly.

*"A Service Level Agreement is a statement of various service level options from which one will be selected by the customer or client which specifies timing, frequency, cost, etc. to match the business need."*¹⁴⁸

Both the above definitions concur on the need to *meet or match* service provision to *the business need*. For many organisations, their services have been adapted and enhanced over many years, during which business objectives, market conditions, priorities and cost-benefit calculations have changed radically. But even when business goals are shifting, an SLA provides

¹⁴⁷ Hiles, A. (1993) *Service Level Agreements - managing cost and quality in service relationships*. Chapman & Hall. pp. 2.

¹⁴⁸ Pratt, K. (1994) "Introducing a Service Level Culture." *Facilities*, Vol.12, No.2 pp.10.

the impetus to review such services against present needs, particularly to isolate “custom and practice” and identify the real current service requirement.

As mentioned above, a major benefit of using service level is that it promotes customer orientation within support services. This shift has motivated service providers to examine the service packages they offer to their customers and to prompt the tailoring of service packages to meet customers’ need.

Figure 2.34: Context of Service Level Agreements - Serving the Business¹⁴⁹

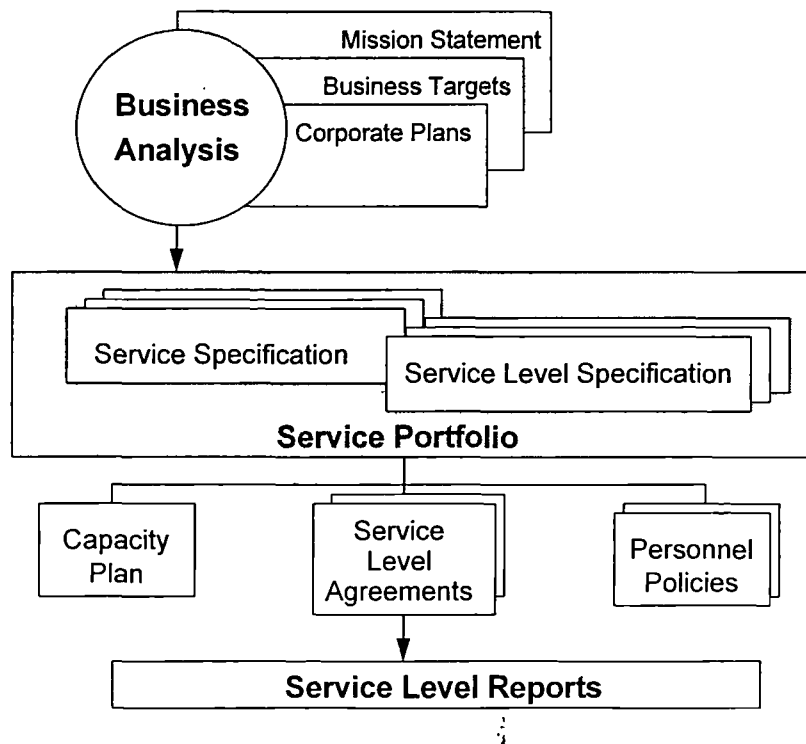


Figure 2.34 sets the context of the role of service levels and service level agreements within an organisation. It illustrates the direct relationship of aligning services with business strategies regardless whether the services are provided internally or by external suppliers. What is important is that the support service provision must be at an appropriate capacity, quality and cost. In practice, an SLA represents a 'sub-contract' with an in-house support service or amplifies a contract for an external service provider. An SLA therefore orients the support service provision to the business plan.

¹⁴⁹ Hiles, A. (1993) *Service Level Agreements - managing cost and quality in service relationships*. Chapman & Hall. pp.5.

A key role in service demand assessment is arriving at the appropriate 'service portfolio' to support the achievement of corporate targets. In this respect it is crucial, at the start of the evaluation process, to clearly define the client-customer-consumer relationship and role.

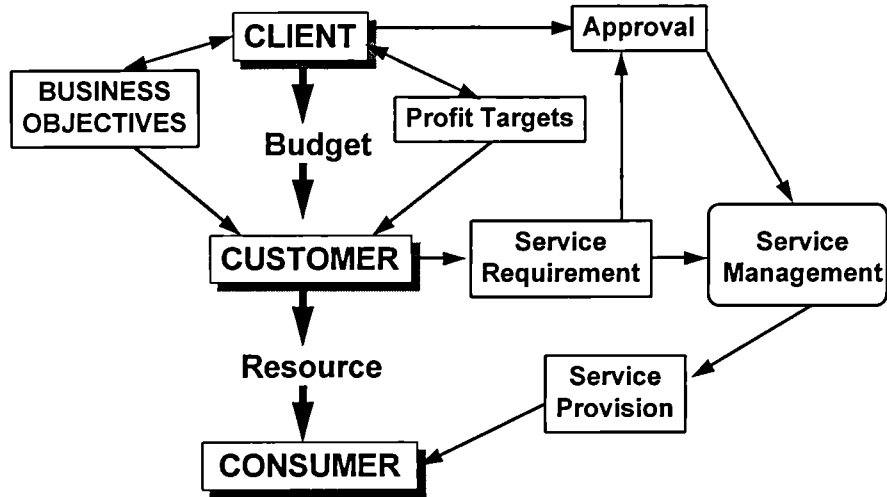
- **Client** At the most senior level of the company, possibly at the Board level, with responsibility for directing the business, setting targets, budgets and return on investment, etc.
- **Customer** Usually at the business unit level, responsible for achieving targets set within budget and in a position to determine what services and support are required to underpin and help deliver performance.
- **Consumer** People working within business units to meet performance targets set, often with high expectation of services provided but no responsibility for their costs.

By delineating the business activities and decisions and focusing them into a direct relationship between the Board, as client and budget holder, the customer as divisional head and business unit manager, and the consumer who uses resources to achieve results, the service evaluation or review process can be framed to ensure that the provision of non-core activities to the business is considered in its proper perspective, and not caught in what has been described as the "service/demand trap"¹⁵⁰ when increased demand are provided at the expense of sacrificing services quality.

To ensure a more focused service provision, Pratt(1995) suggests that it is essential to provide a framework for service decisions within business strategy. To achieve this requires a process that separates out the interaction within the core business and allows the business strategy to be clearly tested both within operating divisions and with an adjacent service management function as illustrated in Figure 2.35. The outputs from the *Client* and *Customer* boxes of *budgets* and *resources* respectively in Figure 2.35 stress the importance of 'locking' the costs of service provision into the organisation's planning and budgeting timetable and procedures.

¹⁵⁰ Pratt, K. in "Service Level Agreement" Proceedings of seminar organised by Quadralect, London. November, 1995.

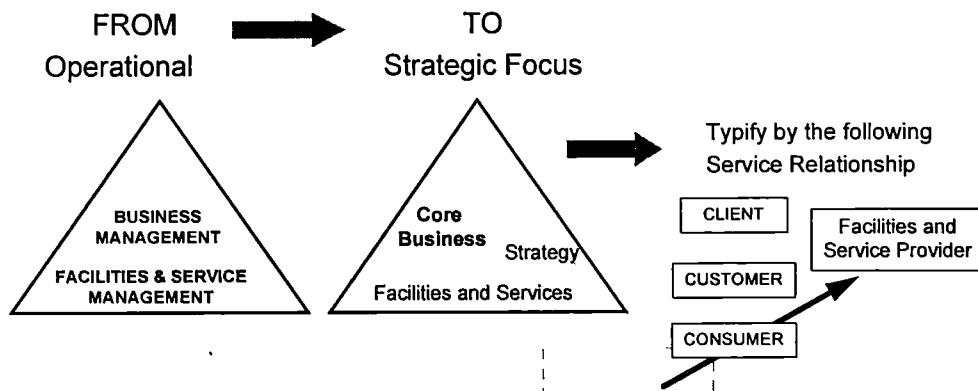
Figure 2.35: A Framework for Service Decisions



The implementation of the above service decision framework calls for top management commitment to both the process of deriving the service requirement and the outcome from the service provision. A participative approach that brings together inputs from the client, customers, consumers of services and the service provider must underpin the service evaluation process. In this respect, it is essential that the role of the facilities and service provider is appropriately placed to evaluate the service requirements at the level of the client and customer (who are in a position to judge the benefit or otherwise of a service level to the business) rather than at the consumer level (who are not responsible for the service costs).

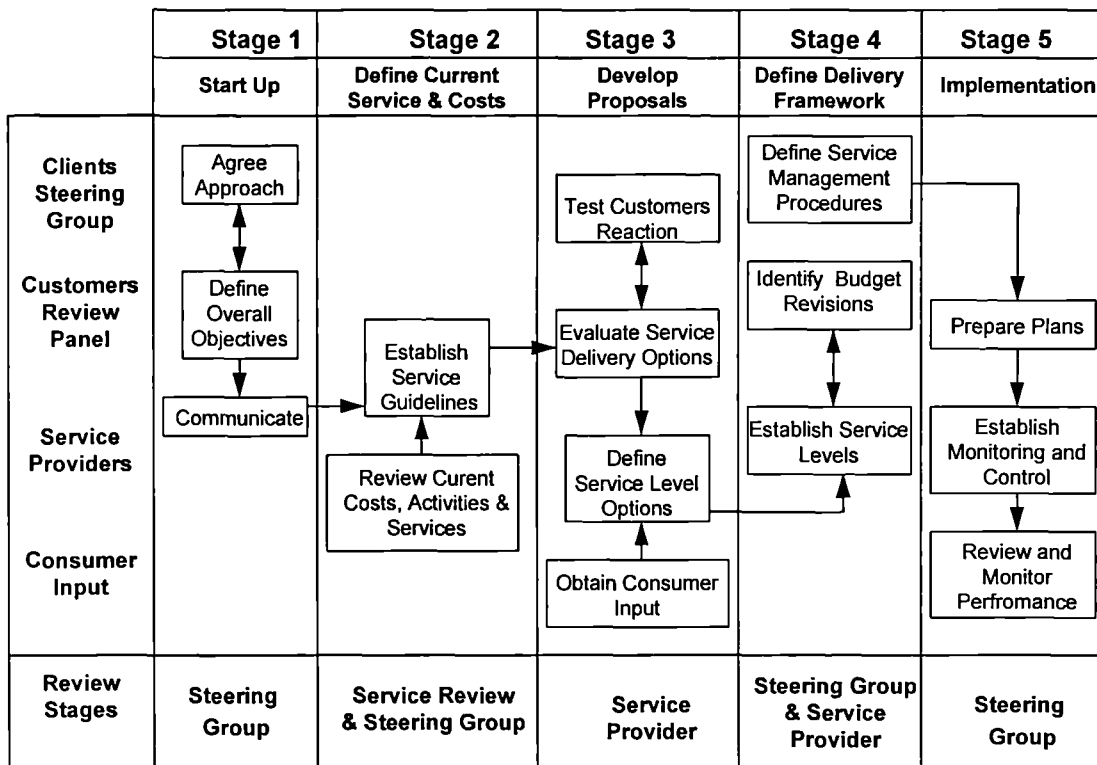
Figure 2.36 illustrates the shift from a traditional approach in which facilities and service management are detached from business management, to one in which the facilities and service functions are strategically placed to support core business initiatives.

Figure 2.36: Implication of Service Decision Framework on Service Relationship



For the above integrated strategic focus to be realised, Pratt(1995) suggests that a service management structure must be set up to support the service decisions framework depicted in Figure 2.36 above. The principal role of service management is to ensure the buy-in to the chosen level and cost should and can be afforded by the core business. The service review and planning structure is designed to provide interaction between client (via the service steering group), customers and service providers (via the service review panel). Five distinct but related stages from start-up to implementation are identifiable with inputs from the steering group, service review panel and service provider at various stage of the overall service review and planning process, as illustrated in Figure 2.37.

Figure 2.37: Service Review and Planning Process¹⁵¹

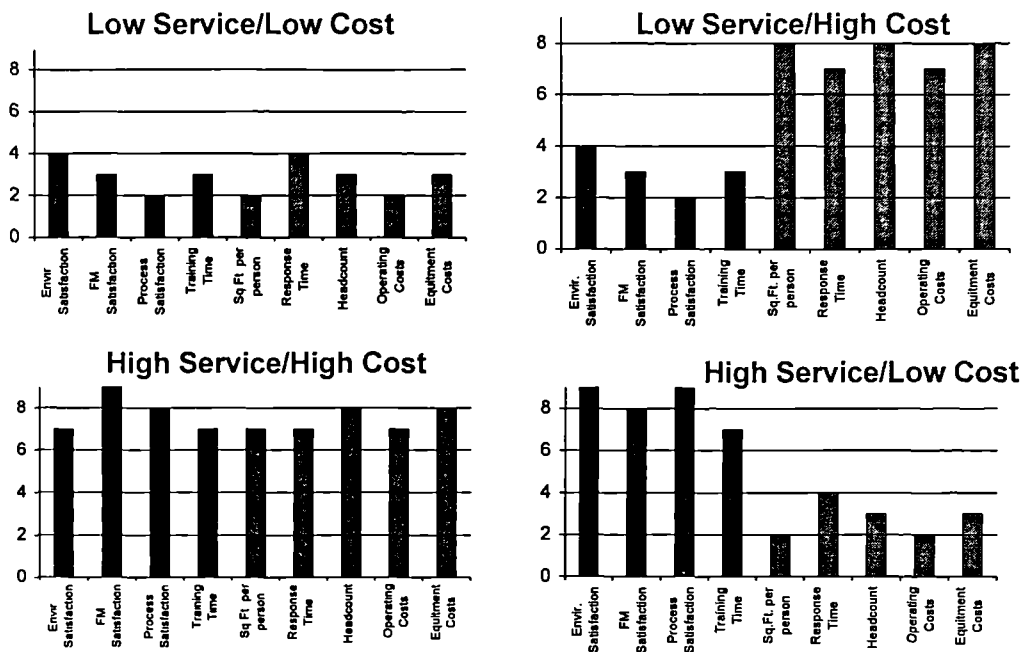


The above service decision framework, service review and planning process provide a logical basis for monitoring the provision of facilities support services in relation to the operational real estate portfolio at any point in time.

¹⁵¹ Pratt, K. in "Service Level Agreement" Proceedings of seminar organised by Quadralect, London. November, 1995. A summary of main steps in the implementation of the above service review and planning process is included in Appendix B.

In the evaluation of individual services and the appropriate mix of support services, a number of techniques have emerged. For example, Becker(1990) suggested the concept of *Facility Management Performance Profiles* stating that their value is in helping an organisation think about the shape of the profile they believe is appropriate to their organisation. Figure 2.38 illustrates prototypical FM Performance Profiles.

Figure 2.38: Prototypical Facility Management Performance Profile¹⁵²



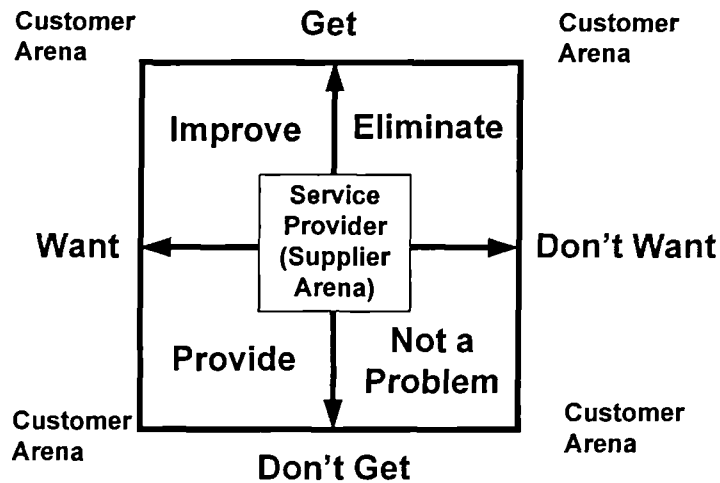
FM performance profiles link cost to service, measuring value for money. The ideal FM profile is *low cost/high service*, and the worst is *high cost/low service*. *High cost/high service* is tolerable during prosperous times, when inefficiency is burried in profit. *Low cost/low service* should always be avoided. The point is that looking at one side of the profile may result in an entirely false conclusion about overall performance; that is, costs may be down, but if service is also very low, not much has been achieved. Similarly, a high service measure loses some of its lustre when associated with higher than expected costs.

Whitehair(1994) outlined the results of a survey in which the responses of a survey was mapped onto a quadrant chart to establish the link between important

¹⁵² Becker, F. "A performance profile approach to measuring overall facility management performance". pp.162-164 in Davis, G. & Ventre, F.T. editors. *Performance of Buildings and Serviceability of Facilities*. STP 1029. ASTM. 1990.

and satisfaction - what is important to the customer and are those needs met? Figure 2.39 is an adaption of the principles described by Whitehair to demonstrate a simple tool to evaluate support service provision.

Figure 2.39: Evaluation of Service Provision¹⁵³



The above brief overview of developments in service evaluation concepts and methodologies represents a growing awareness by organisations that the overall process of provision of corporate operational facilities must be carried through to the efficient provision of facilities support services if the benefits from the real estate resource are to be fully realised. This will involve the evaluation of the appropriateness of the current range of support services in terms of costs associated with their current provision and the service levels. The objective being to ensure the best fit of service packages to support the core business. In this respect, the demand assessment of support services is an essential element of a well organised and relevant facilities and services provision, providing valuable management information for understanding the role of support services and the management issues relating to their efficient and timely supply.

(b) Sourcing Evaluation of Facilities Support Services - Supply Assessment

Issues relating to sourcing evaluation are closely intertwined with decisions that influence or impact on the corporate procurement strategy for both facilities

¹⁵³ Adapted from Whitehair, R. "Sustaining your competitive edge." in IFMA '93 Conference Review by Byatt, R.. *Premises & Facilities Management*. January 1994. pp.16.

support and business support services. This section of the review is concerned with the principles and concepts governing the evaluation of what support services are to be retained in-house or contracted out (outsourced) to a third party supplier, following the support service demand assessment. The development of corporate procurement strategies in relation to the provision of support services will be considered in the next section.

The rationale behind the growing popularity of outsourcing¹⁵⁴ has already been described earlier (section 2.4.1.3). The premise is that organisations perform more effectively if they concentrate on the delivery of their core business activities. The following quotation from Jones(1994) aptly sums up the importance of a careful evaluation of the sourcing of support services provision.

"Outsourcing carries a convincing argument. But with it come potentially lethal traps. Mistakes can prove costly and damaging."¹⁵⁵

In the UK, the contracting out of facilities services is historically more established than elsewhere in Europe. Perhaps what is discerning to corporate in-house departments is that outsourcing is no longer confined to the blue collar activities (like catering, cleaning, maintenance and security) but is more and more penetrating professional and white collar services (like accounting, legal services, recruitment, etc,) nearer the core business. Indeed, the emerging trend seems to point to a situation that hardly any internal service is immune to, the economic benefits of exchanging fixed overheads with the variable expense of a bought-in service.

In the context of real estate asset management, the provision of facilities support services is an integral part of the overall process of providing an enabling working environment to the productive processes of the organisation. The drive to achieve greater flexibility as a result of the pace of technological change and global competition have caused many organisations to scrutinise the current utilisation of their operational asset base. Given that the facilities service components typically represent between 50 to 75 percent of all non-core

¹⁵⁴ In the context of this study, "outsourcing" is when an outside service provider is brought in to perform a function that used to be performed by an in-house department.

¹⁵⁵ Jones, O. "Contracting out non-core services." Facilities Management, April 1994. pp.4.

support costs, and between 20 to 30 percent of an organisation's total costs¹⁵⁶, the management of facilities support services as a whole is clearly a key area within which this essential organisational flexibility can, and indeed needs to be achieved.

Of even greater significance than their absolute cost, however, is the influence the workplace environment has on the organisations' largest cost and their most important asset; their people. The success with which the facilities support function provides an enabling working environment, that supports and enhances the performance of those personnel, will have a fundamental effect upon the overall success of the company. It is within the context of this critical role of the real estate resource that organisations must develop robust strategic evaluation tools and methodologies to assess the appropriateness of their current basket of facilities support services provision.

At the heart of a decision to provide a service internally or to purchase from the external market is commonly known as "Make-or-Buy Analysis" (or MB analysis for short). In economic terms, MB analysis is based on a market-economy attitude that favours voluntary market transactions instead of compulsory internal transactions. Traditional MB analysis has its roots in manufacturing industry where the techniques for applying it to problems of component procurement are fairly well known. It is the application of MB analysis in facilities, administration and professional services that is considered here.

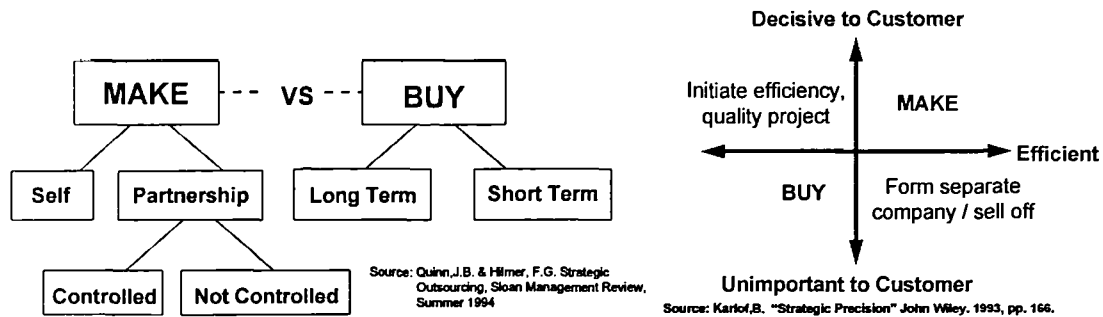
Analysis of which activities the organisation should handle itself, and which it should buy from outside, is aimed at sharpening the focus on core business and increasing the productivity of the organisation. Fundamentally, a MB analysis starts by determining whether the contribution which a function makes to value creation in the business is greater than the cost of producing that contribution. The rationale being if the cost of providing a service exceeds the contribution to creation of value, the service should be discontinued and its contribution should be bought instead. Conversely, if value exceeds costs, then the service should be retained and the in-house competence in the service developed and

¹⁵⁶ Varcoe, B. "intelligent Outsourcing." *Facilities Management*. August 1995. pp.4.

improved.

In reality, however, in an organisational setting, the more obvious economic advantages will often need to be balanced against the more intractable problems that may result from existing practices and culture prevailing within an organisation.

Figure 2.40: Dimensions of MB Analysis



Figures 2.40 above illustrates the various dimensions of MB analysis and the outcome options resulting from the analysis. It is clear that in deciding on a sourcing decision for a particular support service or a bundle of services, there are a number of factors to be considered, the resolution of which can lead to other options, other than make or buy.

The key strategic issue is whether a company can achieve a maintainable competitive edge by performing an activity internally - usually cheaper, better, in a more timely fashion, or with some unique capability - on a continuous basis. If one or more of these dimensions is critical to the customer and if the company can perform that function uniquely well, the activity should be kept in-house. Many companies unfortunately assume that because they have performed an activity internally, or because it seems integral to their business, the activity should be kept. However, on closer investigation and with careful benchmarking, its internal capabilities may turn out to be significantly below those of the best-in-industry or best-in-world suppliers. Quinn and Hilmer(1994) cited two examples to underscore the importance of external comparative analysis (benchmarking) as a means of exposing internal deficiencies.

“ Ford Motor Company found that many of its internal suppliers’ quality practices and costs were no where near those of external suppliers when it began its famous “best in class” worldwide benchmarking studies on 400 subassemblies...”

*A New York bank with extensive worldwide operations investigated why its Federal Express costs were soaring and found that its internal mail department took two more days than Federal Express to get a letter or package from the third floor to the fortieth floor of its building. ...*¹⁵⁷

Karlof and Ostblom(1993)¹⁵⁸ in the book on "Benchmarking" listed six decision parameters that can influence the outcome of a MB analysis; productivity, customer-perceived value, availability, focus on core business, fixed costs and conversion costs. They also cautioned that some of the parameters which affect the decision are quantifiable, others are matters of judgment. However, the precision of decision-making can be improved if the right questions are asked and answered, even if the answers cannot always be quantified.

Some of the main issues that have emerged in debates concerning the pros and cons of outsourcing have evolved around the resolution of the following pairs of decision parameters:

- Competitive Edge versus Strategic Vulnerability
- Strategic(core) versus Operations(non-core)
- Strategic Benefits and Risks
- Control versus Flexibility

The issues relating to competitive advantage and strategic vulnerability, and the distinction between strategic(core) and operational(non-core) functions will be considered within this section of the review. Issues relating to strategic benefits and risks, and control and flexibility will be discussed in the next section.

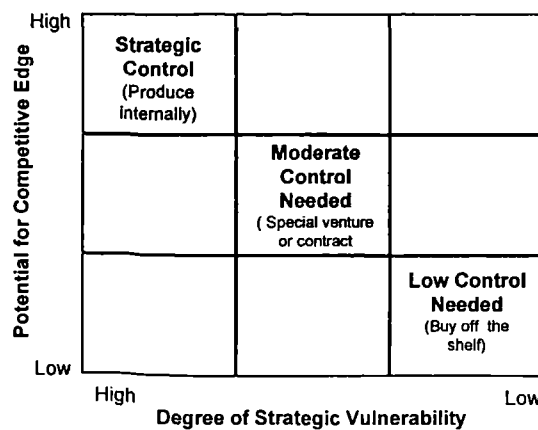
Quinn and Hilmer(1994) conceptually link the two decision parameters that affect the validity of a sourcing decision for an activity or service: the potential for obtaining competitive advantage and the degree of strategic vulnerability that could arise from market failure if the activity is outsourced (see Figure 2.41). The two extremes of the matrix are relatively straightforward. When the potentials for both competitive edge and vulnerability are high, the company needs a high degree of control, usually entailing production internally or through joint ownership arrangements or tight long-term contracts (explicit or implicit). The

¹⁵⁷ Quinn,J.B. & Hilmer,F.G. "Strategic Outsourcing." Sloan Management Review. Summer 1994. pp.48-49.

¹⁵⁸ Karlof,B. & Ostblom,S.(1993) "Benchmarking - a signpost to excellence in quality and productivity." John Wiley& Sons. pp. 165-171.

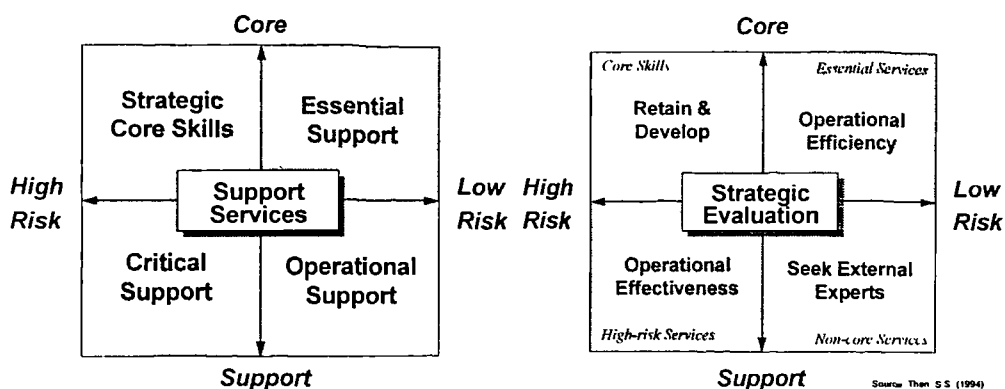
opposite case is perhaps office cleaning where little competitive edge is usually possible where there is an active and mature market of supplier firms. In between, there is a continuous range of activities requiring different degrees of control and strategic flexibility. At the intervening point, the question is not just whether to make or buy, but how to implement a desired balance between independence and incentives for the supplier versus control and security for the buyer.

Figure 2.41: Competitive Advantage vs. Strategic Vulnerability¹⁵⁹



In the ensuing discussion the author has adapted the Boston Consulting Group(BCG) quadrant matrix¹⁶⁰ to provide a system of frameworks for the strategic evaluation of decision parameters listed above.

Figure 2.42: Strategic Evaluation of Support Services

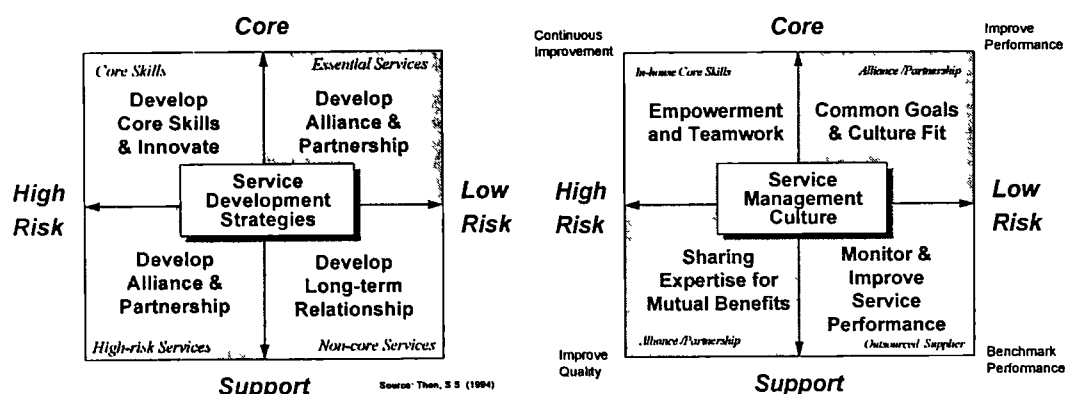


¹⁵⁹ Quinn, J.B. & Hilmer, F.G. "Strategic Outsourcing," *Sloan Management Review*, Summer 1994. pp. 48.

¹⁶⁰ Henderson, B.D. (1970) *The Product Portfolio*, Boston Consulting Group.

The quadrant matrices illustrated in Figure 2.42 are based on the relationship between core-support services and the perception of risk. The figure depicts a two-stage evaluation model. The left hand side matrix represents a framework whereby the existing basket of support services in an organisation are grouped as either offering strategic support, essential support, critical support or operational support to the core business. Services or activities that are perceived to be strategic to the core business and in a high risk category in terms of retaining competitive advantage are clearly the organisations core skills. Activities within the *operational support* quadrant are non-core support activities perceived as posing relatively low risk to the business delivery. The *essential support* quadrant comprises services that are considered to be relatively close to the core but posing relatively low risk, while the *critical support* quadrant is make up of services that are perceived to be high risk but of a supporting nature to the business delivery. The inter-relationship of the *support services* matrix model (left-hand side) on the strategic evaluation matrix model (right-hand side) lies in the different focus of evaluation for activities or services identified within each of the quadrant. For example, non-core low risk operational services would represent candidates for potential outsourcing, emphasising the need to monitor the external supply market to identify potential suitable third party service providers for the services within the operational quadrant.

Figure 2.43: Service Development Strategies



The matrices shown in Figure 2.43 above follow on from Figure 2.42 by developing service development strategies for the four quadrants of services and their corresponding management focus in service management.

The *service development matrix* (left-hand side) emphasises the various strategies that will influence the actions for services within each of the quadrants. For example, for the non-core outsourced services, the main strategy will aim to develop a lasting long-term relationship with the external service provider(s).

The management focus matrix (right-hand side), suggests the underlying motivation that underpins the management focus for each of the quadrants. For example, referring once again to the outsourced non-core services, the underlying motivation for management will be to continuously monitor the service delivery by the external service provider with a view of improving service to the end users(consumers) and value to the business units(customers) within the organisation.

The models presented in Figures 2.42 and 2.43 are grounded on the concepts of core competencies and strategic outsourcing which have been well supported by research.¹⁶¹ The concept of core competencies requires that managers think much more carefully about which of the company's activities really do create unique value and which activities could more effectively be bought-in from external suppliers. From a strategic outsourcing viewpoint, core competencies are the activities that offer long-term competitive advantage and thus must be rigidly controlled and protected. Peripheral activities are those not critical to the company's competitive edge.

If the supplier markets can be taken to be totally reliable and efficient, rational companies would outsource everything except those special activities in which they could achieve a unique competitive edge, i.e. core skills. Unfortunately, most supplier markets are imperfect and do entail some risks for both the buyer(client) and seller(service provider) with respect to price, quality, time and

¹⁶¹ Some of the more important references include:

Miles,R. & Snow,C. "Organisation, New Concepts and New Forms." *California Management Review*, Spring 1986, pp.62-73.

Prahalad,C & Hamel,G. "The Core Competence of the Corporation." *Harvard Business Review*, May-June 1990. pp.79-91.

Quinn,J.B., Doorley,T.L., & Paquette,P.C. "Beyond Products Service-Based Strategies." *Harvard Business Review*, March-April 1990. pp.58-68.

other key variables. Moreover, outsourcing entails unique transaction costs - searching the supply market for a suitable supplier, contracting, controlling, and re-contracting - that at times may exceed the costs of having the activity directly under management's in-house control.

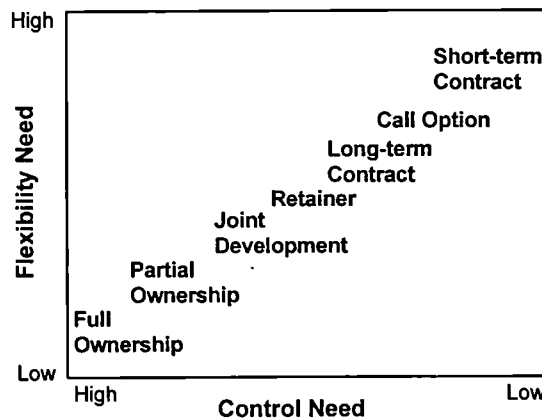
From the above discussion, it is clear that there are a number of decision parameters that must be considered in any sourcing evaluation of facilities support services. This section of the review has concentrated on issues relating to make-or-buy analysis, the next section will consider issues relating to the demand-supply interface of facilities support service management.

2.4.2.2.3 Evaluating Procurement Options - Sourcing Delivery

This section of the review follows on from service demand evaluation from the last section. Once a clear understanding of the core demand requirement has been established, attention must be directed within that context to the nature of the demand-supply interface. The interface must be structured in a such a way that each party does what it can do best and for the least overall cost. This is a vital aspect that can be crucial to the overall success of the whole procurement strategy. In effect, it is concerned with the consequences of the make-or-buy analysis of demand assessment.

Two decisions parameters that will influence the choice of procurement route are control versus flexibility, and strategic benefits versus risks.

Figure 2.44: Potential Contract Relationships - Flexibility versus Control¹⁶²



¹⁶² Quinn, J.B. & Hilmer, F.G. "Strategic Outsourcing," *Sloan Management Review*, Summer 1994. pp. 50.

In deciding on a sourcing strategy for the provision of support services to support core business, companies have a wide range of control options. Figure 2.44 shows that potential range of contract relationships that are possible between the purchaser and service providers. The two variables that differentiate each choice of contractual relationship are the relative weightings given to the need for flexibility and for control.

Within this flexibility vs control framework, there is a full spectrum of outsourcing arrangements, depending on the company's control and flexibility needs. In other words, there is a constant trade-off between flexibility and control. Where there is a high potential for vulnerability and a high potential for competitive edge, tight control is required. At the opposite end is, say, office cleaning. Between these extremes are opportunities for developing special incentives or more complex contracts to balance intermediate levels of vulnerability against more moderate prospects for competitive edge.

One of the main purposes of outsourcing is to have the supplier assume certain classes of investments and risks, such as demand variability. The issue is less whether to make or buy an activity than how to structure internal versus external sourcing on an optimal basis. Companies are outsourcing much more of what used to be considered either integral elements of their value chains or necessary staff activities. Because of greater complexity, higher specialisation, and new technological capabilities, outside suppliers can now perform many such activities at lower cost and with higher value added than a fully integrated company can. In the end, the core business that achieves this most consistently and effectively in all its contractor/supplier relationships will be a long way towards the establishment of a firm basis for competitive success.

Too often companies look at outsourcing as a means to lower only short-term direct costs. However, through strategic outsourcing, companies can lower their long term capital investments and leverage their key competencies significantly. Quinn and Hilmer(1994)¹⁶³ cited a study by the Boston Consulting Group of more than 100 major companies doing extensive outsourcing which concluded

¹⁶³ Quinn, J.B. & Hilmer, F.G. "Strategic Outsourcing," *Sloan Management Review*, Summer 1994. pp. 52.

that most western companies outsource primarily to save on overhead or short-term costs. By contrast, the Japanese companies outsource primarily to improve efficiency and quality of their own processes, build close interdependent relationships, and hold on tightly to high value-added activities that are crucial to quality.

The above findings testify to the importance of having a clear understanding of the reason(s) for contracting out services or functions that are currently provided in-house. Outsourcing complete or partial activities creates great opportunities but also new types of risks. For the client organisation, management's main strategic concerns include:

- loss of critical skills or developing the wrong skills,
- loss of cross-functional skills, and
- loss of control over a supplier.

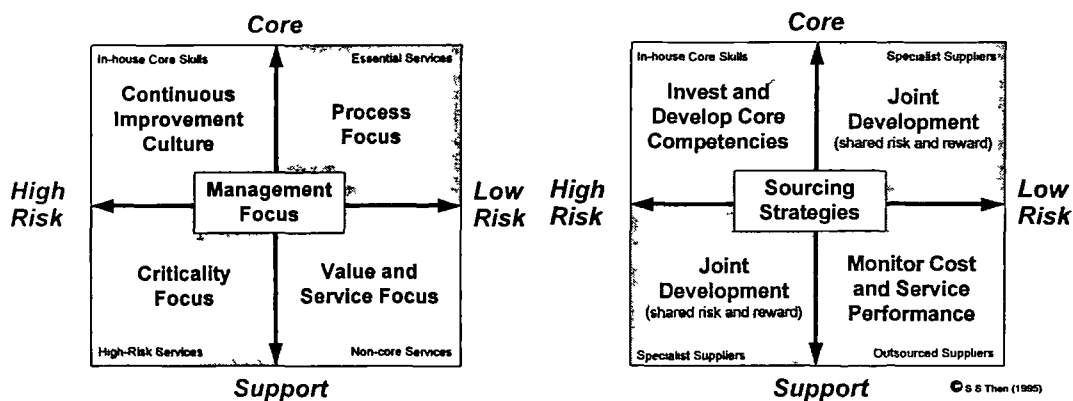
The evaluation of a company's procurement strategy must not only address the above concerns but also consider the potential long-term implications on the resource structure and in-house processes and competencies.

Figure 2.45 provides a framework for considering the nature of support services within each quadrant in terms of sourcing options and the corresponding management focus that is required to support their on-going management. Operational non-core support activities or functions within the *Support-Low Risk* quadrant are obvious potential candidates for contracting out to external service providers. The procurement process will place the onus on service management to define the appropriate levels of service required and measures to ensure that value and service measured in terms of cost, quality and time, are delivered and continuously monitored.

Activities or services falling within the *High Risk-Support* and *Core-Low Risk* quadrants offer some variability in terms of procurement options. The final choice will be very much dependent on the purchasing organisation's perception of risk and importance attached to the service(s) being considered. However, where outsourcing offers the opportunities to spread the company's risk to potential service providers, as well as leveraging internal technical capabilities and to tap the rapid response and innovative capabilities of small enterprises, joint

development between purchaser and service providers has the potential of getting the best of both worlds. The spreading of risks and rewards between both parties encourage a culture that promotes cooperation and innovations to mutual benefits. Whether such joint development takes the form of a strategic alliance or a partnering relationship or any other variants of relationships, is not a major factor. What is significant is that in consciously seeking these experiences, the main managerial adjustments for most companies are those needed for coping with the increased scale, diversity, and service-oriented nature of the activities potentially outsourced. The management adjustments needed represent a direct consequence of the mix of sourcing strategies that modern companies must accommodate in order to optimise both internal core competencies and maturing external specialism by a growing band of service providers.

Figure 2.45: Sourcing Strategies and Management Focus



It is against the above frameworks of sourcing evaluation that developments in the area of facilities support service provision should be viewed.

The review of the impact of change on the provision of operational facilities and their management (section 2.4.1.1/2) clearly point to trend where the pace of change will continue to accelerate, with significant impact of the way operational facilities will be viewed by senior management, both in terms of facilities' costs and their utilisation. Structural changes in the markets, and growth of a facilities support services industry have had the impact of leaving many large companies like Digital, British Telecom, amongst others¹⁶⁴, with massive disposal

¹⁶⁴ Proceedings of SBIM Conference on "Strategic Facilities Planning." 24th April 1996, London.

programmes. The implications on companies with real estate/facilities departments managing these properties is clear - they have to demonstrate how they can add value to the company by achieving the optimum "cost-to-service ratio" in managing the facilities resources and associated support services. Current literature¹⁶⁵ suggests real estate/facilities executives in organisations with large real estate portfolio are following a number of strategies to achieve this end:

- actions aimed at changing the profile of facilities (occupancy) costs,
- decreasing the fixed costs to variable cost ratio,
- contracting out of facilities support services.

The above trend suggests that real estate/facilities executives have to take on a more strategic role in supporting the achievement of the corporate core business objectives, by changing from a provider of services and fixer of problems to a business manager with specific responsibilities for the provision of operational facilities(real estate) and the provision of associated support services. In respect of the latter role, the development of an appropriate procurement strategy is clearly central.

At the heart of a company's procurement strategy is a process for sourcing support services. The outcome of the process is to match the organisation's sourcing profile to the sourcing options, which may be one or a combination of the following:

- Keep as in-house service,
- Buying-in (partial or total)
- Joint developments - e.g. partnering, alliance, etc..

The evaluation process to arrive at a sourcing solution can be applied to a single service/activity, or to groups of services in an organisation.

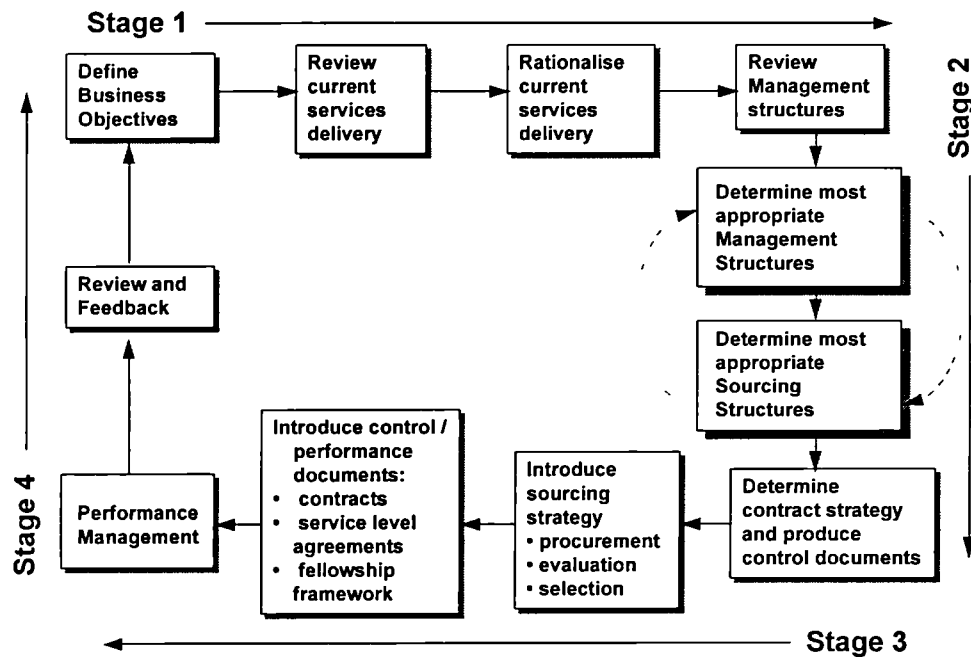
¹⁶⁵ Examples include:

Longley, N. "Contracting Out of Services." *Premises Management Bulletin*, Issue 3. January 1993.

Varcoe, B. "Facilities Performance" *Facilities Management, Management Guide No.7*. The Eclipse Group. May 1995.

A strategic approach to the evaluation of sourcing delivery and ongoing management of support services can be summarised in a model comprising of four key stages (i) rationalise current service to meet business requirements, (ii) review of management structure, (iii) targeting of services for alternative sourcing, and (iv) performance management and review. Figure 2.46 summarises the steps within the process model.

Figure 2.46: Process Model for Sourcing Support Services¹⁶⁶



The model illustrated above must be viewed as a continuous process of adaptation, driven by the dynamics of the particular business. In terms of evaluation of sourcing delivery of support services, it can be seen as a performance enhancement plan which monitors both internal changes (business/organisational), as well as, external (supply market) opportunities.

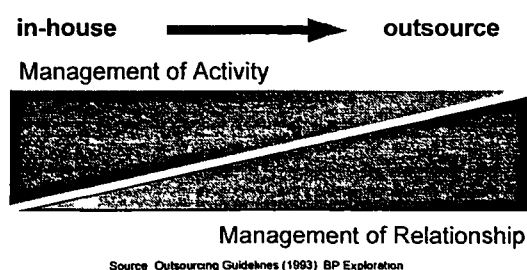
In brief, Stage 1 of the model sourcing process concentrates on understanding the business needs and defining the customers requirements, and reviews current service delivery in order to suggest changes for overall improvement of efficiency and customer satisfaction. Stage 2 concentrates on reviewing the current management set-up for support services against the recommended

¹⁶⁶Toone,D. & Then,S.S. "Outsourcing as a Business Strategy." Proceedings of CIBSE/ASHRAE Joint National Conference 1996.

current management set-up for support services against the recommended changes from stage 1. The main outcome from this stage being an agreed sourcing profile taking into consideration factors like internal competencies, need for control and flexibility and cost parameters. Stage 3 represents the implementation phase of the sourcing strategy developed in Stage 2 with emphasis being placed on contractual aspects of service delivery and monitoring. Stage 4 concentrates on data collection and performance measurement in terms of service outcomes against set targets/measures. It incorporates the feedback loop to the original demand set by business objectives.

The review on management developments in facilities support service clearly indicate a trend where companies are outsourcing more of what used to be considered either integral elements of their value chains or necessary staff activities. It is also becoming more apparent to senior management that the issue is less whether to make or buy an activity than it is how to structure internal versus external sourcing on an optimum basis. Because of their greater complexity, higher specialisation, and new technological capabilities, outside suppliers can now perform many such activities at low cost and with higher value added than a fully integrated company can. Real estate/facilities executives in both, private and public sectors organisations alike, can no longer ignore the economics of outsourcing in deriving their procurement strategies. It is important to note one major implication of outsourcing on the internal management of support services - the shift from managing activities to managing relationships as illustrated in Figure 2.47. This shift demands a different set of skills and competencies on the part of the purchasing organisation.

Figure 2.47: Shift in Management Emphasis



It should also be stated that outsourcing as a business strategy is not a panacea. There may well be situations where to outsource is not the right route for a company to take, for example, where the company is satisfied with the cost of the internal provider; where the market may not be sufficiently mature, or where the budget for each location is very small. Outsourcing assumes that it is possible to separate strategic from operational elements of facilities support. If this is not the case, or where an internal management consensus cannot be reached, outsourcing ceases to be a viable option.

In summary, just as performance measures in the provision of facilities to support core business strategies requires actions to be taken to continuously align operational real estate supply to anticipated business demand; performance measurement in the delivery of associated facilities support services similarly need to balance internal competencies in management and in-house capabilities to emerging opportunities offered by external sources of supply.

The next section of the review will draw together the numerous conceptual threads that have emerged from the broad review of management developments and their impact on the practice of real estate asset management (i.e. sections 2.4.1 and 2.4.2) and to point towards key emerging themes and areas in need of further research.

2.5 Summary and Critique of Literature Review - *Emerging themes for further research*

The objective of this section is to draw together key emerging themes in real estate asset management from the literature review of the last two sections - section 2.4.1: management and economic drivers of change, and section 2.4.2: developments in performance management. These emerging themes will form the basis of identifying research needs aimed at improving management effectiveness of the corporate real estate assets as a business resource utilised to support the achievement of core business objectives.

Three themes are discernible from the literature survey carried out:

1. A strategic response is needed to raise corporate management awareness of the contributing role of the corporate real estate resource.
2. The need to proactively manage the corporate real estate asset base.
3. A coherent conceptual framework is needed to explain the integral role of real estate asset management from the business perspective.

2.5.1 Linking Real Estate/Facilities Decisions to Corporate Strategy

There is clear evidence from the literature (section 2.4.1) that supports the view that a clear strategic response is needed at the senior management level to consider the management of the corporate real estate (i.e. the land and buildings used for work space, infrastructure and investment) as an integral part of business resource management. This view is aptly described in the Executive Summary of the Corporate Real Estate 2000 Report which labeled the corporate real estate as the emerging fifth vital business resource and called for a rethinking in the way this resource is managed.

"In the past, corporate management often did not consider the corporate real estate function to be as important as the four corporate resources of capital, people, technology and information. Senior managers had not learned to ask how the function could create value for the company and help to meet the overall corporate mission.

Today that goal is being pursued aggressively. Senior managers now are beginning to recognise that real estate is a critical strategic asset, one that supports the financial, work environment and operational needs of the total corporation."¹⁶⁷

The reference to "*financial, work environment and operational needs*" as an integrated resource management task to provide for *the "total corporation"* is significant, in that it acknowledges that land, buildings and work environment are an essential part of every corporation's strategic planning, and must therefore be managed to ensure that the financial and operational goals of the company are met.

There are many examples where the strategic dimensions of real estate decisions are being demonstrated in the form of actions taken by real estate/facilities executives in order to add value to the organisation, improve

¹⁶⁷ Joroff, M., Louargand, M., Lambert, S., & Becker, B. Executive Summary. Report of Phase One - Corporate Real Estate 2000. IDRF 1993. pp.7-8.

economic performance at a time of frequent corporate restructuring, and strengthening the company's competitiveness. But in most companies, the real estate/facilities management function is still primarily reactive and oriented to transactions.

Studies conducted in North America and United Kingdom in recent years (section 2.2.1) all confirmed the relative low status of real estate/facilities executives and the corporate real estate assets as an under-managed corporate resource. A key issue confronting real estate/facilities executives in many organisation is, how to transform their existing essentially, operational role into a strategic function ? At the heart of the question lies a number of issues that must be resolved:

- senior management perception of the role of real estate/facilities function;
- real estate/facilities executive's reporting line and positioning in organisational hierarchy;
- current processes and interface with senior management and business units; and
- internal competencies and capacity of in-house real estate/facilities department(s).

The above issues relate to four aspects of organisational variables, namely, *attitudes, structure, process and competencies*. Taken together, these variables will determine the performance outcomes of the in-house real estate/facilities department(s) as service providers.

The above four organisational variables form the basis of the case studies design and investigation in the development and subsequent explanation and validation of the emerging models for REAM.

In order to link real estate/facilities decisions to the organisation's corporate strategy, the required "rethinking" mentioned above applies equally to both, strategic management and operational management. It is crucial for senior management to understanding the resource implications of the corporate real estate assets in terms of: (section 2.2.3)

- the nature of the physical asset as a enabling spatial product;
- the economics of provision of real estate assets as a operating resource, as well as their intrinsic value;

- the relationship between the physical environment and individual satisfaction and organisational productivity
- the provision and ongoing management of facilities support services and users interface within the physical workplace environment.

Operational management (i.e. real estate/facilities department), on its part, has to move from a transactional-reactive role to a strategic-proactive role with emphasis on anticipating the future in the light of the company's core businesses and consistently providing value-adding solutions. In congruent with senior management's "new awareness" of the corporate real estate assets (listed above), real estate/facilities executives will have to be able to provide innovative solutions to:

- meet competitive challenges;
- reduce cost;
- increase quality and productivity;
- respond to unpredictable market conditions,
- organise work places to accommodate a more complex workforce, and
- exploit new information technologies.

At the start of this review chapter (section 2.1.1), the concept of real estate asset management (REAM) is proposed as the *informed interface* between strategic management and operational management. This informed interface is clearly needed to consider overlapping concerns and to reconcile top-down communication of strategic intent and bottom-up performance reporting of real estate asset management function.

Management development promoting this informed interface between corporate planners and real estate/facilities executives are driven by a clear motivation. The desire to balance the demand to control costs and minimise long-term commitment to infrastructure (both suggest the consumption of less functional space) with the increasing need to provide workplaces that enhance productivity, serve increasingly complex environmental requirements and provide satisfaction for the work force (suggesting the need to consider technological input into the workplace, as well as, balancing the interests of various users). Management responses in meeting this strategic requirement has evolved as some forms of strategic planning; *strategic facilities planning*

(section 2.4.1.2). The emergent of strategic facilities plans as corporate planning tools linking real estate decisions to the corporate business plans support the clear trend toward proactive management of the corporate real estate portfolio. The trend is supported by numerous studies over the last decade (section 2.2.2)¹⁶⁸.

The nature and form of interactions between the parties involve in the implementation of SFP are areas deserving further research.

2.5.2 Space as a business resource

From the discussion in the last section, it is discernible that a fundamental rethinking about the *definition* and *use* of physical space is required. A key concept in the measurement of performance of operational real estate asset is the relationship between the cost of provision and utilisation of functional space by the company. The functional space (measured in term of square metre or square foot), is a unit of measure of the real estate (property) resource. The monitoring of occupancy costs as a primary component of costs associated with facilities provision has focused management attention on the importance of the *amount*, *quality* and *utilisation* of space within buildings, as the key business measures of the real estate resource. (section 2.4.2.2.1)

Understanding appropriate functional space as a business resource demands a clear understanding of the company's business operational support in spatial dimensions at two levels: (i) the corporate real estate assets at the *portfolio level* (location and lease/own attributes), and (ii) the characteristics of individual buildings at the *building level* (floor plate attributes and layouts). At the portfolio level, matching supply to demand is part of the interface between core business planning (i.e. the client) and strategic facilities planning. At the building level, the process comprised essentially of space planning and management issues, involving interface between business units (i.e. the customers) and real estate/facilities department (i.e. service provider). (refer to Figures 2.35-36)

¹⁶⁸ Others supporting the call for proactive management of the operational real estate (property) portfolio include: Varcoe, B. "Proactive Premises Management - the premises policy." *Property Management*. Vol.9. No.3, pp.224-230. Edwards,V. & Seabrooke,B., "Proactive property management." *Property Management*. Vol.9 No.4. pp.373-384.

The nature of the above tripartite interfaces between corporate management (i.e. client) where executive decision to allocate corporate resources rests; business units (i.e. customer) who are the purchasers of services and the real estate/facilities department (as in-house service provider), suggests the management of facilities provision and facilities services provision is a critical interface within REAM.

This critical interface between client, customer and service provider which manifests itself in the processes of facilities provision and their subsequent ongoing management is an area where research is lacking.

2.5.3 Need for Conceptual Framework for REAM

The literature survey covered in section 2.4.2 provides clear evidence of active management development within the area of real estate asset management (REAM). A general increased level of senior management scrutiny (engendered by a heightened awareness of the role of the corporate real estate assets) of premises occupancy costs has had the impact of promoting the need for appropriate performance measures. This, predominantly client-driven, push has caused real-estate/facilities staff within companies and consultants operating in this area, to reveal new insights in presenting the case for support that demonstrate the integral part played by the physical infrastructure in supporting the fulfillment of corporate strategic intent. The evidence of new emerging analytical tools and models, aimed at supporting more effective decision making at the portfolio level, as well as in the evaluation of facilities services support is supported by some of the analytical tools and models reviewed. In this respect, the insights provided by conceptual writers like Bon, Becker, Duffy, Varcoe, amongst others; as well as practitioners in the field like Apgar IV, Evans, Chekijian, amongst others; have been fundamental in advancing this relatively new area of corporate management concerns.

Despite the above rapid developments, the literature reviewed points toward the need for a coherent framework to bring together the various emerging analytical tools and models to better explain the context of REAM in the corporate arena of core business management. The focus of such a framework must be, first and foremost, grounded on a clear understanding of the nature and demands of the

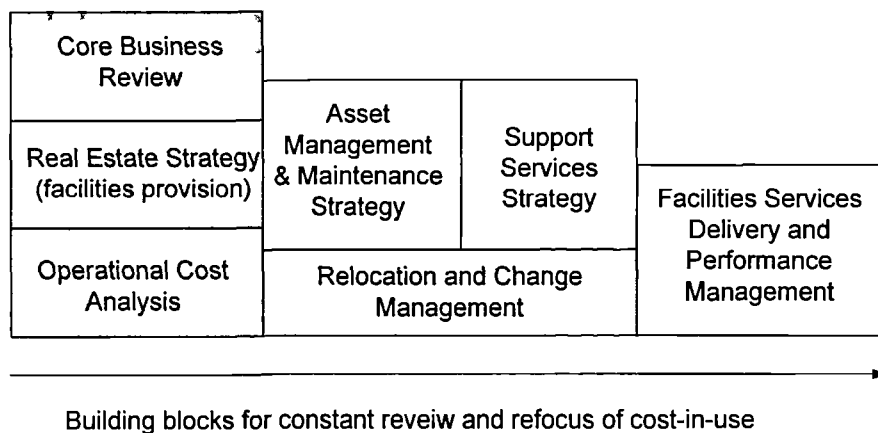
core business requirement. It is from this basic understanding that the needs of the real estate and facilities provisions will flow, as an integral process of managing *all* business resources (i.e. people, property, technology, finance and information) towards the fulfillment of corporate objectives and targets.

Based on the above rationale, research efforts aimed at improvement management effectiveness of the operational real estate asset base must be channeled to provide frameworks or models to promote understanding to all parties involved in the process from a knowledge base that can better explain the following:

1. requirements of core business(es);
2. key real estate/facilities service attributes, and
3. options evaluations to meet dynamic changes.

Figure 2.48 provides a schematic view of the spectrum of activities that must be embraced within the arena of REAM as the informed interface.

Figure 2.48:: Facilities focus for Real Estate Asset Management



In the provision of operational real estate, there has been an increasing realisation that the real estate resource can be managed to promote organisational change and productivity of the most expansive resource, staff, can be enhanced by the provision of appropriate enabling environment working in the workplace.

In the provision of support services, there has been an increasing awareness for a more systematic approach to defining the services upon which a business can develop and evolve.

There is a clear need for common grounds for dialogue between business processes and facilities processes to the overall benefits of effective management of the corporate working environment.

2.6 Summary

The evidence from the above broad review of management development suggests that organisation design and physical design (of buildings) must be closely correlated to achieve organisational success, or even organisational survival. In order to achieve the much needed alignment between organisational structure, work processes and the enabling physical environment, the corporate strategic intent must clearly reflect the facilities dimensions in its strategic business plans.

The emerging concept of strategic facilities planning (SFP) points to a number of prerequisites if organisations are to benefit from this integrated strategic approach to ensure the continuous alignment of its physical infrastructure to the company's strategic intent. The literature review conducted points to at least three requirements:

1. The need for an integrative framework for considering facilities implications of business decisions through an intelligent client role.
2. The need for processes to monitor strategic relevance of existing real estate asset portfolio against a dynamic business environment.
 - Systems & procedures for strategic evaluation of facilities requirements and monitoring performance.
3. The need to monitor and continuously review procurement strategy to take advantage of advances and development in technology, process development and services standards.
 - Systems & procedures for strategic evaluation of facilities support services provision and monitoring performance.

The next chapter will focus on theory development aimed at encompassing the multi-faceted factors and variables highlighted by this literature review chapter.

2.7 The contribution this study will make to the literature

In the opinion of the author, the last two decades have seen dramatic changes in the real estate/property market, against an increasingly dynamic business environment which dictates that prudent management of all business resources is a necessity for survival and growth. The role of real estate as a resource to business is receiving wider recognition at senior management levels, supported and backed up by an increasing band of professionals practicing in the field as real estate/facilities executives.

In attempting to justify how this study can contribute to the broad area of real estate asset management, a guiding principle the author has adopted is: *in what way the review conducted has shed new insights in the subject matter under investigation?*

At a macro level, the review of literature from the theory and practice in related field of property portfolio management (corporate real estate), facilities management, asset management and performance management; all point towards a need for a coherent framework to *define, explain and justify* the contributory role of the physical infrastructure (however this may be termed: real estate asset, operational property, facilities, etc.) within the remit of business management.

Viewed from the above perspective, the main contribution of this study is to advocate and/or reinforce the need to *rethink* the current predominant perception of operational property as a *passive cost of production*, and *justify* the *strategic importance* of the real estate/property resource which should be managed effectively to promote or lever organisational change in an increasingly volatile business environment. In short, there is a pressing need for a framework for integrating business considerations in the provision and ongoing management of operational assets as a business resource.

The contribution of the literature review is to bring together wide, yet disparate areas of information under a coherent framework that looks at the operational real estate resource and its ongoing management from a business perspective. Hitherto, literature in the various related areas are presented very much from a narrow technical professional viewpoint. The main contribution is to provide a

framework for integrating business considerations in the provision and management of operational assets as a business resource.

A further elaboration of the possible contributions of this study into the organisational response to the management of operational property assets as a strategic business resource is considered under two broad areas: (i) knowledge issues, and (ii) methodology issues. The former focus on contribution to knowledge in terms of providing a framework for explaining the role and competencies required to effectively provide for, and manage the supporting operational assets to support the achievement of corporate business objectives. The latter highlights methodological issues relating to research in the broad area of Real Estate Asset Management.

Knowledge Issues:

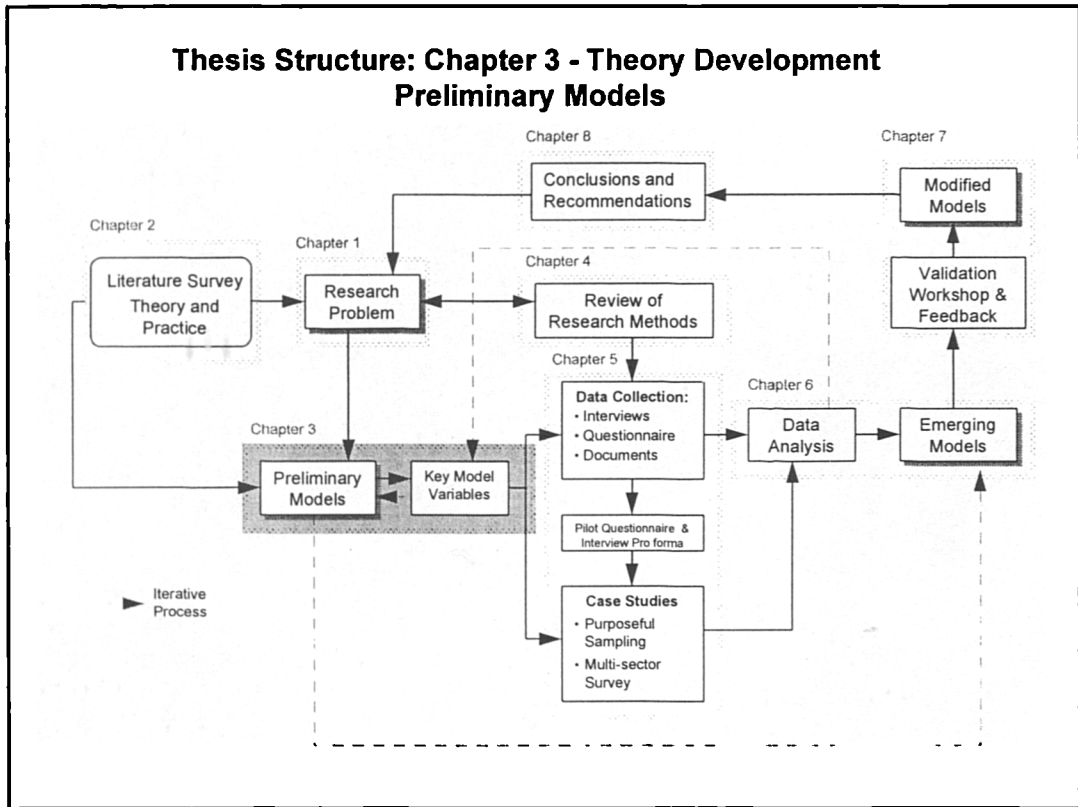
- Understanding why corporate real estate resource is under-managed ?
- Understand and develop measures to quantify the consequences of not relating real estate assets to corporate objectives.
- Demonstrate the importance of Real Estate Asset Management - the operational asset base of any business, if not managed properly or aligned to business requirements, can constraint the full potential of the business and affect the productivity of its most expensive resource - the employees.
- Changing business environment (competition and customer orientation) demands proactive management of the real estate resource - need for flexibility and adaptability in organisation, exploitation of technology and an adaptive resource base (people, technology as well as the physical asset base). *How to manage an integrated approach to business resource management ?* The study aims to provide a framework for this purpose.
- The case study organisations provide evidence for validating an incremental management development model for consciously mapping real estate implementation from an operational 'taskmaster' role to a proactive management 'strategist' role within a volatile business environment.

Methodological Issues:

- Qualitative research methodology as valid approach because of uniqueness of each organisation.
- Property as a business resource is unique with multi-dimensional implications on organisation structure, process and performance.
- Generalisation (of real estate management issues at strategic level) is possible by providing a framework for broad classification of decision types, evaluation techniques and outcomes, as learning experience for similar organisations.

Chapter 3

Theory Development - Preliminary Models



3. Theory Development - Preliminary Models

3.1 Introduction

The last chapter provided a comprehensive review of developments in recent years on a number of related areas, viewed from traditionally demarcated discipline areas, principally: strategic business management and operational asset management, building economics, real estate(property) management and facilities support services management.

The economic imperatives imposed by global competition and the continuous drive for improved performance have promoted a need to consider the implications of strategic decisions on the corporate physical asset base. Such implications include the following

- Businesses increasingly demand *flexibility* in response to competition in order to survive, the supporting physical infrastructure (the corporate real estate portfolio) must be able to respond accordingly, necessitating a proactive management approach base on full knowledge of the portfolio (that is, opportunities, as well as constraints).
- Increasingly, the arena for conducting businesses no longer respect national boundaries. The economies of *international comparative advantage* dictate site selection with major implications on facilities provision beyond just production capacity, but also associated social infrastructure to house the local labour (e.g. in Russia and China).
- Buildings, as *operational property*, and the space business units occupy is a legitimate expense, no longer regarded as a 'free' goods.
- Buildings, as *physical assets*, are durable assets demanding a life-cycle approach in their management over time.
- The *service element* of the delivery of facilities related services (customer interface) is seen as a critical dimension of the facilities support service delivery package.

There is a clear trend, in recent years, that supports the proposition that the push by businesses to demonstrate value for money necessitates a management approach that embraces *all businesses resources* which emphasises *effectiveness*, on top of, general economic *efficiency*.

The primary focus of this research is the physical resource base that supports any business - the corporate operational property assets. What is clear (Chapter 2, Section 2.5) is that there is a lack of an integrating framework for

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considering the likely impact and implications of business management trends and strategic management decisions on the provision and subsequent ongoing management of this corporate operational real estate resource.

The literature survey carried out revealed three key elements central to the role of real estate asset management (REAM) as defined in this study: (a) strategic business intent, (b) the economics of buildings, and (c) the practice of operational asset management. The significance to any organisation of the inter-relatedness of the three elements can be seen from two perspectives:

- I. (a) and (b) above, define the core business requirements in terms of the appropriate operational real estate attributes and support services deliverables; and
- II. (c) defines the organisation and ongoing management of the provision and delivery of the required serviced functional space to support the core business production processes.

In order to achieve the much needed alignment between organisational structure, work processes and the enabling physical environment, the company's strategic intent must clearly reflect the facilities dimensions in its strategic business plans. In this respect, the literature review (Chapter 2, Section 2.5) highlighted three emerging *themes* which point to the need for further research:

1. The need to link real estate/facilities decisions to corporate strategy;
2. The need to proactively manage functional space as a business resource, and
3. The need for the development of conceptual models and frameworks for integrating the emerging evaluation tools and management development skills in business resource management, as they are applied to the provision and management of the corporate real estate portfolio and facilities support services in business settings.

The above emerging themes, in turn, lead to at least three *requirements* in real estate asset management in an organisational setting:

- (1) The requirement for an appropriate linking mechanism for considering facilities implications of business decisions by promoting meaningful dialogue between business corporate planners and real estate/facilities personnel.
- (2) The requirement for management processes to monitor the strategic relevance of facilities requirements and monitoring their performance over time.

- (3) The requirement of appropriate skills and competencies within the real estate/facilities function to monitor and continuously review procurement strategies to take advantage of advances in technological development and market offerings in supply.

This study is an attempt to provide a coherent conceptual explanation (via descriptive models) to meet the above requirements within an organisation setting. This enquiry provides the basis upon which the research propositions for this study have been framed (Chapter 1, Section 1.4) and forms the basis for the focus of theory/model development in this chapter.

The aim of the ensuing discussion is to develop conceptual frameworks for encompassing the multi-faceted factors and variables from a number of related discipline areas highlighted by the literature survey. The purpose of the evolved models/frameworks are to explain the central role of REAM in defining, providing and managing the enabling working environment necessary to continuously support modern dynamic businesses.

3.1.1 Basis of Model Development

Three principal sources of information provide the basis for the development of preliminary conceptual models and frameworks: the literature survey findings, published empirical case studies of organisation and/or interviews with real estate and facilities executives, and the experience of the candidate in research and consultancies in the related subject areas encompassing the scope of REAM.

The theoretical grounding that forms the basis for data analysis and model development is based on current knowledge in systems thinking, grounded theory and descriptive model representation of the real world. A more detailed coverage of various qualitative analytical methods are given in the following two chapters (i.e. Chapters 4 and 5).

The preliminary conceptual models and frameworks will be evaluated, and validated against the current practice in real estate asset management in organisations in terms of the following performance criteria:

1. their ability to explain context - organisational and cultural variables,;

2. their ability to pinpoint areas of critical interface between corporate business plans, strategic facilities planning and operational asset management;
3. their ability to benchmark current practices in real estate/facilities processes against requirements of emerging conceptual models / frameworks; and
4. their ability to raise corporate management awareness of internal competencies to fulfil the intelligent client's role in the provision and ongoing management of the corporate real estate resource.

This chapter will propose a number of conceptual models and frameworks which are aimed at supporting the case for strategic consideration of the real estate resource as an integral part of prudent business management. The principal aim being to strategically integrate and continuously align the supporting role of the corporate operational real estate assets with the organisation's business plan.

3.1.1.1 Current Practice

The review of published research reports and surveys conducted (Chapter 2, Section 2.2) in both the public and private sectors organisations revealed the following weaknesses in current approaches in the management practices of operational property assets:

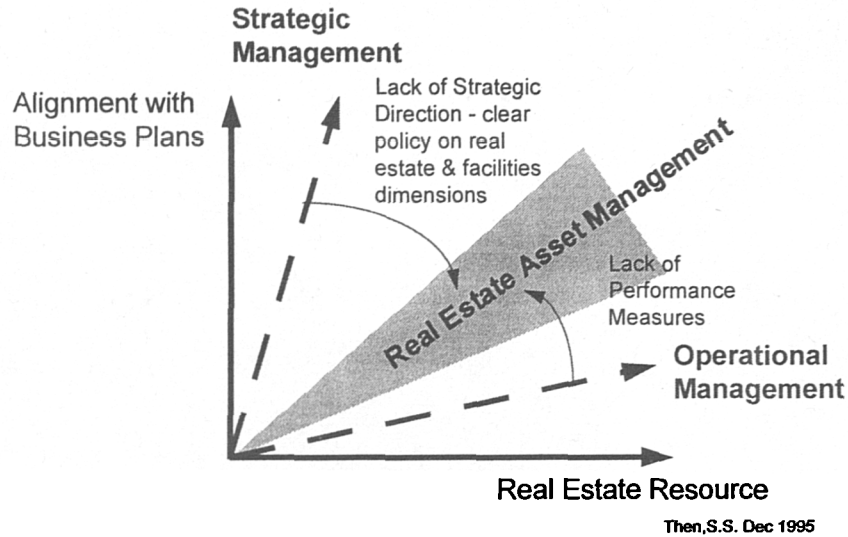
- reactive approach to management;
- conflicting landlord vs tenant objectives;
- lack of performance monitoring;
- inadequate information for informed decision making.

This research study advocates that the above weaknesses are symptoms underlying a persistent problem - the lack of a strategic view of the role of real estate resource within the business context, as well as a lack of clear performance criteria for measuring the efforts of managers charged with managing the resource through time.

Figure 3.1 illustrates a conceptual representation of the current practice of REAM in many organisations which are typified by the above symptoms of *under-management* of the corporate real estate assets. The combination of a lack of clear strategic guidelines on real estate and facilities services issues, and a lack

of clear performance measures in relation to the supply and utilisation of operational facilities, resulted in situations in which the efforts of operational management are not aligned to objectives set by strategic management.

Figure 3.1: Conceptual Representation of Current Practice



The implications of the above weaknesses are reflected by the following:

- different perceptions of the role of operational assets by senior management (as clients), business units (as customers of functional space) and users (as consumers of space);
- different perceptions of real estate asset variables, i.e. motivational drivers that influenced the management emphasis of operational property - a physical product view / a business resource view / a organisational enabler view.
- different planning horizons imposed by strategic management and operational management;
- mismatch between particular business operational requirements and the existing real estate portfolio attributes; and
- organisational influences on the operational property and facilities support services delivery processes.

The justification for REAM can be viewed in the context of the pressures and constraints which businesses must operate within today's environment. Many organisations must compete in uncertain, dynamic and turbulent environments where change pressures are continuous and changing. New opportunities and threats appear at short notice and require a speedy response. Strategies which were appropriate 'yesterday' are unlikely to be suitable 'today,' let alone 'tomorrow'. The latter challenge finds particular relevance in REAM which is the congruent of pressures arising from business planning at the strategic

management level, and real estate and facilities service delivery, at the operational management level.

3.1.1.2 Impact of Strategic Management on Operational Asset Management

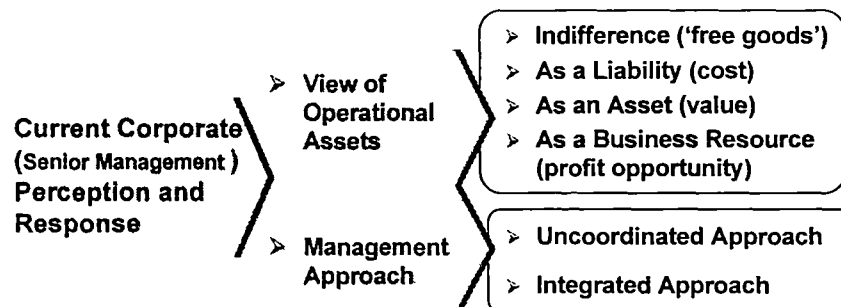
From the evidence of the literature reviewed, two main groups of factors exert a direct impact and influence on the practice of operational asset management in an organisation setting:

1. senior management perception and response (internal to the organisation),
2. markets factors (external to the organisation),

The perception of the role of the supporting operational real estate asset by senior management is taken as a key factor that has a major implication on the management practice of operational asset in terms of its impact on the following:

- level within organisational hierarchy (organisational positioning);
- level of participation at strategic decision making. (influence);
- level of funding (resource support);
- level of management skills (competencies); and
- level of strategic evaluation (information-decision support).

Figure 3.2: Current Practice - Corporate Perception and Response



Then, S.S (1996)

As shown in Figure 3.2 above, typically, there are four types of operational asset management models categorised by four types of response which are influenced by the prevailing culture within the organisation concerned:

- Indifference response - typified by a 'free goods' view
- Reactive response - typified by a cost centred model;
- Proactive response - typified by a business resource model, and
- Business response - typified by a profit centred model.

In many respects, the above models of organisational response to the management of operational assets share common characteristics with the five-stage evolutionary model presented in the CRE 2000 Report (Chapter 2, Section 2.2.2, pp.45-48).

The *indifference* response model is very much akin to the '*Taskmaster*' stage of the CRE 2000 model, where for the most part senior management pays little attention to the role of real estate/facilities function, which is perceived essentially as caretakers, organising the company's physical space and trying to give the business units what they need. The competence expectations are grounded mainly in professional technical abilities.

The *reactive* response model depicts a shift in senior management awareness from regarding the space occupied by business units as 'free goods' to a recognition of potential costs and benefits of the operational real estate assets. The reactive model can be compared to the '*Controller*' stage, where senior management's scrutiny of overall business operating costs saw the development of accounting controls for occupancy costs and the emergence of internal to business units. The role of the real estate/facilities function is recognised as supporting the space needs of the business units at the lowest possible cost. At this stage, performing the roles required to control and minimise costs requires the real estate/facilities unit to develop competencies in analytical skills in accounting, as well as, evaluation skills in developing options for alternative use or disposal of potential surplus space.

The *proactive* model refers to a shift towards active problem-solving by the real estate/facilities function on behalf of the business units. The role is typified by seizing opportunities to create value, both financial and organisational via the corporate real estate assets; individually or the corporate portfolio, as a whole. The CRE 2000 model describes this stage as the '*Dealmaker*,' where improved communication between the internal customers (business units) and service provider encourages a more proactive role in the management of the corporate real estate assets. At the senior management level, the view of operation real estate assets being regarded as a business resource in its own right is gaining acceptance. The competencies involved in this stage emphasise project-related

negotiations and problem-solving abilities applied to business units' expanding or changing space requirements.

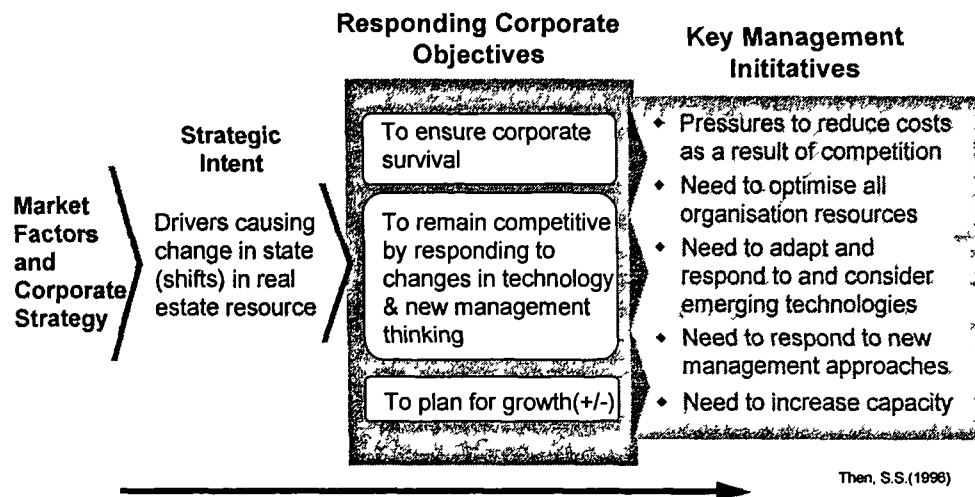
The *business* response model typify a situation in which the real estate/facilities executive participates in the business units' strategic planning process. The CRE 2000 model describe the role of the real estate/facilities unit at this stage as '*Intrapreneur*,' operating like an internal profit centre charging business units market rents for their occupied space. In terms of competencies, business management skills are applied on the real estate efforts at the portfolio level to optimise on real estate and associated facilities services provision. The principal objective at this stage is to align the real estate resource, together with the other business resources (human resources, technology, information and capital), to achieve the corporate objectives. At the extreme, the business model of real estate asset management also include the features of the final stage of the CRE 2000 model. The '*Business Strategies*' stage represents a situation where, the real estate/facilitates role is integrated or close to the strategic business management process, regularly anticipating business trends, monitoring and measuring their impacts, and contributing to the strategic intent of the company through the development of an appropriate supporting occupancy strategy.

The evolution of the models from '*indifference*' to regarding the corporate real estate resource as a '*business resource*,' clearly implied a shift in culture on the part of senior management and business units' views of the role of operational assets. On the part of the real estate/facilities unit, the necessary shift is not only from a narrow professional technical view to a business-wide world view in terms of its required competencies; but the need to embrace a service culture, and to contribute at a strategic level in corporate business planning.

Apart from the corporate perception of the role of the operational real estate assets, there is also the external dimensions of the market environment which influence strategic business management.

Figure 3.3 illustrates how decisions taken at the strategic business management (strategic intent and responding corporate objectives) in respond to market factors are translated into key management initiatives.

Figure 3.3: From Strategic Intent to Management Initiatives



For any business, the arena of strategic management is the environment external to the organisation and the market forces that impact on the products/services of the organisation. In terms of the impact on the corporate operational assets, the main concerns are factors that result in a change in the size and nature of the existing real estate portfolio.(i.e. buildings). The origin of such factors are a direct result of the emerging corporate strategy as a response to the external market trends and strategic business evaluations. The output of this strategic business evaluation by senior management is commonly reflected in a shift in strategic direction of the business. The focus of such a strategic shift in direction can be viewed in terms of three possible outcomes or responding corporate objectives:

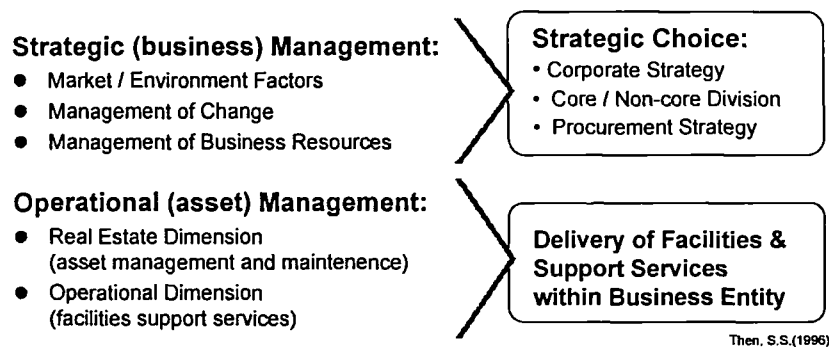
- to ensure continued corporate survival;
- to remain competitive by responding to technological and management developments; and/or
- to plan for growth.

Figure 3.3 above lists the key management initiatives emanating from the identified corporate objective(s). Each of the management initiatives will have implications on the specific measures to be taken to realign the nature and mix of the supporting operational asset base. The specific measures taken under operational asset management must demonstrate how they can respond to meeting the identified corporate objectives. It is to be noted that the push is very much unidirectional from strategic management. The context of this

unidirectional push and its implication on operational asset management can be largely attributed to the separation between strategic management processes and operational management processes as illustrated in Figure 3.4.

Evidence from published literature supports the view that this separation is often reinforced by senior management's perception of the non-strategic role of the real estate and facilities dimensions of operational management. It is this organisational culture that is likely to prevail in companies that depict the *indifference response* and *reactive response* models of real estate asset management described above.

Figure 3.4: Separation of Strategic Management and Operational Management



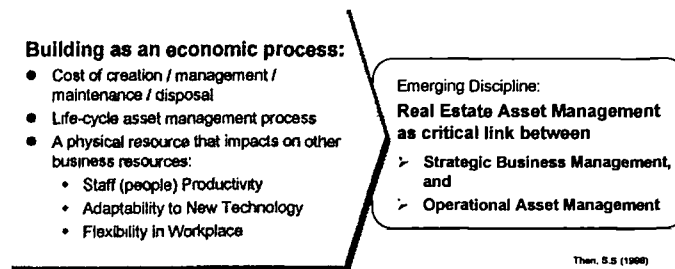
The derivation of the corporate strategic choice without integrating the real estate and operational dimensions clearly contributes to sub-optimum solutions in many organisations, reducing the role of the real estate/facilities function to one of reacting to business units demands.

The literature review conducted (Chapter 2, Section 2.3) on the economics of buildings provided a rational basis for considering the role of the real estate assets as a supporting business resource. Figure 3.5 summarises the main considerations of buildings as an economic process with the proposition that Real Estate Asset Management should be considered as a serious discipline in its own right. The justification being that REAM provides the essential critical link in order to bridge the gap between strategic business planning and the management of the corporate operational assets necessary to fulfil the business objectives.

The above discussions form the basis upon which models and frameworks will be developed to *explain*, to *map* and to *justify* the appropriate role of the

operational real estate assets in a business setting within the context of prudent resource management.

Figure 3.5: Economics of the Real Estate Resource

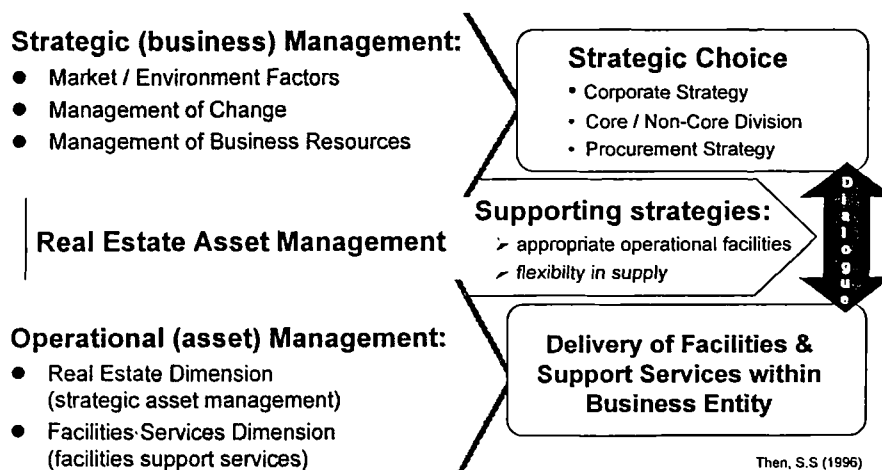


3.1.2 The Research Propositions - restated in the context of REAM

The concept of REAM as the bridging crucial link between strategic and operational management is central to the models and frameworks development in this chapter. It is built upon the *emerging themes* from literature and practice, leading to the identification of *requirements* which form the basis of the research propositions for this study.

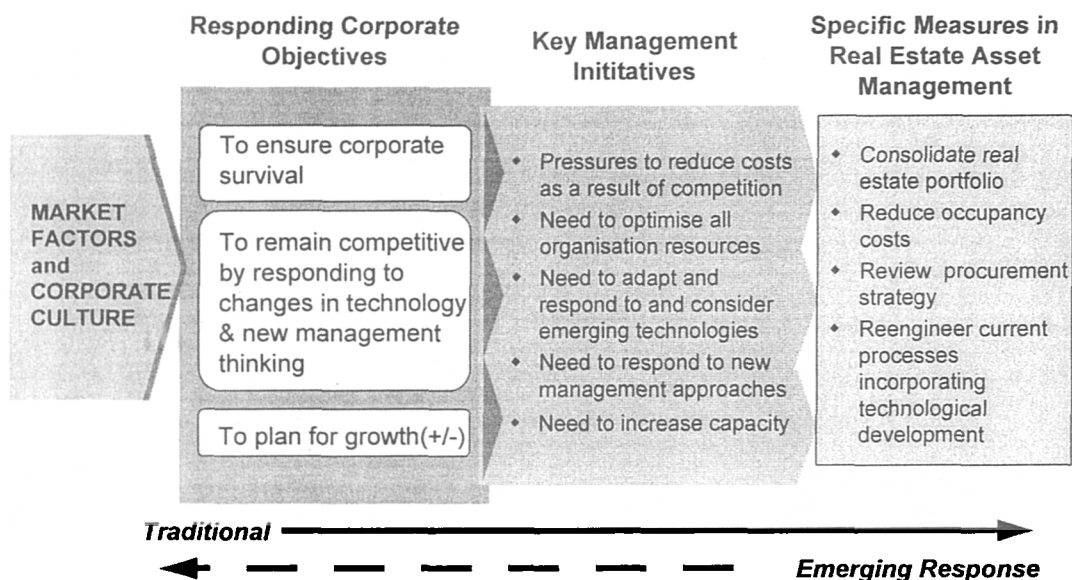
Taking Figure 3.4 above as a representation which typify current practice in REAM, Figure 3.6 below proposes a feasible expectation of a desirable outcome which integrates decisions at the level of making strategic choices, with the economics of facilities provision and management as an important economic resource. The outcome being a well thought out and evaluated supporting facilities strategies that continuously meet the business requirements through flexibility in supply and fitness of purpose.

Figure 3.6: REAM as the Emerging Response to generating Supporting Strategies.



Similarly, if Figure 3.3 above is taken as typical of current practice where operational issues are overtly regarded as essentially a reactive response to decisions taken at senior management level without formal consultation with operational units, Figure 3.7 suggests the emerging development where solutions to key management initiatives are increasingly reflecting, not only the operational elements, but the strategic importance of the real estate and facilities services dimensions in supporting and contributing to business restructuring and improving corporate effectiveness through improved utilisation and a more focus matching of supply to demand.

Figure 3.7: Strategic Response to Management Initiatives



The figure above shows some key management initiatives emanating from the identified corporate objectives and implications on the supporting operational asset base. The specific measures under operational asset management must demonstrate how they can contribute to meeting the identified corporate objectives by saving costs, adding value or both. It is crucial to acknowledge that the specific operational asset management measures identified must be directly related to achieving the key senior management initiatives. In this way, corporate objectives and initiatives must underpin any measures relating to the operational asset base. The feedback loop is closed when the outcome of such measures are fed upwards to senior management and are seen to contribute to meeting corporate objectives.

will be operationalised by the development of models that incorporate the latest management concepts and innovative in real estates practice with the objective of optimising the corporate real estate resource.

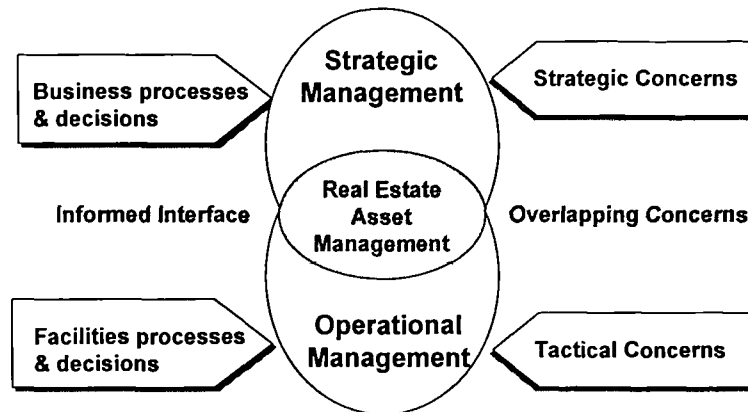
Research Proposition 1 - that a strategic view of the role of supporting physical resource (operational real estate asset) provides the planning framework for linking corporate demand for facilities (functional space) and related services to the ongoing management of the operational real estate assets.

The first research proposition is driven by the need to link real estate and facilities decisions to strategic business planning. A major organisational variable identified from the literature being senior management perception of the role of operational assets in supporting the achievement of business goals. Various studies seems to confirm a general lack of a formal dialogue between the decision-makers who commit resources from a core business viewpoint without a thorough evaluation of the long term implications on variables that impact on the economics of the provision and subsequent occupancy costs of the corporate real estate resource. In short, the main focus of the first research proposition is related to an attempt at defining the role of the corporate real estate resource in the business context, and its implications on the interface between, seemingly two disparate group of corporate personnel who are aiming at the same goals - to realise the corporate strategic intentions. In this respect an important driver for change is how to improve and promote a construction dialogue between the corporate strategic planners and those charged with the economic and timely delivery of appropriate physical infrastructure and at an occupancy cost that is commensurate with the company's affordability.

The conceptual framework which justifies the need for a constant dialogue between strategic management and operational management is illustrated in Figure 3.8.

The model development in relation to this crucial role definition will be elaborated in the next sub-section 3.1.2.1.

Figure 3.8: Justification for REAM as Linking Mechanism



Research Proposition II - that a process model for the proactive management of operational real estate assets and their associated facilities support services can be evolved with the emphasis on management over time.

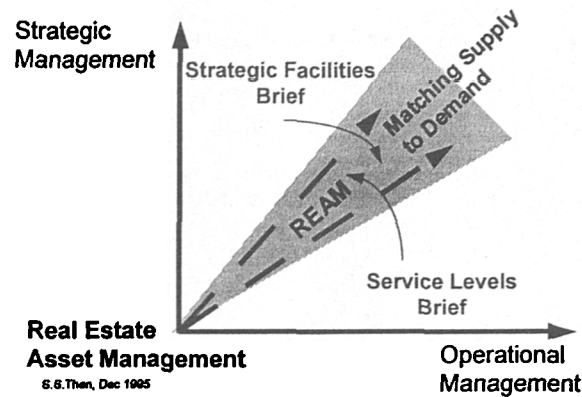
Having justified the need for an *informed interface* in order to consider *overlapping concerns* of strategic and operational management in an organisational setting, the second research proposition is aimed at developing a process model or framework whereby the planning, delivery and ongoing management of the corporate real estate assets is regarded as part of an integrated management process. Both the literature and practice evidence indicate that there is a need to consider facilities provision plans in conjunction with the other business resources like human resources and technology.

A proactive management model of the corporate real estate resource necessitate constant two-way dialogue; from strategic management - the strategic intentions and direction of where the company is going, from operational management - the best way of achieving the desired outcome in resource terms and their ongoing management.

Taking Figure 3.1 (pp.142) as a conceptual representation of current practice of REAM in many companies, a key requirement of a proactive model is to not only raise the awareness of the two sides to the strategic importance of closely aligning the real estate resource to the corporate strategic intent, but to establish channels of formal communications that keep both parties fully informed of the external market and its likely implications on the corporate operational asset

base. Figure 3.9 illustrates the use of the *strategic facilities brief* (SFB) and the *service levels brief* (SLB) as the vehicles for promoting and maintaining this crucial interface between strategic management decisions and operational management decisions.

Figure 3.9: Justification for REAM as Integrating Mechanism



The model development in relation to this integrating framework will be described in Section 3.1.2.2.

Research Proposition III - that the practice of operational asset management and facilities services delivery can be mapped as an incremental developmental process model that seeks to integrate the demands arising from strategic business decisions to the delivery of operational facilities and associate support services as a dynamic management process.

There is a growing acceptance that the effective practice of REAM involves competencies from a number of traditional disciplines. Whilst acknowledging the necessity for particular technical expertise in line with the requirements of a particular sector of industry, it is the overall corporate 'fit' between existing supply of resources to meet anticipated demand that is a concern of strategic management. In this respect, evidence from literature and practice point to a need to widen the traditional functional (professional) divide of role and tasks, to embrace a wider range of skills and competencies

The objective of research proposition three is to provide a series of matrices to map the incremental development of skills and competencies from the evolving theories and practices associated with real estate provision and management of facilities support services. The use of matrices is seen as an

effective way of distilling information from published literature in terms of theoretical propositions, as well as summarising innovative practices by organisations. An additional motivation in using matrices as a presentational format is that the management development matrices have been developed as a self-evaluation tool for assessing performance adequacies on a number of aspects within REAM.

The inputs from the practice element have relied on a comprehensive review of published case studies and interviews covering a period of fifteen years of major journals in real estate management and facilities management in North America, Europe and Australasia.¹ This is then supplemented by the case studies conducted as part of this investigation.

A detailed explanation and presentation of the management development matrices will be covered in Chapter 6 as part of the results of analysis.

3.1.2.1 Role Definition - the need for an informed interface

Cole (1994) describes the fundamentals of strategic management as “about setting the underpinning aims of an organisation, choosing the most appropriate goals towards those aims, and fulfilling both over time.”² Steiner (1979) saw it as “designing a desired future and identifying ways to bring it about”³. Thomson(1995) defined strategies as “means to ends,” and strategic management as “the process of by which these strategies are created, implemented and changed.” He also emphasised the necessity for strategies to be changed or modified whenever necessary and illustrated strategic management as a continuous process comprising the following four elements: awareness, formulation, implementation and monitoring.⁴

¹ Examples of key journals include:

- UK & Europe sources: *Facilities*, MCB.UK, *Property Management*, *Site Selection Europe*
- American Sources: *Site Selection*; *Facilities Design and Management*, *Real Estate Executive*, NACORE; *Facilities Management Journal*, IFMA
- Various Internet sites.

² Cole, G.A. (1994), *Strategic Management*. DP Publications Ltd. pp.1.

³ op.cit. pp.1

⁴ Thomson, J.L.(1995), *Strategy in Action*. Chapman & Hall. pp.7-9.

The reference to dynamics of change and managing over time are important as strategy development always looks to the future desired state as the driver of current actions.

Mintzberg and Quinn (1991) see strategy implementation as being conducted under four headings - structure, systems, culture and power. They take the view that strategic management is basically about balancing a number of interdependent factors.⁵ Mintzberg and Quinn's four headings can be compared with the so-called Seven-S framework developed by the management consultants, McKinsey & Co. which focused attention on seven key variables - strategy, structure, systems, staff, style, skills and superordinate goals (or shared values). These variables are sub-divided by Pascale and Athos (1981) into 'hard' elements (comprising of strategy, structure and systems) and 'soft' elements (comprising of staff, style, skills and shared values)⁶.

The above short overview of strategy and strategic management is by no means comprehensive. The intention is to provide a framework for relating strategic thinking at the senior management level to implementation of tactical action plans, in the particular context of decisions that impact on the physical asset base, i.e. buildings.

Strategic management is usually contrasted with operational management which is basically short-term and detailed, both in content and processes. Planning at an operational (tactical) level usually takes place in the context of immediate or near-future events, characterised by a fair degree of predictability about them and are generally related to the affairs of a business unit. Strategic management, by comparison, involves thinking and actions that are focused on the long-term future of the whole organisation, and which are conducted in conditions of considerable unpredictability. However, it is important to acknowledge that the act of implementing a strategy automatically leads into the operational domain, so the two forms of management activity in any organisation are closely linked as shown in Figure 3.10.

⁵ Mintzberg, H. & Quinn, J. (1991), *The Strategy Process - Concepts, Context and Cases*. Prentice-Hall International

⁶ Pascale, R. & Athos, P. (1981), *The Art of Japanese Management*. Penguin.

Figure 3.10: Relationship between Strategic and Operational Planning



Applying the above model to the context of REAM, it can be seen that the primary role of the strategic management of business is reading the market environment and making strategic choices that is incorporated in the corporate strategy for the development of the business. The management of change and decisions relating to allocation of business resources is influenced by senior management perception of what is core and non-core activities. This perception (awareness) will in turn have a direct bearing on the supporting facilities strategies for the provision of real estate assets and the delivery of facilities support services.

The primary role of operational asset management is to action the strategic facilities plan and manage the operational facilitates and services over time. Some of the key elements of operational asset management include:

- the level of competence of staff,
- the quality of information support,
- the level of analysis and evaluation, and
- the management approach (cost centred/ resource centred/ profit centred)

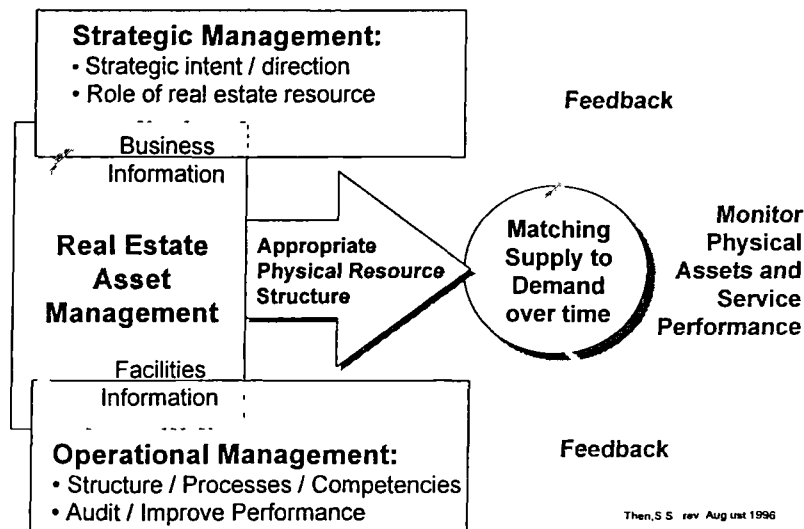
A critical barrier to the success of REAM is access to the right information, from within business units as well as from the facilities operations. Establishing the existence of useful information within the business units, and gaining access to this information on a regular basis, is often a problem. In this respect one of the key role of REAM is to act as the *informed interface* (Carder,1995)⁷ where the *overlapping concerns* (Cole, 1994)⁸ from strategic management and operational

⁷ Carder (1995) Knowledge-based FM: managing performance at the workplace interface, *Facilities*, Vol 13 No 12. Nov 1995, pp.8.

⁸ Cole,G.A. (1994), Strategic Management. DP Publications Ltd. pp.10.

management can be reconciled to provide an optimum solution to apparent conflicting goals seen in isolating from either perspective. The effectiveness of REAM relies on the regular flow of information: localised information built up from the bottom of the operational structure, and business information brought down from the core business end of the organisation. A schematic illustration of the proposed model is illustrated in Figure 3.11.

Figure 3.11: The Context of REAM as an Informed Interface



REAM provides the strategic link between strategic business planning and operational asset management. In the context of any organisation or business unit, the focus of REAM is to reconcile the demand for, and supply of, the physical asset base and associate support services essential for the delivery of its core products or services. Simply expressed, the principal role of REAM is to support the core business of the organisation it is serving.

In economic terms, REAM provides the platform and vehicle for:

- defining and quantifying the *demand* emanating from strategic business direction in terms of operational needs of facilities and support services to core business activities (business units);
- defining the *supply* in terms of the necessary physical asset base and appropriate service levels from the delivery perspectives and their management over time; and
- *matching supply to demand over time* as a continuous process of maintaining relevance in terms of an appropriate physical resource structure to support the corporate strategic intent.

Simply stated, REAM fulfils a much needed intermediate role between strategic

management and operational management in any organisation. Representation in REAM should comprise of strategic inputs from senior management staff responsible for strategic business planning, and executive management staff from the facilities management or property services management department.

At the strategic business planning level, inputs will be determined by the need for strategic direction of business units' intentions and guidelines from senior management in matters relating to operational requirements, and the operational processes that interpret operational assets demand and their subsequent delivery and management over time. The element of managing over time is critical in view of the life-cycle management of physical assets from the initiation, procurement, utilisation to final disposal of the real estate assets. The relative inflexibility of buildings as a physical product involving high capital investment necessitate a long term view of asset ownership (for owned assets) or asset occupancy (for leasehold assets).

At the operational management level, the main concerns are with the delivery of the functional operation space in the right place, at the right time, and for the right economic price. The ongoing management of the assets over time must strive to balance the requirements for flexibility in supply of space (measured in terms of quantity), and appropriateness and affordability in supply of associated facilities services (measure in terms of service quality).

Proactive management of the corporate real estate resource demands clear strategic direction from senior management as well as clear measurable deliverables from operational management. However, it must be acknowledged that, in reality where uncertainty is the norm, 'precise' planning is an impossibility. At best, forecasts of a number of possible outcomes carried out as part of scenario planning provide an acceptable view of the likely future strategic intent.

3.1.2.2 Integrating Management Framework - role of SFB and SLB

From the above discussions, it is clear that an integrating framework for REAM must be built on creating a continuous dialogue between the strategic management of core business development and operational management of business resources. Two key instruments and processes are proposed to bring

about a formal and continuous dialogue:

- Strategic Facilities Brief
- Service Level Brief

Figure 3.12: The Role of Strategic Facilities Brief and Service Levels Brief

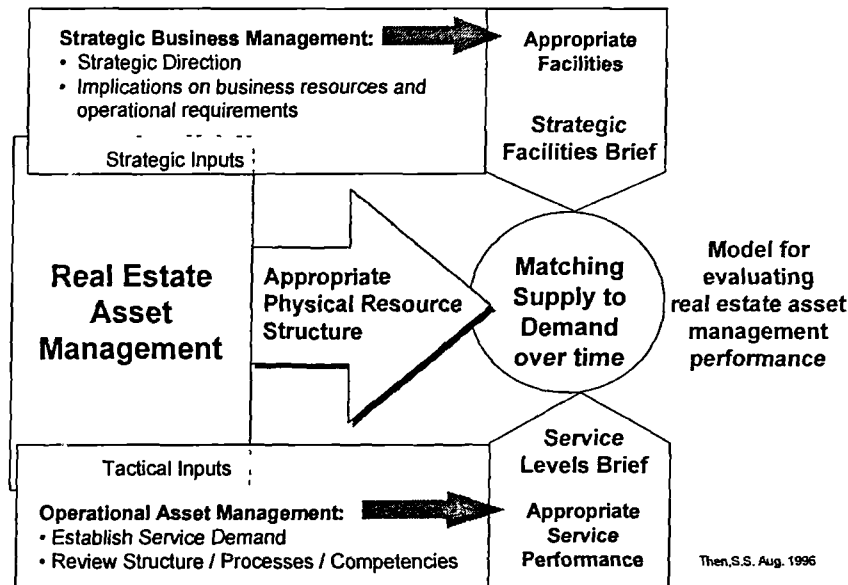


Figure 3.12 above builds on Figure 3.11 (pp.156) by highlighting the inputs and outputs from both strategic management and operational management. The process of matching supply to demand is clearly a complex one, the final outcome being an appropriate physical resource structure that is aligned with current corporate objectives, at the same time acknowledging that at any point in time, the situation is optimum with reference to the current steady state. The concept of the *current steady state* is central to the need to manage the corporate real estate assets and associated services over time and will be explained further in a later section.

The reconciliation of strategic inputs from senior management and tactical inputs from operational management represents only one dimension of the interface - defining current and anticipated demand for functional space and service performance. A second dimension of the interface involves choosing the most appropriate supporting facilities strategies for the conditions prevailing - externally by market factors, and internally by the capacity and constraints imposed by the current physical asset base. The development of appropriate supporting strategies is one of the aspects covered in the case studies

investigation.

The *Strategic Facilities Brief* (SFB) is the output document which defines the operational needs emanating from the organisation's business plans. The principal purpose of SFB is to define a corporate guide which outlines key facilities attributes and physical service performance criteria required to fulfil the organisation's objectives as dictated by the business plans.

The scope of the SFB will be influenced by the following factors:

- nature of business;
- site selection attributes;
- need for flexibility;
- proneness to technological change;
- corporate view of role of property and support services.
- resource commitment and affordability

The *Service Level Brief* (SLB) represents the definition of acceptable environmental performance levels in respect of the physical asset base and support services requirements as defined by the SFB. The principal purpose of the SLB is to define and quantify the appropriate support services and their performance within the physical working environment supporting the activities of the core business.

The scope of SLB would be dictated by the following criteria

- minimising risk exposure within the workplace;
- serviceability of the physical asset base;
- protecting the asset worth;
- promoting a conducive workplace environment;
- procurement strategy;
- costs and affordability.

It is clear from the above, that the development of SFB and SLB involves participation and inputs from strategic business planning and operational asset management in terms of staff involvement.

The strategic inputs from strategic management are the expressed intentions of the corporate strategy for core business development in the short to medium term. The role of the SFB is to attempt to ensure that any investments in physical

resource terms result in the delivery of appropriate facilities to support the fulfilment of the business plans. The source of the strategic inputs are business information. The role of SLB is to ensure that the appropriate facilities support services are delivered for the level of operational assets as defined by SFB.

Similarly, the tactical inputs from operational management should contribute to the strategic evaluation of potential capital investments that result in altering the capacity of the physical assets. The source of the tactical inputs are facilities information. The strategic role of the SFB is to interpret the implications of strategic business decisions in terms of real estate asset requirements to ensure that appropriate facilities are available to support the chosen strategic direction. The ongoing management role of SFB is to ensure that the appropriate facilities support services needed to carry out the production processes of core business activities (services or goods) are delivered to expected service performance at appropriate costs.

The interactions between the SFB and SLB are necessary to ensure proper matching of demand for facilities to support strategic business development and supply of appropriate facilities-related support services to support the implementation of the desired business plans. Proactive management of the corporate real estate resource demands clear strategic direction from senior management and clear measurable deliverables from operational management.

Figure 3.13: REAM as an Integrated Management Framework

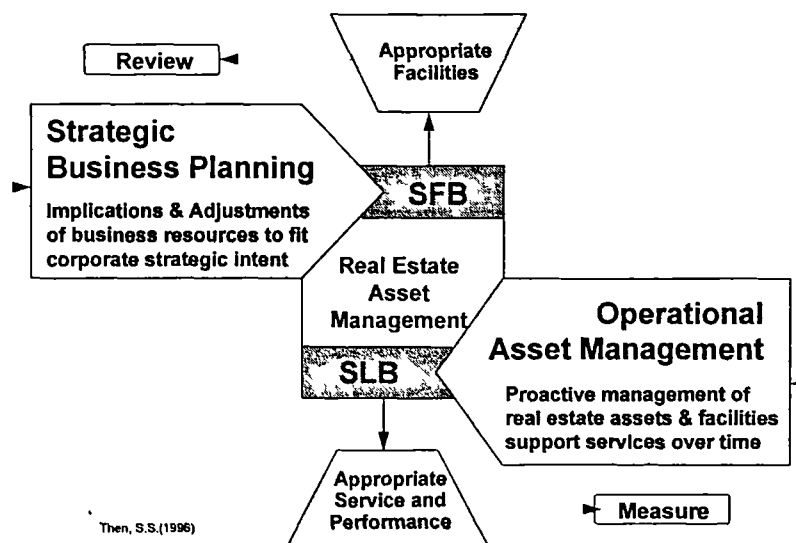


Figure 3.13 illustrates a 'double-loop' integrated management framework emanating from REAM.

At the strategic level, the focus of the management interactions between the parties is to review the existing corporate real estate portfolio in terms of adequacies (e.g. capacity, location, etc.) and constraints (e.g. adaptability, component life profile, occupancy costs, etc.) in the light of potential changes in the market place. The 'review loop' is therefore one of maintaining strategic relevance of the operational real estate portfolio within the corporate business plans. This strategic evaluation would also take into consideration supply market developments which may impact on the corporation's overall procurement strategies for support functions and services.

At the operational level, the focus of the management interactions between the parties is to continuously measure and evaluate the performance of the supporting working environment in terms of the "quality" relationship (i.e. cost and quality dimensions) and "service" relationship (i.e. quality and time dimensions) to customers.⁹ As in the review loop, the 'measure' loop covering the delivery of operational facilities services would have to consider the economics of current provision against potential market offerings.

3.1.2.3 Competence Matrices - targeted Incremental Improvement

It was mentioned earlier (refer section 3.1.2, pp.152-153), that the use of matrices is seen as an effective way of summarising information, as well as encapsulating concepts from theoretical sources and innovative techniques from innovative practices. As a presentational format, the layout of columns and rows provides a consistent framework for presenting variables and influencing factors or developments that have multi-dimensional impact on management decisions.

The use of the matrix format to illustrate the context of an array of variables and factors in an incremental management developmental model is not new. Examples of the effective use of matrices in presenting complex information can be found in research reports in different countries. In the U.K., the Building

⁹ Refer to section 2.4.1.4, pp.82-83.

Research Establishment BRECSU's "*Energy Management Matrix*" is an excellent example of a "quick, easy to use but effective method to establish your organisational profile" of energy management.¹⁰ The *CRE 2000 Report* makes frequent use of matrices to illustrate the key characteristics of competencies shifts in a phased developmental model in the evolution of corporate real estate management in North America.¹¹ In Australia, the Construction Industry Development Agency's (CIDA) report, "*Building Best Practice in the Construction Industry*," summarises its findings in a matrix comprising of levels of competencies (rows) against strategic management imperatives (columns) as a guide to best practice through continuous improvement.¹²

For this study a series of management development matrices have been developed as a self-evaluation tool for assessing performance adequacies on various aspects within *Real Estate Asset Management*, defined as '*the management of the provision of operational real estate assets and the delivery of associated facilities support services, as an enabling role to fulfil corporate business objectives*'.

The contents of each cell in each matrix have been derived from various sources: published literature, case studies interviews and personal knowledge in the emerging area. The matrices are not exhaustive, but do represent, in the author's opinion, one of the best ways of representing a distillation of best practices from theory and practice.

A detailed description of the matrices will be considered under the data analysis chapter (chapter 6).

3.2 Preliminary Organisational Models for REAM

The last section provides a board framework against which the current practice of REAM was evaluated from evidence of published literature, against a

¹⁰ BRECSU, (1993), *Energy Management Guide. General Information Report 12*. Department of Environment, January 1993. pp.5.

¹¹ Jorroff, M, et al., (1993), *Strategic Management of the Fifth Resource: Corporate Real Estate*. The Industrial Development Research Council, U.S.A.

¹² CIDA, (1993), *Building Best Practice in the Construction Industry - a practitioner's guide*. Construction Industry Development Agency, Australia

background of rapid changes in the global market place. The pace and nature of change are having a significant impact on the way in which organisations are being managed to get the best out of their existing business resources. It is clear from the evidence of literature over the last decade or so, that many of the larger national and international corporations are beginning to scrutinise how their real estate operational assets are provided for and managed. Indeed, the almost unanimous conclusion of the under-management of the corporate real estate assets by numerous research reports(section 2.2) that have had the impact of raising awareness to the significant role of the physical assets as a business resource.

“Ineffectively managed, property can actually hamper flexibility to respond to change. Where property decisions are out of line with strategy and objective, property can become a long-term brake on business development, tying up vital capital and limiting the options available.

Property is a resource which can, under the right management, be put to work for the business; the need for flexibility and innovative practice applies as much to property as to any other business asset.”¹³

The above pair of statements from a recent Arthur Anderson research report (1995) aptly summed up the likely contrasting consequences in relation to how the real estate (property) resource is managed in an organisation. It is the means to move from the former to the latter scenario presented above that is the focus of the preliminary model development in this section.

3.2.1 Drivers promoting Organisational Change

The background to the need for strategic awareness of the role of the operational in contributing to business success have been largely covered in the review of literature (Chapter 2).

Table 3.1 below provides a summary of the main drivers for change by listing the emerging trends in real estate management and facilities services management, and their implications on real estate provision and facilities service provision.

¹³ Arthur Anderson (1995), Wasted assets? A survey of corporate real estate in Europe. Arthur Anderson. pp. 3.

Table 3.1: Drivers for Change and Implications on REAM

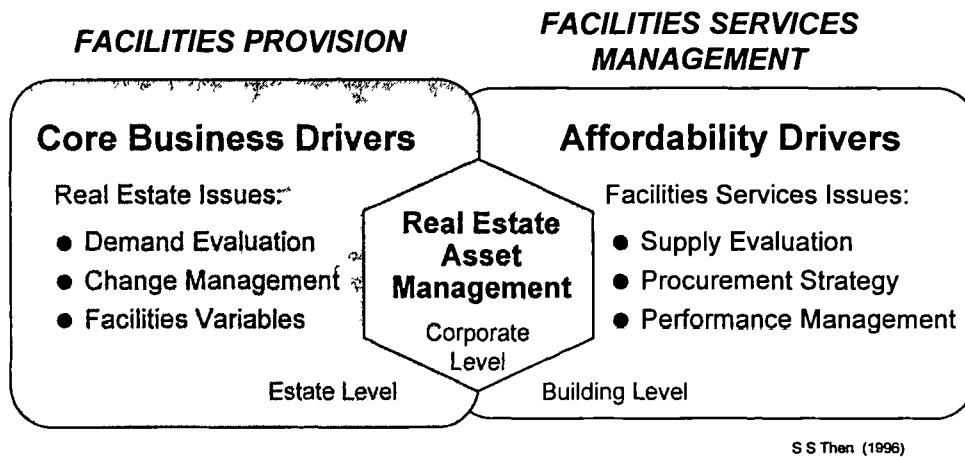
Trends in Real Estate Management	Impact on Real Estate Provision
<ul style="list-style-type: none"> • Growing awareness of the need to manage the operational assets • Concerns with raising occupancy costs • Long term asset ownership and liabilities • Need to align real estate resource to strategic direction • Environmental concerns (site and internal configuration) and employee productivity 	Flexibility in: <ul style="list-style-type: none"> • Real estate portfolio profile (level of ownership and/or lease liabilities) • Optimising location advantages (rationalisation and disposal) • Space utilisation (innovations) • Layout configurations (functional / process)
Trends in Facilities Services Management	Impact on Facilities Services Management
<ul style="list-style-type: none"> • Becoming generalist • In search of economy • Trend towards outsourcing • Partnering and Alliances • Service orientation 	Flexibility in: <ul style="list-style-type: none"> • Accommodating changes in technology - IT, telecommunication, electronic mail, etc. • Procurement strategies • Service management

It is against the trends and implications listed in the above table that the model development for REAM must be based in an organisation setting.

The distinction between *facilities provision* and *facilities services management* is important in that they are inextricably linked and share the common objective of providing an enabling workplace environment to fulfil corporate objectives. More importantly, for many organisations, the roles of facilities provision and facilities services management are separately managed by two functional departments or units. In this respect, any models for REAM must be able to show the interfaces between the two interrelated processes.

Figure 3.14 illustrates the critical interface between *facilities provision* and *facilities services management* within an organisational context. The objective of the emerging preliminary models is to show the crucial interfaces by identifying the drivers motivating actions at three identifiable levels in terms of real estate asset management; i.e. corporate level, estate level and building level.

Figure 3.14: Business Drivers and Affordability Drivers



The *corporate level* is concerned with the adequacy of the real estate assets as a business resource, to fulfil strategic objectives. The *estate level* then interprets this strategic intent in terms of implications on the current operational real estate portfolio, i.e. facilities provision. The *building level* primary concern is with meeting users requirements on an ongoing basis, while at the same time, minimising disruptions while taking actions to adjust to the next steady state as a consequent of the strategic response initiated at the corporate level.

Figure 3.14 above also makes another differentiation; *core business drivers* that impact on physical resource issues and decisions, and *affordability drivers* that impact on facilities service delivery issues and decisions. The distinction between the two sets of drivers are important for the model in that they determine the nature and content of management analyses that are necessary, as well as the quality of dialogue between strategic management and operational management.

Core Business Drivers are concerned with *physical resource issues* that arise from the corporate level as a result of strategies taken in responding to the market and competition. They have a direct impact of measures taken at the estate level. Given the general apathy of senior management in disregarding the need to link strategic real estate planning and business planning, (see section 2.2.1) it is crucial to demonstrate how strategic business decisions impact on the costs of real estate provision and management. The underlying premise supporting this need is that real estate assets, as a business resource, must be continuously

aligned to the strategic intent of the company. Provision for flexibility in supply of supporting operational real estate assets requires formal planning and access to the corporate business plans. In this respect information is the key to senior management understanding of the real estate resource.

The main categories of core business drivers that impact on facilities provision relate to demand evaluation, change management and desirable facilities variables.

Table 3.2: Core Business Drivers Variables

1. Demand Evaluation	<ul style="list-style-type: none"> • Market / competition analysis • Corporate culture • Growth projections
2. Change Management	<ul style="list-style-type: none"> • Response to market trends • Organisational development • Technological Innovations
3. Facilities Variables	<ul style="list-style-type: none"> • Location • Fitness of purpose • Investment implications

Table 3.2 lists the main factors to be considered within each of the category of core business drivers. Demand evaluation is a strategic management process bounded by the prevailing corporate culture and involving market and competition analyses leading to a responding corporate strategy that specify the company's growth projections. It is the direction of the business plans in terms either positive or negative growth, that determines its implications on the existing real estate portfolio in terms of:

- definition of necessary assets attributes to meet projected operational requirements, i.e. facilities variables; and
- definition of capacity shifts in the existing operational assets to meet the projected demand level of operation.

It is important to point out that underpinning any decisions in facilities provision, is the constant interplay between the pulls from three key resource drivers: that of people, technology and the workplace environment (property). These issues are considered under the headings of *organisational development* (people issues) and *technological innovations* (technology issues) within change management.

Affordability Drivers are concerned with facilities service delivery issues (as service providers) resulting from measures taken at the estate level which set the demand level, and governed by service level guidelines from the corporate level (as client) via business units' specifications (as customers) at the individual building level. For facilities services management, the emphasis on *affordable costs* rely on consideration of parameters within supply evaluation, procurement strategy and performance management as show in Table 3.3.

Table 3.3: Affordability Drivers Variables

<p>1. Supply Evaluation</p>	<ul style="list-style-type: none"> • Economics of current provision • Risk / criticality assessments. • Supply market developments
<p>2. Procurement Strategy</p>	<ul style="list-style-type: none"> • Service demand evaluation • Service procurement options • Service management implications
<p>3. Performance Management</p>	<ul style="list-style-type: none"> • Service performance monitoring • Managing stakeholders relationships • Promoting continuous improvement

The resolution of an appropriate real estate asset portfolio to meet the projected level of operation sets the basis upon which the facilities services delivery will be assessed. The concept of affordability relies on the basic economic principle of 'living within one's means.' In terms of facilities service delivery in an organisational setting, the growing practice of internal charging or recovery of real estate and support services costs from business units by the service department or unit providing the services, have made the service demand evaluation process a valuable opportunity for improving dialogue between the business units (as service purchasers) and the in-house real estate/facilities service provider.

The supply evaluation of facilities service delivery at an affordable level is primarily concern with the economics of the provision of fully serviced functional space. The evaluation process must consider the economics of current provision against the external supply market offerings, and any inherent risks associated with the chosen sourcing option(s). Issues relating to variables within procurement strategy and performance management have been largely covered earlier (Chapter 2, section 2.4.2.2; pp. 94-127).

3.2.2 Key Organisational Variables

The last section provides the dynamic background upon which the role of the operational real estate assets within organisations must evolve to accommodate changes in the market place. The desired outcome from REAM in physical form is an appropriate portfolio structure that is aligned with the organisation's business operational requirements. Buildings and land, as physical assets are relatively static products. Effective matching of demand for, and supply of, functional accommodation and associated support services to meet operational requirements in a dynamic business environment demands the management of the real estate assets as a dynamic integrated process. The realisation of an integrated approach necessitates a formal planning framework that must cater for the cultural, procedural and existing knowledge base of the organisation concerned.

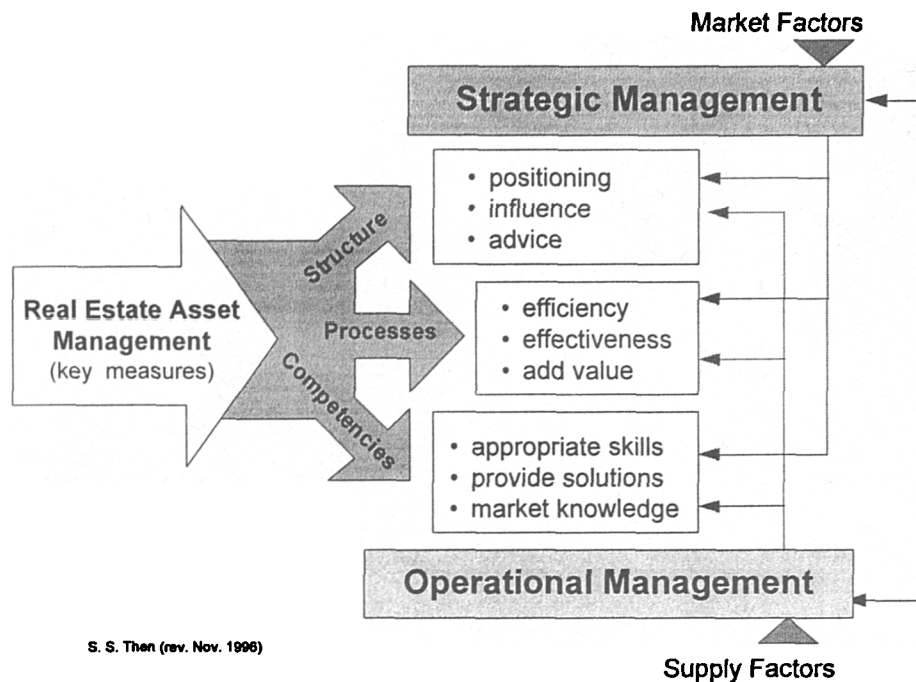
For the purpose of this study, three measures have been chosen for evaluating the performance of REAM within an organisation. The choice of the measures are driven by the need to measure how organisations response to managing their operational real estate assets as a business resource.

Figure 3.15 illustrates a model that proposes the performance of REAM can be evaluated in term of three key organisational variables:

- *Structure* - organisational set-up for operational real estate provision and facilities services management.
- *Processes* - the systems and procedures for the management of the delivery of operational assets and their associated facilities support services.
- *Competencies* - the necessary skills required for an efficient and effective delivery system - both in-housed and bought-in expertise.

The performance of REAM is seen as the outcome whereby the above three organisational variables of *structure*, *processes* and *competencies* must work in concert. The underlying research proposition is that any mismatch between the three organisational variables in any organisation is likely to lead to a situation where the solutions generated are sub-optimum in the utilisation of the operational real estate assets. Results from the case studies investigated will form the basis of validating this model proposition.

Figure 3.15: Organisational Measures for REAM



In demonstrating the requirements for each of the organisational variables chosen, a qualitative approach is adopted to measure each variable. The qualitative measure used is based on assessing the presence or absence of a strategic shift in a number of factors that are considered to be closely related to the organisational variable. For example, as shown in Figure 3.14 above, for the organisation variable - *structure*; in evaluating the performance of REAM in an organisation; the positioning of the real estate/facilities function, the level of influence it has in strategic decision making, and the quality of consultation with senior management, are taken as measures that indicate the adequacies of the existing structure for the organisation concerned.

3.2.2.1 Structure

The term 'structure' is used here to refer to organisation structure which is closely linked to strategy, subscribing to Mintzberg & Quinn's view that "the two exist interdependently, each influencing the other"¹⁴. Given that senior management perception of the role of the operational real estate assets has a major bearing

¹⁴ Mintzberg, H. & Quinn, J. (1991) *The Strategy Process - concepts, contexts and cases*. Prentice Hall Int. Also refer to section 3.1.2.1, pp.145-146.

on the state of its management (Chapter 2, section 2.2, pp.34-39), for this study, the prevailing corporate culture is viewed as an important determinant of structure.

As described above, in terms of assessing the performance of REAM in an organisational context, positioning within the organisational hierarchy and the level of interaction and/or influence within strategic business planning are taken as important indicators. Table 3.4 lists the strategic shifts required for the organisational variable - structure.

Table 3.4: Strategic Shifts required in *STRUCTURE*

From:	To:
<ul style="list-style-type: none"> • Distance from senior management • Low / non influential • Functionally divide • Predominantly in-house service provision 	<ul style="list-style-type: none"> • Close to strategic business planning • Contribute to strategic options • Projects driven • Competitive procurement

3.2.2.2 Processes

'Processes' refer to the administrative procedures which help organisations function. In terms of assessing the performance of REAM in an organisational context, processes refers to the systems and procedures for the overall process of management of the delivery of the functional space to operating business units within the organisation. Performance measures relates to effectiveness and efficiency criteria, as well as the ability to add value to the corporate core businesses through real estate/facilities related actions.

Table 3.5: Strategic Shifts required in *PROCESSES*

From:	To:
<ul style="list-style-type: none"> • Reactive, supply-led process • Subservient role, transaction-led • Functionally split, property focused • Patchy knowledge of assets base 	<ul style="list-style-type: none"> • Proactive, demand-led process • Supporting strategic intent, business process-led • Integrated resource management • Interactive knowledge of assets base

Table 3.5 lists the nature of strategic shifts required. The shifts in operational approach underline a move from a role in real estate support which is typically reactive, transaction-led, without full knowledge of the asset base; to one in

which the real estate function is fully aware of the capacity and constraints of the corporate operational assets, and in a position to seize opportunities to optimise the real estate assets in conjunction with other business resources to provide the necessary enabling working environment to support the achievement of corporate business objectives.

3.2.2.3 Competencies

In the context of real estate asset management, competencies refer to the skills base required to support a proactive management approach with the competencies necessary to contribute at the business planning level by providing strategic facilities solutions to support the realisation of corporate plans.

It is important to acknowledge that almost all strategic business decisions has a real estate/facilities dimension, the crucial question is, to what extent is such implications thoroughly evaluated, articulated and presented at senior management level, where core business decisions are made? Executive charged with real estate and facilities support roles must develop the competencies and capabilities to provide realistic options within the business plan’s remit with the intention of influencing senior management decisions in order to arrive at the most appropriate supporting facilities strategies. Table 3.6 lists the nature of strategic shifts required within the organisational measure of competencies.

Table 3.6: Strategic Shifts required in *COMPETENCIES*

From:	To:
<ul style="list-style-type: none"> • Technical skills • Solving problems • Task-based approach • Internally focused 	<ul style="list-style-type: none"> • Business skills • Providing strategic options • Process-based approach • External comparison

An essential prerequisite of this competence shift for real estate/facilities personnel is to bridge the language barrier between the ‘technical speak’ of operational tasks and senior managers’ concerns of business operating costs. This demand business management skills on top of the technical skill base inherent with the management of operational tasks. Similarly, the transition

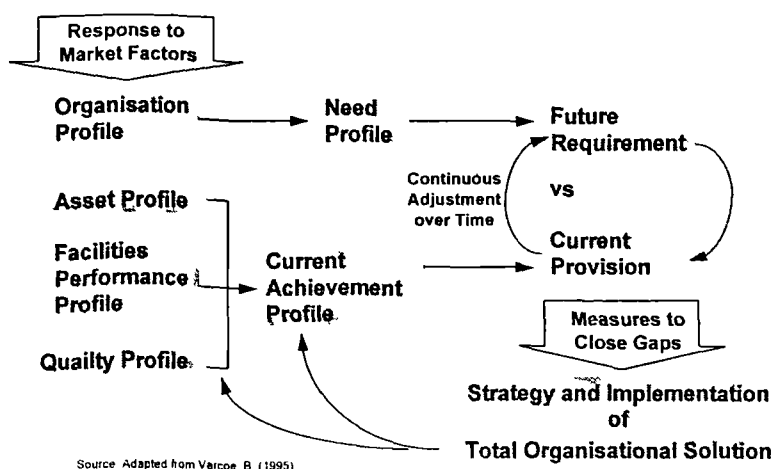
needed is not just confined to provide solutions to emerging operational problems, but having the knowledge base and capabilities to provide alternative real estate/facilities scenarios to support strategic business evaluations. An implicit assumption of this capability is the ability of translating the corporate mission statement in terms of real estate and facilities drivers, since only then, will the corporate critical success factors be embedded within the performance measures of the facilities processes.

Another component of this competence shift is the need to look beyond the organisation. This external awareness is beneficial in two respects: firstly, to take advantage of external market developments which may alter the economics of current provision; and secondly, to conduct comparative analyses with other organisations as a motivation of promoting continuous improvement.

3.2.2.4 Summary

The dynamic background upon which the role of the operational real estate assets must evolve to accommodate changes in the market place is clearly a constant within organisations today. The role and effectiveness of REAM must be measured in terms of how each organisation is capable of responding in terms of adjusting its facilities supply (real estate provision) to meet changing demand in operational levels, as well as maintaining an appropriate level of facilities service delivery in line to the operational asset base.

Figure 3.16: The Dynamic Link between Responding to the Market and REAM



The need for continuous adjustment of the corporate real estate portfolio is clearly illustrated in Figure 3.16, where measures are taken to close the gap

between *future requirements* and *current provision* until the next steady state is reached temporarily. The figure also serves to illustrate the crucial link between the organisational response to the dynamics of the market and its implications on the ongoing management of the corporate real estate resource.

The chosen organisational variables of structure, processes and competencies provide a basis for measuring how effectively an organisation responds to the demands for changes to its operational asset base as it moves from one steady state to the next over time.

3.3 REAM Model Components

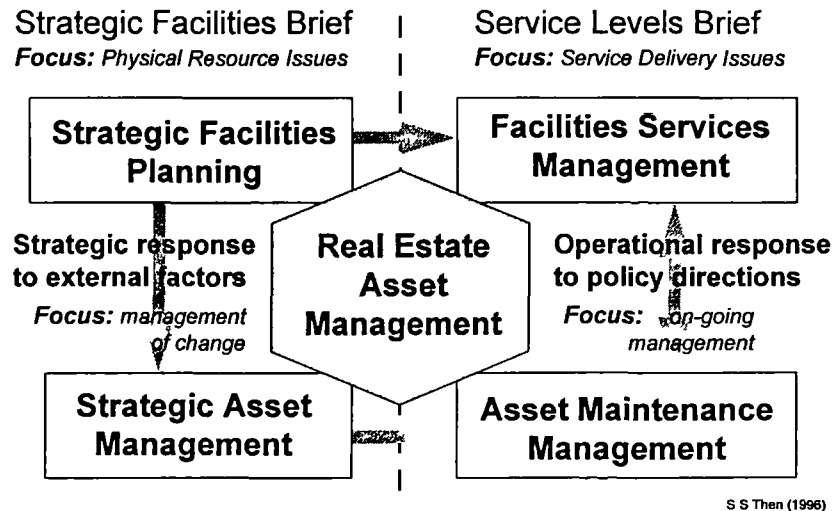
The last section describes the three key organisational variables that will impact on the outcome of the practice of REAM in an organisational setting. This section of the model development will concentrate on the main components of REAM. The distinction within REAM of the management processes associated with facilities (real estate) provision and facilities support services provision (Figure 3.14, pp.165) provides a convenient separation of two groups of issues: issues relating to decisions on the provision of the physical infrastructure necessary to support the corporate strategic business plans; and issues relating to the delivery of support services within the physical resource base as operational facilities. The interface between facilities provision and facilities service management is important in three respects:

- it differentiates between *core business drivers* and *affordability drivers* which underlines the cause and effect relationship between them;
- it highlights the *strategic components* from the *operational components*; and
- it defines the potential scope and domain of *strategic facilities brief* and *service levels brief*.

The model illustrated in Figure 3.17 advocates that the scope of REAM can be considered as comprising of four interrelated components. The concepts of the strategic facilities brief (SFB) and service levels brief (SLB) were introduced earlier on (Section 3.1.2.2, pp.157) as bridging mechanisms between strategic business planning and operational asset management. Figure 3.17 shows the four components of REAM and their relationships to SFB and SLB. The *strategic facilities planning* (SFP) component and *strategic asset management* (SAM)

component are within the domain of *Strategic Facilities Brief (SFP)*, while the *Facilities Services Management (FSM)* component and *Asset Maintenance Management (AMM)* component are within the domain of *Service Levels Brief (SLB)*.

Figure 3.17: REAM - Components and Relationships



The distinction between the strategic components from the operational components is important in two respects:

- the outputs from the former are concerned with physical resource issues as an outcome of the corporate strategic response to external market factors, while the latter are concerned with service delivery issues as a response to corporate policy directions relating to the use of the physical resource base; and
- the outcome from the strategic components will directly impact on the direction or emphasis that the operational components must respond.

The practice of REAM will be reflected in the way these four components are structured and organised as an integrated delivery process, in order to meet the organisation's demand for functional fully-serviced space over time.

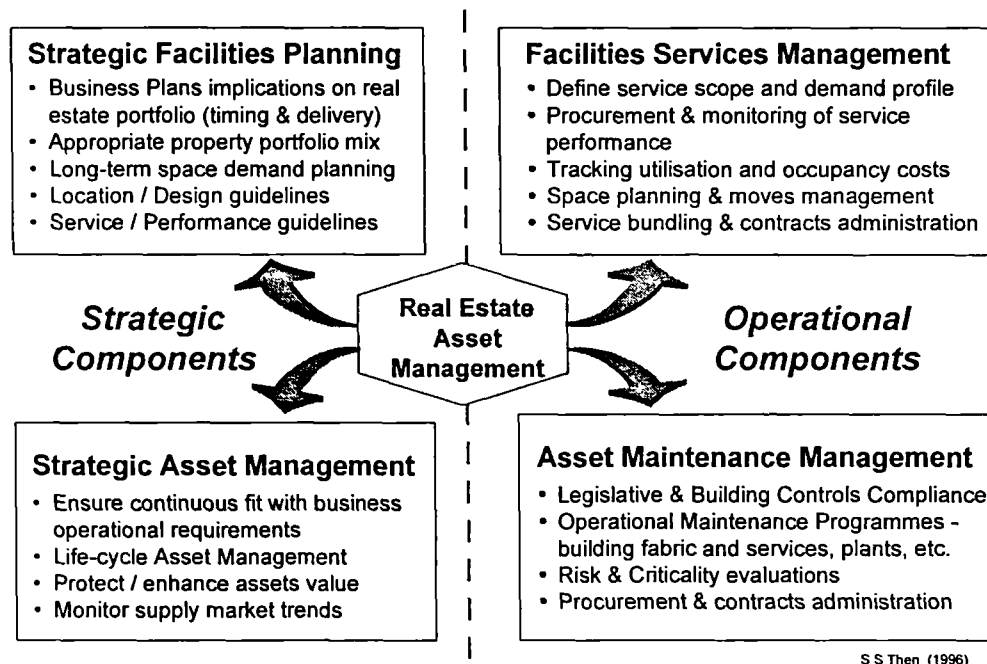
An important consideration of the model illustrated in Figure 3.17 above is the interactions and relationships between the components. The strategic facilities planning (SFP) component is the initiator and motivator of change as it represents the business interface of REAM within the corporate structure. In terms of responding to external market factors that impinge on the corporate business plans, the role of SFP is central in developing and providing strategic guidelines for the ongoing monitoring of decisions and actions taken within

strategic asset management (SAM) and facilities service management (FSM). In terms of management focus, SFP and SAM main concerns are with managing change to the nature, size and mix of the corporate real estate portfolio as a consequent of alterations to the strategic business plans. The emphasis being to maintain fitness of purpose between the corporate strategic intent and the supporting real estate infrastructure. On the other hand, the management focus of FSM and AMM are primarily to ensure minimum disruption to operational status through economic and effective delivery of support services within the operational facilities.

3.3.1 Components of REAM - definition of scope

Having defined the context of the components within the broader concepts of SFB and SLB, this section of model development is aimed at defining the scope and role of each of the four components as detailed in Figure 3.18.

Figure 3.18: Scope of REAM Components



3.3.1.1 Strategic Facilities Planning (SFP)

The evolution of the role of SFP as a corporate management tool to relate the physical variables of the corporate real estate assets in business strategic planning and management has been described earlier (Chapter 2, section 2.4.1.2, pp.69). The practice of SFP varies considerably from organisation to

organisation. Briefly, strategic facilities plans define how much space is needed, what kinds of facilities are required and where facilities should be located. Typical steps involved in strategic facilities planning include:

1. Develop alternative facilities/space-demand scenarios based on management policies and business plans;
2. Generate optional facilities strategies;
3. Evaluate and select the best supporting facilities strategy by comparing the risks and benefits of each strategy with alternative facilities-demand scenarios.

At the strategic level, the SFP process is necessarily closely linked to corporate planning, and must strive to interpret business plans in terms of facilities provision, ahead of projected demands. Given the volatility of the market environment, this analysis by nature, has to be a continuous review of reading the market and deciding on a strategic direction for business units development.

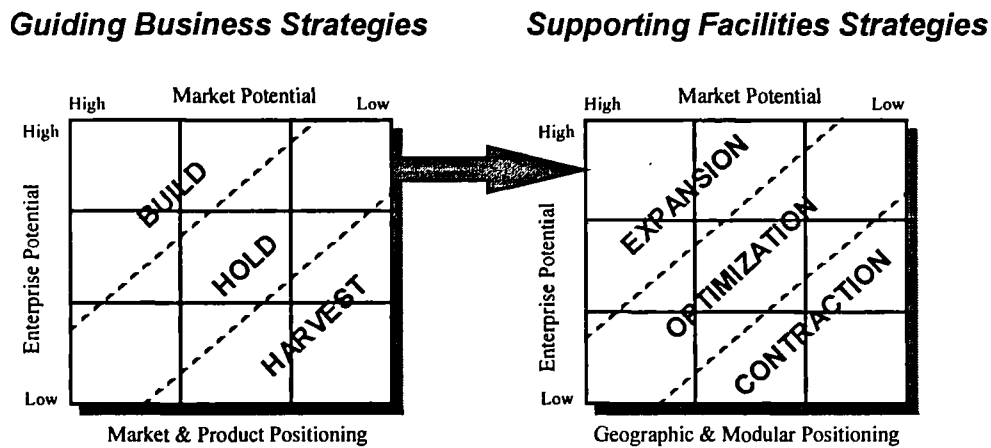
For the real estate/facilities executive, the reality is that the emerging strategies must support the corporate strategic direction through an integrated analysis of three key organisational resources mix - people, technology and property.¹⁵ Wilson(1991)¹⁶ refers to these organisational resource as '*modular-mix variables*' which support the market and product positioning of a company. He also suggests that strategic business decisions can result in (or from) two categories of changes that affect the corporate real estate portfolio - *abrupt* changes and *incremental* changes. Abrupt changes can be a result of major acquisitions and divestment with significant impact on the modular-mix variables. Incremental changes develop more slowly and more rationally over an extended planning horizon usually based on sales forecasts and new technologies that influence headcount and space forecasts. In arriving at a supporting facilities strategy, Wilson rightly suggests that the SFP process must consider both types of change scenarios, and as the company's product/market portfolio changes, so must the real estate/facilities portfolio. In demonstrating the link between business

¹⁵Then, S.S.D. (1994), Property as an Enabling Resource to Business. *Facilities Management*. August 1994. pp.4-7.

¹⁶Wilson, R.C. (1991), Strategic Positioning and Facilities Planning: reviewing business plans and facilities strategies. *Site Selection. Industrial Development Section*. April 1991. pp.26-30.

planning and facilities planning, Wilson differentiated between guiding business strategies and the supporting facilities strategies as illustrated in Figure 3.19.

Figure 3.19: Guiding Business Strategies and Supporting Facilities Strategies¹⁷



The current and planned product mix within each strategic business unit usually embraces a combination of *build*, *hold* and *harvest* policy goals which joint impact is reflected in long-range and near-term forecasts of revenue and sales goals and related resources. Each market segment or target market, by design, should have a unique marketing mix of product, price, promotion and distribution, with unique strategies. Clearly the supporting facilities strategies must support the corporate strategic direction, building-hold harvest goals and marketing mix strategies. The real estate portfolio must be designed and adjusted to strongly support the product/market portfolio. Space must be *expanded*, *optimised* and *contracted* as required to support corporate and business unit requirements. It is not uncommon for all three of these facilities planning activities to be occurring simultaneously somewhere within a company.

At the level of interface with senior management, the desired outcome from the SFP process is an effective and affordable resolution of physical resource issues arising from any revision of the current corporate business plans. The SFP process is the source where the business demand for physical (functional) space is clearly articulated. The business and real estate/facilities planning process must be tightly linked to be able to anticipate and respond to the abrupt and

¹⁷ Wilson, R.C. (1991), op cit. pp.28.

incremental change in terms of making the strategic choice of the most appropriate supporting facilities strategy to pursue. In arriving at an appropriate supporting facilities strategy, the SFP process main concerns will include evaluation of the following:

- Business plans implications on appropriateness of existing real estate asset base - real estate/facilities strategy review;
- Definition of appropriate portfolio mix - facilities attributes and capacity;
- Long-term space demand planning - demand-scenarios planning;
- Location / Design guidelines - value and costs variables;
- Service / Performance guidelines - outsourcing evaluations.

An important quality for SFP evaluation is to strive for an appropriate balance in any real estate investments, between the demands for flexibility (in supply), adaptability (in use) and manageability (in servicing). In this respect, knowledge of business strategies to implement build-hold-harvest and related marketing-mix goals is crucial to the development of the supporting facilities strategies.

3.3.1.2 Strategic Asset Management (SAM)

In output terms, the outcome from the strategic facilities planning (SFP) process is the identification of the nature and extent of the mismatch between anticipated demand and current provision of operational real estate assets. It is a corporate articulation of the business response in terms of the likely emerging supporting facilities strategies that are likely to align the corporate physical resources to the strategic direction of the company. The role of the strategic asset management (SAM) process is essentially one of operationalising the measures to be taken within the framework guidelines emerging from the SFP process. It is concern with the implementation of measures that relates to the management of the corporate real estate asset base as a business resource over time. Inputs from SFP will influence operational policies and decisions relating to own/lease, life-cycle management, maintenance and renewal.

A pivotal role of SAM is managing the transition of the real estate portfolio as it moves from one 'steady state' to the next, as a consequence of the corporate business response to the external market place. This transition in 'states' or adjustments to the corporate real estate portfolio, is reflected in measures which

necessitate structural changes to the existing asset base. Underlying all the actions within SAM is the need to maintain fitness for purpose by aligning the corporate operational real estate resource to the strategic intent of the company. Typically, the response will be one or a combination of the following actions:

- Projected demand expected to exceed current supply for functional space with implications for the need to build new buildings or leasing of new premises to meet projected demand;
- Existing supply expected to exceed projected demand for functional space with implications for the need to dispose of surplus space or leases;
- No significant projected change in demand for functional space with emphasis being given to sustaining or enhancing the current stock of buildings through modernisation or adaptation.

One of the most compelling reasons for the need to align the organisation's asset base to the corporate business plan is that operational assets (held long-term) attract liabilities in terms of costs for ongoing operation and maintenance, both of which steadily rises as the asset base ages.

Figure 3.20 illustrates the influences that impact on SAM from strategic and operational aspects and the performance management drivers operating within the management process. The context of strategic asset management must be interpreted in terms of the service demand that results from the organisation's corporate plan. The service demand is fundamental in translating the organisation's demands and/or expectations into service needs in spatial terms.

The asset management strategy objective is to optimise the asset base to meet the projected organisational demand for space and associated services. The asset strategy provides the framework for managing the organisation's asset base through time by clearly identifying short and medium terms actions.

Figure 3.20: Role of Strategic Asset Management¹⁸

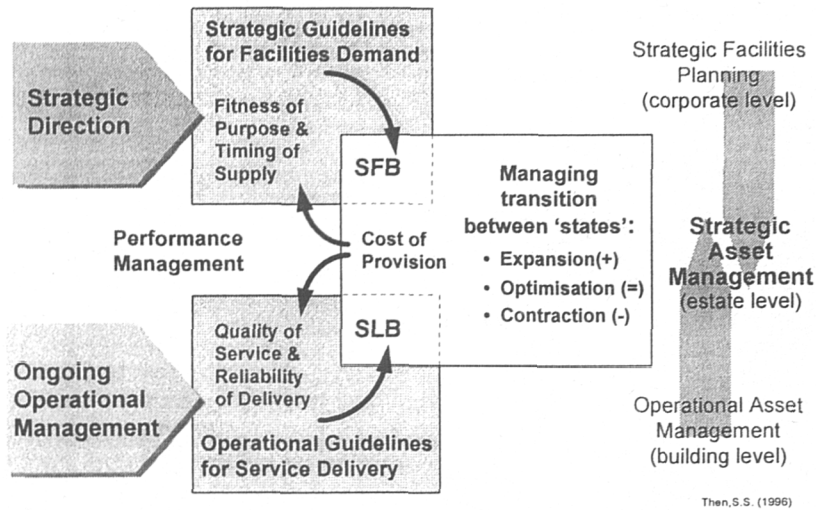
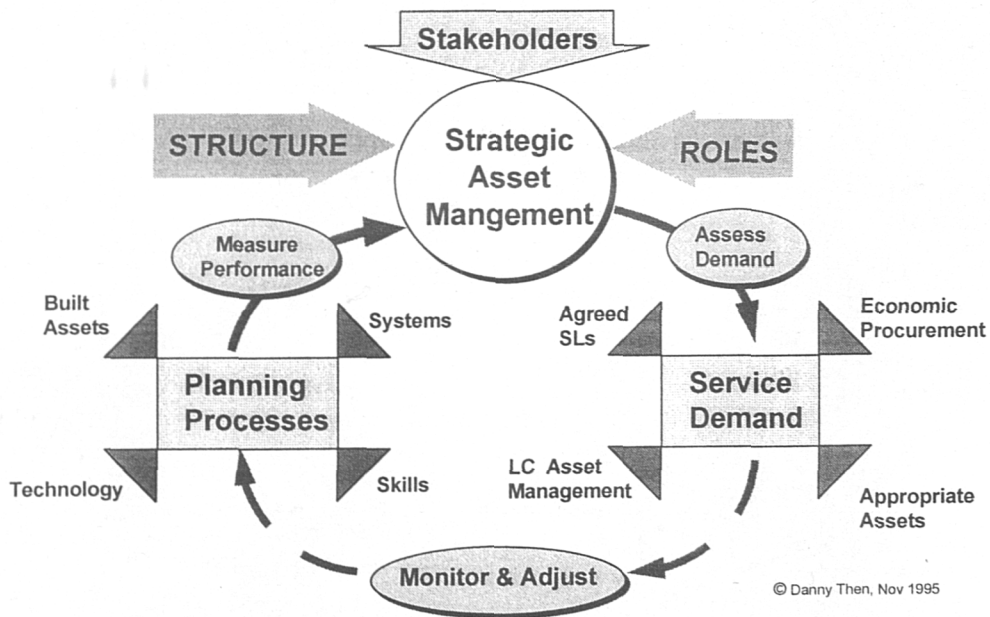


Figure 3.21 above provides a conceptual process model for considering the practice of Strategic Asset Management. The process model seeks to establish the following:

Figure 3.21: Strategic Asset Management - A Process Model¹⁹



1. Outline the key drivers (stakeholders) and components (structure and roles) for strategic asset management in any organisation.

¹⁸ Adapted from Then, D.S.S. (1996), Strategic Asset Management - the crucial link between strategic business planning and operational asset management. Proceedings of CIB W70 Helsinki '96 Symposium on User-oriented and Cost Effective Management, Maintenance and Modernisation of Building Facilities. Editors Heikki & Anee Aikivuori. pp.293-298.

¹⁹ Then, D.S.S. (1996), op cit. pp.296.

2. The crucial relationship between *Service Demand* and the *Planning Processes* that is geared to deliver the required facilities and associated support services.
3. The factors that impact on *Service Demand* and the *Planning Processes*.
4. The interactive management processes involved in assessing demand, monitor and adjust, and performance measurements.

An important element of SAM is the integrated approach in relating anticipated service demand for functional space to supply of space as dictated by the nature and physical characteristics of the existing assets base. It is the mismatch between demand and supply that leads to the need for adjustments to the existing physical asset base to a next *steady state*.

The life-cycle philosophy of asset management provides the crucial link between demand for asset creation, and utilisation of the asset over time. Strategic asset management principles promote an integrated process of asset evaluation from cradle to grave, guided at each stage by economic justification between performance (value/benefits) and cost of provision (costs).

The main concerns of strategic asset management as a follow-on from strategic facilities planning, can be summarised as comprising the following:

- Provide and maintain continuous fit between real estate resource and operational requirements via strategic reviews;
- Integrate life-cycle asset management principles in operational systems;
- Protect and enhance real estate assets value by monitoring assets' attributes;
- Monitor real estate supply market trends and seize on potential opportunities to realign economics of provision.

3.3.1.3 Asset Maintenance Management (AMM)

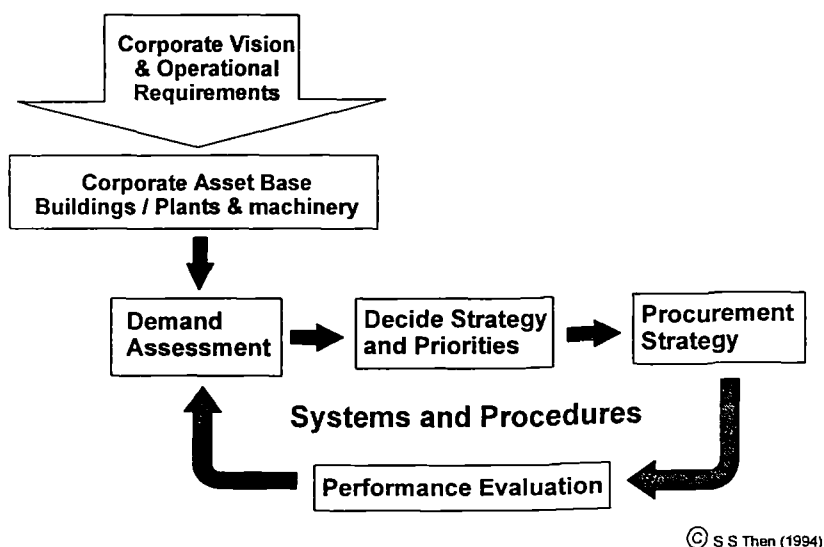
The role of asset maintenance in any business is a direct consequent of the need to protect the asset worth in the form of the building as a facility, and the need to maintain a constant operational flow of output - whether in the form of tangible products or in the form of a range of support services to internal, as well as external customers. It is the balance in the weighting given to these two aspects of maintenance by management that are often reflected in practice.

At any point in time and for each organisation, the existing maintenance management set-up will be a consequent of the current company policy in terms of its corporate vision and its assessment of operational requirements. This will

be reflected in the existing organisational structure and systems and procedures upon which the maintenance function will be executed. Figure 22 provides a personal (generic) view of the asset maintenance management process showing the main 'building blocks'.

It is important to point out that implicit within the management process are the requirements of appropriate skills in both technical and managerial aspects. The technical aspects will include expertise that may be unique to the production process in respect of the setting up, running and on-going maintenance of the plants and machinery, technical audits, etc.. The managerial aspects will cover resource allocation, procurement, budgeting, performance monitoring and management audits. The systems and procedures are the vehicle that provides the information flow that enables the organisation to monitor its performance. This is the arena where computerised information systems has been targeted by numerous software suppliers.

Figure 3.22: The Asset Maintenance Management Process²⁰



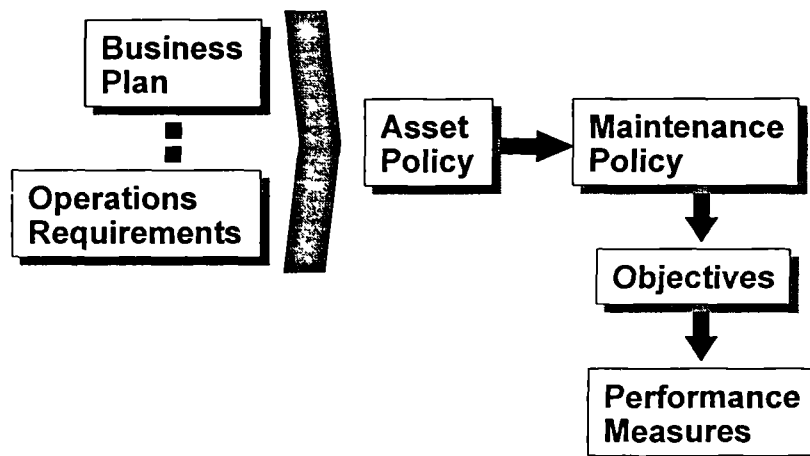
Effective asset maintenance management requires a clear understanding of the nature of the business and the demands of the business operations. That knowledge base is essential to formulate a realistic and practical maintenance

²⁰Then, D.S.S. (1996), Benchmarking the Asset Maintenance Management Process for Improvement. Proceedings of CIB W70 Helsinki '96 Symposium on *User-oriented and Cost Effective Management, Maintenance and Modernisation of Building Facilities*. Editors Heikki & Anee Aikivuori. pp.300.

policy that takes into consideration the organisation's total asset maintenance needs. The definition of maintenance standards in relation to any asset item is fundamental to the whole maintenance management process. The defined datum sets the standard of care appropriate for the assets concerned in relation to the business operations they are supporting. The defined standards of care then establish the asset maintenance demand and justification for resources. The drivers for formulating a workable maintenance policy must be the business plan and operational needs.

In practical terms, the starting point is the standard of care as prescribed by code compliance (building, health & safety, use, etc.) which establishes the minimum datum. These are mandatory actions, default of which will be unacceptable both in terms of cost consequences and bad publicity. The level of care required above the minimum prescribed by legislation and codes, is clearly dictated by the corporate culture and the nature of the business operations. Prestigious hotels and headquarters of 'blue chip' companies are examples of premises where the standard of care required are well above the code compliance norms. Code compliance and business operations requirements can be categorised as the 'hard' drivers of asset maintenance standards.

Figure 3.23: Determinants of Asset Maintenance Policy²¹



During the last decade or so, there has been a gradual realisation of the strategic importance of buildings as corporate assets, and as a resource that could be managed effectively to increase the productivity of the most expensive resource -

²¹ Then, D.S.S. (1996), op cit.

people. This important change in perception has brought about an important shift in the management, provision and delivery of support services, of which asset maintenance is clearly an integral component of the corporate facility brief. Actions that are implemented as a result of a clear corporate facility strategy can be classed as the 'soft' drivers of asset maintenance standards. These drivers include:

- Corporate vision and image.
- Management perception of role of property assets.
- Whole-life asset management.
- Workplace environment.
- Training and staff turnover.

Clearly, in defining the asset maintenance standards for any organisation, both the 'hard' and 'soft' dimensions should be included. To consider only the 'hard' drivers will be to miss out the reality of a whole spectrum of user derived demands emanating from the utilisation of the built asset.

Given the 'hard' and 'soft' dimensions of asset maintenance determinants, the quantification of the standard of care is not a straight forward process. Standards associated with asset protection are manifestation of actions perceived to be necessary to protect the integrity and wind and water tightness of the building shell, generally termed as 'fabric work'. Maintenance actions associated with the building fabric include those of a response or planned (including renewals) type. Standards associated with users of buildings are a direct influence of users' perception of the internal environment of the space occupied, these actions being a consequent of dissatisfaction of the 'scenery' of space occupied. In terms of space utilisation, the demand for space may be a consequent of changing work practices and adjacency of related work tasks (i.e. churn rate). Both the 'hard' and 'soft' determinants of asset maintenance will comprise of a combination of objective as well as subjective measures. In practice, there is always a balance to be struck between objective and subjective measures.

At the heart of the quantification process is the issue of what the 'acceptable standard' (however it may be defined) should be? Who should define the

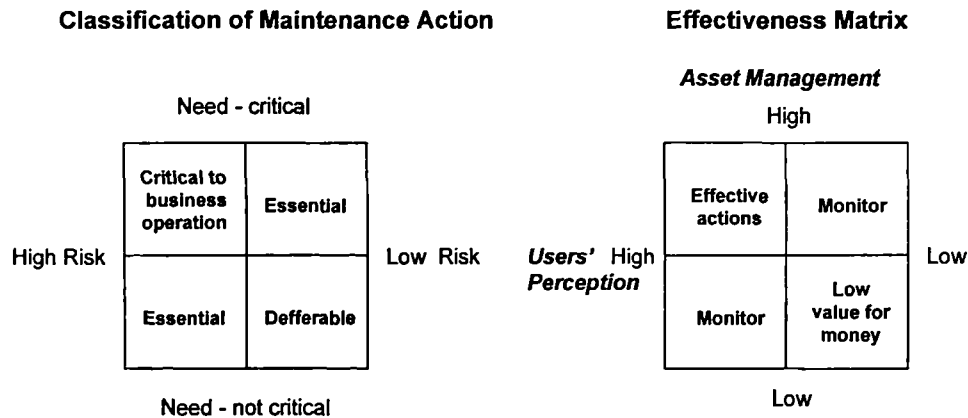
'acceptable standard' ? The preceding pair of questions presupposes that we can succinctly describe the composition of the asset item concerned in terms of subsystems or components. Also, maintenance needs are often perceived in a different light depending on the eyes of the beholder. Surveyors with their technical training will prescribe asset maintenance needs from the asset protection dimension. Building users will often be driven by the ambient of the working environment. Owners and managers of buildings may be governed by other priorities relating to resource allocation and long term real estate's development plans. Nevertheless, it is clear that the quantification of maintenance standards is governed by the need to define the mismatch between current condition and the desired condition. The divergence between the two condition states defines the gap that maintenance efforts (by policy) aims to close.

From the above discussion, it is clear that the asset maintenance management component (AMM) of REAM must be guided by a clear strategic framework which must emanate from the deliberations from the two strategic components of SFP and SAM. It is also apparent that the notion of the role of asset maintenance commonly viewed as "*work undertaken to keep, restore or improve every facility, ... to a currently acceptable standard and to sustain the utility and value of the facility.*"²² must now take on a more sophisticated approach. Increasingly, for many organisations, the realm of responsibilities within maintenance has to embrace such issues as asset management, energy management and risk management; in addition to maintenance tasks and operations management. The SAM component described above clearly embraced emerging asset management considerations. The emphasis of REAM in providing a pro-active interface to business provides an increasingly convincing case for a *risk-driven* asset maintenance management regime. The underlying rationale being, understanding risks fully can provide the necessary framework within which all the more tactical issues can be assessed and prioritised accordingly.

²² Committee of Building Maintenance (1972), Definition of Building Maintenance.

Then (1996)²³ suggested a two stage process of evaluation using a quadrant matrix framework for: (1) classifying asset maintenance actions, and (2) assessing their effectiveness. Figure 3.24 illustrate the two matrices.

Figure 3.24: Classification of Asset Maintenance Actions and their Effectiveness



In asset maintenance establishing a clear prioritisation scale is crucial in ensuring that limited scarce resources are directed where they can make the most impact. In practice, the allocation of resources is often haphazard. The dichotomy of maintenance actions aimed at asset value protection and those arising from building users' requests, often leads to spreading of limited maintenance resources too thinly. It is intended that the above framework of classification of maintenance actions will have a direct impact on the distribution of resources allocated for asset maintenance. More importantly, the approach should ensure that both the 'hard' and 'soft' dimensions of asset maintenance standards, described above, are taken into consideration..

In recent years there has been a shift in emphasis in the provision of facilities and support services from one that was essentially reactive in nature, to one that must be proactively managed. Proactivity is actively and constantly seeking information about changing business priorities and their implications in terms of customer-perceived value so that there is a constant alignment of facilities and support services provision to the core business units. In this respect the role of asset maintenance management is no exception - the process of ensuring that

²³ Then, D.S.S. (1996), A conceptual framework of describing built asset maintenance standards. *Facilities*. Vol.14, no. 7/8. July/August 1996. pp.12-15.

the facilities required by the business continue to support the business in the most effective manner by minimising the risk of disruption to the business.

3.3.1.4 Facilities Service Management (FSM)

This component of REAM is predominantly concerned with the provision of a fully functioning and serviced workplace environment to users. The scope of responsibilities that facilities service management (FSM) embraces is often loosely referred to as 'facilities management' - the procurement and management of non-core support services in an organisation. It is to be noted that the definition adopted for this study (as defined in Chapter 1) include *activities related to the role of ongoing management and servicing of buildings in use, that is, the workplace environment.*

The background to FSM has been largely covered in the literature survey chapter (sections 2.4.2.2.2 - 3) where aspects relating to demand assessment and sourcing of delivery of facilities support services were reviewed. This is an area of management activities within organisations that has seen major changes; both in senior management's changing perception of facilities support services provision and procurement, as well as potential offerings from a rapidly expanding facilities management services and facilities-related services supply market.

The changing customer view of supplier relationships is driven by the need to find better ways to manage a growing range of services to increase efficiency, improve quality and reduce risk. This has resulted in the traditional cost driven approach becoming supplemented with considerations of potential quality of service delivery, reduction in risk and a cultural match between the service provider and the purchasing client.

Equally, as businesses look to improve performance, whether it be in a manufacturing process, or the delivery of service to customer satisfaction within the core business of the company, they are finding that the means of achieving such improvements are often related to non core activities. In facilities terms, this encompasses all those services that enable the company to concentrate on core revenue earning activities. However, in order to manage these effectively in support of the core business in a company, requires a good understanding of the

position of facilities in the company's value chain, a sound appreciation of the commercial environment, and the pressures that the business managers face.

Planning for support services must start by identifying the services needed to support the operational requirements of the company concerned. In this respect, the wide range of potential support services relative to the type and size of businesses, make generalisation of service requirements a complex task. Some of the more common support service groupings include:²⁴

- Property services - examples include estate services, ongoing maintenance, accommodation planning, special projects like relocations, etc.
- Hospitality services - examples include reception and security.
- Administrative services - examples include mail and courier services, record management, general housekeeping, etc.
- Amenity services catering, vending, child care, car fleet management, etc.
- Communication services - examples include computing, networks, e-mail, telephone/fax/modems, etc.

The growing trend of companies opting to place traditional in-house services under the responsibilities of external service providers has spawned a multitude of contract options with an equal range of accompanying purchaser-service provider relationships. As outsourcing becomes more widespread, it has also led the purchasing organisations to directly link their measures and targets to the supplying organisation, as they effectively represent an extension of the client's organisation. This involves a process of integration and mutual consideration between client and supplier, which contrasts sharply to the traditional adversarial relationships.

Another driver for such changes in client/supplier relationships is the need for continuous improvement in services and processes, that is embedded in a total quality methodology. This encourages the development of a longer-term relationship between the parties which often necessitates a move away from single measure mentality focused on cost.

²⁴ Kennedy, A. *Facilities Management Support Services*, in *Facilities Management - theory and practice*, Alexander.K. Editor (1996) E &FN Spon. pp.135-145.

The role of the FSM within an organisational setting is clearly one of service provider to the corporate core business units. Management emphasis will include definition of scope and range of services to be provided and their demand profile. Procurement and monitoring of service delivery, and tracking of occupancy costs and customers satisfaction form a major part of the ongoing process.

The main concerns of the facilities service management (FSM) component of REAM may be summarised as covering:

- Defining scope and demand profile of service requirements.
- Procurement and monitoring of service performance
- Tracking utilisation and occupancy costs
- Space planning / churn management
- Service bundling and contracts management.

3.3.1.5 Summary

The central theme of REAM in this study is the justification of an integrated management framework that is focused in supporting the strategic intent of the company by creating mechanisms for promoting a continuous dialogue between core business planners and those charged with the delivery and ongoing management of the physical working environment. In this respect, the four component parts of REAM must be seen as an integrated whole with critical and constant interfaces between the components.

The case studies carried out as part of this investigation will form the basis of providing data for a fuller exposure of the variables considered within the domains of strategic facilities brief(SFB) and service levels brief(SLB).

3.4 REAM - Preliminary Process Models

In chapter one, the scope and focus of *Real Estate Asset Management* (REAM) are defined in terms of providing a platform for acting as a conduit for integrating *core business information* arising from strategic management and *facilities information* from operational management of facilities provision and ongoing management.

The restatement of the research propositions (Section 3.1.2, pp. 148-161) in the context of REAM provided a basis for an organisational model for evaluating the state of play in the practice of operational asset management in organisations (Section 3.2). The last section 3.3 has defined the scope and interrelationships of the four integrating components of REAM.

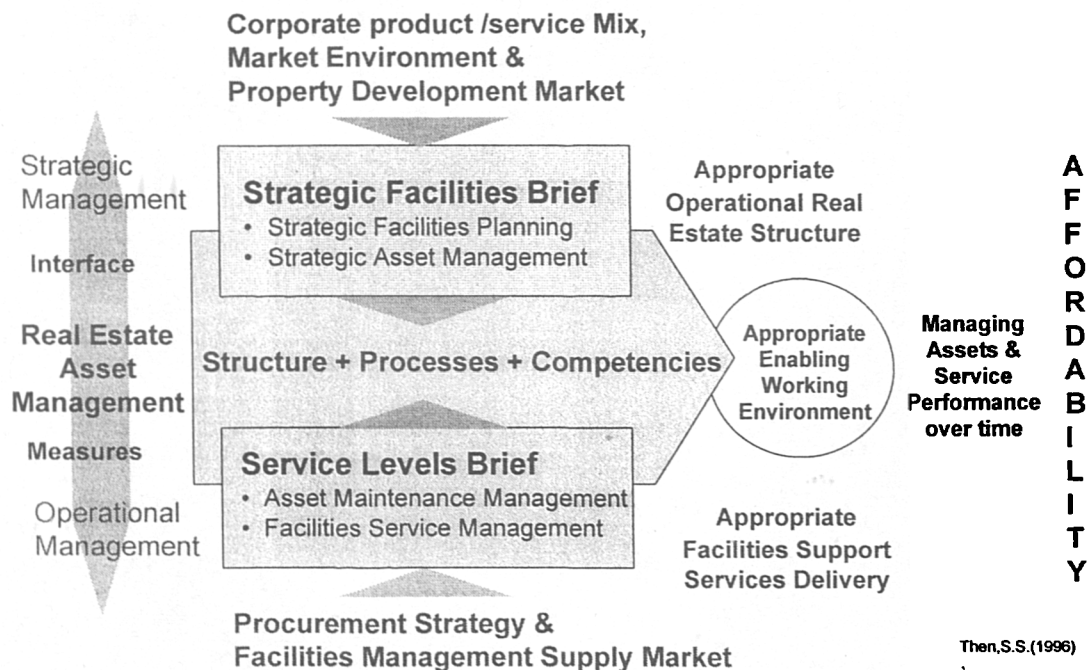
The intention here is to integrate the models and frameworks introduced in this chapter to provide an overview of the emerging process model for REAM. Figure 3.25 attempts to show five aspects of the emerging process model for REAM:

1. The integrating role of REAM in providing a means for interface between strategic management and operational asset management, as well as, performing a vital measuring and feedback role to senior management on the ongoing performance of the real estate resource. The desired outcome being an appropriate real estate portfolio structure that is aligned with the organisation's business operational requirements, providing fully serviced enabling working environment to the users.
2. It illustrates the increasingly demanding need for organisations to continuously monitor the external environment from two perspectives: (i) as a player in the product/service markets in which the organisation trades in, and (ii) as a purchaser of support services from the supply markets. In terms of the management of facilities provision, the state of the property and property development market have a clear bearing on choice of supply in location and types of property. In terms of the management of facilities support services, developments in the facilities management market in recent years have considerably widened the choice of sourcing supply from external service providers.
3. It positioned the strategic roles of the strategic facilities brief (SFB) and the service levels brief (SLB) in defining the organisation's demand for functional space as a business resource, measured not only in purely financial terms of the initial capital investments and subsequent occupancy costs; but more importantly, as a potential lever to initiate organisational change to effect an increase in the productivity of its most expensive resource - employees - by

reconfiguring the workplace to support more effective ways of working.

4. The organisational variables of structure, processes and competencies provides a framework for evaluating current practice from a basis of comparative analysis with the best practice available.
5. The proposed process model is built upon the premise of dynamic monitoring of demand for and supply of the corporate real estate assets. The matching of supply to demand is driven by (i) a focused demand by clear articulation of corporate guidelines in facilities provision and associated service levels as prescribed by existing and anticipated operational requirements; and (ii) a supply approach that optimise sourcing opportunities with an emphasis on appropriateness and affordability.

Figure 3.25: Overview of REAM - Preliminary Process Model

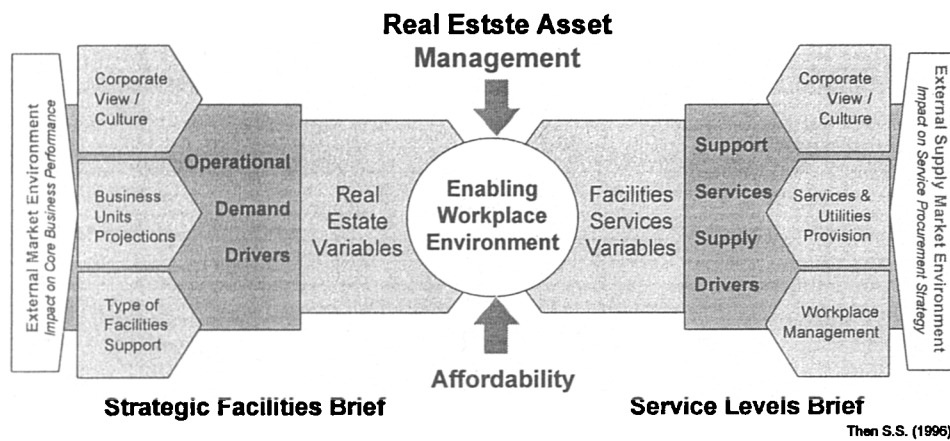


3.4.1 The Outcome of REAM - enabling working environment

In proposing the basis of the emerging models and frameworks with the intention of bridging the gap between strategic business planning and operational asset management, it is fundamental for both sides to agree that the ultimate objective of REAM, as the informed interface, is to create an **enabling working environment** for the organisation concerned.

Figure 3.26 attempts to illustrate the converging impact of the roles played by the *Strategic Facilities Brief* in defining the organisation's *operational demand drivers* which will in turn set the parameters defining the *real estate variables*. Similarly, the *Service Levels Brief* serves to define the organisation's *support service supply drivers* which will in turn set the parameters defining the *facilities services variables*.

Figure 3.26: Defining the Outcome from REAM



The concept of *affordability* deserves elaboration in that it is the overriding economic parameter that differentiates how much each organisation perceived it can afford to spend in order to create its particular blend of acceptable working environment that is in line with its corporate culture. In this respect the context of affordability is complex in that while it is seemingly cost-driven, its drivers are inherently subjectively loaded in terms of senior management's perceptions. One of the roles of SFB and SLB is particularly designed to uncover and articulate this 'hidden' management perceptions in functional spatial terms from the real estate dimensions, and in service expectation terms from the facilities service dimensions.

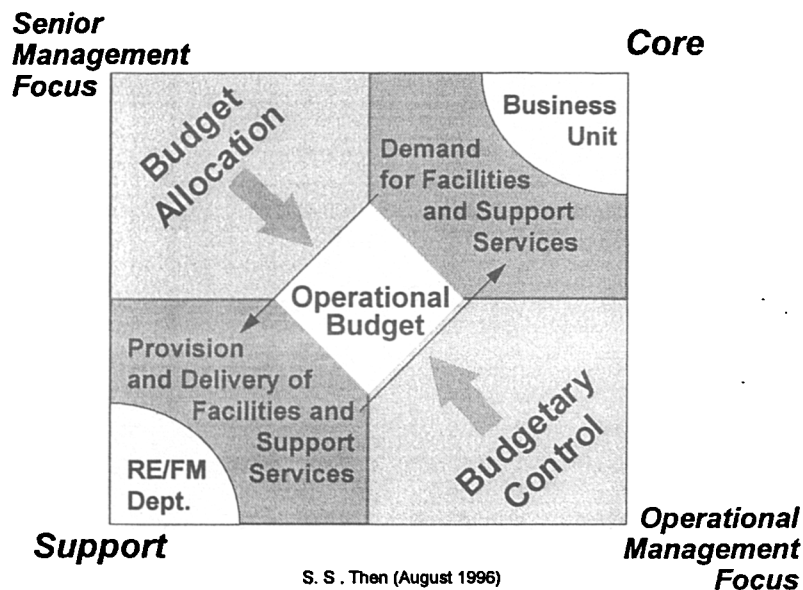
The preliminary framework illustrated in Figure 3.26 above also outlines the external influences that directly impact on the organisation from the outside environment; namely, the external market environment which impacts on core business performance within the domain of SFB; and the external supply market environment which impact on service procurement strategy within the domain of the SLB.

3.4.2 Traditional Reactive Management Model

The *Traditional Reactive Management Model* illustrated in Figure 3.27 represents the starting point of theory and model generation for a better integrated and proactive model.

In the author's opinion, the management model depicted above encapsulates the underlying dominant management mind-set that directly impacts on the current practice of real estate asset management - i.e. the management of the provision of facilities and associated facilities support services - in many organisations. It is a generalised model derived from published literature and case studies practices.

Figure 3.27: Traditional Reactive Management Model
- Provision and Delivery of Facilities and Support Services



The key features of the *Traditional Reactive* model are summarised as:

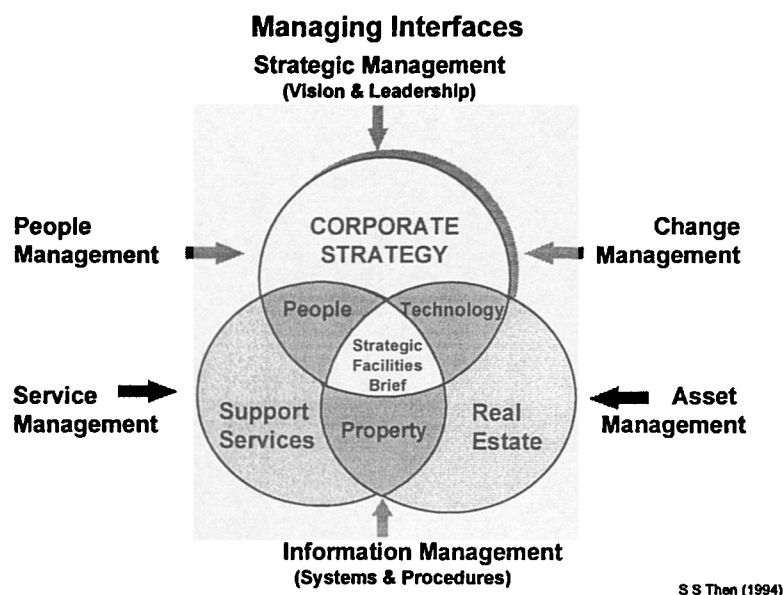
Core business units demand for functional space are usually met by the in-house property and/or facilities services department as part of the corporate administrative support infrastructure required for the delivery of the core businesses product or services. The focus of management efforts are not considered as strategic since senior management's main concern is with arriving at an appropriate budget allocation for property and support services. The management of the delivery process is very much transactions and projects oriented, the objective being to stay within cost targets. The inherent weakness

of such an approach is that it is reactive - always responding to the business units demands.

3.4.3 Integrated Resource Management Model

An underlying theme that has influenced the model development described above is the emphasis on managing the interfaces amongst the numerous stakeholders and processes that have an impact on the creation of the workplace environment in organisations.

Figure 3.28: Managing Interfaces within REAM²⁵



The above figure illustrates the various facets of management that are inherent in the management of facilities provision and associated support services. The *facilities strategic brief (SFB)* provides the focus where facilities decisions and actions are related to the resource bases of people, property and technology and how they are utilised to fulfil the business objectives. The organisation's corporate strategy and vision are the drivers for the business's direction - *Strategic Management*. *People Management* and *Change Management* are very much determined by the corporate vision and leadership style (internally); and markets and competition (externally). *Service Management* deals with issues

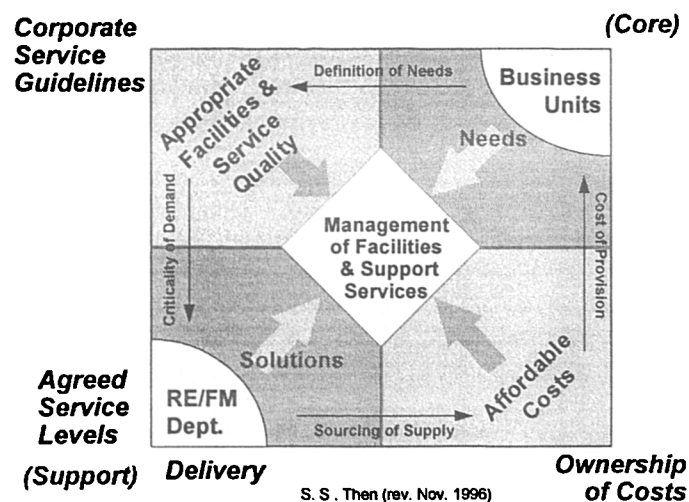
²⁵Then, D.S.S.(1994), Facilities Management - The relationship between business and property. Proceedings of EURO FM/IFMA Conference on Facility Management European Opportunities. Brussels May 1994. pp.258.

that relate to the delivery of facilities support services that are influenced to a large extent by the type of premises and service levels dictated by the nature of business. *Asset Management* relates to the post occupancy processes covering both the management and maintenance of facilities under steady state use, and periodic reinvestment in modification and improvement of facilities while in use. *Information Management* provides the systems and procedures that monitor the strategic and operational processes. The information systems serving the business must be structured in a manner that provides data and information for overall control and performance evaluation as well as performance indicators targeted at each of the resource bases.

Figure 3.29 depicts a proposed model that incorporates an integrated resource management view upon which the models and frameworks presented in this chapter have been based.

Figure 3.29: Preliminary Proactive Management Model

- Provision and Delivery of Operational Facilities and Facilities Support Services



One of the reasons that reinforced the traditional non-strategic role of operational property at senior management is that occupancy costs are not made transparent. The practice of pooled occupancy costs as a corporate overhead item does not promote true ownership of the true costs incurred by the business units. In the last two decades, there has been a growing awareness of the need to understand fully, each business units cost structure.

In contrast to the primarily budget-driven approach of the reactive management

model (Figure 3.28 above), the proposed proactive management model (Figure 3.29) relies on process-driven approach guided by clear articulation of facilities and service demand via corporate guidelines (outputs from SFB and SLB). The provision of facilities and support services are driven by business units' needs. The management of provision of these needs follows a process cycle comprising of:

- definition of needs'
- criticality of demand,
- sourcing of supply, and
- cost of service delivery.

Inherent within the proactive management model is a re-definition of the service relationship between the business units, as purchasers of functional space and related services, and the in-house real estate and/or facilities department, as an intelligent client interface with the relevant competencies to provide effective and economical solutions to business units expressed needs with full awareness and ownership of the cost of provision. Such an informed interface between the two parties contrasts sharply with the one-sided demand-response regime of the traditional reactive management model depicted by Figure 3.28 above.

3.5 Summary

This chapter on model development is of fundamental importance to this study of the role of operational assets in business and how organisations are responding to pressures and influences from a number of fronts - commercial, demographic, cultural, management and technological development, among others. The conceptual models and frameworks presented represent the consolidation of influences from theory and practice, the objective being to understand the nature of the problem and logically justify the crucial need for an informed interface between strategic business management and operational asset management. The approach adopted has been to answer the following questions:

- How REAM has evolved from theory and practice ?
- How it can be operationalised in an organisational setting ?
- How it can be structured to promote the bilingualism that is so critical to maintain synergy between business strategic intent and the realisation of an

appropriate supporting working environment for the users within an organisation ?

- What prerequisites support its incremental development ?

The line of enquiry adopted has provided the conceptual models against which the case study organisations will be evaluated.

Figure 3.30: Summary of Causes - Responses - Impact on REAM

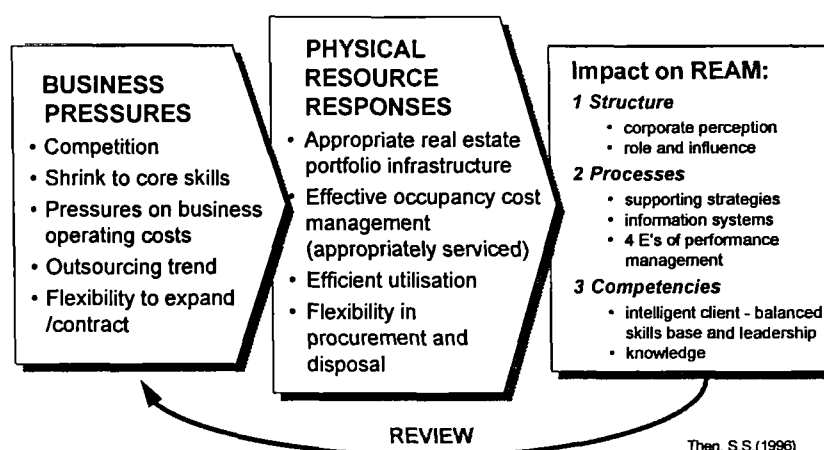


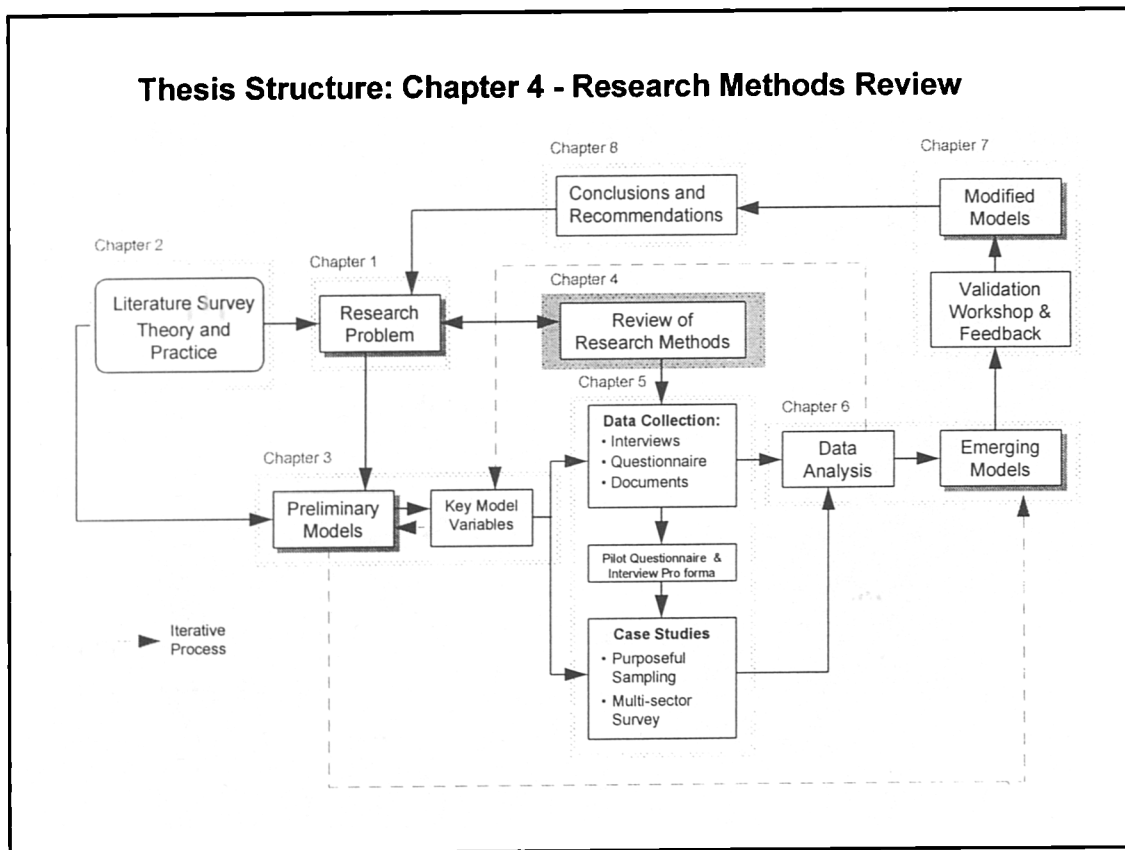
Figure 3.30 represents an attempt to summarise the causes - responses - impact relationship that accounts for the justification and conceptual development of Real Estate Asset Management..

Chapter Four following will cover a comprehensive review of research methods with the objective of choosing the most appropriate research strategy for the study.

Chapter Five provides a justification for the chosen research design in terms of data collection, analysis and evaluation frameworks.

Chapter 4

Research and Research Methods



Chapter 4 Research and Research Methods

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4. Research and Research Methods

4.1 Introduction

The object of this chapter is to review current research approaches and issues with a view of selecting the most appropriate research strategy - to formulate an appropriate research framework for the research at hand. This chapter begins with a board review of the main research methodologies. This is followed by a summary of research approaches used in the area of the property or real estate asset management. The chapter concludes with the justifications of the research design for the current project outlining the research framework for data collection, data analysis and validation of the research findings.

4.1.1 Nature of Research

At the meta-level, research can be defined as the orderly search for truth. Buckley, et al (1975) suggested an operational definition of research that requires the satisfaction of the following conditions:¹

1. That it be an orderly investigation of a defined problem.
2. That appropriate scientific methods be used.
3. That adequate and representative evidence be gathered.
4. That logical reasoning, uncoloured by bias, be employed in drawing conclusions on the basis of the evidence.
5. That the researcher be able to demonstrate or “prove” the validity or reasonableness of his conclusions.
6. That the cumulative results of research in a given area yield general principles or laws that may be applied with confidence under similar conditions of the future.

Research is conducted in the spirit of inquiry which relies on concepts like facts, experience and data, concepts and constructs, hypotheses and conjectures, and principles and laws; which are commonly used but easily confused concepts in science. However, these concepts provide a hierarchy upon which

¹ Buckley, J.W., Buckley, M.H. & Ching, H.F.(1975) *Research Methodology and Business Decisions*. National Association of Accountants and The Society of Industrial Accountants of Canada. pp.28.

knowledge is built. Table 4.1 illustrates how together these concepts of research form a symbiotic and rational system of inquiry. Additionally, they constitute the language of research, enabling precision in the use of words and communication among those concerned.

Table 4.1: Basic Elements of Scientific Research Methodology²

Laws	verified hypotheses; used to assert a predictable association among variables; can be empirical or theoretical.
Principles	a principle is a law or general truth which provides a guide to thought or action.
Hypotheses	formal propositions which though untested are amenable to testing; usually expressed in causal terms.
Conjectures	informal propositions which are not stated in testable form nor is a causal relationship known or even necessarily implied.
Concepts and Constructs	concepts are inventions of the human minds to provide a means for organizing and understanding observations; they perform a number of functions, all of which are designed to form logical and systematic relationships among data;
Facts	something that exists, a phenomenon that is true or generally held to be true.
Data	the collection of facts, achieved either through direct observations or garnered from records; observation is the process by which facts become data.

Research is conducted in accordance with the scientific method. The link between research and science is crucial for the former is intrinsic to the latter. It is through research that the scientist tests his hypothesis and draws inferences from his observations. Research bridges the gap between fantasy and facts and turns principles into applications.

Buckley, Buckley and Chiang (1975) cited six essential steps as the requirements of scientific method in order to ensure the assurance of quality research and the achievement of *reliability* and *validity*.³

1. Knowledge stems from observations which take place through a definable searching process.

² Abstracted from: Buckley, J W., Buckley, M H; and Chiang H F, (1975) Research methodology and business decisions. National Association of Accounts and Society of Industrial Accountants of Canada. pp28-29.

³ Buckley, J W., Buckley, M H; and Chiang H F, (1975) Research methodology and business decisions. National Association of Accounts and Society of Industrial Accountants of Canada. pp29.

2. The research problem is defined , which means answering *why* the research is being done and *what* it is suppose to achieve.
3. A research plan or *modus operandi* must be formulated. The purpose of the plan should be directed towards the testing of a hypothesis (deduction) or evaluation of evidence in terms of constructing a hypothesis (induction).
4. Inquiry ensues in accordance with the plan and is directed by the need to obtain relevant and sufficient evidence.
5. The outcome of the inquiry is stated in explicit terms which may result in the support or refutation of an existing hypothesis (deduction) or a proposed one (induction).
6. The conclusions are documented with sufficient support and clarity that they establish *what* was done, *what* was found, and *what* significance the findings may have. The researcher is also careful to separate his work from that of others, and to show his/her methodology or findings mesh with other efforts within the same field of inquiry.

The important issues of reliability and validity will be separately discussed at a later section.

4.1.2 Research Problem Definition

Problems are the catalysts of research. The need for research is indicated primarily where the existing fund of knowledge is insufficient to solve a problem. The nature of the problem and the manner in which it is defined bear crucially upon every aspect of the research which follows. Hence, it is important to give careful consideration to problem construction before starting the research process. Buckley, at el.(1975)⁴ listed five attributes they considered to characterized an appropriate research problem:

1. The problem is defined properly. Is labeled and described accurately.
2. The problem is posed in solvable terms.
3. The problem is connected logically to the environment from which it is drawn - and the solution can be applied within that environment.
4. The problem has been screened against existing body of knowledge to assure it uniqueness, i.e. it has not been solved previously.
5. The solution to the problem must be viewed as making a potential contribution to the body of knowledge, i.e. the problem must be significant.

⁴Buckley, J W., Buckley, M H; and Chiang H F, (1975), op cit. pp.19.

4.2 Qualitative and Quantitative Research Paradigms

Research may be categorized into two distinct types: qualitative and quantitative. The former concentrates on words and observations to express reality and attempts to describe people in natural situations. In contrast, the quantitative approach grows out of a strong academic tradition that places considerable trust in numbers that represent opinions or concepts. Typically, qualitative research will provide in-depth information into fewer cases whereas quantitative procedures will allow for more breadth of information across a large number of cases.

Philosophers of science and methodologists have been engaged in a long-standing epistemological debate about how best to conduct research. This debate has centered on the relative value of two fundamentally different and competing school of thoughts or inquiry paradigms:⁵ (1) logical-positivism, which uses quantitative and experimental methods to test hypothetical-deductive generalizations, versus (2) phenomenological inquiry, using qualitative and naturalistic approaches to inductively and holistically understand human experience in context-specific settings.

Patton (1990), points out a main concern confronting researchers is the polarization of views held by each paradigm, " .. it is this aspect of paradigms that constitutes both their strength and their weakness - their strength in that it makes action possible, their weakness in that the very reason for action is hidden in the unquestioned assumptions of the paradigm".

Easterly-Smith, et. al. (1991) summarized the main differences between the positivist and the phenomenological viewpoints succinctly in Table 4.1.

Although the distinction between the two paradigms may be very clear at the philosophical level, as Burrell and Morgan (1979)⁶ argue, when it comes to the use of quantitative or qualitative methods and to the issues of research design

⁵ Patton (1990) in *"Qualitative Evaluation and Research Methods "* defines "a paradigm is a worldview, a general perspective, a way of breaking down the complexity of the real world. As such, prardigms are deeply embedded in the socialisation of adherents and practioners: Paradigms tell them what is important, legitimate, and reasonable.....)

⁶ Burrell, G. and Morgan,G. (1979), *Sociological Prardigms and Organisational Analysis*. Heinemann, London.

the distinction breaks down.

Table 4.2: Key Features of Positivist and Phenomenological Approaches⁷

	<i>Positivist paradigm</i>	<i>Phenomenological paradigm</i>
<i>Basic beliefs:</i>	The world is external and objective Observer is independent Science is value-free	The world is socially constructed and subjective Observer is part of what observed Science is driven by human interests
<i>Researcher should:</i>	focus on facts look for causally and fundamental laws reduce phenomena to simplest elements formulate hypotheses and then test them	focus on meanings try to understand what is happening look at the totality of each situation develop ideas through induction from data
<i>Preferred methods include:</i>	operationalising concepts so that they can be measured taking large samples	using multiple methods to establish different views of phenomena small samples investigated in depth or over time

In research design therefore, it is crucial to know about the methodological paradigms debate in order to appreciate why methods decisions can be highly controversial. Patton(1990) advocates “a paradigm of choices” as a way out of the dilemma. “A paradigm of choices rejects methodological orthodoxy in favour of *methodological appropriateness* as the primary criterion for judging methodological quality”.⁸ The paradigm of choices recognises that different methods are appropriate for different situations. This issue then becomes not whether one has uniformly adhered to prescribed canons of either logical-positivism or phenomenology but whether one has made sensible methods decisions given the purpose of the study, the questions being investigated, and the resources available. Situational responsiveness means designing a study that is appropriate for a specific research situation. Table 4.3 provides a pragmatic view of a summary of some of the strengths and weaknesses of the two research paradigms.

From the above discussions, it is apparent that both qualitative and quantitative methods involve differing strengths and weaknesses, “they constitute

Easteby, S M. Thrope, R, and Lowe, *Management Research - an introduction*. Sage Publishing 1991. pp. 27

Patton, M Q (1990) *Qualitative Evaluation and Research Methods*, 2nd Edition. pp.39.

alternative, but not mutually exclusive, strategies for research. Both qualitative and quantitative data can be collected in the same study.” (Patton, 1990)

Table 4.3: Comparison of Strengths and Weaknesses⁹

	<i>Strengths:</i>	<i>Weaknesses</i>
<i>Positivist (Quantitative) paradigm</i>	<p>they can provide wide coverage of the range of situations</p> <p>they can be fast and economical where statistics are aggregated from large samples, they may be of considerable relevance to policy decisions</p>	<p>the methods used tend to be rather inflexible and artificial</p> <p>they are not very effective in understanding processes or the significance that people attach to actions</p> <p>they are not very helpful in generating theories</p> <p>because they focus on what is, or what has been recently, they make it hard for policy-makers to infer what changes and actions should take place in the future</p>
<i>Phenomenological (Qualitative) paradigm:</i>	<p>data gathering methods seen as more natural rather than artificial</p> <p>ability to look at change processes over time</p> <p>ability to understand people's meaning,</p> <p>ability to adjust to new issues and ideas as they emerge</p> <p>contribute to theory generation</p>	<p>data collection can be tedious and require more resources</p> <p>analysis and interpretation of data may be more difficult</p> <p>harder to control the pace, progress and end-points of research process</p> <p>policy-makers may give low credibility to results from qualitative approach</p>

Increasingly, there is a growing recognition among researchers, of the benefits of combining qualitative and quantitative procedures, resulting in greater methodological mixes that strengthen the research design. Das (1983), stated that “qualitative and quantitative methodologies are not antithetic or divergent. Rather, they focus on the different dimensions of the same phenomenon. Sometimes, these dimensions may appear to be confluent: but even in these instances where they apparently diverge, the underlying unity may become visible on deeper penetration. The situational contingencies and objectives of the researcher would seem to play a decisive role in the design and execution of the study”¹⁰. Fineman and Mangham(1983) expressed similar sentiment; “The researcher, in whatever tradition, has to select and shape his or

⁹ Abstracted from Easteby, S.M. Thrope, R, & Lowe, *Management Research - an introduction*. Sage Publishing 1991. pp. 33.

¹⁰ Das, T H “Qualitative Research in Organisational Behaviour” in *Journal of Management Studies*, Vol.20 No 3, 1983, pp.311.

what is in contention are the rules such materials may be collated and presented”¹¹.

4.3 Research Typologies

A scan of publications on research methods will reveal a wide variation in the classification of research approaches. Esterby-Smith, et al(1991) provide a simple classification of research by outcomes that are assumed to emerged: *pure, applied and action research*.¹² On the other hand, Mauch and Birch(1989)¹³ identified fourteen common types of research: *analytical, comparative, correlational-predictive, design and demonstration, developmental, experimental, historical, opinion polling, status, theoretical, trend analysis, case study, quasi-experimental and evaluation*.

The above list is by no means exhaustive, but it does highlight to any potential researcher the complexity of choice when embarking on a particular research project.

A typology is a classification by type. The identification of research typologies is essential in research design as a filtering mechanism in selecting the most appropriate research methods that align with the subject being investigated.

Buckley, et al (1975), describe a framework of research methodology that is classified by deciding whether the research problem is primarily *inductive or deductive* in nature (i.e. the research mode). “Induction is the process by which theory is generated. Deduction is the process of by which theory is tested.”¹⁴ This distinction between what the authors termed “fact finding” (i.e. induction) and “testing” (deduction) is fundamental in that it affects the definition of research problem, the researcher’s attitudes, the selection of methodology, and the very nature of the research activity itself. In terms of research strategy, their

¹¹ Fineman, S and Mangham, I. “Data, meaning and creativity: a preface” in in Journal of Management Studies, Vol 20 No.3, 1983, pp.297.

¹² Eastebly Smith, M Thrope, R, & Lowe, *Management Research - an introduction*. Sage Publishing 1991. pp 6

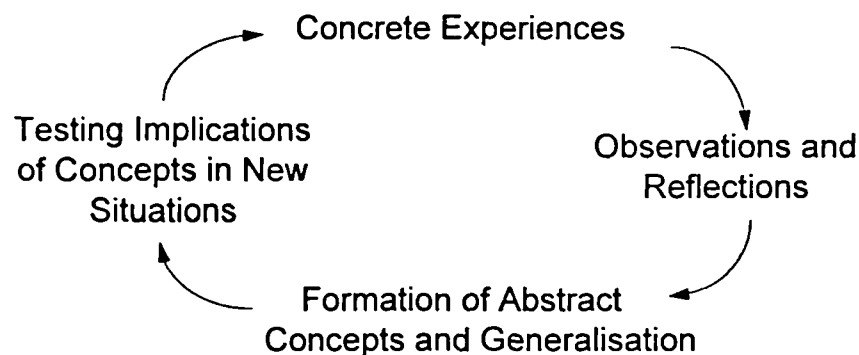
¹³ Mauch, J M. and Birch, J.W. “Guide to the Successful Thesis and Dissertation”, 2nd Edition. 1989, pp 79 82

¹⁴ Buckley, J W , Buckley, M.H. & Ching, H.F. (1975) *Research Methodology and Business Decisions*.. National Association of Accountants and The Society of Industrial Accountants of Canada. pp.21. (*italics authors’ emphasis*)

research classification are: *opinion, empirical archival* and *analytical* research.¹⁵ Opinion research seeks the views, judgment or appraisals of other persons with respect to a research problem. Empirical research requires the researcher to observe and/or experience the phenomena being investigated directly. Archival research is concerned with the examination of recorded facts. Finally, analytical research relies on the use of internal logic on the part of the researcher. For a detailed classification please refer to Figure 4.2.

Gill and Johnson (1991) provide a richer differentiation between deductive and inductive social science research methods by relating them to Kolb's experiential learning cycle. According to Kolb (Figure 4.1), learning might start with the experience of an event or stimulus, which individual then reflects upon in trying to make sense of it. This might lead to the generation of explanations of how or why something happened the way it did - explanations that can be used to form an abstract rule or guiding principle that can be extrapolated (or generalised) to new events and stimuli of a similar type to that already experienced.

Figure 4.1: Kolb's Experiential Learning Cycle¹⁶



A deduction research method entails the development of a conceptual and theoretical structure prior to its testing through empirical observation. Seen in the context of Kolb's model, Gill and Johnson associate the deduction process to the left hand side of Kolb's model since it begins with abstract conceptualisation and then moves on to testing through application of theory so as to create new experiences or observations. In contrast, the logical ordering

¹⁵ op cit. pp.15.

¹⁶ Kolb, Rubin and McIntyre, (1979) *Organisation Psychology: an experiential Approach*. Prentice-Hall Inc, p 38

of induction is the reverse of deduction as it involves moving from the 'plane' of observation of the empirical world to the construction of explanations and theories about what has been observed. In this sense, induction relates to the right hand side of Kolb's learning cycle, i.e. learning by reflecting upon past experiences and through the formulation of abstract concepts, theories and generalisations that explain past, and predict future, experience. Using the deductive-inductive as extreme along a continuum, Gill and Johnson differentiated different research methods in terms of the various logic they bring to bear in conducting research, from laboratory experiments through to ethnography, as shown in Table 4.4.

Table 4.4: A Comparison of Nomothetic and Ideographic Methods¹⁷

Nomothetic methods emphasize:		Ideographic methods emphasize:
1	Deduction	Inductive
2	Explanation via analysis of causal relationships and explanation by covering - laws	Explanation of subjective meaning systems and explanation by understanding
3	Generation and use of quantitative data	Generation and use of qualitative data
4	Use of various controls, physical or statistical, so as to allow the testing of hypotheses	Commitment to research in everyday settings, to allow access to, and minimise reactivity among the subjects of research
5	Highly structured research methodology to ensure replicability of 1,2,3 and 4 above.	Minimum structure to ensure 2,3 and 4 (and as a result of 1)

Laboratory experiments, Quasi experiments, Surveys, Action Research, Ethnography

At the deductive end of the continuum, *nomothetic methodologies*¹⁸ have an emphasis on the importance of basing research upon systematic protocol and technique; while on the inductive end, for *ideographic methodologies*¹⁹ there is an emphasis upon theory grounded in empirical observations which takes account of the subjects' meaning and interpretational systems in order to gain an understanding. Along the continuum, therefore, it is possible to discriminate between different methods (laboratory, quasi-experimental, survey, action research and ethnography) in terms of their relative emphasis upon deduction or

¹⁷ Gill, J. & Johnson, P. (1991), *Research Methods for Managers*. Paul Chapman Publishing. pp. 36

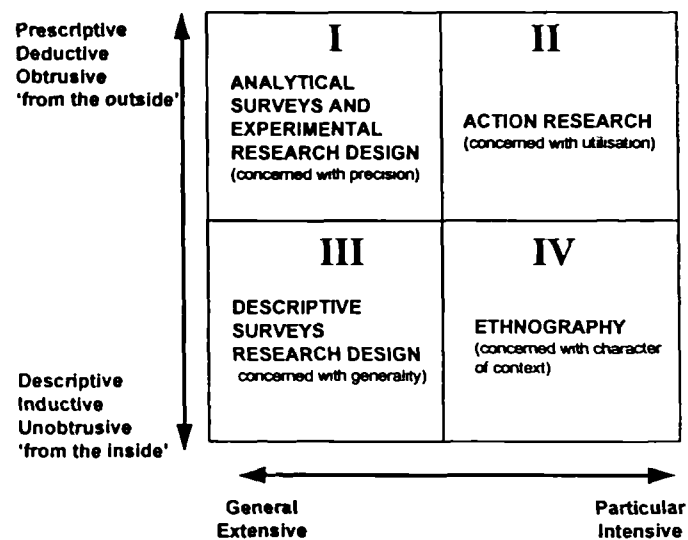
¹⁸ Burrell and Morgan, (1979) pp 6-7.

¹⁹ op cit

induction, their degree of structure, the kinds of data they generate and the forms of explanation they create.

The four basic research methods can also be considered within a matrix classification of research methods by describing their interrelationship and the different aspects they attempt to fulfill. The objective of the matrix is to assist the researcher in choosing the appropriate method to obtain their information. Hence, the experimental researcher is concerned primarily with precision, the survey methodologist with generality, the ethnographer with the character of the particular context and the action researcher with issues of utilisation. Figure 4.2 illustrates the matrix for choosing research strategies.

Figure 4.2: Matrix of Research Strategies²⁰.



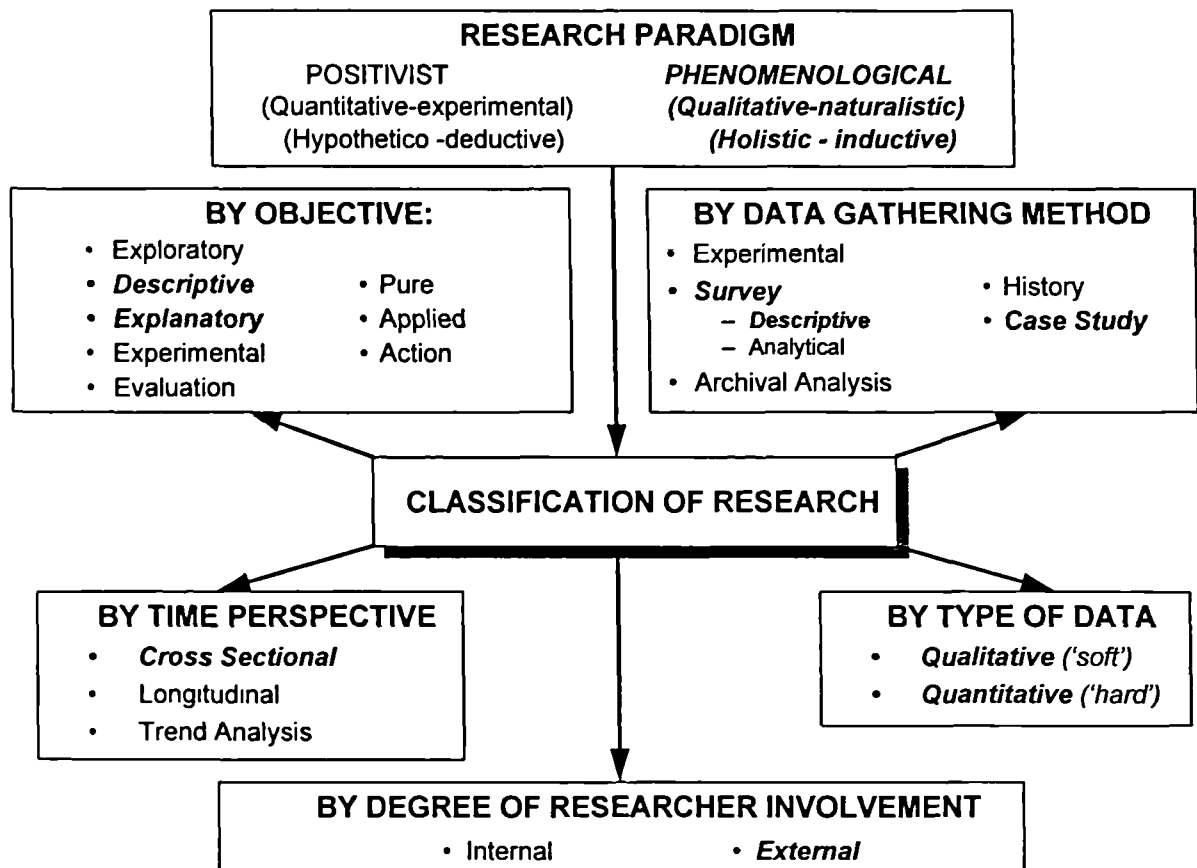
4.3.1 Research Typologies - Summary

Figure 5 attempts to provide a visual summary of the main research typologies that have emerged from this review of research paradigms and methods. Each one of the classification typologies provides a means of classifying the type, unit and level of analysis of the research approach. In practice, the outcome of a research strategy is likely to be a combination of several of the concepts that delineates each typology. The decision to study a topic in a particular way always involves some kind of philosophical choice about what is important.

Gill, J. & Johnson, P. (1991), op cit. pp.146.

Figure 4.3: Research Typologies

Based on: Black, J.A. & Champion, D.J. (1976); Yin, R.K. (1984); Patton, M.Q. (1990); Esterby-Smith, M., Thorpe, R. & Lowe, A. (1991); Gill & Johnson (1991), Gummesson, E. (1991) and Creswell, J.W. (1994)



The intention of Figure 4.3 is to provide a visual map of the richness of research approaches. Because of the potential scope of coverage, it is not proposed to dwell into the pros and cons of each typology, only the research approaches that are considered central to the research at hand will be considered in some details. In this respect, two of the above research typologies will be further elaborated: by objective and by data gathering method.

4.3.2 Research Typology by Objective

Black and Champion (1976) and Yin (1984) identify three major research types as Exploratory, Descriptive and Explanatory.

- **Exploratory Research:** In the investigation of an unknown subject, this type of research has an objective to find key variables on which future researchers may base their studies.

- **Descriptive Research:** This type of research is more specific than exploratory research because the investigator directs his attention to particular aspects of a problem. Focusing on some limited or special aspects of a subject, descriptive research seeks to describe the composition, action, process and phenomena of a research subject.
- **Explanatory Research:** Going beyond description, explanatory research tries to find causal relationships among variables in order to explain the cause and effect of the variables found to be important. The researcher's aim is to pose competing explanations for the same set of events and to indicate how such explanations may apply to other situations.
- **Experimental Research:** This type of research manipulates variables under controlled conditions. The researcher observes the effects of one or more variables upon others.
- **Evaluation Research:** This type studies and assesses some aspects of performance of an enterprise, generally the effects of changes in the way something is done. It rarely tries to change things directly and is aimed at specific organisations through specific reports.

4.3.3 Research Typology by Data Gathering Method

One of the problems in establishing a data gathering strategy is that there are many ways to classify how to collect data. Figure 4.3 above categorises five main data gathering methods in line with Yin's (1984) research strategies as listed in Table 4.5 below. Yin's framework suggests that the five major social sciences research strategies can be compared by three conditions: the type of research question posed; the extent of control an investigation has over the actual behavioral events; and the degree of focus on contemporary as opposed to historical events.

Table 4.5: Relevant Situations for Different Research Strategies²¹

Strategy	Form of Research Question	Requires control over behavioural events?	Focuses on contemporary events?
Experiment	how, why	yes	yes
Survey	who, what,* where, how many, how much	no	no
Archival Analysis	who, what,* where, how many, how much	no	yes/no
History	how, why	no	no
Case Study	how, why	no	yes

* "what" questions, when asked as part of exploratory study, pertain to all five strategies.

Yin asserts that "defining the research questions is probably the most important step to be taken in a research study", and suggests that as a guide, "In general, "what" question may either be exploratory (in which case any of the strategies could be used) or about prevalence (in which surveys or the analysis of archival records would be favoured). "How " and "why" questions are likely to favour the use of case studies, experiments, or histories."²²

4.4 The Case Study as a Research Strategy

As a research endeavour, the case study contributes uniquely to our knowledge of individual, organisational, and political phenomena, and have been a common research strategy in psychology, sociology, political science, planning and economics. In all these situations, the distinctive need for case studies arises out of the desire to understand complex social phenomena. In brief, the case study allows an investigation to retain the holistic and meaningful characteristics of real-life events - such as individual life cycles, organisational and managerial processes.²³

The case study, like the other research strategies listed in Table 4.5 above, is a way of investigating an empirical topic by following a set of pre-specified procedures. In his book, Yin(1984) provides us with what he termed as a "technical" definition of a case study:

²¹ Yin, R K. (1984) Case Study Research - design and methods. Sage Publications. pp.17

²² Yin, R K. (1984) op cit.. pp.19

²³ Yin, R K (1984) op cit pp 14.

"A case study is an empirical inquiry that:

- *investigates a contemporary phenomenon within its real-life context: when*
- *the boundaries between phenomenon and context are not clearly evident; and which*
- *multiple sources of evidence are used".²⁴*

Yin(1984) proposes that for case studies, five components of a research design are especially important: (1) a study's question; (2) its propositions, if any; (3) its unit(s) of analysis; (4) the logic linking the data to the propositions; and (5) the criteria for interpreting the findings.²⁵

The above definition and framework is particular useful in understanding case study as a research strategy and also distinguishes it from the other research strategies (experiment, survey, archival and history) listed in Table 4.5 above.

Yin also differentiates between four types of case studies research designs illustrated on a 2 x 2 matrix, as shown in Figure 4.4. The matrix is based on the assumption that single-case and multiple-case studies reflect different design considerations and that within these two types, there also can be a unitary or multiple units of analysis. Thus, for the case study strategy, the four types of designs are (1) single-case (holistic) designs, (2) single-case (embedded) designs, (3) multiple-case (holistic) designs, and (4) multiple-case (embedded) designs.

Figure 4.4: Basic Types of Designs for Case Studies²⁶

	Single-Case Designs	Multiple-Case Designs
Holistic (single-unit of analysis)	Type 1	Type 3
Embedded (multiple-units of analysis)	Type 2	Type 4

²⁴ Yin, R K (1984) Case Study Research - design and methods. Sage Publications. pp 23.

⁵ Yin, R K (1984) op cit. pp 28.

Yin, R K (1984) op cit. pp 41

Given the dichotomy in views between quantitative and qualitative research paradigms as discussed earlier, it is inevitable that they are critics of the case study research. Traditional prejudices against the case study strategy can be summarised as the following:²⁷

- lack of rigour of case study research,
- case studies provide very little basis for scientific generalisation,
- case studies research take too long and result in massive, unreadable documents.

Yin (1984) has suggested that the above criticisms are misdirected, and suggested appropriate “tactics” that can be taken to ensure the validity and reliability of case studies research against four common tests commonly cited in social science research literature²⁸, namely; construct validity, internal validity, external validity and reliability. Table 4.6 lists Yin’s case study tactics for the four research design tests.

Table 4.6: Case Study Tactics for Four Design Tests²⁹

Tests	Case Study Tactic	Phase of Research in which tactic occurs
Construct Validity (establishing correct operational measures for the concepts being studied)	use multiple sources of evidence establish chain of evidence have key informants review draft case study report	data collection data collection composition
Internal Validity (establishing a causal relationship; for explanatory or causal studies only)	do pattern matching do explanation building do time-series analysis	data analysis data analysis data analysis
External Validity (establishing the domain to which a study’s findings can be generalised)	use replication logic in multiple case studies	research design
Reliability (demonstrating that the operations of a study can be repeated with the same results)	use case study protocol develop case study database	data collection data collection

²⁷ Summarised from Yin,R.K (1984), op cit. pp.21-22.

²⁸ For a fully discussion refer to Yin, R K. (1984), Case Study Research - design and methods. Sage Publications. pp.35-41

²⁹ Abstracted from Yin, R K. (1984), Case Study Research - design and methods. Sage Publications. pp.38.

In designing and doing case studies, various steps can be used to cater for the validity and reliability issues. Yin's framework cautions that not all the tactics occur at the formal stage of designing a case study. Some of the tactics occur during the data collection, data analysis, or compositional phases of the research. In summary, the key message is that researchers must exercise great care in designing and doing case studies in order to overcome the traditional criticism of the method.

4.5 Systems Approaches

As an element of research design, models and systems thinking have gained recognition as useful research instruments in structuring complex relationships - as a way to represent all the elements of a problem and the relationships between them. This section will provide a brief discussion on models and systems approaches.

Parallel to the philosophical and methodological paradigms debate between quantitative-experimental research and qualitative-naturalist inquiry, there has been another and corresponding debate about the mechanistic, linear construction of the world versus organic, systems constructions. This debate has been most intense among organisational theorists (Burns and Staker, 1972, Azumi and Hage, 1972; Checkland, P.B., 1981; Checkland and Scholes, 1990). It includes concern about definitions of closed systems versus open systems and the implications of such boundary definitions for research, theory, and practice in understanding programmes, organisations, and even the world as a purposeful human activity system³⁰

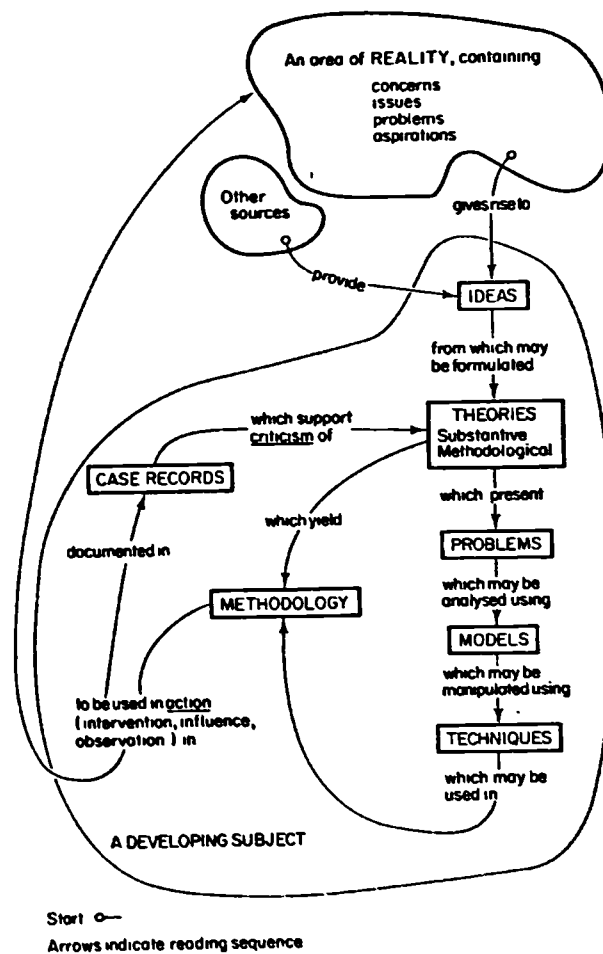
Holistic thinking is central to a systems perspective. A system is a whole that is both greater than and different from its parts. A vast literature has developed about system theory and systems research. The intention here is to highlight systems thinking methodologies and their contributions to existing research strategies.

⁰ Checkland, P.B. (1972) Towards a system-based methodology for real-world problem solving. Journal of Systems Engineering. Vol.3 No.2 pp.51-77.

Checkland(1981) defines a systems approach as “an approach to a problem which takes a broad view, which tries to take all aspects into account, which concentrates on interactions between the different parts of the problem.”³¹

Figure 4 shows a schematic diagram of the cycle of interaction between theory and practice by the application of systems methodology to solving real world problems and concerns. Patton(1990)³² draws attention to three points which impact on choice of research methods: (1) a systems perspective is becoming increasingly important in dealing with and understanding real world complexities, viewing things as whole entities embedded in context and still larger wholes; (2) some approaches to systems research lead directly to and depend heavily on qualitative inquiry; and (3) a systems orientation can be very helpful in making sense out of qualitative data.

Figure 4.5: A Systems Methodology in Summary³³



³¹ Checkland, P.B. (1981) *Systems Thinking, Systems Practice*. John Wiley & Sons. pp.5.

³² Patton, M.Q. (1990) *Qualitative Evaluation and Research Methods*, 2nd Edition. pp.78-79.

³³ Checkland, P.B. (1981) *op cit.* pp.163.

4.6 Models

Models are used in many circumstances to provide a mechanism for understanding something that cannot be visualised or studied as a whole. In qualitative research, models are frequently used effectively to represent in symbolic form theories or abstraction of processes. In this respect, the systems methodologies use model abstractions as an effective visual tool to illustrate system entities' boundaries and relationships.

Lave and March (1975) define a model as "a simplified picture of a part of the world. It has some of the characteristics of the real world, but not all of them. It is a set of interrelated guesses about the world. We construct models in order to explain and appreciate the world".³⁴ Beakley and Chilton (1974) share a similar view: "Models are simplified, idealised versions of complex systems.. Models are used because the human mind works best with simple models.. One of the principal purposes of a model is to idealise and simplify the problem so that we can predict the performance of design."³⁵

Lave and March (1975) also describe the model building process as a form of art: "...like all art, model building requires a combination of discipline and playfulness"³⁶ They also indicated four necessary skills for developing models:

1. *An ability to abstract from a reality to a model:* It is necessary to form abstract representations of complex and intrinsic realities.
2. *A facility at derivation within an abstract model:* The value of a model lies in its meaningful implications.
3. *A competence at evaluating a model:* Not all models are good and may lead to inaccurate or wrong derivations.
4. *A familiarity with some common models:* There is a large number of models in science. It is necessary to have a base of standard models and work from there.

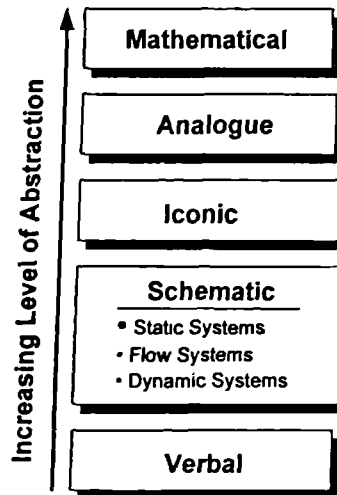
⁴ Lave, D A and March, J.G. (1975), *An Introduction to Models in the Social Sciences*. Harper & Row. pp 3

³⁵ Beakley, G, and Chilton, E.G. (1974), *Design: Serving the Needs of Man*. Macmillan Publishing Co., Inc. pp 268

Lave, D A and March, J.G. (1975), *op cit*. pp.4.

In addition, the same authors also propose three “rule of thumb” for model building: (1) *Think “process”*, (2) *Develop interesting implications*, and (3) *Look for generality*.

Figure 4.6: Types of Models³⁷



Alexander(1974) provides a classification system for models by their degree of abstraction as shown in Figure 4.6.

- **Verbal Models:** This is a loose category that relies on words, written or spoken, to describe the elements and interrelations of the system. However, verbal models suffer from ambiguity and semantic difficulties in communication.
- **Schematic Models:** Based on “a picture is worth a thousand words”, these models represent systems in pictorial form and are strongly descriptive. They reduce ambiguity and facilitate communication but are limited to representation in two dimensions. Three types of schematic models are commonly used:
 - **Static Systems Models:** These models show a set of elements and their relationships at a given point in time. Relationships are continuous and throughout the model. Gant chart and maps are examples of this type.
 - **Flow Systems Models:** These models attempt to show flow, motion or some other type of movement. This relationship binds all the elements together. Flow/process charts or CPM/PERT networks are examples of this type.
 - **Dynamics Systems Models:** The basic characteristics of these models is forceful and change-generating activity. They contain *inputs* to a *processor* which transforms them into *outputs*, with a controller function included.

³ Alexander, M.J. (1974) Information Systems Analysis. Science Research Associates, Inc. pp.4

- **Iconic Models:** These models are static 3-dimensional representations of physical objects. They may contain movable parts but do not attempt to represent dynamic characteristics of the system. Scale models of buildings, objects are examples.
- **Analogue Models:** These models seek to describe the operational characteristics of a system based on the process of analogy. The basic assumption is that a total system's behaviour will be the same than a smaller one with the same characteristics. These models are used mostly for research and development. Wind tunnel or prototype testing are examples.
- **Mathematical Models:** These represent the highest level of abstraction in model construction. They offer a great degree of precision when the system studied lends itself to quantitative analysis. There is no dimensional restrictions as with other models. Using computers simulation, models may be changed rapidly to evaluate changes in scenarios. Mathematical evaluations have the advantages of being clear and unambiguous and may be stochastic(probabilistic) or deterministic models. Their use can be for describing or optimising systems.

The above brief review of systems methodologies and model development testify to a growing richness in research approaches that the researcher must be aware of.

4.7 Methodological Mixes

The terms multi-methods, linking methods and triangulation are frequently used interchangeably to describe research strategies that incorporate a combination of quantitative and qualitative research methods in the study of the same phenomenon. Denzin(1978)³⁸ identified four basic types of triangulation: (1) *data triangulation* - the use of a variety of data sources in a study; (2) *investigator triangulation* - the use of several different researchers; (3) *theory triangulation* - the use of multiple perspectives to interpret a single set of data; and (4) *methodological triangulation* - the use of multiple methods to study a single problem. Triangulation is one important way to strengthen a study design but can be very expensive. Triangulation can include borrowing and combining parts from pure methodological approaches of the hypothetico-deductive and holistic-deductive paradigms. Patton(1990)³⁹ suggests that the ideal-typical qualitative methods strategy is made up of three parts: (1) qualitative data, (2) a

³⁸ Denzin, N.K. (1970) *The Research Act: A theoretical introduction to sociological methods*. McGraw-Hill, New York.

³⁹ Patton, M.Q. (1990) *Qualitative Evaluation and Research Methods*, 2nd Edition. pp.189.

holistic-inductive design of naturalistic inquiry, and (3) content or case analysis. In the traditional hypothetico-deductive approach to research, the ideal study would include (a) quantitative data from (b) experimental (or quasi-experimental) designs and (c) statistical analysis. Table 4.7 summarises some of the main design issues and possible options.

Table 4.7: Design Issues and Options⁴⁰

Issues	Samples Options and Considerations
1. What is the primary purpose of the study?	Basic research, applied research, summative evaluation, formative evaluation, action research
2. What is the focus of the study?	Breadth versus depth trade-offs
3. What are the units of analysis?	Individuals, groups, programme components, whole programmes, organisations, communities, critical incidents, time periods, etc.
4. What will be the sampling strategy or strategies?	Purposeful sampling, probability sampling, variations in sample size from a single case study to a generalisable sample
5. What types of data will be collected?	Qualitative, quantitative, or both
6. What controls will be exercised?	Naturalistic inquiry, experimental design, quasi-experimental options
7. What analytical approach or approaches will be used?	Content analysis, statistical analysis, combinations
8. How will validity of and confidence in the findings be addressed?	Triangulation options, multiple data sources, multiple methods, multiple perspectives, and multiple investigations
9. Time issues When will the study occur? How will the study be sequenced or phased?	Long-term fieldwork, rapid reconnaissance, exploratory phase to confirmatory phase, fixed times versus open time lines
10. How will logistics and practicalities be handled?	Gaining entry to the setting, access to people and records, contracts, training, endurance, etc.
11. How will ethical issues and matters of confidentiality be handled?	Informed consent, protection of human subjects, reactivity, presentation of self, etc.,
12. What resources will be available? What will the study cost?	Personnel, supplies, data collection, materials, analysis time and costs, reporting/publishing costs

Clearly, the challenge presented in Table 4 for any research problem, is to find which information is most needed and most useful in a given situation, and then employ those methods best suited to producing the needed information.

⁴ Patton, M Q.(1990), op cit. pp 197.

4.8 Choice of Research Methodology

McGrath (1982)⁴¹ aptly uses the term 'dilemmatic' to describe the study of research choices in which it is clear that there are no ideal solutions, only a series of compromises. Patton (1990) express the same view : "Research, like diplomacy, is the art of the possible"⁴²

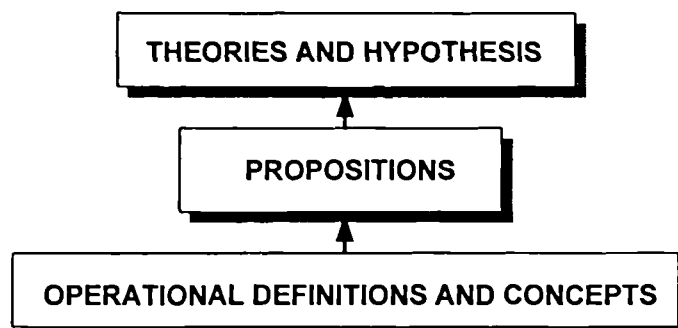
The above quote by Patton is perhaps a very poignant guide to any researchers contemplating on the most appropriate avenue of successfully completing a sizeable piece of research study. In this respect, the author is no exception.

4.9 Research Design

The previous section presented different research typologies based on objective, method of data gathering, time perspective, degree of involvement, and type of data. Once a typology route has been selected, the researcher then needs to establish the methodology for the study and define all of its principal elements

Research designs are about organising research activity. At an abstract level, Simon and Burstein(1985)⁴³ provide a hierarchy upon which knowledge is built; facts, assumptions, deductions, theories, hypotheses and law. At a general level, Pelto and Pelto(1979)⁴⁴ consider the main elements of a research study as comprising of: operational definitions and concepts, propositions, and theories and hypothesis as illustrated in Figure 4.7.

Figure 4.7: Elements of Research Methodology



McGrath, J E. (1982) Dilemmatics: the study of research choices and dilemmas in McGrath, Martin and Kukla (1982).

⁴² Patton (1990), op cit. pp.13

⁴³ Simon and Burstein (1985)

⁴⁴ Pelto and Pelto (1979) in Tatum,N.D.

At a more “technical” level, Yin (1984)⁴⁵ defines a research as “the logic that links the data to be collected (and the conclusions to be drawn) to the initial questions of a study”.

Easterby-Smith, et al(1991) describe research design in terms of resolving choices and issues. They describe five choices that are of particular significance as listed in Table 4.8.

Table 4.8: Key Choices in Research Design⁴⁶

Researcher is independent	vs	Researcher is involved
Large sample	vs	Small numbers
Testing theories	vs	Generating theories
Experimental design	vs	Fieldwork methods
Verification	vs	Falsification

The first four issues relate fairly closely to the basic dichotomy between the use of positivist and phenomenological approaches and the last issue on verification versus falsification is a debate located mainly within the positivist paradigm.

4.9.1 Elements of Research Design

At a more detailed level, Patton (1990) considers research design in terms of five elements: (1) clarity of research purpose, (2) the issue of breadth versus depth, (3) the decision on the unit of analysis, (4) the research sample and (5) sample size.

4.9.1.1 Clarity of Purpose

Purpose is the controlling force in research. Decisions about design, measurement, analysis, and reporting all flow from purpose. Patton(1990) points out that “the centrality of purpose in making methods decisions is evident from examining alternative purposes:

- (1) *basic research* to contribute to fundamental knowledge and theory;
- (2) *applied research* to illuminate a societal concern;
- (3) *summative evaluation* to determine program effectiveness;

⁴⁵ Yin, R K. (1984) Case Study Research - design and methods. Sage Publication. pp.27.

⁴⁶ Easterby Smith, M. Thrope, R, & Lowe (1991), *Management Research - an introduction*. Sage Publishing. pp 33

- (4) *formative evaluation* to improve a program; and
(5) *action research* to solve a specific problem".⁴⁷

It is important to understand variations in purpose along this continuum because different purposes typically lead to different ways of conceptualising problems, different designs, different types of data gathering, and different ways of presenting and disseminating findings.

4.9.1.2 *Breadth versus Depth*

In many ways a major trade-off between quantitative methods and qualitative methods is a trade-off between breadth and depth. Qualitative methods permit the researcher to study selected issues in depth and detail; the fact that the data collection is not constrained by predetermined categories of analysis contributes to the depth and detail of qualitative data. Qualitative methods, on the other hand, require the use of a standardised approach so that the experiences of the respondent are limited to certain predetermined categories. The advantage of the quantitative approach is that it is possible to measure the reactions of many subjects to a limited set of questions, facilitating comparison and statistical aggregation of the data. By contrast, qualitative methods typically produce a wealth of detailed data about a much smaller number of people and cases.

On the issue of breadth versus depth in qualitative research, Patton(1990) states that: "There is no rule of thumb that tells a researcher precisely how to focus a study. The extent to which a research question is broad or narrow depends on purpose, the resource available, the time available, and the interests of those involved. In brief, these are not choices between good and bad, but choices among alternatives, all of which have merit."⁴⁸

4.9.1.3 *Unit of Analysis*

As a general rule, the definition of the unit of analysis is related to the way the initial research has been defined. The research design specifies the 'unit' to be studied. This may be an organisation, a person in an organisation or an event.

⁴⁷ Patton, M Q. (1990) *Qualitative Evaluation and Research Methods*, 2nd Edition. pp.150. (*italics* - author's emphasis)

⁴⁸ op cit pp 166. (*italics* - author's emphasis)

The definition of the appropriate unit of analysis in research design is fundamental because it is the primary focus of data collection. Decisions about samples, both sample size and sampling strategies, depend on prior decisions about the appropriate unit of analysis to study. Each unit of analysis implies a different kind of data collection, a different focus for the analysis of data, and a different level at which statements about the findings and conclusions would be made.

Patton(1990) advises that: “the key issue in selecting and making decisions about the appropriate unit of analysis is to decide what is it you want to be able to say something about at the end of the study”.⁴⁹

4.9.1.4 *The Research Sampling*

Perhaps nothing better captures the difference between quantitative and qualitative methods than the different logic that underpin sampling approaches. Qualitative inquiry typically focuses in depth on relatively small samples, even single cases, selected purposefully. Quantitative methods typically depend on larger samples selected randomly. Not only are the techniques for sampling different, but the logic of each approach is unique because the purpose of each strategy is different.

The logic and power of probability sampling lies in selecting a truly representative sample that will permit confident generalisation from the sample to a larger population. The purpose is generalisation. In contrast, the logic and power of purposeful sampling lies in selecting what Patton(1990) termed as *information-rich cases*⁵⁰ for study in depth. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose to the research, thus the term *purposeful* sampling.

There are a number of strategies for purposefully selecting information-rich cases. Patton(1990) listed sixteen different purposeful sampling strategies in Table 4.3. The logic of each strategy serves a particular research/evaluation purpose. It is clear from the above discussions that, for any research project,

⁴⁹ Patton, M Q. (1990) *Qualitative Evaluation and Research Methods*, 2nd Edition. pp.168. (*italics* - author's emphasis)
op cit pp 169.

the sampling strategy must be selected to fit the purpose of the study, the resources available, the question being asked, and the constraints faced. This holds true for sampling as well as sample size.

4.9.1.5 Sample Size

On this issue, Patton(1990) asserted that there are no rules for sample size in qualitative inquiry. The validity, meaningfulness, and insights generated from qualitative inquiry have more to do with the information-richness of the cases selected and the observation/analytical capabilities of the researcher than with sample size".⁵¹

The problem is, however, that the utility and credibility of small purposeful samples are often judged on the basis of the logic, purpose, and recommended sample sizes of probability sampling. What should happen is that purposeful samples be judged on the basis of the purpose and rationale of each study and the sampling strategy used to achieve the study's purpose. The sample, like any other aspects of qualitative research, must be judged in context. Random probability samples cannot accomplish what in-depth, purposeful samples accomplish, and vice versa.

The consideration of elements of research design listed in Table 4.9 implies that the research methods chosen for a particular study must be appropriate to the nature of the subject and the purpose of study. Understanding the differences between the various approaches will enable the researcher to control the type of information he/she collects and also to determine which technique for data collection is most suited. Cropper(1982)⁵² argues that the research methodology is clearly bound up with the nature of the subject matter that forms the substantive concern, the types of theory being espoused; and the state of knowledge in the field of inquiry. Hence it is important to link the research strategy (data collection and manipulation procedures) with developing and testing explanations of the social entity being investigated.

⁵¹ Patton, M.Q. (1990) *op cit.* pp.185. (*italics* - author's emphasis)

⁵² Cropper, S.A. (1982) "Theory and Strategy in the study of planning process - the uses of case study". *Environment and Planning*, Vol.9, pp.341-57.

The above discussions clearly demonstrate the need to think through a number of key parameters in research design that will impact the final outcome. There are always trade-offs to be made, necessitated by limited resources, limited time, and limits of human ability to grasp the complex nature of social reality.

Table 4.9: Sampling Strategies⁵³

Type	Purpose
A. Random probability sampling	Representativeness: Sample size a function of population and desired confidence level.
1. simple random sample	Permits generalisation from sample to the population it represents.
2. stratified random and cluster samples	Increases confidence in making generalisations to particular subgroups or areas.
B. Purposeful sampling	Selects information-rich cases for in-depth study. Size and specific cases depend on study purpose.
1 extreme or deviant case sampling	Learning from highly unusual manifestations of the phenomenon of interest, such as outstanding successes/ notable failures, top of class, etc.
2 intensity sampling	Information-rich cases that manifest the phenomenon intensely, but not extremely, such as good students/ poor students, above average/ below average.
3 maximum variation sampling	Documents unique or diverse variations that have emerged in adapting to different conditions. Identifies important common patterns that cut across variations.
4 homogenous sampling	Focuses, reduces variation, simplifies analysis, facilitates group interviewing.
5 typical case sampling	Illustrates or highlights what is typical, normal, average.
6 stratified purposeful sampling	Illustrates characteristics of particular subgroups of interest; facilitates comparisons
7 critical case sampling	Permits logical generalisation and maximum application of information to other cases because if it's true of this one it's likely to be true of all cases.
8 snowball or chain sampling	Identifies cases of interest from people who know people who know people who know what cases are information-rich, that is, good examples for study, good interview subjects.
9 criterion sampling	Picking all cases that meet some criterion, such as all children abuses in a treatment facility. Quality assurance.
10 theory-based or operational construct sampling	Finding manifestations of a theoretical construct of interest so as to elaborate and examine the construct.
11 confirming and disconfirming cases	Elaborating and deepening initial analysis, seeking exceptions, testing variation.
12 opportunistic sampling	Following new leads during fieldwork, taking advantage of the unexpected, flexibility.
13 random purposeful sampling (still small sample size)	Adds credibility to sample when potential purposeful sample is larger than one can handle.
14 sampling politically important cases	Attracts attention to the study or purposefully eliminating from the sample politically sensitive cases.
15 convenience sampling	Saves time, money, and effort. Poorest rationale; lowest credibility. Yields information-poor cases.
1 non-biased random purposeful sampling	Triangulation, flexibility, meets multiple interests and needs

³Patton, M.Q (1990) *Qualitative Evaluation and Research Methods*, 2nd Edition. pp.182-183.

Patton (1990) cautions the researcher *that there are no perfect research designs*⁵⁴. In research design, purposes, strategies, and trade-offs - these themes go together. This view is also supported by Buckley, et al. (1975): "No research methodology is perfect. In fact we will observe that it is possible to critique *any* research effort. The objective therefore is to select the best methodology in the circumstances and be able to justify that choice in the light of available options."⁵⁵

4.10 Evaluation Criteria

Any review of research methods will be incomplete without considering the fundamental issues relating to evaluation of the value of any research outcomes. In many respects such an evaluation is often focused on measures to counteract the weaknesses inherent in the particular research strategy(ies) chosen to carry out a particular piece of research. The technical language of such research evaluation include terms such as validity, reliability and generalisability. The importance placed on judging the credibility of research results is also accentuated by the long-standing debate in science over how best to study and understand the world. The debate is rooted in philosophical differences about the nature of reality and takes the form of qualitative versus quantitative methods, as discussed earlier. This section will provide an overview of the main research evaluation criteria considered in research methods literature. A more detailed consideration of evaluation criteria specific to the research design for the research at hand will be covered in a later section.

In general, the value of any research stems from the validity of its results and the extent of its contribution to the body of knowledge. These results are the outcome from the collection, interpretation, analysis and evaluation of data.

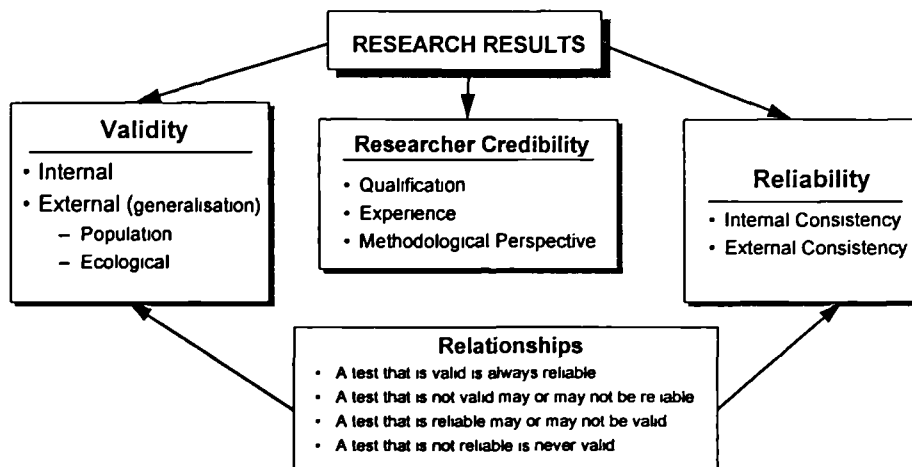
Figure 4.8 provides a schematic summary of the three main criteria that are cited in assessing the value or rigour of research results: (1) validity, (2) reliability and (3) researcher credibility.

⁵⁴ Patton, M Q. (1990) op cit., pp.162 .(*italics* - author's emphasis)

⁵⁵ Buckley, J.W., Buckley, M.H. & Ching, H.F.(1975) *Research Methodology and Business Decisions*. National Association of Accountants and The Society of Industrial Accountants of Canada. pp.33. (*italics* authors' emphasis)

Figure 4.8 ; Research Evaluation Criteria

Based on: Patton, M.Q. (1990); Esterby-Smith, M., Thorpe, R. & Lowe, A. (1991); Gill & Johnson (1991), Black, J.A. & Champion, D.J.. (1976), de Vaus, D.A.. (1991)



4.10.1 Validity

For a given problem, validity is one of the concepts used to determine how good is an answer provided by research. Validity means in essence that a theory, model, concept, or category describes reality with a good fit. de Vaus(1991) defines “a valid measure is one which measures what it is intended to measure. In fact, it is not the measure that is valid or invalid but the use to which the measure is put ... The validity of a measure then depends on how we have defined the concept it is designed to measure”.⁵⁶ In research methodology literature, the measure of validity is often considered under either *internal* and *external* validity.⁵⁷

- **Internal validity:** This criterion refers to whether or not what is identified as the 'cause(s)' or 'stimuli' actually produce what has been interpreted as the 'effect' or responses'.
- **External validity:** Generally, this criterion refers to the extent to which any research findings can be generalised or extrapolated beyond the immediate research sample or setting in which the research took place. External validity is often subdivided into:

⁵⁶ de Vaus, D.A. (1991) Surveys in Social Research. 3rd Edition. Allen & Unwin. pp.55-56.

⁵⁷ Gill, J. and Johnson, P. (1991) Research Methods for Managers. Paul Chapman Pub.Ltd. pp.121

- **Population validity:** This criterion concerns the extent to which it is possible to generalise from the sample involved in the research, to a wider population.
- **Ecological validity:** This criterion is concerned with the extent to which it is possible to generalise from the actual social context in which the research has taken place and data collected, to other contexts and settings.

To summarise, internal validity refers to the internal logic of the study that allows for the results to be meaningful. External validity, on the other hand, refers to the applicability of the results from an internally valid study to other situations and other subjects; it is concerned with the question of the extent to which the findings can be extended to other populations or settings.

It is worth noting that there is a different perspective on validity when viewed within the context of qualitative and quantitative research. Qualitative research identifies the presence or absence of a given feature in a given problem or situation, as opposed to quantitative research which measures the degree of presence of the feature itself. Qualitative research focuses on the nature rather than the amount of something.

4.10 2 Reliability:

“For observations to have scientific value, there must be assurance that different observers of the same people or events would use the same abstractions in the same way. The technical term for this is reliability.”(Stern, 1979)⁵⁸ Another definition by Simon and Burstein (1985) states that “ ... reliability is essentially repeatability - a measurement procedure is highly reliable if it comes up with the same result in the same circumstances time after time, even employed by different people”.⁵⁹ Finally, it also conveys the notion of consistency when reliability of an instrument is defined as “ .. the ability of the instrument to measure consistently the phenomenon it is designed to measure. Reliability, therefore refers to test consistency” (Black and Champion, 1976)⁶⁰ .

⁵⁸ Stern, P.C. (1979) *Evaluating Social Science Research*. Oxford University Press. pp12.

⁵⁹ Simon, J.L. & Burstein, P. (1985) *Basic Research Methods in Social Science*, 3rd Edition. Random House pp 209.

⁶⁰ Black, J.A. & Champion, D.J. (1976) *Methods and Issues in Social Research*. John Wiley & Sons. pp234.

In each of the above definitions, the common denominator is that regardless of who measures and when something is measured, if the technique or measurement instrument is reliable, the process yields consistent results.

From the above discussion, it can be that the basic difference between reliability and internal validity is that reliability deals with the data collection process to assure consistency of results while internal validity focuses more on the way such results support the conclusions. It should also be noted that the above deliberation refers very much to the traditional evaluation criteria of validity and reliability that are governed by the canons or convention of quantitative research paradigm. Although early qualitative researchers felt compelled to relate to traditional notions of validity and reliability to procedures in qualitative research, later qualitative writers (e.g. Miles and Huberman,1984; Lincoln and Guba,1985; Alkin, Dailak and White,1979; Patton,1990; Strauss and Corbin,1990;) developed their own language to describe quality criteria in qualitative research paradigm. Lincoln and Guba (1985) concentrate on the centrality of understanding and accepting the naturalistic inquiry paradigm as the key issue of credibility. Miles and Huberman (1984) concentrate on improved and rigorous techniques for data gathering and analysis as the best way to enhance credibility and acceptance. Alkin, Dailak and White (1979) have shown that the utility of any evaluation is closely associated with and heavily dependent on the personal and professional credibility of the researcher.

4.10 3 *Credibility of Researcher*

This is the third factor that is included in Figure 4.8 that can affect the way research findings are received. While consideration of validity and reliability are concerned with methodological choices in research design, this factor is concerned with the researcher as the instrument in research. Glaser (1978) in his book of the same title, coined the term "*theoretical sensitivity*". to refer to the personal qualities of the researcher in the context of qualitative research. Theoretical sensitivity is the ability to recognised what is important in data and to give it meaning. It helps to formulate theory that is faithful to the reality of the phenomena under study.⁶¹ Theoretical sensitivity has two sources: being well

⁶¹ Glaser, B. (1978) *Theoretical Sensitivity*, Mill Valley, Sociology Press.

grounded in the technical literature as well as from professional and personal experience. Good science (good theory) is produced through the interplay of creativeness and the skills acquired through training in analytical processes of inquiry.⁶²

4.11 Summary of Research Methods Review

The above review highlighted a variety of potential problems that a researcher is likely to face in trying to come up with a sound research design. These problems, if overlooked, increase the risk of invalid, erroneous, or distorted design. In order to avoid any potential problems an adequate strategy must guide the research process from the beginning to conclusion. It is suggested that the basic steps of a research strategy must include:

1. *an understanding of the fundamental research issues* likely to affect the investigation and measures to overcome them;
2. *an understanding of research typologies* and justification for selection; and
3. *a clear definition of all the elements* and components that comprise the investigation.

The success of a research project is largely dependent on the robustness of this strategy. The next section will present a more focused discussion of research approaches in the chosen field of study - Real Estate Asset Management⁶³, and concludes with a research design for the study of the organisational response to the management of operational asset management as a strategic business resource.

⁶² Corbib, J & Strauss, A, (1990), *Basics of Qualitative Research - Grounded Theory Procedures and Techniques*. Sage Publication. pp.41-47.

⁶³ Real Estate Asset Management - as defined by the author in the context of this research.

Chapter 5 Research Design for the Current Study

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5. Research Design

5.1 Introduction

From the discussions in Chapter 4, it is clear that the world view held by the individual researcher is clearly an important factor in the choice of research methods. The success of a research project relies substantially on the soundness of definition and understanding of each of its components. An important element of a research design is a coherent framework that ties the component parts as an integrated model representation of the real world - especially in areas of social science research like organisations and management.

The primary purpose of this chapter is to provide a focused discussion of the decision processes relating to the chosen research strategy for the current research in terms of the governing research paradigm, the data collection instruments, the data analysis tools and verification criteria for the research outcomes.

5.2 Research Design for Current Study

Research interests into the nature of interactions between strategic business management and operational management in respect of the provision and subsequent ongoing management of operational real estate assets have only emerged since the early 1980s. In North America, three landmark studies¹ raised the awareness of real estate considerations at the corporate management levels. In the UK, strategic awareness in the role of property assets have also been stirred by several reports². The data collection methods used for all the above sponsored research reports were mainly based on sample surveys using questionnaires, supplemented by a small sample of interviews.

The results from the above reports provided the much needed background information about the general perception of the role of property in the context of

¹ (1) *The Harvard Study*(1981), (2) *the MIT Survey*(1987), and more recently (3) *The IDRF CRE 2000 Report* (1993).

MOPA(1989), Debenham Tewson(1992), PMPM(1993), Hillier Parker(1994), and PERM(1995)

business, and how operational properties are managed within organisations. A common theme of all the reports from both sides of the Atlantic is the general apathy shown towards the corporate operational real estate portfolio as a business resource. There appears to be a 'gap' in understanding the role and contribution which real estate assets bring to the core business production processes.

This research aims to answer some of the "why" and "how" of the gap that seems to exist between corporate core business managers and real estate/facilities executives who are charged with their ongoing management. The study is therefore concerned with how corporate organisations respond to the management of operational real estate assets as a strategic business resource. In this respect, a principal factor influencing the data collection methods adopted is to seek rich empirical data from organisations in order to develop conceptual models to explain the drivers and processes that relate to the provision and ongoing management of operational facilities as a business resource.

Because of the complex nature of the subject being studied and the potential problem of access to senior management, a quantitative approach to data collection is not considered appropriate. The discussion from hereon will therefore, focus primarily on methodological issues relating to choosing the most appropriate qualitative research strategy for data collection, data analysis and validation.

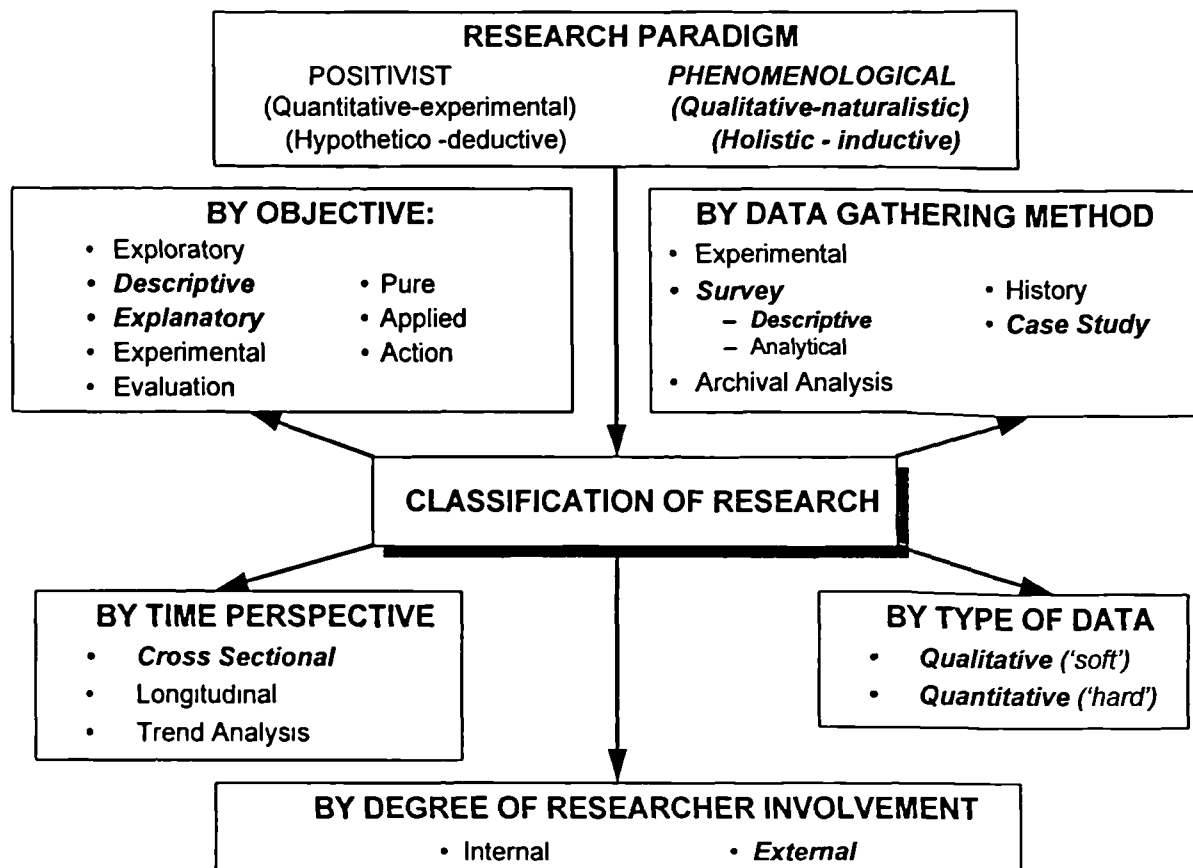
Using the research typologies developed in Figure 4.3 (pp. 208), the research design adopted for this study is mapped against each typology's attributes and indicated in ***bold-italics font*** in Figure 5.1. The justification for the above route in research design are considered each in turn.

1. Research Paradigm: *Holistic-inductive*

The main thrust of the research is in developing a model framework for a better understanding of the role of operational real estate assets in the business setting and the processes and interactions between corporate management and operational management. The main research propositions

“how”, very much akin to the key features of the phenomenological features of qualitative research as listed in Table 4.2 (pp.202).

Figure 5.1: Mapping the Chosen Research Strategy



2. Research Objective: *Descriptive / Explanatory*

The current research seeks to understand how organisations respond to the management of operational real estate assets and associate facilities support services against a volatile and competitive business environment; i.e. the corporate drivers, the real estate supply market, internal capabilities and how they impact on the provision and ongoing management of the built infrastructure that provides the enabling workplace environment for the corporate core business to grow and prosper.

In this respect the objective of the research is partially driven by both the descriptive as well as the explanatory modes.

3. Data Collection Methods: *Survey and Case Studies*

The survey approach in data collection may take the form of a questionnaire,

administered either by interview or as a respondent completed form. Each have their place and the chosen method should be considered carefully to minimise bias. Glastonbury and Macken(1991)³ offer a rule of thumb for deciding the most beneficial survey research method. They suggest that if the researcher is more interested in the depth and quality of data than in having a large number of responses then the interviewing technique should be considered. If the questions are fairly easy to answer and a large number of responses are required to complete statistical analysis then self completed questionnaires may be more suitable. It is clear therefore that the survey research may be used for either quantitative or qualitative research. These are categorised into analytical and descriptive surveys, the latter being more relevant to the qualitative researcher, and is discussed in more detail below.

Descriptive surveys are concerned primarily with addressing particular characteristics of a specific population of subjects, either at a fixed point in time or at varying times for comparative purposes. The most basic decision to be made is how the questionnaire will be administered depending on the information required. This may be by sending a questionnaire which the respondent self administers or the use of an interviewer to administer the questionnaire. In either of these cases the questions must be designed to reduce the effects of bias and to guide the respondent through the questionnaire in order to gain the maximum level of information.

The research question under consideration for this study is clearly in the management-related area in an organisational context. The focus of the research is process-oriented with the objective of generating theory to promote a greater understanding of the role and management of operational real estate assets over time in organisations. The research propositions are driven very much by answers to questions of “why” and “how”. At the outset, access to potential respondents, particularly at senior management levels in respondents’ organisations is seen as a major potential obstacle and is weighted heavily in the final choice of data collection strategy.

³ Glastonbury, B. & Mackean, J. (1991) Survey Methods, in Allan G & Skinner C. (Eds), Handbook for Research Students in the Social Sciences, Falmer Press.

Yin (1984) recommends that in general, case studies are the preferred strategy when “how” and “why” questions are being posed, when the researcher has little control over events, and when the focus is on a contemporary phenomenon within some real-life context. Given that the current research concerns are with seeking answers to “why” (research proposition I) and “how” (research proposition II), the data gathering strategy chosen follows Type 4 of Yin’s matrix (refer to Figure 4.4, page 211) In other words, a multiple-case, embedded(multiple units of analysis) case studies design is adopted.

A purposeful sampling approach is applied in choosing case studies respondents. The research design adopted also takes advantage of the case study’s unique feature of incorporating evidence from multiple sources. For the purpose of this research, the principal source of data gathering include - interviews, observations and respondents supplied documents and published information relating to case study respondent. The interviews with respondents is also supplement by a survey questionnaire comprising questions of a quantitative and qualitative nature (i.e. descriptive survey).

4. Time Perspective: *Cross-sectional*

Cross sectional studies are investigations of several units of analysis at a single moment in time. Hence, all observations or data collection are made at a point in time thereby avoiding changes in conditions. For the current research, a cross-sectional approach is adopted covering a multi-sector survey of organisations in order to ensure that the emerging model framework can be validated across industrial sectors. The comparative analysis across sectors will also strengthen the external validity of the resulting models.

5. Data Types: *Qualitative and Quantitative*

Data collected in relation to research is classified as either quantitative or qualitative. Quantitative data includes numerical descriptions of the unit of analysis, whereas qualitative data usually contains narrative results of observations or interviews..

For the research in hand, three principal sources of qualitative data form the

basis for the development of the model framework: published literature and published interviews, case studies interviews and questionnaires.

6. Researcher Involvement: *External*

The degree of involvement of the researcher with its subject of study is an important consideration in qualitative research. The extent to which the researcher will be a participant in the setting being studied is a continuum that varies from complete immersion in the setting as full participant (i.e. internal) to complete separation from the setting (i.e. external). In the latter the researcher is detached from the process and his/her observations are objective.

For the research at hand, the researcher involvement is external. The approach tends towards rationalistic model building.

5.3 Theory Generation versus Theory Testing

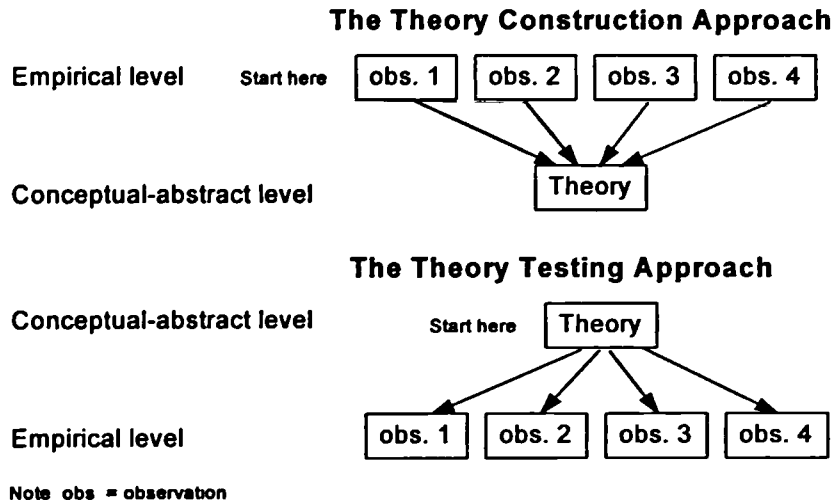
The research typology 'road map' has been useful in considering a number of aspects in research method choices. However, it is also important to emphasise the difference in approach in a research strategy that is driven by '*theory generation*' to one that is governed by '*theory testing*'. The generation of theory is very much an attempt to find new ways of approaching reality, the need to be creative and receptive in order to improve our level of understanding. This contrast with the testing and refinement of existing theories and models, which is a primary concern of quantitative researchers.⁴

De Vaus (1991) holds the view that the development of good explanations involves two related processes: theory construction and theory testing. These two processes are not alternative ways of arriving at good theories but represent two stages with different starting points as shown in Figure 5.2. Theory construction is a process which begins with a set of observations (i.e. description) and moves on to develop theories of these observations. This process is also known as grounded theory (Glaser and Strauss, 1967) or *ex post*

⁴This distinction was clearly defined by Glaser and Strauss in their book *The Discovery of Grounded Theory* (1967).

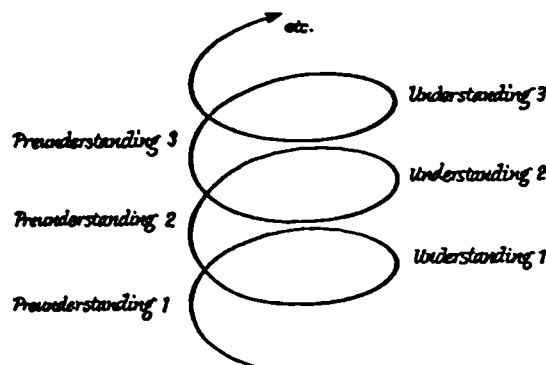
facto theory since the theory comes after the observation rather than before. Theory testing differs in that it starts with a theory and data are collected to support or refute the prediction. De Vaus suggests that in practice, there is a constant interplay between constructing theories and testing them.

Figure 5.2: Theory Construction and Testing⁵



Gummesson(1991), using a different terminology, describes this iterative process as a *hermeneutic spiral* between *preunderstanding* and *understanding*.(Figure 5.3) The relationship between preunderstanding and understanding is influenced by our conscious (personal experience) as well as our experience to other sources of information.

Figure 5.3: The Hermeneutic Spiral⁶

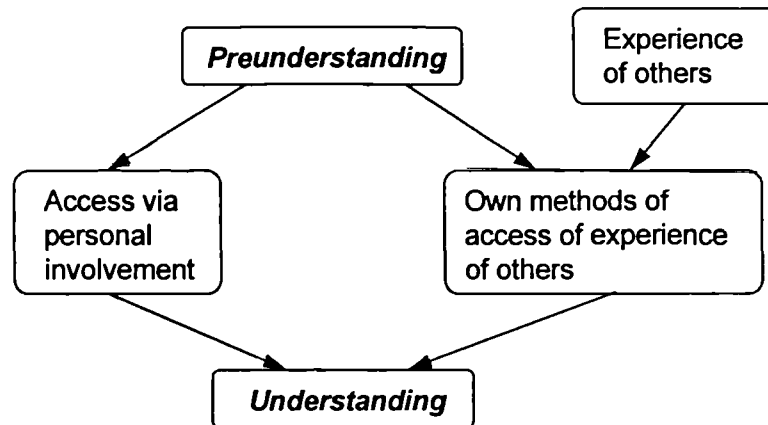


⁵ De Vaus, D.A. (1991) *Surveys in Social Research*. 3rd Edition. Allen & Uwin. pp.11-12.

⁶ Illustration by Bengt Melberg in Gummesson (1991), *Qualitative Methods in Management Research*. Sage Publication. pp.62.

Figure 5.4 shows the development of understanding in relation to a specific project. The combination of one's own and other people's experiences constitutes a store of knowledge at any point in time.

Figure 5.4: Sources for Understanding⁷



Hence, research by qualitative method can be represented by an iterative process whereby each stage of the research provides us with additional knowledge as we move up the ladder from preunderstanding to understanding (Figure 5.3). The *hermeneutic spiral* can be likened to an ascending order of theory generation and testing.

For the current research, the research strategy is driven very much by theory generation. The generation of theory being grounded in empirical data gathered in descriptive case studies and survey questionnaires. The next section will consider the relationship between data and theory. The theory generation process using the procedures of grounded theory will be covered under the section on theory generation in qualitative research.

5.4 Data and Theory

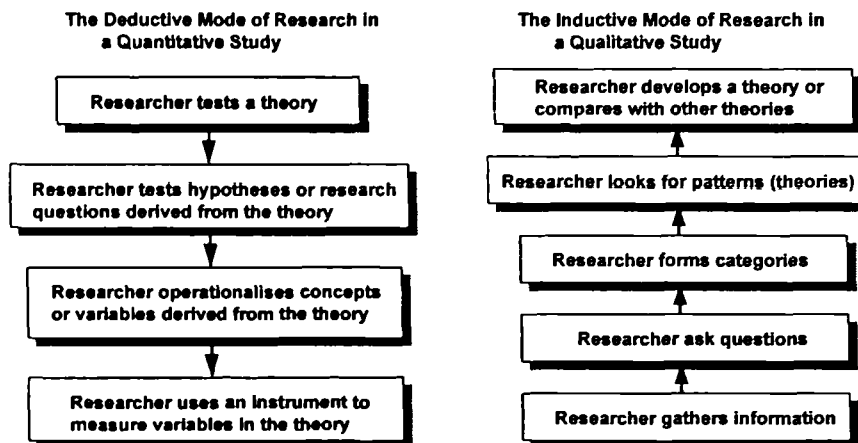
Concepts do not occur in a vacuum, they are part of representations of reality and part of models and theories. "Concepts are the building block of theory."⁸ The aim of a model or theory is to simplify reality. The context of theory plays a fundamental role in differentiating between a deductive mode of research in a

⁷ Gummesson, E. (1991) *Qualitative Methods in Management Research*. Sage Publication. pp.61.

⁸ Strauss, A. & Corbin, J. (1990) *Basics of Qualitative Research - Grounded Theory Procedures and Techniques*. pp.74.

quantitative study, and an inductive mode of research in a qualitative study. Figure 5.5 illustrates clearly the contrast in placement of the theory in the context of the two research approaches.

Figure 5.5: The Context of Theory⁹



In the deductive model of thinking, a theory is an interrelated set of constructs (or variables) formed into propositions or hypotheses that specify the relationship among variables (typically in terms of magnitude or direction). The systematic view might be an argument, a discussion, or a rationale that helps explain (or predict) phenomena that occur in the world. The form of theories might be a series of hypotheses, “if... then” logic statements, or a visual model. The form of presentation of the theory shows a causal ordering of the variables. In quantitative research the objective is to test or verify a theory, rather than to develop it. The researcher often begins the study by advancing a theory, collects data to test it, and reflects on whether the theory is confirmed or disconfirmed by the results of the study. The theory becomes a framework for the entire study, an organising model for the research questions or hypotheses and for the data collection procedure.¹⁰

In the inductive mode of thinking, the use of theory is less clear. The term used for “theory” varies by type of research design. For example, *theory* is used by researchers in grounded theory studies as an outcome for their studies. Strauss

⁹ Creswell, J W. (1994) Research Design - Qualitative & Quantitative Approaches. Sage Publications. pp. 88 & 95

¹ Ibid , pp 82 89

and Corbin(1990) suggested that the development of a theory is the culminating aspect of the entire study, a theory grounded in the data. In case studies, Lincoln and Guba(1985) refer to “pattern theories” as an explanation that develops during naturalistic or qualitative research. The researcher looks for categories that form a “pattern” of interconnected thoughts or parts linked to a whole. The inductive model of thinking does not begin with a theory to test or verify, instead a theory may emerge during the data collection and analysis phase of the research or be used relatively late in the research process as a basis of comparison with other theories. In terms of the form of presentation, in qualitative research, the theory might be presented as a logic diagram, a visual representation of relationships among concepts. Whether the end product is a pattern, generalisation, or a visual model, it represents a theory developed by the researcher.¹¹

5.4.1 An Elaboration of Grounded Theory

The progression from data to theory is especially important in qualitative research and is the basis of grounded theory as it is known today. Grounded theory is a qualitative research approach that was collaboratively developed by Glaser and Strauss(1967). In justifying their stand, Glaser and Strauss assert that “theory in sociology is a strategy for handling data in research, providing modes of conceptualisation for describing and explaining.”¹²

The grounded theory approach is a qualitative research *method* that uses a *systematic* set of *procedures* to develop an inductively derived grounded *theory* about a phenomenon.¹³ The research findings constitute a theoretical formulation of the reality under investigation, rather than consisting of a set of numbers, or a group of loosely related themes. Through this methodology, the concepts and relationships among them are not only generated but they are also provisionally tested. In describing the methodology, Strauss and Corbin

Creswell, J W (1994), *Research Design - Qualitative and Quantitative Approaches*. Sage Publication. pp 93-97

¹² Glaser, B.G. & Strauss, A. (1967) *The Discovery of Grounded Theory: strategies for qualitative research*. Aldine Publishing Co. pp 3.

¹³ Glaser, B G & Strauss, A (1967), *op cit.* pp 24 (*italics text - authors' emphasis*)

(1990)¹⁴ cite three basic components that underpin qualitative research in general and grounded theory, in particular. The first component is *data*, which can come from various sources, interviews and observations being the most common sources. The second component consists of the different *analytic* or *interpretive procedures* that are used to arrive at findings or theories. These procedures include the techniques for conceptualising data. The process, called "coding", varies by training, experience, and purpose of the researcher. The third component is made up of *written* and *verbal reports*. These may be presented in publications or presented in conferences.

A well-constructed grounded theory will meet four central criteria for judging the applicability of theory to a phenomenon: *fit*, *understanding*, *generality* and *control*. These justifications are best described by the following quotation:

*"If theory is faithful to the everyday reality of the substantive area and carefully induced from diverse data, then it should fit that substantive area. Because it represents that reality, it should also be comprehensible and make sense both to the persons who were studied and to those practicing in that area. If the data upon which it is based are comprehensive and the interpretations conceptual and broad, then the theory should be abstract enough and include sufficient variation to make it applicable to a variety of contexts related to the phenomenon. Finally, the theory should provide control with regard to action toward the phenomenon. This is because the hypotheses proposing relationships among concepts - which later may be used to guide action - are systematically derived from actual data related to that (and only that) phenomenon. Furthermore, the conditions to which it applies should be clearly spelled out. Therefore, the conditions should apply specifically to a given situation."*¹⁵

From the above brief elaboration, it can be discerned that grounded theory is a valid qualitative research approach that is governed by systematic techniques and procedures of analysis that enable the researcher to develop a substantive theory that meets the criteria of doing "good" science. While the procedures are designed to give the analytic process precision and rigour, creativity is also an important element. In qualitative research, it is creativity that enables the researcher to ask pertinent questions of the data and to make the kind of

¹⁴ Strauss, A & Corbin, J. (1990) Basics of Qualitative Research - Grounded Theory Procedures and Techniques pp 20

¹ Strauss A & Corbin, J (1990) op cit., pp.23. For a fuller discussion refer to Glaser & Strauss (1967), pp 237 250

comparisons that elicit from the data new insights into phenomenon and novel theoretical formulations.

5.4.2 Theory Generation in Qualitative Research

The process of generating theory in qualitative research is inextricably linked with the way the data will be analysed. Analysis of qualitative data is often identified as a problem area due to its volume and diversity. In the grounded theory approach, the data analysis is often conducted as an activity simultaneously with data collection, data interpretation, and narrative writing. In this respect qualitative analysis clearly differs from the quantitative approach of dividing and engaging in the separate activities of data collection, analysis and writing the results.

The richness of qualitative data argues for the need for a holistic view in data analysis. There are two main methods for achieving this (Easterby-Smith, et al, 1991). In the first method, *content analysis*, the emphasis is on converting the qualitative data into numbers and frequency of events. This is considered by some researchers to spoil the richness of the data and fails to give the holistic view so important in qualitative data. The second method, *grounded theory*, allows the researcher to go by “feel and intuition” (from personal experience and knowledge) aiming to produce common and or contradictory themes and patterns. A comparison of the two approaches is given in Table 5.1, highlighting that the grounded theory is better placed for dealing with transcripts, simplifying the large amount of non standard data produced by qualitative studies.

Table 5.1: Differences between Content Analysis and Grounded Theory¹⁶

Content Analysis	Grounded Theory
Bitty	Holistic
Go by frequency	Go by feel
Objectivity	Closer to data
Deductive	Inductive
Testing hypothesis	Testing out themes, developing patterns

¹⁶ Easterby-Smith, M., Thrope, R. & Lowe, A. (1991) Management Research - an introduction. Sage Publication pp.106

The differences between the two approaches is once again governed by a viewpoint based on a hypothetico-deductive paradigm or one based on holistic-inductive paradigm.

In their pioneering book on grounded theory, Glaser and Strauss (1967) assert that:

“there is no fundamental clash between the purposes and capacities of qualitative and quantitative methods or data. What clash there is concerns the primacy of emphasis on verification or generation of theory Primacy depends only on the circumstances of research, on the interests and training of the researcher, and on the kinds of materials the he needs for his theory. ...

.In many instances, both forms of data are necessary - not quantitative used to test qualitative, but both used as supplements, as mutual verification and, most important... as different forms of data on the same subject, which, when compared, will each generate theory. ¹⁷

The above quotation is regarded as an important consideration in the final choice of the research framework for the current study.

In their discussion on generating theory, Glaser and Strauss(1967) placed emphasis on the use of comparative analysis as a research instrument: (1) in gathering accurate evidence, (2) to establish empirical generalisation, (3) in specifying a concept, (4) in verifying theory, as well as, (5) generating theory. As a strategy of comparative analysis for generating theory, they place high emphasis on *theory as process*: as an ever-developing entity, not as a perfected product.¹⁸ They also identified three elements of theory that are generated by comparative analysis: (1) conceptual categories, (2) the properties of the conceptual categories, and (3) hypotheses or generalised relations among the categories and their properties.¹⁹

In grounded theory, concepts are the basis of data analysis. All grounded theory procedures are aimed at identifying, developing, and relating concepts. Data analysis in grounded theory is the process of *coding*. Coding represents

¹ Glaser, B G & Strauss, A. (1967) *The Discovery of Grounded Theory: strategies for qualitative research.* Aldine Publishing Co pp 17-18.

¹⁸ Glaser, B G & Strauss, A. (1967), *op.cit.* pp.22-32. (authors' emphasis)

¹⁹ Glaser, B G & Strauss, A. (1967), *op.cit.* pp. 35-43.

the operations by which data is broken down, conceptualised, and put back together in a new way. It is the central process by which theories are built from data. Analysis in grounded theory is composed of three major types of coding. These are: (a) open coding; (b) axial coding; and (c) selective coding.²⁰ Table 5.2 list the definition of terms used to describe the procedures of coding in generating theory under the grounded theory approach.

Table 5.2: Definition of Terms used in 'Coding' - Strauss and Corbin²¹

Terms	Definition
Concepts	Conceptual labels placed on discrete happenings, events, and other instances of phenomena.
Category	A classification of concepts. This classification is discovered when concepts are compared on against another and appear to pertain to a similar phenomenon. Thus the concepts are grouped together under a higher order, more abstract concept called a category.
Core Category	The central phenomenon around which all the other categories are integrated.
Properties	Attributes or characteristics pertaining to a category..
Dimensions	Location of properties along a continuum.
Phenomenon	The central idea, event, happening, incident about which a set of actions or interactions are directed at managing, handling, or to which the set of actions is related.
Context	The specific set of properties that pertain to a phenomenon, i.e. the locations of events or incidents pertaining to a phenomenon along a dimensional range. Context represent the specific set of conditions within which the action/interactional strategies are taken.
Causal Conditions	Events, incidents, happening, incidents that lead to the occurrence or development of a phenomenon. The structural conditions bearing on action/interactional strategies that pertain to a phenomenon. They facilitate or constrain the strategies taken within a specific context.
Coding	The process of analysing data
Open Coding	The process of breaking down a property down into its dimensions.
Axial Coding	A set of procedures whereby data are put back together in new ways after open coding, by making connections between categories. This is done by utilising a coding paradigm involving conditions, context, action/interactional strategies and consequences.
Selective Coding	The process of selecting the core category, systematically relating it to other categories, validating those relationships, and filling in categories that need further refinement and development.

Strauss, A & Corbin, J. (1990), Basics of Qualitative Research - Grounded Theory Procedures and Techniques. Sage Publications. pp.57-58.

²¹The definition of terms in this table have been abstracted from Strauss and Corbin(1990) Basics of Qualitative Research - Grounded Theory Procedures and Techniques.. Sage Publications. Part II. Coding Procedures. pp.57-176

Easterby-Smith, et al (1991), using different terminology, describe the grounded theory approach as a series of stages:²²

- Familiarisation - first thoughts emerging
- Reflection - a process of evaluation and critique becomes evident, developing a whole range of loose hypotheses
- Conceptualisation - revisiting data and highlighting where concepts originally appeared
- Cataloguing Concepts - grouping and labeling of concepts
- Recoding - redefining; enlarging or collapsing original coding frames
- Linking - linking variables in a more holistic theory or model
- Re-evaluation - after comments from others.

The data collected by qualitative methods like interviews and documents is voluminous and complex. The analysis of qualitative data pose particular challenges to the researcher. The use of grounded theory approaches as suggested above offers a positive and systemic solution to allow theory or model to develop as themes emerge.

In summary, the discussion so far, has considered the research approaches that are likely to be suitable for the current study. The early decision that the data would be qualitative was based on the requirement for rich data, in order to gain an insight into the nature of interaction between strategic business planning and operational asset management. This need, together with the potential problem of access to organisations as case studies, were largely responsible for the choice of using a purposeful sample, instead of probabilistic sampling in the selection of participating case organisations. In order to increase the validity of the research data, it was decided to use a combination of interviews and questionnaire survey as the main data collection tools, supplemented by information supplied by respondents and published information. The choice of coverage across more than one industry sector in the case studies has the advantage of increasing external validity in the results from the study.

²² Easterby-Smith, M., Thrope, R. & Lowe, A. (1991) Management Research - an introduction. Sage Publication pp 109 112

The remainder of this chapter will discuss the research framework adopted for this study in detail. The specific data collection tools and data analysis techniques will be described.

5.5 The Research Methodology Framework for the Current Study

The review of research design in the last section revealed that the main requirements of a research strategy should include the following:

- a clear understanding and definition of a problem within a given field;
- a framework within which methodological issues are resolved;
- a clear focus on the scope and objectives of the research problem; and
- a detailed process guiding the researcher from the basic levels to the higher levels of abstractions within the specific context of the chosen field of study.

It is also apparent from the literature on research design that the decision to study a topic in a particular way always involves some kind of philosophical choice about what is important.

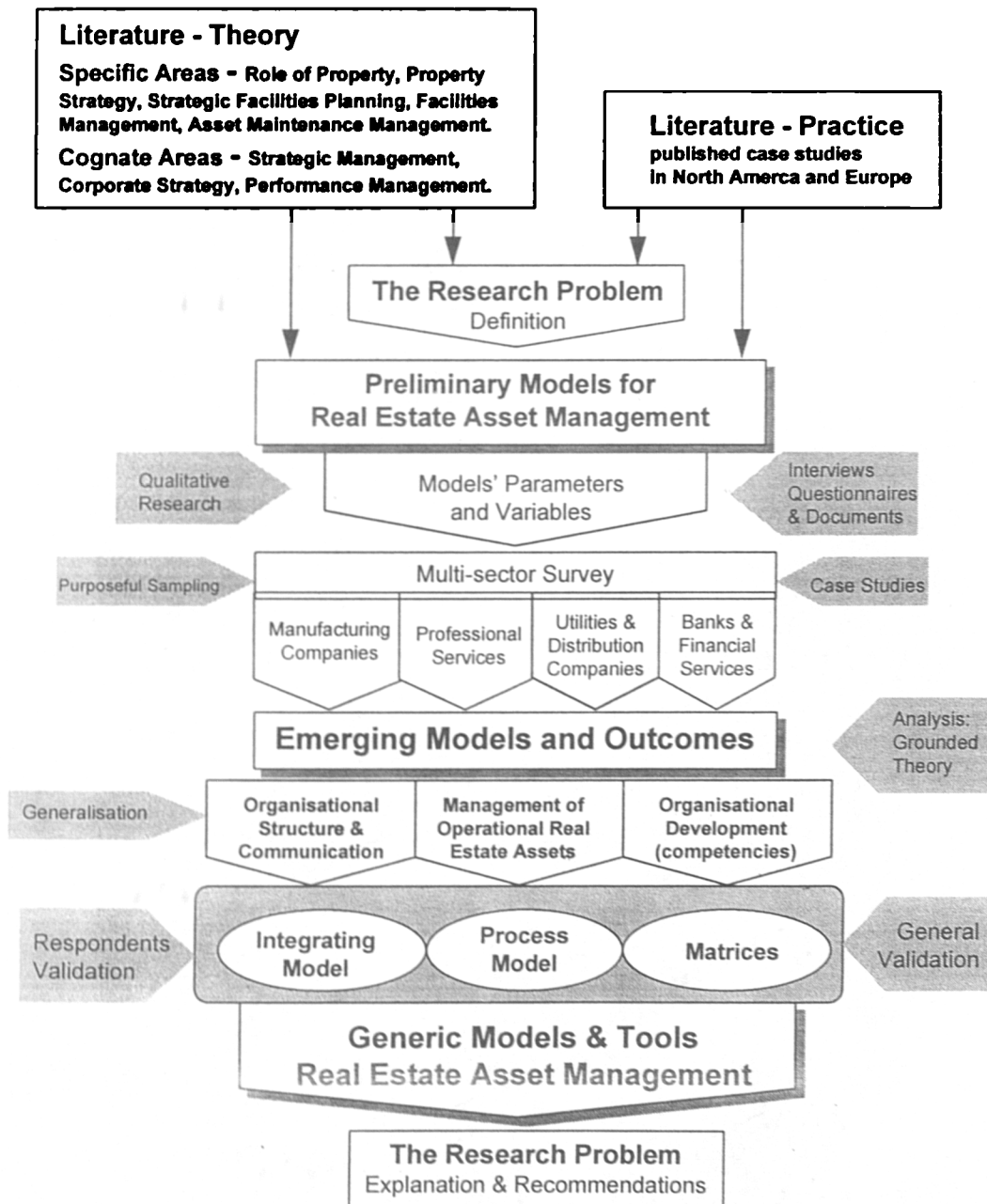
It is within the above parameters that the research framework adopted is designed to achieve a satisfactory outcome to the three research propositions posed in chapter 1.

The scope of *Real Estate Asset Management (REAM)* as defined in the context of this study embraces two principal areas of management of the corporate physical assets: *facilities (real estate) provision* (that is, the provision and management of real estate operational assets to house the core business activities) and *facilities management* (that is, the provision of facilities-related support services required for the proper functioning of the working environment within the corporate real estate portfolio). In the context of this study, the role of REAM in the context of business management, is to ensure the timely supply of appropriate, fully-serviced functional space, as a supporting business resource, to the fulfillment of business objectives. In reality, the practice of REAM is the constant adjustment of the corporate operational real estate asset portfolio to the next steady-state when demand for functional space is temporarily match to existing supply of the appropriate space, measured in terms of amount

and type. It is the conditions and variables that are required to be present in order for this “steady-state” to be achieved that underscored the line of inquiry of this research.

A qualitative approach has been adopted as the principal research method based on case study interviews supplemented by questionnaire surveys in respondent organisations. In short, the research methodology adopted follows a grounded theory approach (Glaser and Strauss, 1967) applied to a multi-sector case studies settings (Yin, 1984). A schematic illustration of the research framework adopted is shown in Figure 5.6.

Figure 5.6: Research Methodology for Current Study



Within the deliberation of this chapter, and using the research methodology framework illustrated in Figure 5.6, the following aspects will be described:

- Identification of the research problem;
- Preliminary theory or model development within the area of REAM;
- The rationale of the multi-sector survey and the use of purposeful sampling in the selection of case study respondents;
- The data collection tools; and
- The data analysis tools

The outcome from data analysis and evaluation of emerging models will be the subject of the following two chapters.

5.5.1 Identification of Research Problem

The derivation of the research problem is the outcome of literature survey conducted in Chapter 2 which comprises two components as shown on the top half of Figure 5.6. The first component provides a review of theoretical aspects of management that directly or indirectly impact on decisions relating to the demand and supply of operational facilities. Subject topics covered within this theoretical review include areas specific to real estate asset management (for example: role of property, building economics, real estate/portfolio management, facilities management, strategic facilities planning, maintenance management), as well as cognate management areas like strategic management, corporate strategy and performance management. The second component provides a 'practice' review of published case studies and interviews of real estate / facilities executives of corporate organisations in North America, Europe and United Kingdom.

The research propositions (Chapter 1) are driven by the need to develop a conceptual framework for modeling the role of operational real estate assets in the business setting. The main line of inquiry of the research is to seek explanations to the "why" and "how" in the area of REAM from empirical evidence.

5.5.2 Theory Development from survey of published literature

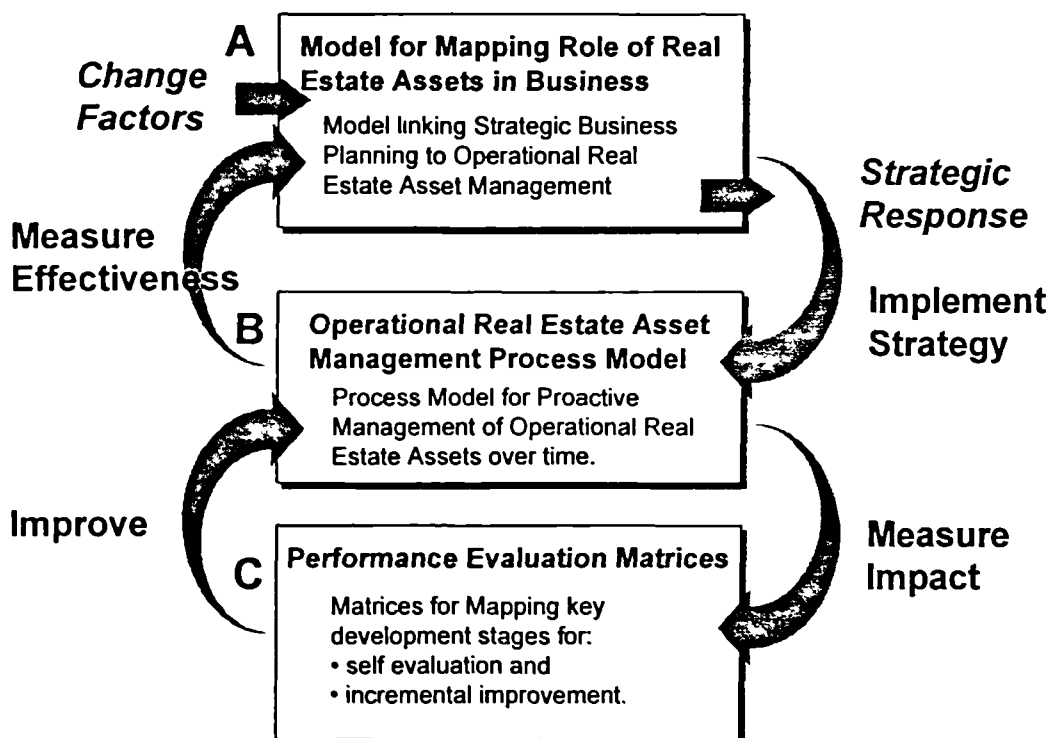
The theoretical framework that resulted from the literature survey is represented in the need for three interrelated conceptual models as shown in Figure 5.7. The focus of the three models represent the outcomes of the 'coding' process of grounded theory procedures from the published empirical evidence:

Model A - for mapping the role of operational real estate assets in business.

Model B - for mapping requirements for a proactive management of operational real estate assets over time.

Model C - matrices for mapping key development stages for organisational development.

Figure 5.7: Relationship between Conceptual Models



The above figure also shows the context of the three conceptual models in terms of their relationships, set against a dynamic business environment that demands the constant adjustments of the operational real estate asset need to meet changing business requirements. Concepts and categories that are apparent from the literature analysis that influence the choice of the conceptual models include:

- Key Business Drivers - financial, economic, technological, emerging

concerns in REAM.

- Key Variables in Process - organisational communication and interfaces, structure, processes, existing competencies.
- Emerging Management Focus - delayering, core/non-core division, procurement - outsourcing, self-managing groups within an organisation.

The focus of the above conceptual models also provides the basis for the design of the data collection instruments, that is the questionnaire and interview pro forma.

5.5.3 Selection of Case Studies Organisations

The research focus on the nature of interactions between senior corporate management and operational asset management dictated access to managers at both levels. The early recognition of the potential problems of access led to a decision to adopt a non probabilistic sampling of respondents. The access constraint and the need for *information-rich* cases for in-depth study led to a thorough evaluation of purposeful sampling strategies put forward by Patton(1990) listed in Table 5.3. In the main, the case studies chosen have resulted from a combination of the following three techniques according to Patton's classification:

Table 5.3: Purposeful Sampling Strategies

Type	Purpose
Purposeful sampling	Selects information-rich cases for in-depth study. Size and specific cases depend on study purpose.
stratified purposeful sampling	Illustrates characteristics of particular subgroups of interest; facilities comparisons
snowball or chain sampling	Identifies cases of interest from people who know people who know people who know what cases are information-rich, that is, good examples for study, good interview subjects.
criterion sampling	Picking all cases that meet some criterion, such as all children abuses in a treatment facility. Quality assurance.

* extracted from Patton(1990) Table 5.5, pp.182-183.

The decision to carry out a multi-dimensional case studies survey across a number of sectors was influenced by evidence from the literature survey that corporate management perceptions of the role of the operational real estate resource can vary considerably according to the type of business

and the environment of the particular business sector. There is also the possibility that by confining the study to a particular sector, not enough cases would be found to validate the results. The decision to extend the study to cover a multi-sectors survey is also influenced by the fact that external validity will be strengthened.

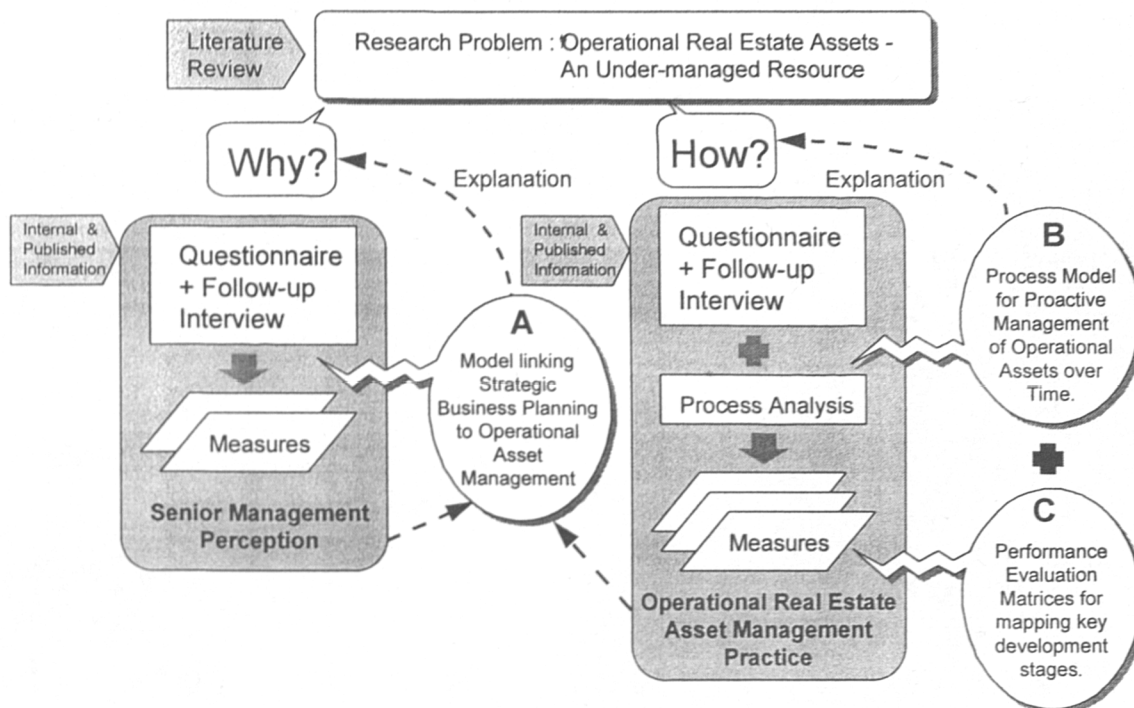
The sample size within each sector was largely determined by the willingness of respondents to provide access, to interviews and completion of the survey questionnaires. A total of twenty-six (N=26) organisations were interviewed over a period of five months. The case studies respondents are grouped under four sectors of industry; namely, banks and financial services (N=11), manufacturing (N=4), professional services (N=7), communications, utilities and distribution services (N=4). In a number of the cases (N=18), access to corporate senior management was not achieved. In such cases, senior management either declined to participate or felt that they could not add to what the real estate or facilities executives had already contributed.

5.5.4 Data Collection Instruments

As discussed elsewhere, it is felt that the best strategy for success in data collection for the chosen area of study is one that combines the flexibility of structured interviews (particularly for senior management) and questionnaires. Empirical evidence is gathered from three principal sources (i.e. published literature, case studies interviews and questionnaires) to generate models that seek to explain the current and emerging trend within the area of REAM.

Figure 5.8 illustrates the use of the data collection instruments in the context of the overall research design and the research problem's focus on "why" and "how". These data collection instruments are applied to each case study organisation. The discussion following will concentrate on the design of the questionnaire and interview pro forma, and the measures chosen to assess the outcome from each case study organisation.

Figure 5.8: Data Collection Instruments and Research Outcomes



5.5.4.1 Design of the Questionnaires and Interview pro forma

The use of a multi-dimensional case studies survey across a number of sectors necessitates that prior review of the consideration of the generality of theory applications as well as, the particular characteristics of the factors influencing a particular sector of the industry. However, the research focus on the role of the operational real estate assets provided a common base for considering the potential diversity of business settings in the way the physical assets are perceived, provided for and managed over time. In this respect the cross sector evaluation strengthens the emerging theoretical models. validity and robustness. Although the primary unit of analysis is the individual case study organisations with a business sector, the secondary unit of analysis are the respondents within each case study organisation, represented by the corporate senior management with overall responsibilities for the real estate resource and the real estate/facilities executives. The strong possibility that the former may not necessarily be sufficiently 'property literate' have strongly influenced the use of semi-structured interviews as a primary data collection tool in conjunction with a separate questionnaire structured for each.

The categories selected for the questionnaires are a direct result of published

literature and interviews and personal knowledge of the researcher. The scope of the area within the realm of Real Estate Asset Management (REAM), as defined by the author, is both diverse and complex embracing a number of traditional and emerging disciplines. The objective of REAM is to provide a common and 'unbounded' platform for considering the operational real estate assets from the business perspective as a *business resource* that warrants a higher strategic consideration that the published literature to date suggests; and not from a narrow professional 'bounded' perspective.

The scope of the research questionnaire covers seven sections:

1. Nature of Business
2. Role of Operational Property Assets
3. Strategic Facilities Planning
4. Current Practice - Management of Operational Property
5. Current Practice - Management of Facilities Support Services
6. Information Systems and Performance Monitoring
7. Future Trends

Each section comprises a combination of open-ended questions, questions with optional answer, and those requiring scoring along a numeric scale. A separate questionnaire was designed for the senior manager and real estate/facilities executive, the main differences being Sections 4 and 5 were omitted in the former. A sample questionnaire for real estate/facilities executive is included as Appendix D. The open-ended questions within the questionnaires also formed the basis of the interview pro forma, a copy of which is also included as Appendix C.

The choice of the seven sections is a derivation of the comprehensive literature review of theory and practice in the field of REAM. The data collected from the questionnaires, together with the interviews' transcript and supporting documents supplied by each case organisation, will form the basis for information required to meet the requirements of the three research propositions stated in Chapter 1. Although, in the main, the outcome of the research will be presented in the form of conceptual models or frameworks, derived from

qualitative data, some quantitative analysis is also incorporated to provide a measure of management perceptions of both senior management and operational asset management. The next section will elaborate on the measures developed to map the perceptions of the role of real estate operational assets and their management by senior management and operational management - i.e. The Strategic Awareness Grid (for corporate senior managers) and the Strategic Readiness Grid (for real estate/facilities executives).

5.5.4.1.1 Meeting the Requirements of Research Proposition I

The conceptualisation of Model A for mapping the role of operational real estate assets in business is driven by research proposition I - that the perceived role of operation real estate assets in the context of the business it is supporting is a key determinant of the quality of interactions between corporate (core business) managers and the real estate/facilities executives. This accounts for the “why” component of the research problem where measures are required to measure the perceptions of the two key stakeholders in the process; namely, the senior corporate manager with overall responsibility for the real estate resource, and the real estate and/or facilities executive who is responsible for the day to day management of the real estate assets and its associated facilities services. This distinction in level of responsibilities for real estate assets is an important consideration as, in many organisations, the role is not necessarily clearly defined or not even a matter of concern of senior management.

The measurement instrument designed to measure management perception is based on a rating process that establish numeric scores for the surveyed organisation both in the present and in the future(say, within 3 years). Each case study respondent is requested to rate their perception on a number of variables categorised under six aspects to reflect his/her attitude about the business in general, and the real estate and facilities support service in particular. The six categories are broadly grouped as: (1) business functions, (2) market challenges (3) real estate and facilities support services, (4) business resources, (5) value variables, and (6) responding strategies in real estate and facilities management. A two-part scoring is incorporated for each of

the variables, for example, under functions, respondents are required to rate *customer service* as a function along a 1(not satisfied) to 9(very satisfied) scale for now(N) and the future(F), as well as how important the function is to the sustained success of the organisation, along a from 1 (low) to 5 (high).

The *Now-Future* format of this survey instrument has been used in other studies; to assess changes in priorities caused by information technology impact on buildings and business organisations;²³ and to measure organisations' management readiness to participant in strategic management in the construction industry.²⁴

Table 5.4 summarises a listing of the six categories, the variables associated with each category and their related measures. A total of 33 variables are represented in Table 5.4. These questions formed only part of the overall research questionnaire.

Table 5.4: Listing of Categories, Variables and Measures

1. Functions and Competencies

<p>With reference to the nature of the business sector you are operating in, please indicate your views on the <i>performance</i> of each of the following functions/competencies in relation to the ongoing success of your company?</p> <p>Indicate your performance rating Now (N) and where you would like to be in the Future F for each function</p>	<p>Indicate how <i>important</i> this function is to the sustained success of your company</p>										
<p style="text-align: center;">not satisfied > < very satisfied</p>	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td>Lo</td> <td colspan="2">Med</td> <td colspan="2">Hi</td> </tr> </table>	1	2	3	4	5	Lo	Med		Hi	
1	2	3	4	5							
Lo	Med		Hi								
<p>Customer service Human resources Marketing/sales Finance Information systems Production Property real estate Support Services - FM Research & Development</p>											

RBIT 2 Study (1985) by Davies, G., Becker, F., Duffy, F., & Sims, W. in Bell, M.A. ORBIT-2 Case Study Results Key implications for corporate facilities planning. Industrial Development, Sept/Oct. 1986. pp.1-5

⁴ Construction Industry Development Agency, (1993) Building Best Practice in the Construction Industry - a practitioner's guide CIDA., pp 48-59.

Table 5.4 contd.

4. Emerging Real Estate and Facilities Support Services Strategies

<p>The following lists some of the emerging real estate and facilities support strategies adopted by companies in response to the external environment and market competitive. Please indicate the relevance of the following strategies to your company. Indicate your rating Now (N) and where you think it will be in the Future(F) for each issue</p>	<p>Indicate your view of the likely adoption of each by your company</p>
<p style="text-align: center;">not relevant > <u>1 2 3 4 5 6 7 8 9</u> < very relevant</p>	<p style="text-align: center;">1 2 3 4 5 Lo Med Hi</p>
<p>Downsizing of corporate organisations. Outsourcing of property services Outsourcing of facilities support services Relocation of a variety of functions to less costly regions Innovative workplace concepts and operating solutions Disposal of surplus properties Major portfolio changes as a result of merger/acquisition Introduction of new technology Increased international activity</p>	

5. Resource Perception

<p>With reference to the nature of the business sector you are operating in, please indicate your views of the following three resources individually. Indicate your rating Now (N) and where you would like to be in the Future(F) for each resource</p>	<p>Indicate the relative importance of the three resources</p>
<p>People</p>	<p>1 2 3 4 5</p>
<p>as one of the factors of production > <u>1 2 3 4 5 6 7 8 9</u> < as the most critical organisational resource</p>	<p>Lo Med Hi</p>
<p>Property</p>	<p>1 2 3 4 5</p>
<p>as a facility for doing business > <u>1 2 3 4 5 6 7 8 9</u> < as an enabling business resource</p>	<p>Lo Med Hi</p>
<p>Technology</p>	<p>1 2 3 4 5</p>
<p>as an aid to improve productivity > <u>1 2 3 4 5 6 7 8 9</u> < as an opportunity to reengineer work processes</p>	<p>Lo Med Hi</p>

Table 5.4 contd.

6. Value Perception

With reference to the nature of the business sector you are operating in, please indicate your view of the following three <i>value variables</i> individually, in the context of property-related evaluations: Indicate your rating Now (N) and where you think it will be in the Future(F) for each value variable		Indicate the <i>relative importance</i> of the three value variables									
Financial (market) Value operational property regarded as wasting assets >		1 2 3 4 5 6 7 8 9			< emphasis on sustaining / enhancing asset market worth		1	2	3	4	5
							Lo	Med	Hi		
Operational (cost) Value Operational property regarded as functional space for production process >		1 2 3 4 5 6 7 8 9			< emphasis on 'fitness for purpose' and adaptability		1	2	3	4	5
							Lo	Med	Hi		
Use (utilisation) Value operational property regarded as fully available resource >		1 2 3 4 5 6 7 8 9			< emphasis on full utilisation		1	2	3	4	5
							Lo	Med	Hi		

The format of the *Now-Future* scaling for categories 5 and 6 above is different from that of the previous four categories in that for each variable, two brief statements are presented as the extremes of a 9-point scoring scale. These statements are indicative of a continuum from traditional-reactive practice (score=1) to strategic-proactive practice (score=9). An illustration of the procedure for completing the *Now-Future* type of questions in the questionnaires is given in Figure 5.9.

Figure 5.9: Completing the *Now-Future* Questions in the Questionnaire

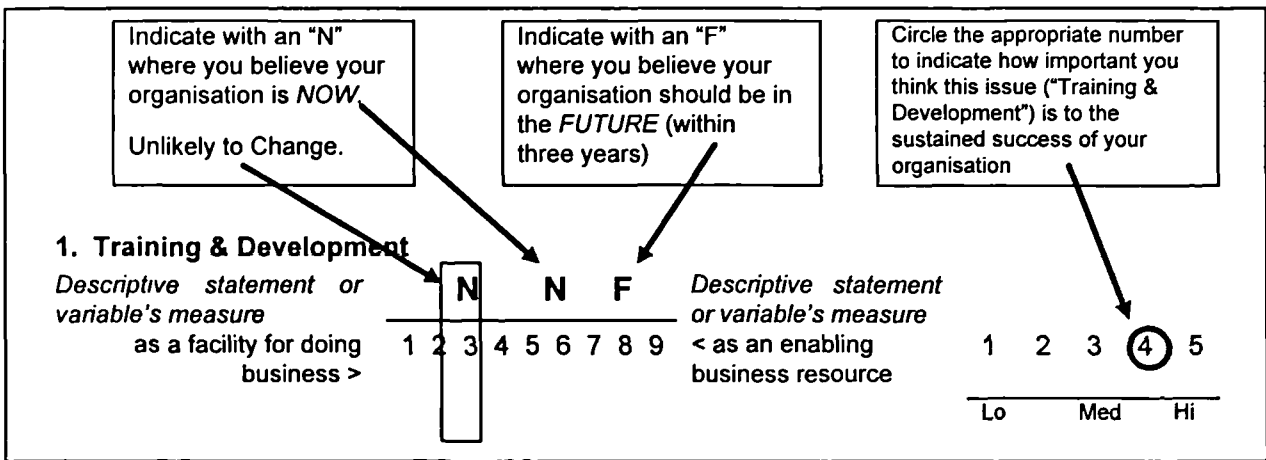


Figure 5.10: Analysing the Results of the *Now-Future* Questions

11. Training & Development

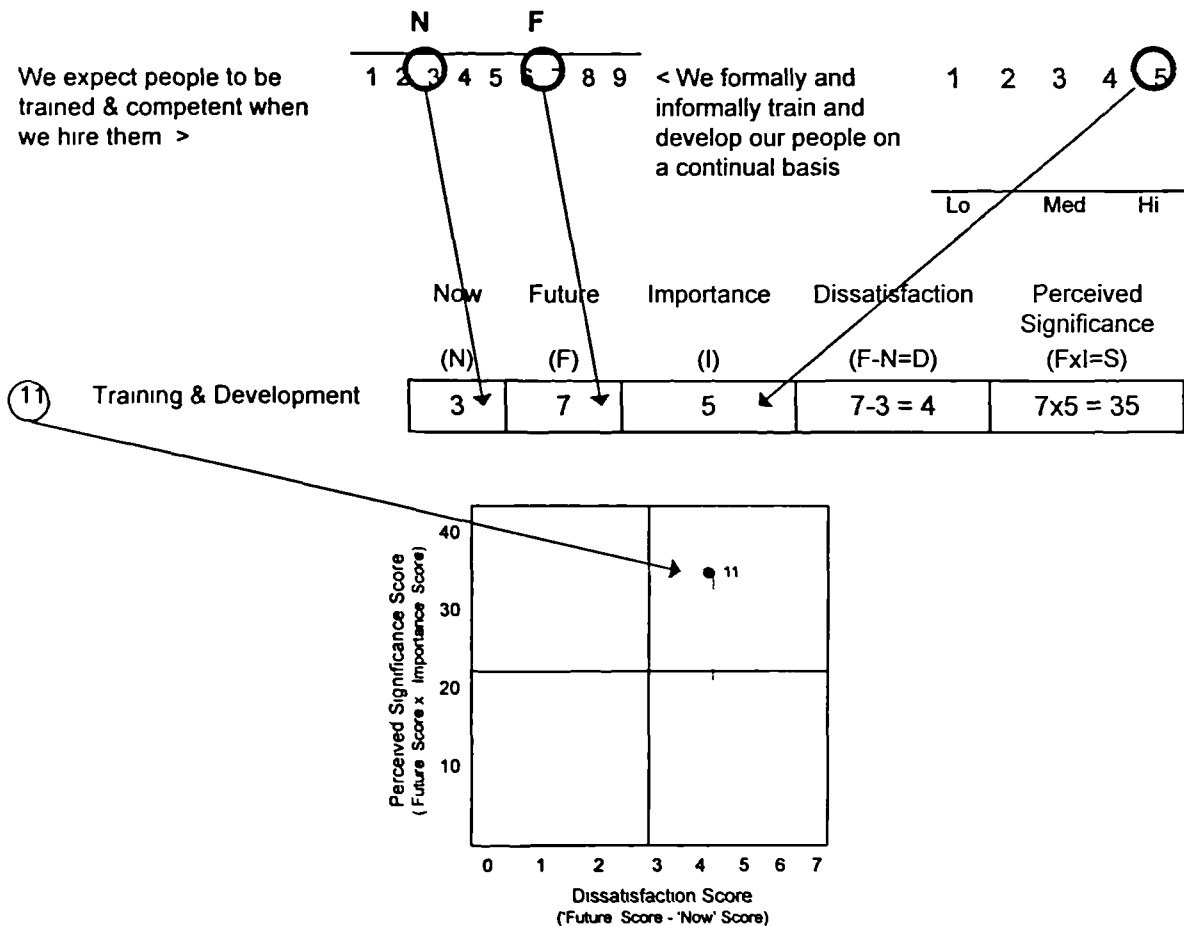


Figure 5.10 illustrates the procedure for collating and calculating the results and plotting the issue on a 'Management Grid'. The grading divide between the quadrant is based on the CIDA(1993) strategic management studies..

Figure 5.11: Senior Management Strategic Awareness Grid

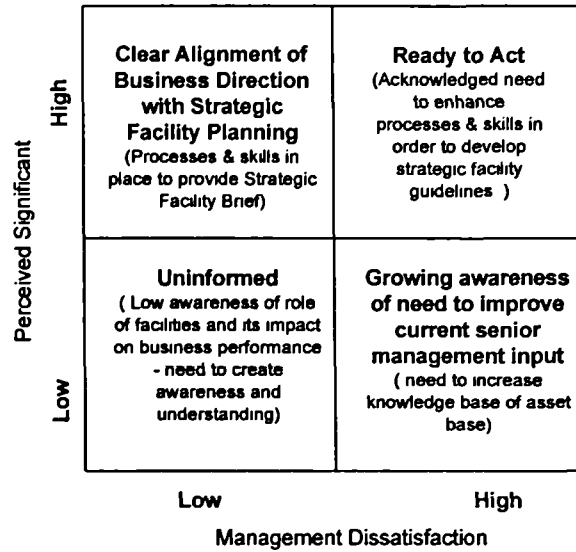
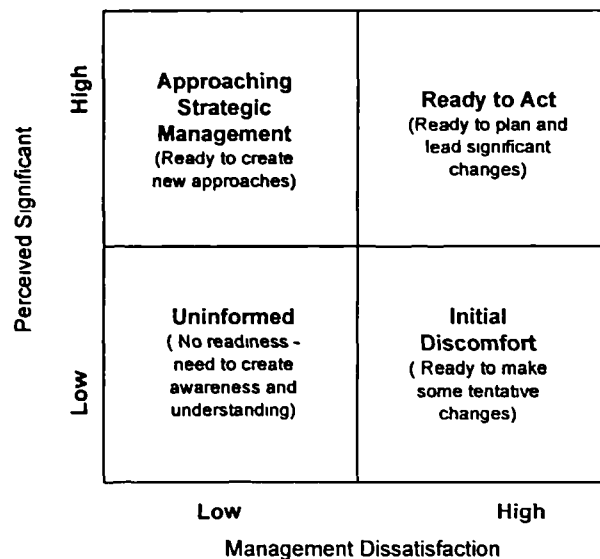


Figure 5.11 above represents the Senior Management *Strategic Awareness Grid*. The scores of the 43 variables listed in Table 5.34 above are plotted on this grid. The clustering of the variables will reveal for each respondent his/her perceptions of the issues. The contents in each of the quadrants of the grid give an indication of the likely perception of the governing 'culture' prevailing in the case study organisation from the senior management point of view. Similarly, the perception of the real estate/facilities manager can be plotted on the *Strategic Readiness Grid*, (Figure 5.12) to give an indication of the likely perception from the operational management point of view.

Figure 5.12: Operational Management Strategic Readiness Grid



The comparison of the results of the two management grids provides a 'snapshot' picture of the existing 'world view' of the case study organisations under investigation. It also provides the much needed information-rich context to understanding the cultural factors and financial constraints which influence the current perceptions of the key stakeholders which will be ultimately reflected in condition of the real estate assets and the service delivery. A more detailed discussion will be provided in the data analysis chapter.

The theory development for Model A will build on the above quantitative evaluations outcome and draws on empirical evidence from published interviews and the case studies data from the interviews and questionnaires. The model development will concentrate on explaining the context of the emerging role of operational real estate assets in the various business settings and how interactions between the two key stakeholders in the processes can be more effectively bridged.

5.5.4.1.2 Meeting the Requirements of Research Proposition II

The conceptualisation of Model B for mapping the basis of a process model for REAM is driven by research proposition II - that a process model for the proactive management of operational real estate assets and their associated facilities support services can be evolved with the emphasis on management over time. This accounts for one of the "how" components of the research problem as illustrated in Figure 5.8 (pp. 258)

The theory development for the proactive model is based on the conceptual coding procedures of grounded theory applied to qualitative data from the comprehensive literature survey and case studies organisations. The emphasis at this stage builds on the conceptual understanding of research proposition I which sets the constraints upon which REAM must operate within, and the crucial communication links that must be maintained or developed, in order to continuously align its operational real estate strategies and actions to the corporate goals.

The process model builds upon the concepts of Strategic Facilities Brief and Service Levels Brief as the bridging mechanism to formalise interactions

between the strategic business planning process at the core business levels and the facilities provision/facilities management processes at the delivery end. At Model B level of conceptualisation, the focus will be on the conceptual construct of REAM in terms of its components and their interrelationships. Given the dynamic business environment and the inherent relative inflexibility of the physical building as an end product, the process model for proactive management of the operational real estate assets will emphasise on management of the physical resource *over time*.

5.5.4.1.3 Meeting the Requirements of Research Proposition III

The conceptualisation of Model C is based on a distillation of best practice knowledge from both the literature survey of theory and practice, and case studies data on selected aspects of REAM. The motivation is driven by research proposition III - that a practice of operational real estate assets and their facilities services delivery can be mapped as an evolving developmental process management model that seeks to integrate the demands arising from strategic business decisions to the delivery of functional, fully serviced operational facilities, in order to achieve corporate goals. This accounts for the remaining "how" components of the research problem as illustrated in Figure 5.8.

The data requirements to fulfill evaluations for research proposition III will be derived from the literature survey and case studies data. The theory development is based on the conceptual coding procedures of grounded theory in the development of matrices to fulfill the following objectives:

1. to explain the relationships between key stakeholders in the development cycle inherent within REAM,
2. to define the scope of REAM in terms of essential competence sets, and
3. to provide a series of matrices for organisations to map a management developmental path aimed at focused continuous improvement.

5.5.4.2 Piloting of the Questionnaire and Modifications

The trial run-through to test the research design instruments of questionnaires

and interview pro forma was considered important in that the success or failure of the study relies on the successful completion of the questionnaires and respondents' willingness to be interviewed. Piloting is necessary as it is very difficult to predict how respondents will interpret and react to questions. Conducting a pilot trial-run before the main survey allows any potential problems in the pro forma of the questionnaire to be identified and corrected. Piloting also provides the researcher the opportunity to refine and develop the interviewing and social skills and highlight any possible sources of interviewer bias.

Introduction to potential case study respondents was by direct contact via telephone or a letter of introduction, or via third party initial introduction. In each of the cases, a research brief was sent to the potential respondent for consideration prior to agreeing to be a case study subject. The research brief outline the objectives of the study, the research propositions, the involvement and anticipated outcomes of the study. Confidentiality in the data and information given by respondents was given in writing. In terms of feedback to respondents, a validation-feedback workshop was conducted and a summary report of the study to be sent to each participating organisation.

The research design adopted relies on the commitments of responding organisations to provide information in fair detail on the nature of their business(es), in general, and how operational real estate assets are managed on an ongoing basis, in particular. The process of identifying the appropriate key personnel within each organisation represents a particular challenge in that the tasks of *facilities provision* and *facilities service management*²⁵ are often not obvious from the organisation chart and job titles, and may be separate divisions or departments. The scope of REAM²⁶ also necessitated a considerable coverage of subject matter that potentially spans across professional divisions or departments.

Separate questionnaires were designed for each of the sectors, but in the main, they share common sections. Table 5.4 lists the areas of data collection that

²⁵ ,Refer to Definition of Terms, pp.33

²⁶ , Refer to Chapter 1, pp. 7 and Chapter 2, pp.134..

each case study respondents are requested to respond to. The size of the resulting questionnaire was a source of concerns and the pilot trail-run was seen as a critical test.

Table 5.5: Case Study - Principal Areas of Data Collection

1.	<p>Organisation Structure (critical linkages)</p> <ul style="list-style-type: none"> • positioning of technical services departments within overall organisation set-up (perceived corporate role) • who is responsible for the corporate asset mandate ? • is current skills base adequate ?
2.	<p>Role of Built Assets (perception)</p> <ul style="list-style-type: none"> • corporate(board) perception • senior management(administrative) perception • technical(professional) staff perception
3	<p>Systems and Procedures (organisational efficiency)</p> <ul style="list-style-type: none"> • Assessment of portfolio requirements(stock level / asset base demand assessment) • Assessment of built asset maintenance and renewal demands based on criticality and standard of care specifications. (Life-cycle management based on asset level (component) demand assessment) • Quantification of asset management and maintenance demand and prioritisation (forecasting, costing and prioritising) • Procurement of asset management and maintenance demand (sourcing and procurement evaluation)
4	<p>Monitoring Performance</p> <ul style="list-style-type: none"> • Basics of measurement of real estate asset performance (value for money in terms of fitness-for-purpose, component life span, utilisation factor, etc.) • Basics of measurement of real estate asset management performance (value for money in terms of organisation effectiveness i.e process and organisational audits)
5	<p>Information Support</p> <ul style="list-style-type: none"> • Evidence of comprehensive asset register and reliability • Evidence of IT sophistication in data capture and data handling • Evidence of customised reporting at operational, managerial and strategic levels • Evidence of customised trend/ feedback analysis • Forecasting and simulation to aid decision making - strategic direction (balance between reactive and planned, in-house provision v outsourced) and priorities (competing demands).

5.5.4.2.1 Interviews

The primary purpose of the adopting the interview as a primary source of data collection in the case study survey is to understand the meanings and contexts of issues and situations in the respondent's organisation that help to explain their perception of the role operational real estate resource. For the one-to-one interview, Burgess(1982)²⁷ aptly commented that " (the interview) is ... the opportunity for the researcher to probe deeply to uncover new clues open up

* Burges, R G (1982) Field Research: A source book and field manual. Allen & Unwin. pp.107

new dimensions of a problem and to secure vivid, accurate inclusive accounts that are based on personal experience". Easterby-Smith, et al (1991)²⁸ added that researchers must be able to conduct interviews so that the opportunity is present for the respondent's insight to be gained. To do this the researcher will need to be sensitive enough, and skilled enough, to ensure that he/she not only understands the other person's views but also, at times, assists individuals to explore their beliefs.

The last point is particularly pertinent for this study as the respondents sought from the case study organisations are senior staff with vast experience and holding responsible positions. In this respect the credibility of the researcher in the area of study is considered as an important factor in securing a favourable response from potential respondents.

Table 5.6: Key Questions for Senior Management

<ol style="list-style-type: none">1 What are your core business activities ?<ul style="list-style-type: none">• Size of market share in your business sector• Current trend and strategic direction - stagnant/ growth/ decline2 What are your key business resource ?<ul style="list-style-type: none">• list and rank relative importance and criticality (i.e. people / property / technology, etc.)• explain role of physical resource - operational property and facilities support services• do you have a strategic facilities plan ? (what are the key components & parameters)3 Process - how do you assess demand in terms of:<ul style="list-style-type: none">• facilities (operational property) requirement for your business,• facilities management services (level and changes).• procurement policy/strategy.4 How do you measure performance / assess value for money ?<ul style="list-style-type: none">• operational property (measures & matrices used)• facilities services (measures & matrices used)• Is the quality of operational property management and facilities management regarded as a competitive advantage ?5 Are you satisfied with the level of management information you are currently receiving on operational property and fm services.<ul style="list-style-type: none">• Describe current system & deficiencies.6 What improvements would you like to see ?<ul style="list-style-type: none">• structure (organisational positioning and influence)• process (delivery, monitoring and control)• competence (skills deficiencies, training needs).7 Do you see the need for further integration of real estate / facilities support services input to strategic business planning?<ul style="list-style-type: none">• Why ?• What are the barriers you are likely to encounter ?• How can they (barriers) be overcome ?
--

⁸Easterby-Smith, M., Thorpe, R., Lowe, A. (1991) Management Research - an introduction. Sage Publications pp. 73 74

As mentioned earlier, the open-ended questions within the questionnaire r serves as the basis of the interview with respondents. The strategy adopted in data collection was to send the questionnaire to the identified respondents in advance of a schedule in the hope that the optional and scaling type questions would be completed at the time of the interview. However, in practice, for a number of the case study organisations, this did not happened. To meet this contingency, a pro forma was also prepared in advanced. The contents of the pro forma for the corporate senior manager and the real estate/facilities executives are listed in Tables 5.7 and 5.8.

Table 5.7: Key Questions for Real Estate / Facilities Executives

<ol style="list-style-type: none">1 What is your role ?<ul style="list-style-type: none">• Please outline organisational setup and your role within it.• Who do you report to ?• How are you positioned within your organisation ?2 Are you satisfied with the level of interaction with senior management in respect: of:<ul style="list-style-type: none">• real estate(operational property) issues and/or• facilities management issues ? Why?• does your organisation have a strategic facilities plan ? (what are the key components & parameters)3 Process - how do you assess demand in terms of:<ul style="list-style-type: none">• facilities (operational property) requirement for your business,• facilities management services (level and changes).• procurement policy/strategy.4 How do you measure performance ?<ul style="list-style-type: none">• of operational property (measures & matrices used)• of facilities services (measures & matrices used)• Is the quality of operational property management and facilities management regarded as a competitive advantage ?• Describe current information system & deficiencies.5 What improvements would you like to see ?<ul style="list-style-type: none">• structure (organisational positioning and influence)• process (delivery, monitoring and control)• competence (skills deficiencies, training needs).6 Do you see the need for further integration of real estate / facilities support services input to strategic business planning?<ul style="list-style-type: none">• Why ?• What are the barriers you are likely to encounter ?• How can they (barriers) be overcome ?
--

The above interview pro forma was piloted with three case study organisations from three different sectors and found to be suitable. Because of the differences in the nature of the business, for example between manufacturing and financial

services, some of the variables listed in Table 5.4 above are not relevant for one sector compared to another. The emphasis on twenty-four hours working also meant that the degree of criticality of some support services are more pressing for manufacturing than for say, banks. On average, the interview duration varies from one to two hours.

5.5.4.2.2 Questionnaire

A major requirement in designing a questionnaire for data collection is the ability to structure, phrase the questions and ask sets of questions in a manner that is intelligible to the respondents. Such questions must be driven by the focus of the subject being investigated and yet, must minimise bias, and provide data that can be analysed to fulfill the research objectives. Gill and Johnson (1991)²⁹ suggest that it is important to consider four interrelated issues in questionnaire design: questionnaire focus; question phraseology, the form of response, and question sequencing and presentation.

In piloting the questionnaires, these issues were taken into consideration and alterations and amendments made whenever necessary. On the whole, it was found that the questionnaire for the manufacturing sector needed the most 'tailoring' because of the operational demands of the production processes. A sample copy of the questionnaires are included in the Appendix.

5.5.5 Validation of Research Outcomes

Concepts are the basis of analysis in grounded theory research. In this respect all grounded theory procedures are aimed at identifying, developing, and relating concepts. Glaser and Strauss (1967) raised doubts that criteria of judgement in qualitative research should not be based solely on canons derived from quantitative research paradigm. They suggested that criteria on judgement be based instead on the detailed elements of the actual strategies used to collecting, coding, analysing, and presenting data when generating theory, and on the way in which people read the theory.³⁰

² Gill, J. & Johnson, P. *Research Methods for Managers*. Paul Chapman Publishing Ltd. pp84-85.

³⁰ Glaser, G. & Strauss L.A. (1967) *The Discovery of Grounded Theory: strategies for qualitative research*. Aldine Publishing Co. NY. pp.224.

The research focus of this study has been to develop theories or models to explain the emerging strategic role of the real estate resource in the context of prudent business management. In this respect, the presentation of the models have been deliberately more diagrammatic than in prose. One of the reasons for taking this approach was that an early decision was made to use a workshop presentation as a means of validating the models derived from the study. The participants of the workshop will be drawn from a combination of representatives from respondents' organisation and experts in the field of real estate and facilities management - that is consultants and practitioners.

5.6 Summary

This chapter has provided a 'road map' against which a number of the methodological issues raised in Chapter 4 are resolved. The proposed research design adopts a research stance that is qualitatively inclined in paradigm with an emphasis on theory or model generation based on recognised procedures of grounded theory. A case study survey based on purposeful sampling is adopted using interviews and questionnaires as the primary instruments for data collection, supplemented by secondary data from respondents. The chapter also describes how the requirements of the research propositions will be made in terms of support data and analysis tools. The next chapter will concentrate on the fieldwork and data analysis from the case studies as the basis for evaluation against the preliminary models developed in Chapter 3.

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6. Data Analysis and Emerging Models

6.1 Introduction

The previous chapter detailed the methods by which the research was conducted in order to validate the preliminary models and frameworks derived in Chapter 3. The research methodology framework and the relationships of the conceptual models governing the research study were described in the last chapter and summarised in Figure 5.6 (pp. 246) and Figure 5.7 (pp. 248).

This chapter reports on the findings from the investigation of the case study organisations in four different sectors. A total of twenty-six(26) organisations participated in the case study investigation. Access to respondent organisations varies from interviews only, to interviews and completion of questionnaires by both senior management and operational management representatives. Table 6.1 lists the case study respondents, the extent of access to both senior management and operational management, and workshop participation.

The programme of data collection extended over a period from March to July 1996 covering a geographical spread of Scotland, England and Ireland. As described in the last chapter (Section 5.5.3 and 5.5.4, pp.250-251), the potential problem of access to senior management was recognised at the outset and had influenced the use of purposeful sampling in identifying potential respondents. Also, the decision to include a multi-sector survey was influenced by evidence from the literature survey which suggests that corporate management perceptions of the role of the operational assets can vary considerably according to the type of business, and the environment of the particular business sector.

Potential respondents were initially contacted either by post or telephone, followed by a cover letter and a copy of the research brief outlining the objectives of the research and the nature of participating - a copy of which is included as Appendix B. In response to a positive expression of participation, contact was then established with the responding organisation and date(s) of meetings arranged with appropriately identified representatives from senior

management and operational asset management. In most cases, the property and/or facilities department provided the initial point of contact.

Table 6.1: Case Study Respondents and Workshop Participants

SM = Senior Management, OAM = Operational Asset Management, Int.= Interview only

Participating Organisations	Case Study	Workshop Participant
Banks and Financial Services (N=11)		
BK1 (Bank)	SM & OAM	
BK2 (Bank)	OAM	
BK3 (Bank)	Int. - OAM	
BK4 (Bank)	Int. - OAM	
BK5 (Building Society)	Int. - OAM	
FS1 (Financial Services)	Int. - OAM	
FS2 (Financial Services)	OAM	Senior Engineer
FS3 (Financial Services)	SM & OAM	
FS4 (Financial Services)	Int. - OAM	
FS5 (Investment)	SM & OAM	
FS6 (Financial Services)	SM & OAM	
Professional Services - Offices (N=7)		
PS1 (Accountancy / Management Services)	SM & OAM	
PS2 (Research & Marketing)	OAM	
PS3 (Administration & Sales)	OAM	
PS4 (Administration & Sales)	OAM	
PS 5 (Administration & Research)	SM & OAM	Property & Office Services Manager
PS6 (Research & Training)	Int. - OAM	
PS7 (Accountancy / Management Services)	OAM	
Manufacturing Sector (N=4)		
M1 (Pharmaceutical)	SM & OAM	Senior Engineer
M2 (Electronic)	SM & OAM	Facilities Manager
M3 (Aircraft Components)	OAM	Manager, Facilities Engineering
M4 (Light Fittings)	OAM	
Utilities/Distribution Companies (N=4)		
C1 (Telecommunication)	OAM	Zone Portfolio Manager, Scotland
C2 (Telecommunication)	OAM	Director of Property/Facilities, Property & Operations Manager
C3 (Delivery/Distribution Services)	OAM	Director of Facilities
C4 (Utilities)	Int. - OAM	
Total N = 26		N = 6 (+ 3 postal)

Some of the constraints encountered during the data collection phase included the following:

- The expense of travelling and accommodation costs as the majority of interviews were in the London area.
- Last minute cancellation of arranged meetings with senior managers.
- Delay and non-completion of questionnaires, especially from senior managers - questionnaire seen as too long, covering too much details.

The findings of the data analysis and discussions are presented in four parts:

- A. Summaries of case studies by organisation and by sector of industry.
- B. Implications of findings on preliminary models and frameworks.
- C. Summaries of emerging knowledge base in the form of matrices as an organisational management development tool.
- D. Results from workshop and extended postal validation of models and frameworks.

Details of the case studies' data and analysis are provided in an Appendix volume to the main thesis.

6.2 Data Analysis and Findings - case studies

The strategy adopted for data collection was a combination of structured interviews, questionnaires and published information on the respondent organisations. Each case study organisation was investigated and analysed against the models and frameworks generated within the theory development chapter (i.e. Chapter 3). The basis of analysis and generation of the models and frameworks have been a combination of systems approaches and qualitative modeling guided by the principles of grounded theory, covered in Chapter 4(Section 4.5 - 4.6, pp.213-216) and Chapter 5(Section 5.4.1-2, pp.239-241). The analysis process is regarded as a continuous iterative one with the intention of incorporating key organisational variables that influence the practice of REAM in organisations.

6.2.1 Framework of Analysis for Case Study Organisations

For the purpose of this study, three measures were chosen for assessing the practice of REAM within an organisation: *structure* - organisational setup and

attitudes, *processes* - systems and procedures, and *competencies* - skills base (refer to Chapter 3, 3.2.2, pp.168-171). The choice of the organisational variables were driven by the need to measure how organisations respond to managing their operational real estate assets as a business resource.

Table 6.2: Principal Areas of Data Collection - Case Study Organisations

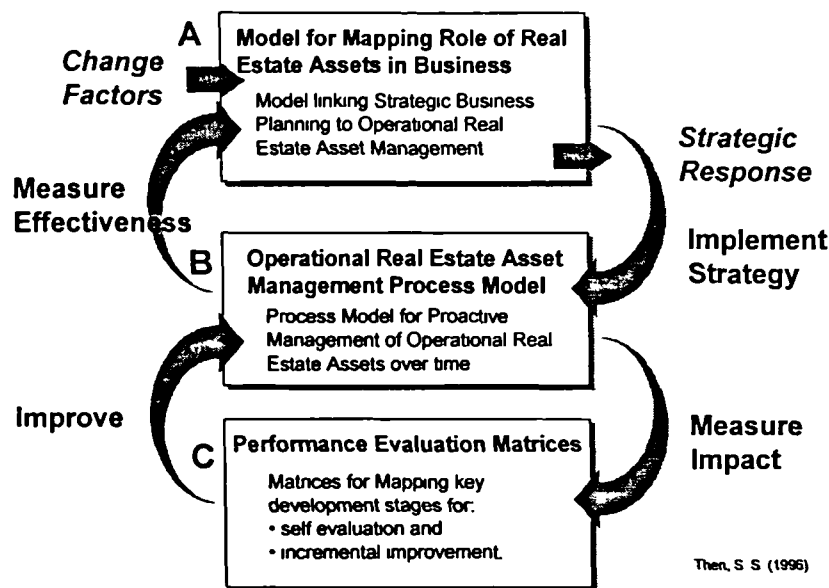
Organisational Variables	Data Elements
<p>STRUCTURE</p> <p>Measures:</p> <ul style="list-style-type: none"> • Positioning of RE/FM role • Strategic Awareness • Strategic Readiness 	<ol style="list-style-type: none"> 1. Organisation Structure (critical linkages) <ul style="list-style-type: none"> • positioning of real estate/facilities service department within overall organisation set-up (strategic awareness) • who is responsible for the corporate asset mandate ? 2. Role of Operational Assets (current perceptions) <ul style="list-style-type: none"> • corporate perception (board level) • senior management perception(business units) • operational staff perception(service provider) • degree and level of interactions between parties
<p>PROCESSES</p> <p>Measures:</p> <ul style="list-style-type: none"> • Nature & extent of dialogue between business planning and facilities planning • Performance management 	<ol style="list-style-type: none"> 3. Systems and Procedures (current practices) <ul style="list-style-type: none"> • assessment of portfolio requirements (demand forecasting) • assessment of asset maintenance & renewal demand (life-cycle management) • costing and budgetary practices • procurement strategies 4. Performance Monitoring <ul style="list-style-type: none"> • assets' performance (physical, functional and financial) • asset management performance (process effectiveness)
<p>COMPETENCIES</p> <p>Measures:</p> <ul style="list-style-type: none"> • Quality of asset information • Level of evaluation 	<ol style="list-style-type: none"> 5. Information Support (knowledge base) <ul style="list-style-type: none"> • current in-house skills base • evidence of comprehensive asset register and reliability • evidence of information management - data capture, analysis and reporting at operational, managerial and strategic levels, • ability to forecast and conduct scenario simulation to aid decision-making, level of strategic evaluation.

Table 6.2 summarised the principal areas of data collection in relation to the chosen organisational variables, and the measures that are used to assess the current practice in REAM in the case study organisations.

For each of the case study organisations, the data collected from the interviews and completed questionnaires were transcribed onto a spreadsheet. Whenever possible, the results are presented in a chart form. Because of the vast amount of data collected, only the salient features relating to the above measures will be summarised. It is the emerging trend of organisational response to the management of the operational real estate asset base that is the focus of the

case studies investigations and the factors contributing the responses that contribute to the model development of REAM.

The analysis of three organisational variables of *structure*, *processes* and *competencies* should be viewed within the context of the three research propositions stated in Chapter 1 (Section 1.4, pp.8-10); the discussions in meeting the requirements of the research propositions (Chapter 5.5.4.1.1-3, pp.253-263), and the relationship between the conceptual models shown in Figure 5.7 (Chapter 5, pp. 248). For convenience of reference, the figure is repeated below.



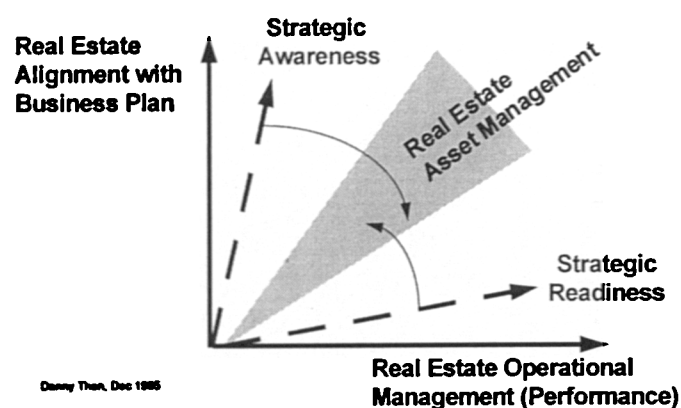
This section reports on the results of analyses of the case studies in terms of the organisational variable - *structure*. The next section (6.3) will consider the findings relating to the *processes* variable from the case studies in terms of their impact on the preliminary process models. Section 6.4 following, will incorporate the findings of the *competencies* variable in the development of the REAM developmental matrices.

Two measures are chosen to assess the perception of the role of the operational real estate assets by senior management and operational (property) management staff in each case study organisation:

- *strategic awareness* of senior management to the role of the corporate operational property as a business resource; and
- *strategic readiness* of operational (property) management staff to move from a traditional functional 'technical challenge' view to contributing at the strategic level in facilities planning in collaboration with senior management.

The current positioning of the real estate/facilities department within the organisation hierarchy is taken as one indicator of corporate perception of the role of the real estate/facilities function within the organisation. The placement of senior management's perception within the *Strategic Awareness Grid*, and the corresponding placement of the operational asset management within the *Strategic Readiness Grid*; should provide further clues to current attitudes to the perceived role of the real estate resource within the organisation concerned (Refer to Chapter 5, 5.5.4.1.1, pp.253-260).

Figure 6.1: Strategic Awareness and Strategic Readiness as Indicators of Perceptions



The variables chosen to measure the degree of *strategic awareness* and *strategic readiness* are indicative of not only current perceptions, but also future expectations (as defined by the prevailing organisation's culture) which are likely to influence the practice of operational asset management. Figure 6.1 illustrates the need for convergence in order that an informed interface can occur within REAM.

The qualitative statements within each quadrant of the Strategic Management Grids (refer to Chapter 5, Figures 5.11-12, pp.259) are chosen to reflect and capture the main attributes pertaining to a level of sophistication in the practice of REAM.

This section uses some of the case studies' data to demonstrate the use of, and test the validity of, the above measures. The data sheets for a sample of the case studies are included in the Appendix G.

In terms of analysis by sector of the industry which the individual case study organisation belongs, the findings will concentrate of providing summaries

relating to factors which may be unique to the particular sector. Hence, for each of the industry sector summaries, the following key factors will be analysed:

- Nature of business environment - volatility & susceptibility to change in market and/or core processes.
- Existing planning and managing constraints - access to business information, quality of existing information of real estate assets & facilities services and performance monitoring.
- Responding Facilities Strategies - expand, consolidate or contract and measures taken to effect change; e.g. improve information base, improve skills base, take advantage of external supply sources, introduce internal market, shift to service culture, etc..

6.2.2 Examples of Analyses of Individual Case Study Organisation and Sector Summary

6.2.2.1 Introduction:

For reasons of confidentiality, some of the respondent organisations have requested that the data sheets for their organisation be excluded from the thesis. As a result only some of the data sheets and or summaries accompanying each case study organisation are included in Appendix G. Whenever possible, the data collected from the questionnaires and/or interviews from each respondent organisation were abstracted into a spreadsheet for easy presentation and analysis. Because of the volume of data collected, this section only uses *some* of the case studies' data to illustrate the results of the attitudes survey on a range of business and operational assets-related variables, and to illustrate the methodology and use of *the strategic awareness grid* and *the strategic readiness grid*, as potential measures of the prevailing organisation culture influencing the practice of REAM.

The format of presentation of the case studies' summaries is in a tabulated form under the following headings:

- *Organisational Profile*: nature of business, products/services, size of operational property portfolio, number of employees, estimated turnover, etc.
- *Organisation Structure*: organisation chart and positioning of real estate/facilities department/division.
- *Real Estate / Facilities Systems / Processes*: main features, key estate/facilities challenges and supporting strategies, etc.

6.2.2.2 An Example from the Banking and Financial Services Sector

Brief of Case Study Organisation BK1:

This is a banking and financial services company with the largest branch banking network operating in Northern Ireland. It is a subsidiary company of an Australian banking group.

The case study data comprised of interviews and completed questionnaires from a senior management respondent (represented by the Head of Management Services) and a respondent from the operational asset management level (represented by the Property Manager).

The data sheets for case study organisation BK1 is included in Appendix G.

Author's Comments:

This is a good example of an organisation which is operating in a sector that has seen considerable changes in the last five years. Two external forces impact considerably on the nature of the business:

1. Deregulation of financial and banking services which led to increased competition and new entries to the traditional market.
2. The impact of information technology which led to the development of new ways of delivery and interaction to customers.

The combined effect of the above factors had the impact of causing a major review of the operational resource base (people, property and technology) in terms of how they will need to be reconfigured to supporting the changing demands placed on the business in the near future and beyond. The management of the operational real estate portfolio is seen as a critical component in this realignment of the business.

The analysis of this case study revealed a situation in which the threats of increased competition is recognised with clear exhortation from the parent company. At the same time, the implications on the existing operational portfolio is not clearly understood at the core business level.

"Currently, there is an understanding gap leading to a disconnection between property considerations and corporate planning." Head of Management Services

At the operational asset management level, there are signs of impatience of not being able to provide a more proactive response, progress being hampered by a the lack of strategic guidelines.

"The organisation will have to come to grip with the reality of property as assets. From the shareholders' view, property is a small percentage of the balance sheet, but high in terms of fixed assets. Buildings have to be managed as long-term assets and have to be able to adapt to new operational requirements. The property and facilities services approach will change considerably in the next few years, driven by a corporate desire to reduce operating costs, maximise occupational flexibility, and the new to meet new regulations and legislation. Issues of current and future concerns indicate the necessity of this change."

Property Manager

Case Study Organisation : BK1

Nature of Business and Organisation Profile:

Core Business: Full range of personal and business banking products and services.
 Aggressively developing investment related products in the last five years.
Personal Banking - insurance and investment services
Business Banking - factoring and leasing.

Organisation Structure and Positioning of RE/FM Function:

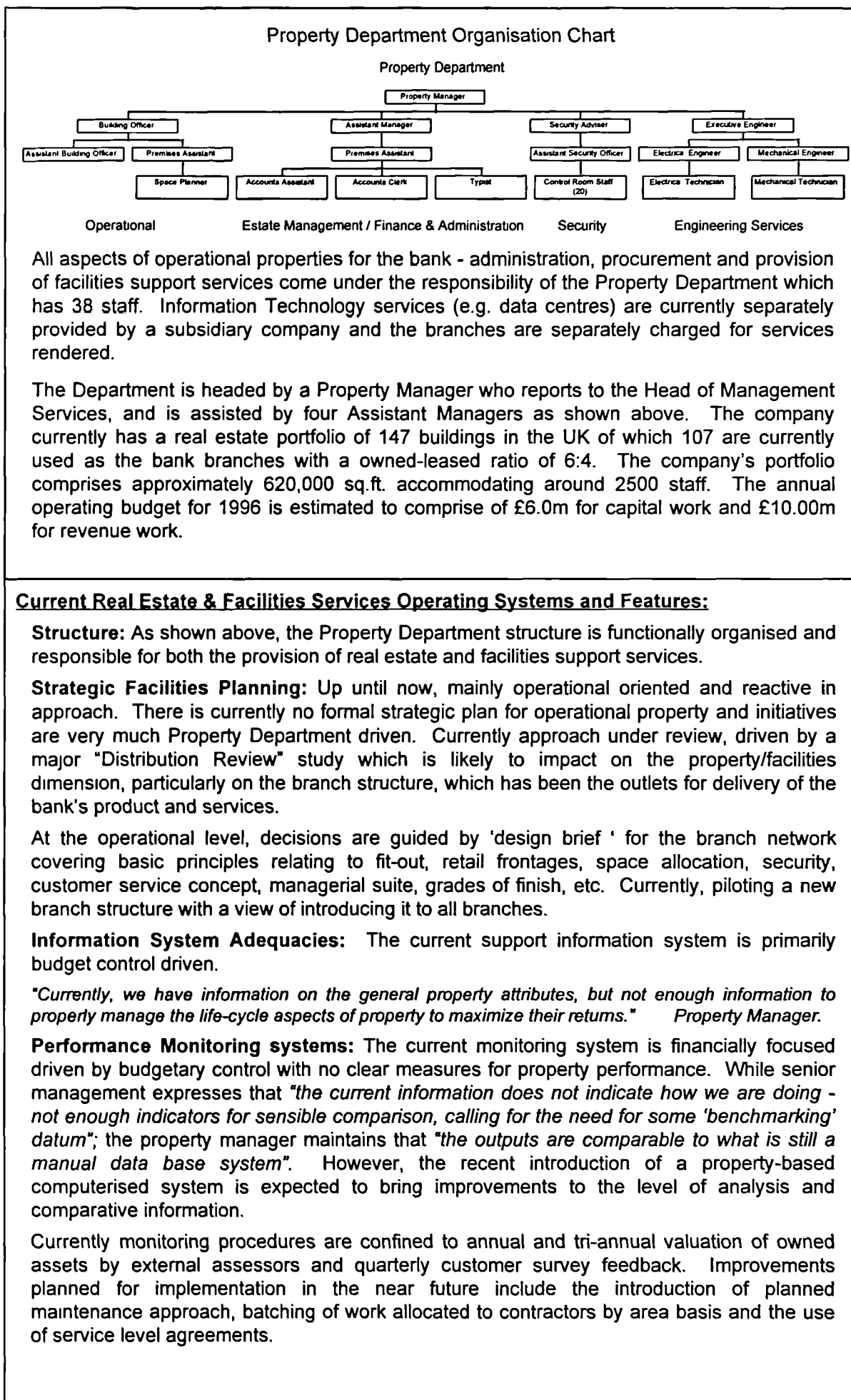


In terms of positioning within the corporate organisation structure, the range of property services is the direct executive responsibility of the Head of Management Services, represented at a second tier of the corporate structure. The operational arm of property services comes under the Property Department.

Whilst the representation of property matters are at the heart of the corporate structure, it is the level of influence its role can contribute to the business processes that matters. The following comments reflect the current senior management consensus:

"Property is generally misunderstood by senior management - seen as simplistic. No appreciation of the asset management aspects, that they cost money to maintain them and should be properly managed just like any other business resources. Issues usually considered as an afterthought after key business decisions are made. ... They is a need to promote property life-cycle management."
Head of Management Services

"The perception of the property division (by senior management) is that of a cost centre that delivers little or no benefit - a necessary evil." *Property Manager.*



Analyses and Results of Attitudes Survey:

The results from this part of the survey is an attempt to quantify the perceptions of the respondents from both levels of management in order to seek explanations on the perceived role of the operational assets within a business management context. In this respect, property-related variables are embedded within a range of other business variables - a total of more than 43 variables are included within the questionnaire to respondents.

The analyses conducted are grouped under responses to six aspects:

1. Key Business Resources - impact and priority; perceptions and importance.
2. Functions - performance and importance.
3. Challenges - importance and priorities.
4. Real Estate and Facilities Support Services - performance and importance.
5. Emerging Strategies - relevance and likely adoption..

Please refer to Data Collection Instruments for description of evaluation methodology (Chapter 5, Section 5.5.4, pp. 258-273).

Senior Management - Operational Asset Management Attitude Profile

Figure BK1-A: Resource Perceptions

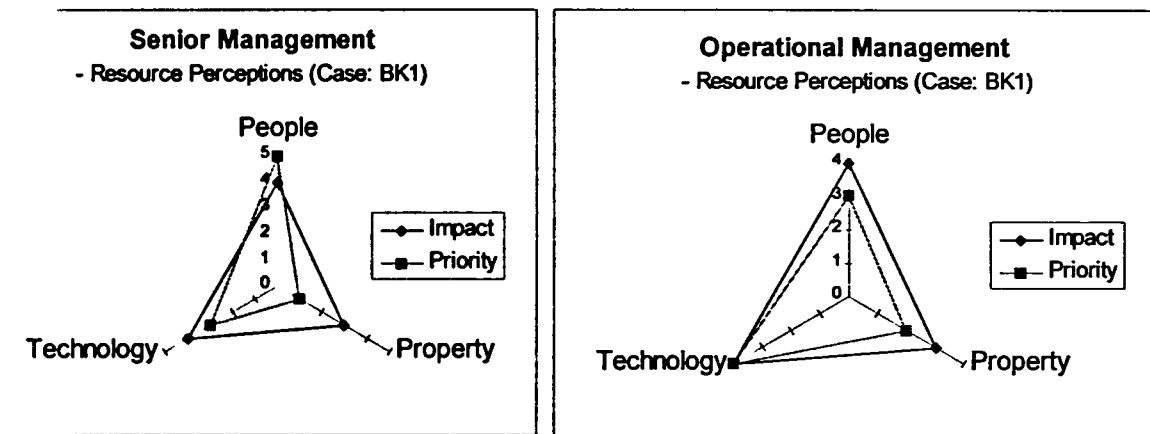


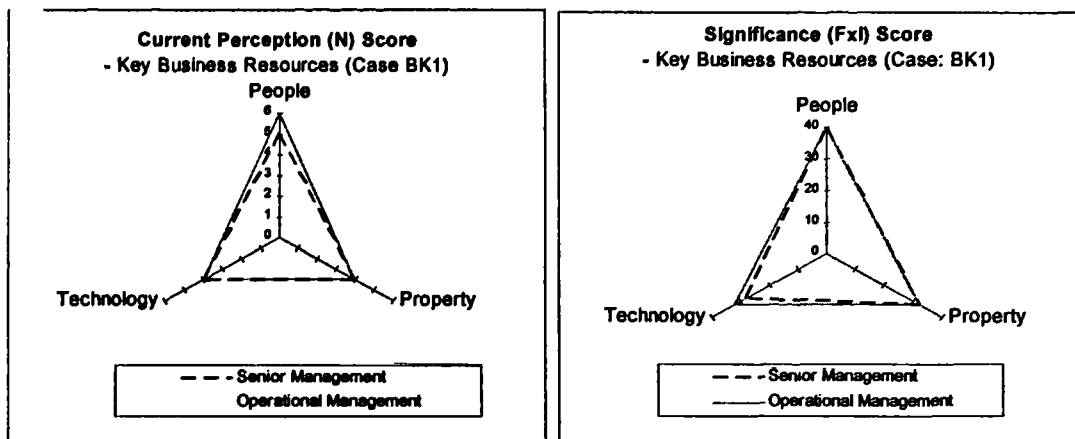
Figure BK1-A illustrates the responses to Question 4 of the questionnaire (page 3 of data sheet for case study BK1). Of the three main business resources of people, property and technology, senior management(SM) placed the highest priority on *People*, while operational asset management(OM) placed greatest emphasis on *Technology*, as key resource factor contributing to success and competitiveness. In terms of impact of the resources on the business performance, both SM and OM rated both *People* and *Technology* above *Property*.

The above results reinforced the importance of human resource as the most important and most expensive resource in the banking sector in relation to technology, which is seen as increasingly important in influencing the business delivery process, with property as a supporting physical resource which has to accommodate changes to technological innovations and the workforce work processes.

Figure BK1-B presents a different perspective of the same variable of people, property and technology. It relates to question 17 in the data sheet (pp.8). It illustrates the current and future perceptions of the respondents against a pair polarisation of views of each of the business resource base and their rating of importance [scoring of 1(low) to 5(high)].

Resource	Views	
People:	1= factor of production,	9 = most critical business resource.
Property:	1= facility for doing business	9 = an enabling business resource.
Technology:	1 = an aid to improve productivity	9 = an opportunity to reengineer work processes

Figure BK1-B: Resource Perceptions



The above figure presents the current perception, *Now* [(N) score], and an indication of the likely future perception by the *Significance Score*, which is a product of the *Future* (F) score and *Importance* (I) rating.

The results indicate a coincidence of views from both SM and OM, with OM scoring marginally higher on the *Now* (N) score for the *People* resource, while SM have a marginally higher *Significance* (Fxl) score on the *Technology* resource. However, it is to be said that the respondent representing the SM's view here may not be considered as representative of the SM corporate culture (refer to comments above).

Figure BK1-C: Perceptions of Operational Property

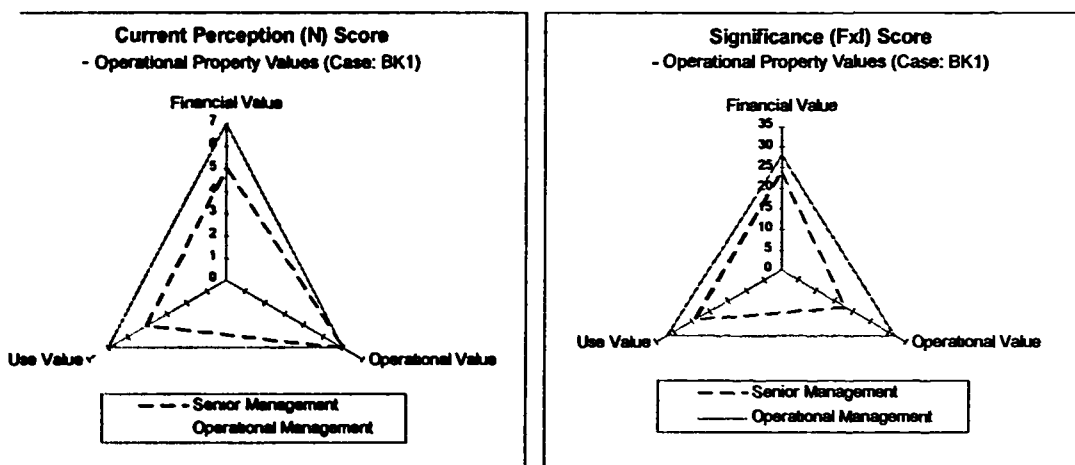


Figure BK1-C illustrates the responses to question 18 (pp.8 of data sheet). It is aimed at assessing the value perceptions of operational assets in term:

- | Resource Value | Views |
|---------------------------|---|
| Financial (market) Value: | 1 = regarded a wasting asset, 9 = emphasis on sustaining/enhancing asset value. |
| Operation (cost) Value: | 1 = as functional space for production process 9 = emphasis on fit for purpose. |
| Use (utilisation) Value: | 1 = as fully available resource 9 = emphasis on utilisation |

On both the current perception *Now* (N) score and *Significance* (Fxl) score, the OM rated a higher score on all three resource value aspects. The SM respondent view on *Operational Value* appears to be mixed in that while expressing a current concern for the costs associated with operational properties, appear to placed higher importance on the market and utilisation values than operating costs.

The above analyses provided a valuable insight into the views of the two principal stakeholders on the three main business resources of people, property and technology. The next three sets of analysis attempt to gauge the views of SM and OM on a range of business and property/facilities services factors.

Figure BK1-D: Functions/Competencies

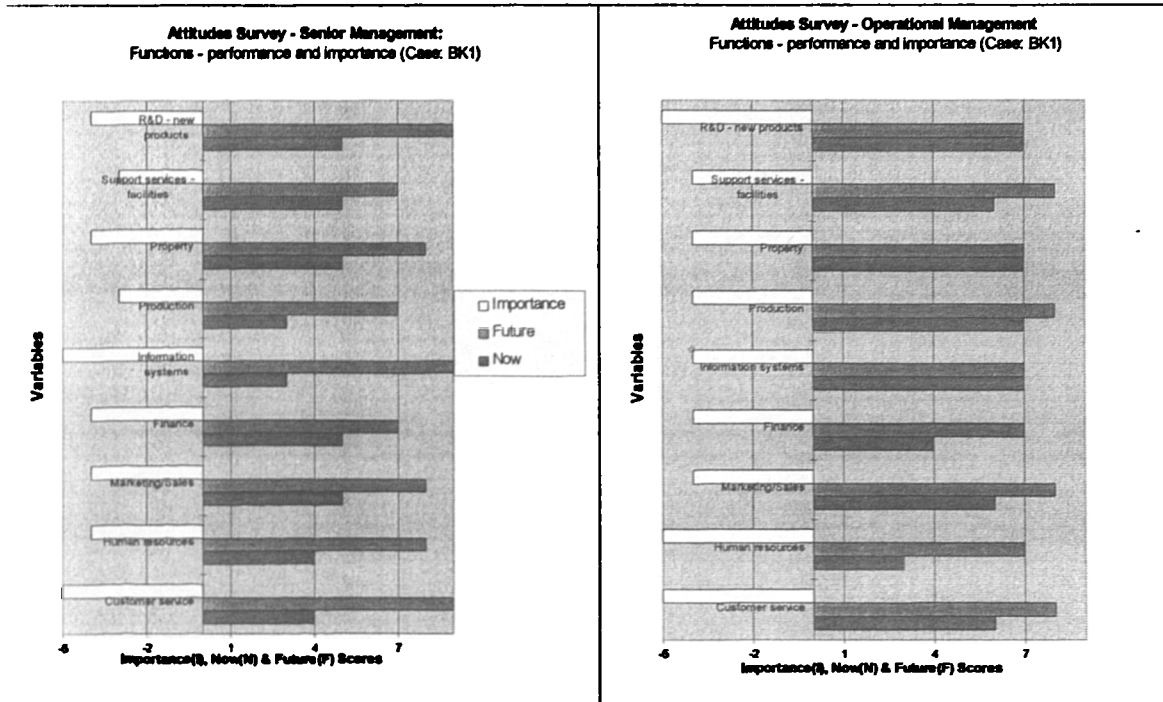


Figure BK1-E: Now (N) Scores and Significance (Fxl) Scores Analyses

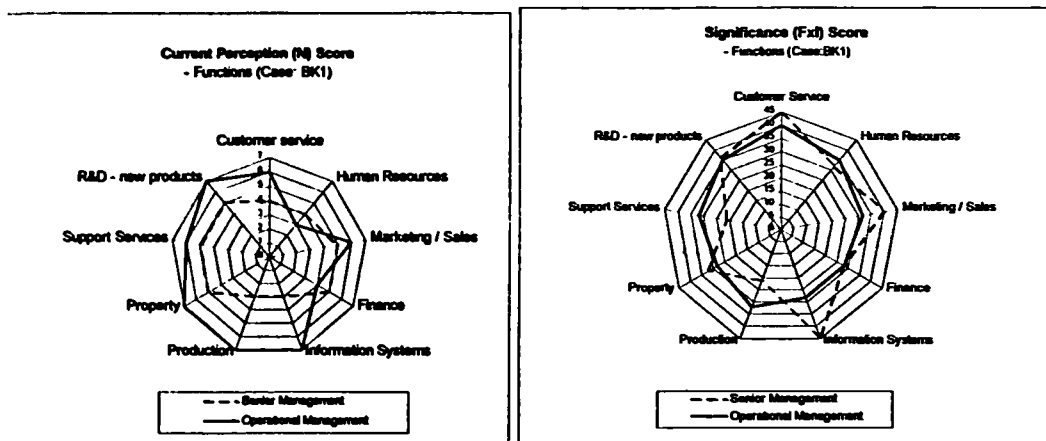


Figure BK1-D illustrates the profile of responses to question 8 (pp.5 of data sheet) which assesses the current(N) and future(F) perceptions of the respondents on the performance and importance(I) of a range of functions and/or competencies that are perceived as essential for the ongoing success of the organisation.

In comparing the profiles of SM and OM, it is clear that SM perceived a trend of growing importance in future performance of all the functions listed more than that perceived by OM. The largest shift for SM is recorded for *Information Systems* which scored a maximum for future importance (F) and Importance (I). OM on the other hand, registered the largest shift needed for *Finance* and *Human Resource*, perhaps reflecting a need for both in relation to the projected needs of the Property Department.

Figure BK1-E presents the *Current Perception (N)* and *Significance (Fxl)* score of the same functions' variables in the form of radar diagrams. The LHS diagram illustrates the current views of the respondents, while the RHS diagram indicates the like future view as a composite measure of the perceived importance and future expected performance for the function concerned.

For the current perception radar diagram, OM seems to rate the current performance of most of the variables higher than SM apart from *Human Resource* and *Finance*. On the whole, the *Significance Score* radar diagram reflect a convergence of views for the immediate future. It is perhaps significant to note the higher score for *Property and Information System* given by SM over that of OM.

Figure BK1-F: Challenges

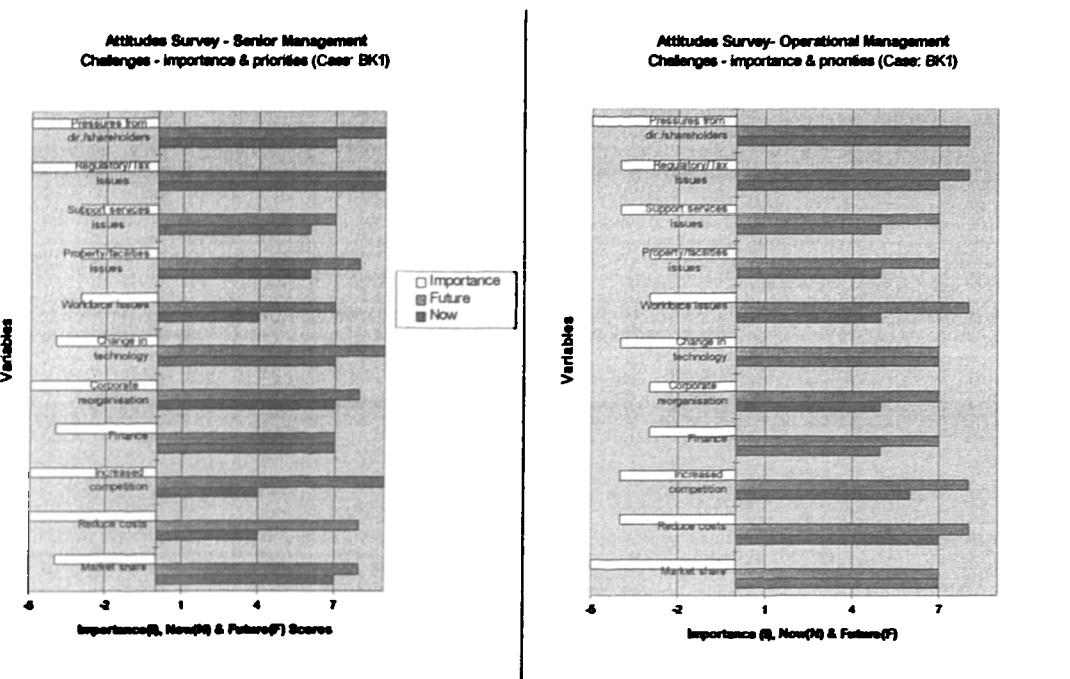


Figure BK1-G: Now (N) Scores and Significance (Fxl) Scores Analyses

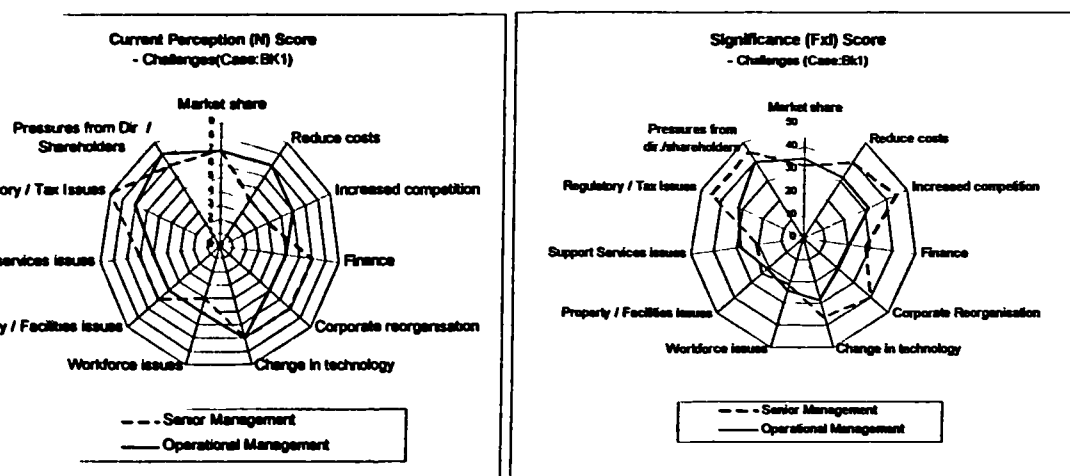


Figure BK1-F illustrates the profile of responses to question 9 (pp.6 of data sheet) which assesses the current and future perceptions of the respondents on the importance and priority given to a number of challenges that are perceived as essential for the continued success of the organisation. Both the SM and OM profiles indicate a need for performance improvement for almost all the challenges listed. While SM saw *Increased Competition* and the need to *Reduce Costs* as key challenges, OM saw *Workforce Issues* relating to property and facilities services as the main concerns.

In terms of the corresponding radar diagrams for the same set of variables, the LHS current perception diagram reveals a divergence of views between SM and OM. While OM emphasises the main challenges posed by *Increased Competition*, *Reducing Costs*, and *Pressures from Shareholders*; SM stressed the remaining challenges. The RHS significance score radar diagram seems to indicate a congruent on views relating to *Property/Facilities*, *Support Services* and *Workforce Issues*, with SM placing more importance on almost all of the remaining challenges.

Figure BK1-H: Real Estate & Facilities Services

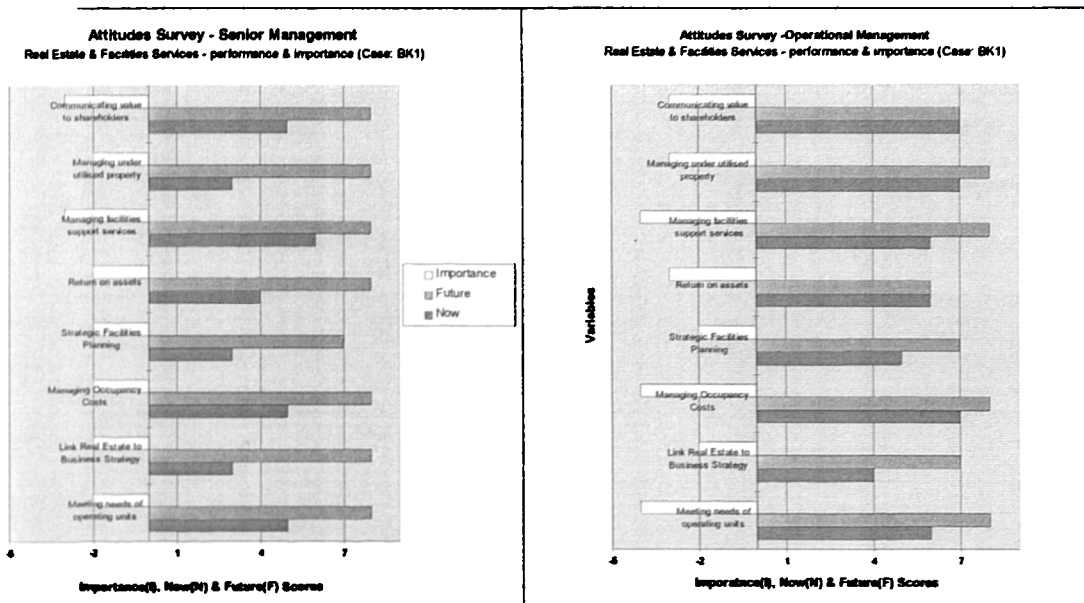


Figure BK1-I: Now (N) Scores and Significance (Fxi) Scores Analyses

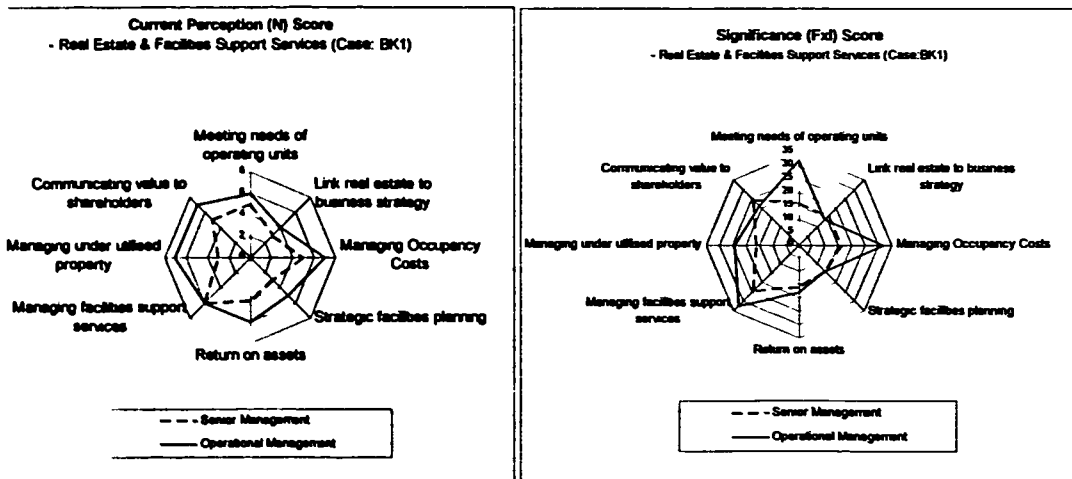


Figure BK1-H illustrates the profile of responses to question 16 (pp.7 of data sheet) which assesses the current and future perceptions of the respondents on the performance and importance of a number of key real estate and facilities service issues that are perceived as essential for the success and profitability of the organisation. The SM profile indicates a growing awareness of the need to *Link Real Estate Assets to Business Strategy* through *Strategic Facilities Planning* and *Managing Under-utilised Properties* and *Monitoring Return on Assets*. The OM profile also stresses the importance of to *Link Real Estate Assets to Business Strategy* through *Strategic Facilities Planning*

In terms of the corresponding radar diagrams for the same set of variables, it is significant to note the considerably lower current perceptions of SM on the range of property and facilities services variables. The adjoining significance score radar diagram illustrates a possible convergence between SM and OM in the future. However, OM remains significantly focused on managing the operational assets in terms of *Meeting Needs of the Operating Units*, *Managing Occupancy Costs* and *Facilities Support Services* and *Underutilised Properties*.

Figure BK1-J: Emerging Strategies

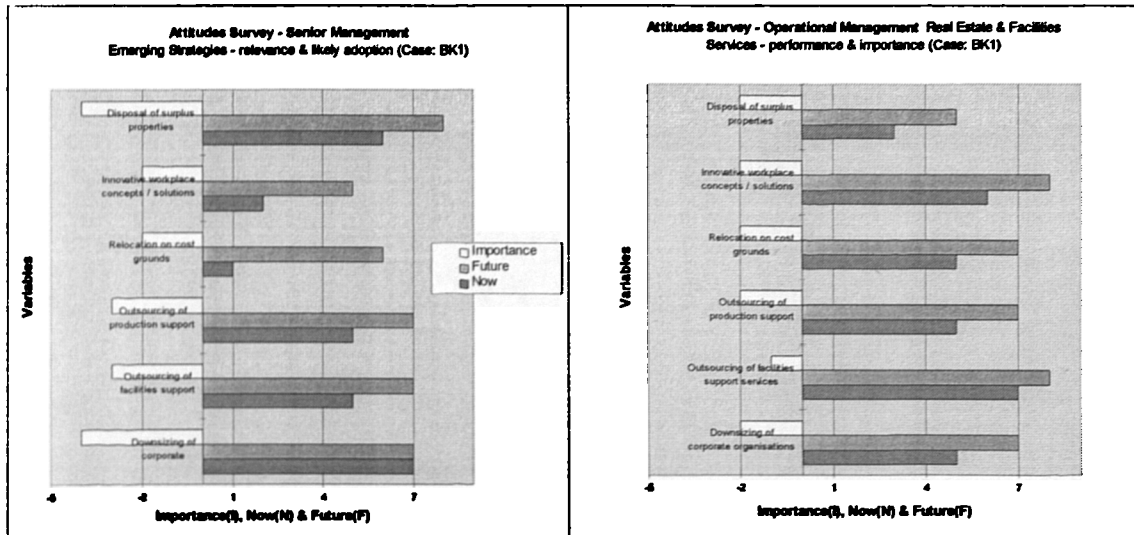


Figure BK1-K: Now (N) Scores and Significance (Fxi) Scores Analyses

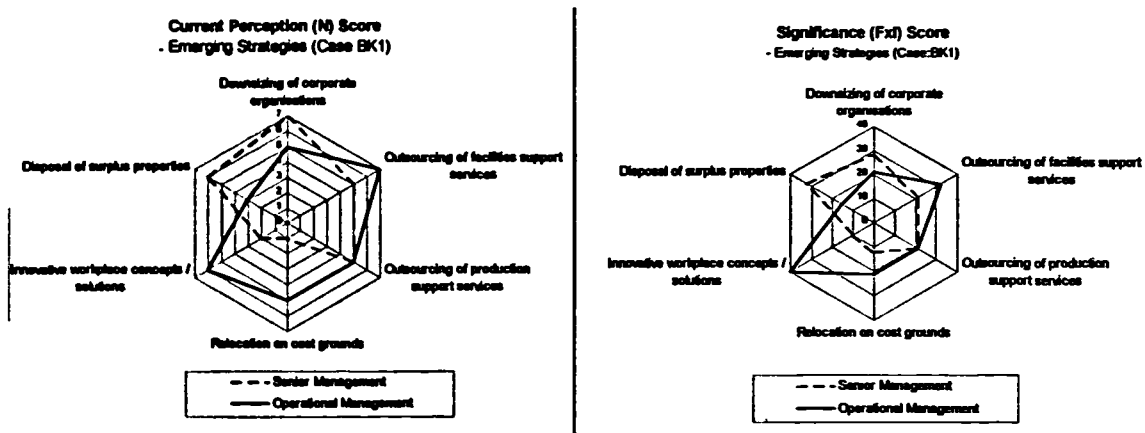


Figure BK1-J illustrates the profile of responses to question 45 (pp.23 of data sheet) which assesses the current and future perceptions of the respondents on the relevance and likely adoption of a number of emerging organisational and facilities supporting strategies.

The SM profile identified *Disposal of surplus properties* and *Downsizing of the corporate* as the two most likely strategies to be adopted. *Relocation to less costly regions* and the *Implementation of innovative workplace concepts/solutions* are seen as strategies that are likely to be relevant to the organisation in the near future. The OM profile suggests all the strategies listed are more or less equally relevant, but rated the outsourcing of facilities support services low in terms of a strategy likely to be adopted.

In comparing the profile of current perceptions of SM and OAM to the emerging strategies, there appears to be a divergent of views as to which are the more relevant to the organisation. OM considers *Relocation on cost grounds*, *Outsourcing of facilities support services*, and *Innovative workplace concepts* as relevant in the near future, while SM considers the *Disposal of surplus properties* and *Downsizing of the corporate organisation* as more appropriate. A similar profile is reflected in the significance score profile.

Positioning within the Strategic Awareness Grid and Strategic Readiness Grid

This part of the analysis illustrates the positioning of the forty-three (43) variables (or issues) within the four quadrants of the respective grid for senior management - *Strategic Awareness Grid*; and for operational asset management - *Strategic Readiness Grid*.

The horizontal axis of the *management grid* is represented by *Management Dissatisfaction* (or achievement gap), measured by the difference between the *Now* and *Future* rating, i.e. ($F-N$). Similarly, the vertical axis of *Perceived Significance Score* is calculated by the product of the *Future* score and *Importance* score., ($F \times I$). This measure gives an indication of the level of strategic awareness and understanding of the variable or issue being evaluated. Hence, a relatively high score for a variable would indicate the respondent has a high level of awareness and understanding of the role of the variable, while a combination of low scores for F and I would indicate a low level of understanding and awareness typified by a relatively low state of readiness for change.

It is to be stressed that the two strategic management grids are designed to highlight explanations and promote discussions and integration between senior management and real estate/facilities executives. In this respect, the hard scoring of positioning of variables within each quadrant gives only an indication for the likely direction of change needed for improving performance within the organisation concerned.

The positioning of the five groups of variables considered can be evaluated at varies levels:

- comparison by each group of variables,
- comparison by aggregate of all variables, or
- comparison by variables that are directly related to real estate and facilities services provision

The results of this case study are illustrated from Figure BK1-L to Figure BK1-P. The interpretation of the results should be made within the context of the preceding analyses. Because of the wide coverage of the variables, the ensuing discussions will be confined to implications relating to the context of Real Estate Asset Management within the case study organisation.

Figure BK1-L

Variables: Key Business Resources - perceptions and importance

A. People

B. Property

C. Technology

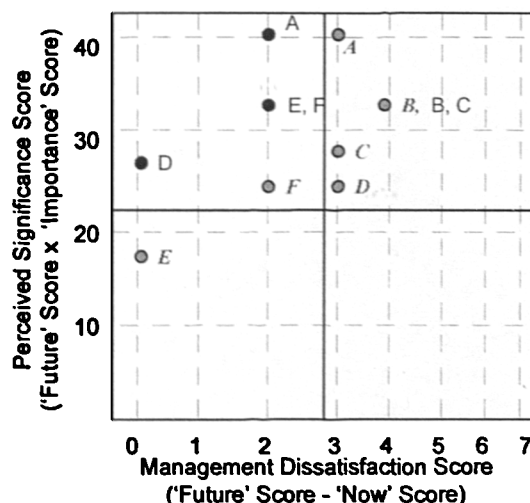
D. Financial Value

E. Operational Value

F. Use Value

Legend:

- Senior Management
- Operational Management



For the case study organisation, Figure BK1-L above indicates that both SM and OM are strategically aware of the roles of the key business resources of people, property and technology. This is indicated by the bunching of the scores on the upper quadrants of the grid. It is also evident that the achievement gaps, as expressed by the *Management Dissatisfaction* scores, are highest for the *Property* and *Technology* variables, with both SM and OM concurring on the former.

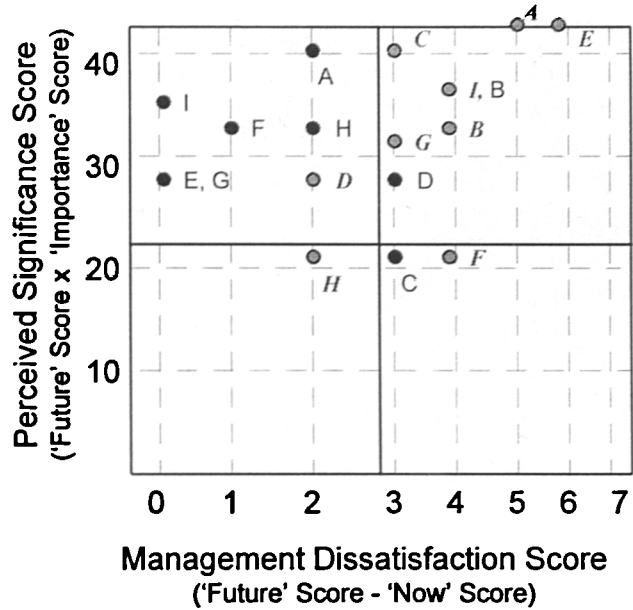
Figure BK1- M

Variables: *Functions - performance and importance*

- A. Customer service
- B. Human resources
- C. Marketing /Sales
- D. Finance
- E. Information systems
- F. Production
- G. Property - facilities
- H. Support services - facilities
- I. R&D - new products

Legend:

- Senior Management
- Operational Management



A similar bunching of scores for functional variables is indicated in Figure BK1-M. The high concentration of OM's scores on the top left-hand quadrant can be inferred as a sign of readiness on the part of the Property Department to contribute to the strategic intent in terms of property and facilities services issues.

Figure BK1- N

Variables: *Challenges - importance and priorities*

- A. Market share
- B. Increase profit / reduce costs
- C. Increased competition
- D. Finance / debt structuring
- E. Corporate reorganisation
- F. Rapid changes in technology
- G. Workforce issues
- H. Property / Facilities issues
- I. Support services issues
- J. Regulatory/Tax Issues
- K. Pressures from Dir./shareholders

Legend:

- Senior Management
- Operational Management

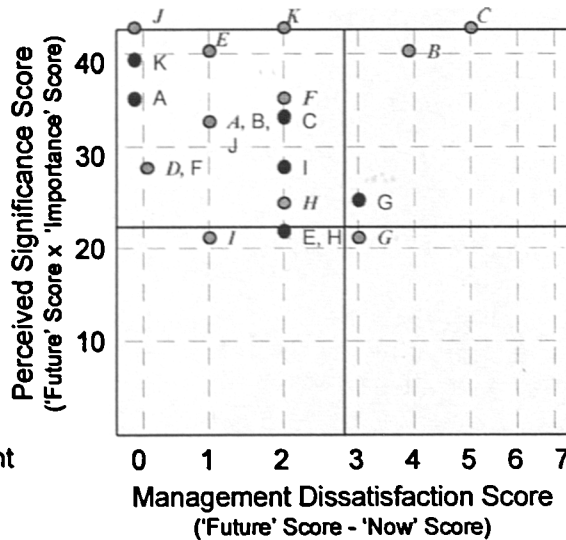
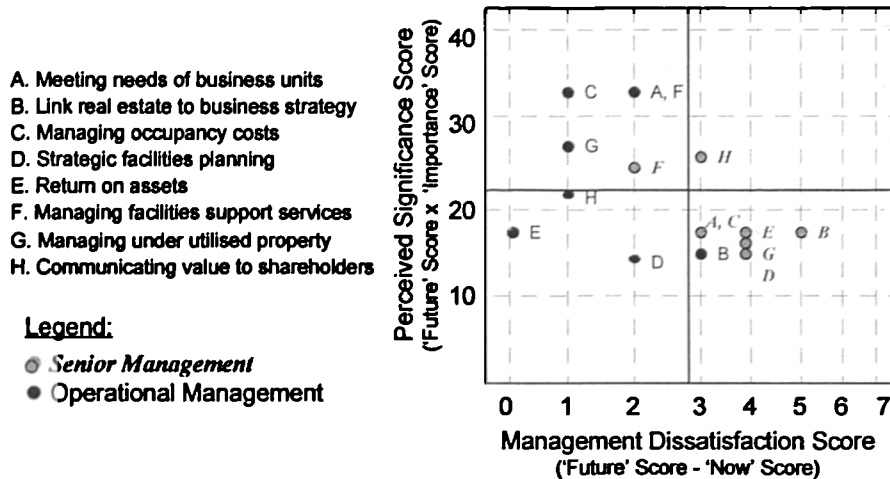


Figure BK1-P again demonstrates a high strategic awareness on likely challenges confronting the organisation.

A higher *Dissatisfaction Score* by both SM and OM for *Workforce Issues* can be inferred as a readiness to act in terms of the implications of the current 'Distribution Study' for the branch network.

Figure BK1- O

Variables: *Real Estate & Facilities Support Services - performance and importance*



It is to be noted that this group of variables are directly related to the context of REAM. The spread of the scores reflects, in the author's opinion, most closely the cultural perception prevailing in the case study organisation at the time of the study.

The bunching of the SM scores in the lower right-hand quadrant reflect a growing awareness, on the part of senior corporate management, of the need to understanding more fully the implications of business plans on the existing operational real estate portfolio.

At the same time, the bunching of the OM scores on the top left-hand quadrant reflect a strategic awareness of the importance of key operational issues with a strategic impact on the overall performance of the organisation, as reflected by the high scoring of the following variables or issues:

- Meeting needs of business units,
- Managing occupancy costs,
- Managing facilities support services, and
- Managing under-utilised properties.

Figure BK1- P

Variables: *Emerging Real Estate & Facilities Support Services Strategies - relevance and likely adoption*

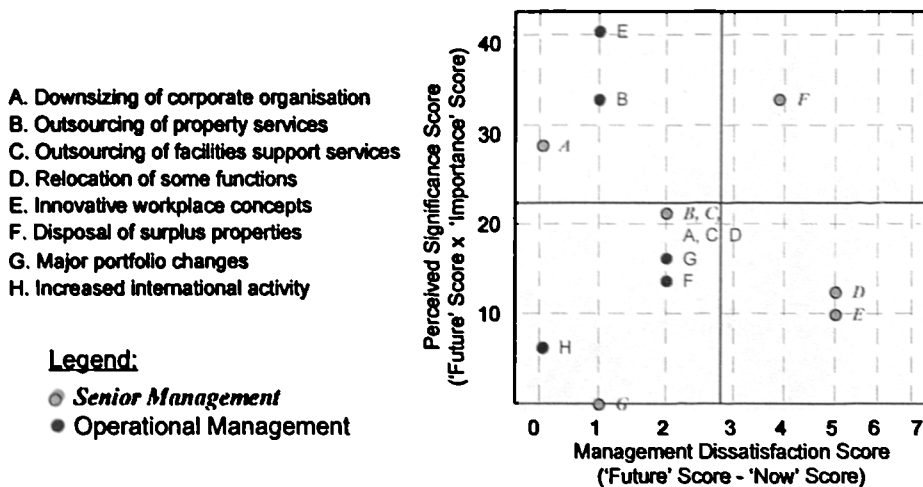


Figure BK1-P closely reflects the comments made with reference to Figures BK1-J and K above.

Comparison with Respondents' Self Assessment

The above analyses of the results in relation to the attitudes and perceptions to the forty-three variables in order to conclusively identify the positioning of the case study organisation with the strategic management grids has proved to be inconclusive in terms of the overall quantitative analyses carried.

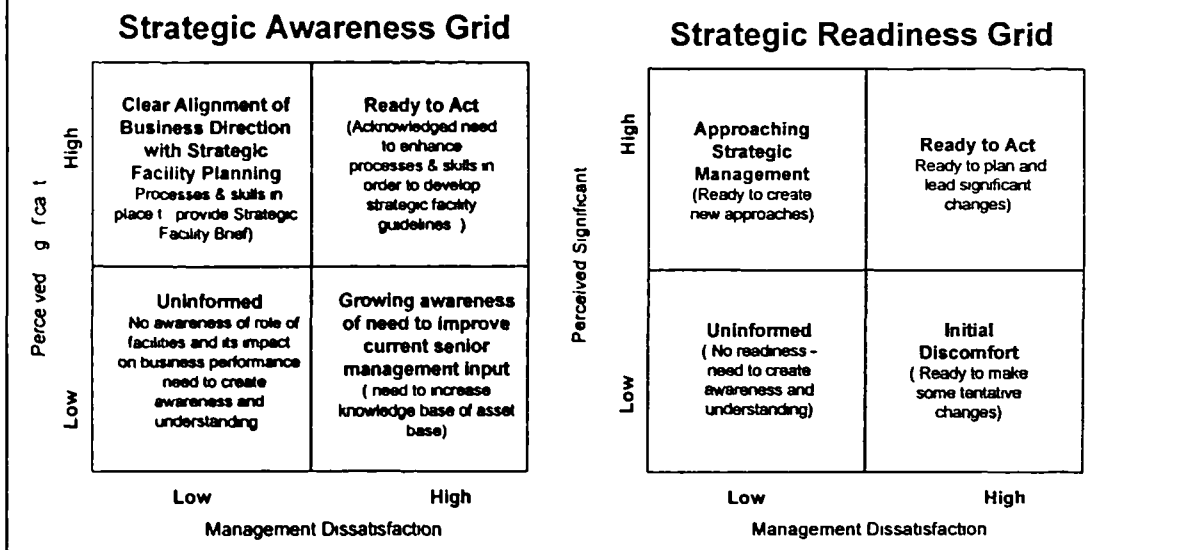
However, for the purpose of this study, Figure BK1-O above can be taken as a good representation of the current cultural perception of the case study organisation in terms of the scope of REAM as defined for this study. Hence in term of output from the above analyses carried in relation to the case study organisation BK1, the senior management positioning can be said to align most closely with *Growing Awareness* within the Strategic Awareness Grid. Whilst the operational asset management positioning of scores indicate a positioning within the Approaching Strategic Management quadrant of the Strategic Readiness Grid, the evidence from the case study data and analyses do not support this capability at the current time. In this respect, it can be surmised that while the Property Department aspire to be in the top left-hand quadrant, in reality its current competencies would suggest its location within the *Ready to Act* quadrant.

The above assessment is also in agreement with the respondents' feedback.

For the case study organisation, both the senior management and operational management respondents shared the same perceptions for both the grids:

- For the Strategic Awareness Grid, the quadrant chosen was *GROWING AWARENESS*.
- For the Strategic Readiness Grid, the quadrant chosen was *READY TO ACT*.

Respondents' Self Assessment - Case Study BK1.



The above results of case organisation BK1 give a detailed account of the analysis methodology adopted to assess the prevailing attitudes and perceptions of two key stakeholders that directly influence the practice of REAM within the organisation.

6.2.2.3 An Example from the Professional Services Sector

Brief of Case Study Organisation PS1:

This is a recently incorporated, professional services partnership company which operates on a world wide basis. Within the UK, the company structure is organised on a regional basis. The case study was confined to the investigation of the operations within the largest south-east region.

The case study data comprised of interviews and completed questionnaires from a senior management respondent (represented by the partner with executive responsibilities for finance, property, information technology(IT), premises and office services) and the Facilities Director, who has operational responsibilities for facilities and IT.

The data sheets for case study organisation PS1 is included in the Appendix G.

Author's Comments:

This is a good example of an organisation (being a partnership) which does not have a capital structure, and as a result leases all its operational property requirements. The corporate concerns in respect of REAM are largely governed by management of leases and associated liabilities, and the ongoing management of the occupied space and facilities services provision, with infrequent decisions required in terms of long-term operational portfolio changes.

The analysis of the case study organisation revealed a situation in which operational property management is generally seen as managing the provision of a standard of working environment for carrying out the tasks of the core business (i.e. professional services), rather than long term asset management. In this respect, the level of provision is largely governed by the budget allocated and seen as a business overhead to be controlled. Typically, for organisations similar to that of the case study organisation, PS1; the overall executive role is often given to one of the more senior partners, with the operational role delegated to a property/facilities professional, with day to day responsibilities for the provision and ongoing management of the working (office) environment for employees of the company. In other words, facilities issues are regarded as

non-strategic in nature. In such an organisational setting, the nature of relationships and interactions between the non-specialist partner with executive power, and the (usually) non-partner dedicated facilities professional, charged with the responsibilities of delivery of functional facilities and services; is often reflected in the practice of REAM. A glimpse of the prevailing culture can be gauged from the following pair of quotations:

"In particular, the strategic planning process has got a long way to go in terms of getting senior management to think in terms of property provision. It is not easy to achieve the mutual understanding that is required. A major obstacle is that because the business is dynamic, property and support services have to fight to get the share of attention of senior management....."

Business units generally do not regard property as a resource - just a cost. Their perception is governed very much by the fact that property and IT together do not even account for 30% of total payroll." Partner.

"Facilities has, in the main, been seen as something senior management do not need to understand or play a valuable part to the business at all. ...Core business managers are not taught to manage fully, they are not taught to manage processes. This often results in situations in which facilities issues of business plans are considered as an afterthought to the business planning process. This attitude will not change unless the running of the business is seen in its totality, with a clear distinction made of the 'retail' or selling side of the business and the actual administration of the business on a day-to-day basis." Facilities Director.

Case Study Organisation : PS1

Nature of Business and Organisation Profile:

International firm of accountancy, business and management consultancy - a people related business, selling time and expertise.

Size of corporate operational portfolio: 50 sites comprising of mostly office facilities covering approximately 1 million sq.ft.

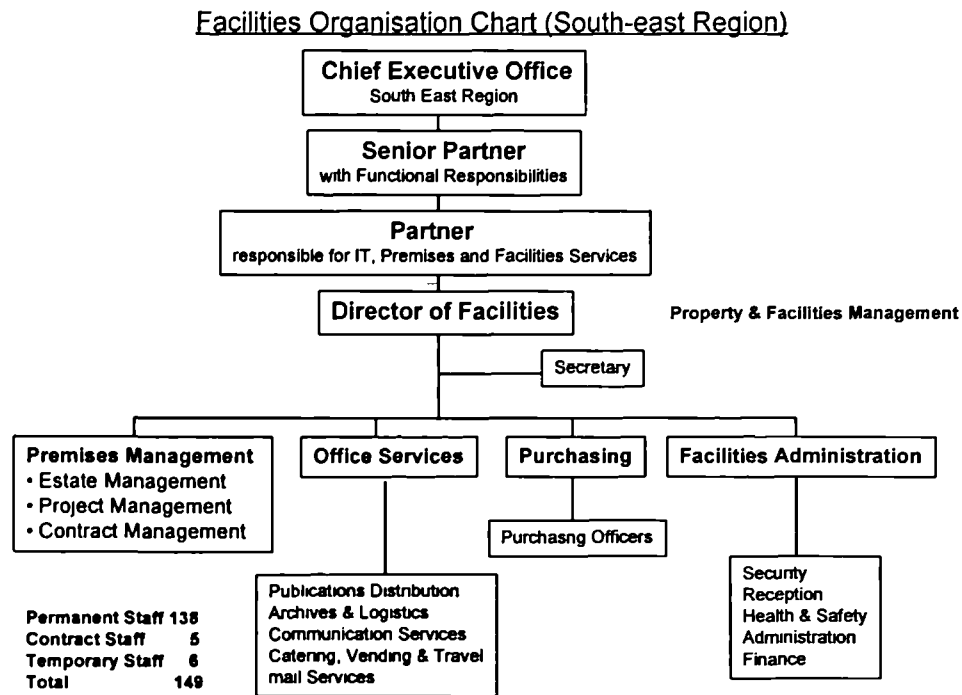
Staff: 5000 staff in UK, 77,000 world wide

Current annual expenditure on property and facilities services : £50 million, of which £35m are spent on rents and rates.

Organisation Structure and Positioning of RE/FM Function:

The case study organisation is part of a limited partnership with about 350 partners. In the UK, the corporate structure is headed by a senior partner acting as the UK Managing Partner. Regional partners report to the Managing Partner.

The organisational chart for the South-east Region is illustrated below.



In terms of positioning within the corporate structure of the South East Regions which is the largest in the U.K., the Director of Facilities reports to the Partner given responsible for Property, IT and Facilities Services, who in turns reports to a Functional Senior Partner.

Although the above chart reflects a fairly close positioning to corporate senior management, facilities and IT are generally not regarded as a critical resource. As a result, the recently appointed professionally Facilities Director's role can be said to be initially dealing with the inherited legacies of past decisions and actions under the responsibilities of partners who are non specialists in the provision and management of the operational resource.

Current Real Estate and Facilities Services Operating Systems and Features:

Structure: As shown above, the Facilities Department structure is functionally organised under four main divisions: premises management, office services, purchasing and facilities administration with a permanent staff compliment of one hundred and thirty-eight (138).

Strategic Facilities Planning: More recently, there is a general acknowledgment by senior management that property is seen as important in terms of recruitment, retention of staff and presenting a corporate image to clients.

In terms of strategic evaluation of future property/facilities requirements, senior management projections are based on assessing demand (business volume forecast, growth expectation) three to five years ahead purely in terms of headcount growth. Although there are no formal property strategy as to what type of property will be required in the future, senior management's current concerns are with achieving flexibility in office provision within the constraints imposed by the property market and existing lease commitments and how to get out or into leases - more concerned with how to organise the existing portfolio and occupancy within existing leases without having to commit more resources.

In terms of the provision of facilities support services, there is also an acknowledgment that, historically, they have not looked after buildings in terms of maintenance and quality of services provision because of the focus on controlling cost, rather than being value oriented. The following statement by senior management reflects a growing awareness of the need to consider how facilities must be aligned to support the working environment:

".. within the last six months, there is a growing awareness of the need to properly maintain buildings and provide good quality services to building users. ... we have not taken full advantage of alternative office strategies, like home working. ..."

On his part, the Facilities Director cited a number of contributing factors that has brought above senior management awareness of property and facilities issues:

- Impact of incorporation, outside pressures to be more accountable - auditing - forcing rethink in traditional approach/processes.
- Forced to consider space planning and workplace environment issues because of necessity rather than desire. (by staff agitation and competition to retain good staff).
- IT and Facilities came under the responsibilities of one partner for the first time last year (July 1995).
- More towards 'sweating the assets' - not wanting to acquire additional properties. Objective to reduce residual liabilities.
- Surplus properties - SM awareness heightened by the problem of surplus properties - seen as a liability.

Information System Adequacies:

Demand Assessment - Facilities:

Starting to understand space demand - by building on historical data of headcount and space use.

Quarterly review of all costs

Gather headcount growth forecast from business units - signed off by business units at senior level - to be included in budget forecast by business units.

Demand Assessment - FM Services:

Estimate of consumption levels (demand) based on forecast of headcount growth - e.g. mail delivery

Recharging introduced in 1993, only had an initiate impact of reducing space because of the small proportion of costs compared to other business units expenses.

Basis of internal changing: By cost centre (business units)

Rate for property costs - based on measured occupied space.

Rate for office services recovery - based on No. of workstations

Performance Monitoring Systems:

Quarterly reporting to senior management - only concerned with monitoring actual vs budget. Budget and financial reporting itemised by individual building and BU's cost centres (36 pages spreadsheet). Actual spent vs budget allocation is the basic control instrument.

In terms of service delivery performance, there appeared to be a divergence in views between SM and OM:

"The PFM division is seen as too bureaucratic as a service provider - not perceived by SM to understand the business culture. ..They are there to provide professional advise on option evaluations, but the locus of decisions must remain a senior management prerogative. Current PFM approach is not diplomatic, what should matter is getting things done the way PFM sees it, at the same time having satisfied customers."

Partner

"In the management of facilities provision and service operations, the PFM must first and foremost, deal efficiently with the day-to-day operational demand and service delivery issues (in order to gain credibility), before considering strategic matters. The constraint of resources, particularly in staff appointment, has meant that it is first necessary to gradually gain the capacity to contribute at the strategic level, by shedding staff whose skills do not meet the competencies required and introduce training to existing staff to gain specific skills needed for improving management and report processes to SM."

Facilities Director

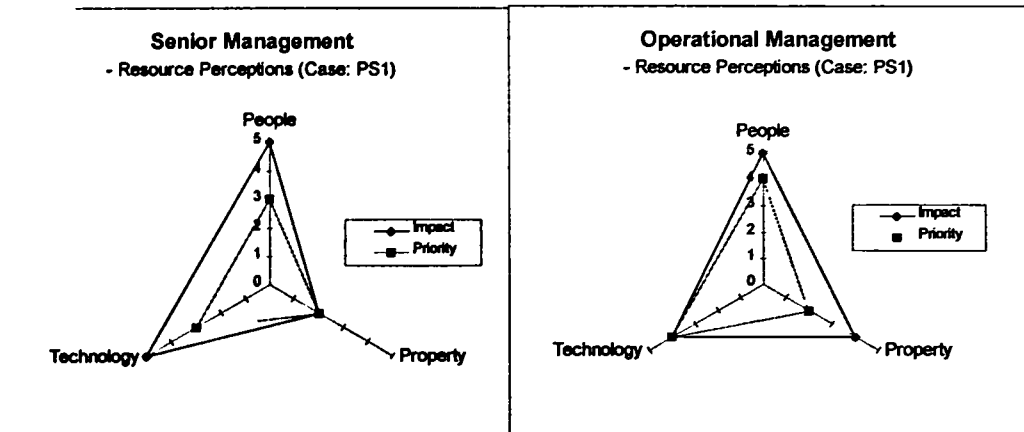
Results of Attitudes Survey:

The results of this part of the attitudes survey follow a similar format to that for FS1, but in lesser detail, as only the salient factors that impact on the current practice in the case study organisation are highlighted.

The data sheets for case study organisation PS1 are included in the Appendix volume.

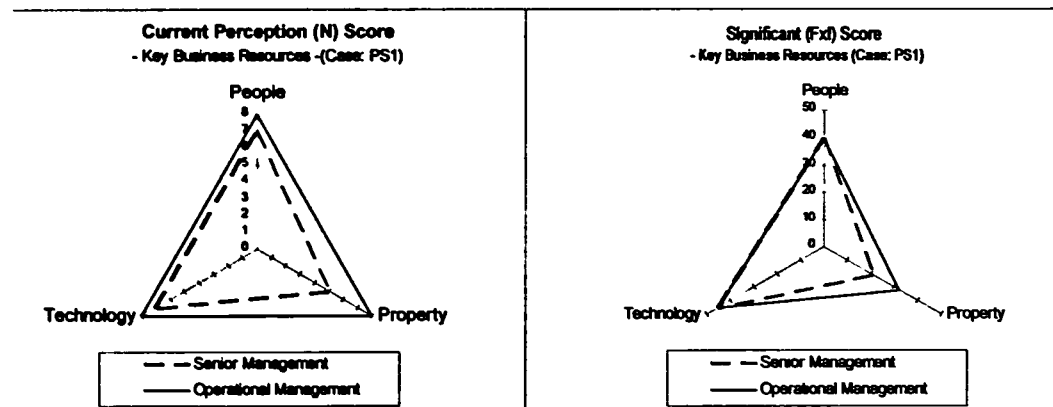
Senior Management - Operational Asset Management Attitude Profiles

Figure PS1-A: Resource Perceptions



Of the three main business resources of people, property and technology, both senior management (SM) and operational asset management (OM) placed a higher priority on *People* and *Technology* than on *Property*. In terms of impact of the resources on the business performance, SM does not share the same perception as OM on the likely impact of the *Property* resource on the business.

Figure PS1-B: Resource Perceptions



The results from Figure PS1-B, measuring the *Now (N)* and *Significance (Fxl)* scores of the same business resources, reflect a similar difference in perception for the *Property* resource as in Figure PS1-A above.

On the whole, SM holds a balanced view of the three value variables associated with their operational property, although giving a marginally higher *Significance* score for the *Operational Value* variable, perhaps reflecting a growing concern for occupancy costs trend.

The OM's view, as reflected by the Facilities Director, places a high concern on current operational costs (i.e. *Operational Value* variable) and expresses *Use Value* (i.e. efficient utilisation) as a growing concern for the *Significance (Fxl)* Score.

The *Financial Value* variable was rated low on both scores by OM because they are leased assets, rather than assets owned by the company.

Figure PS1-C: *Perceptions of Operational Property*

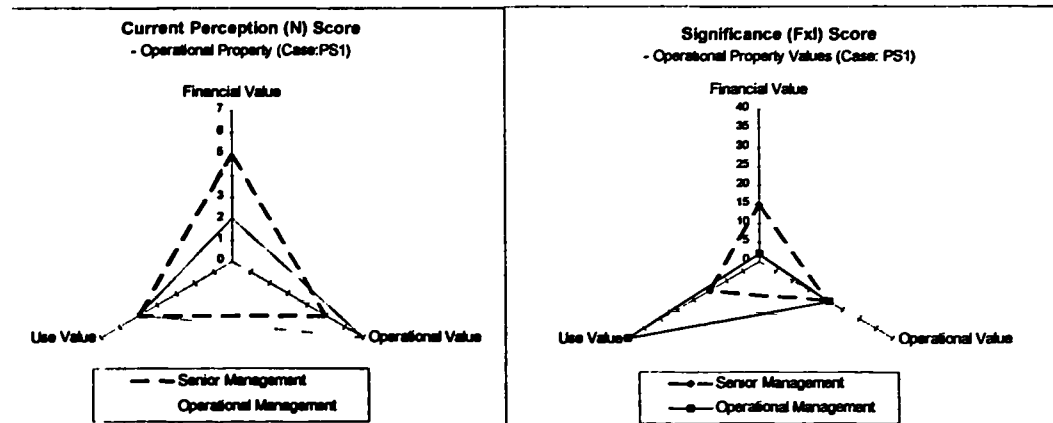
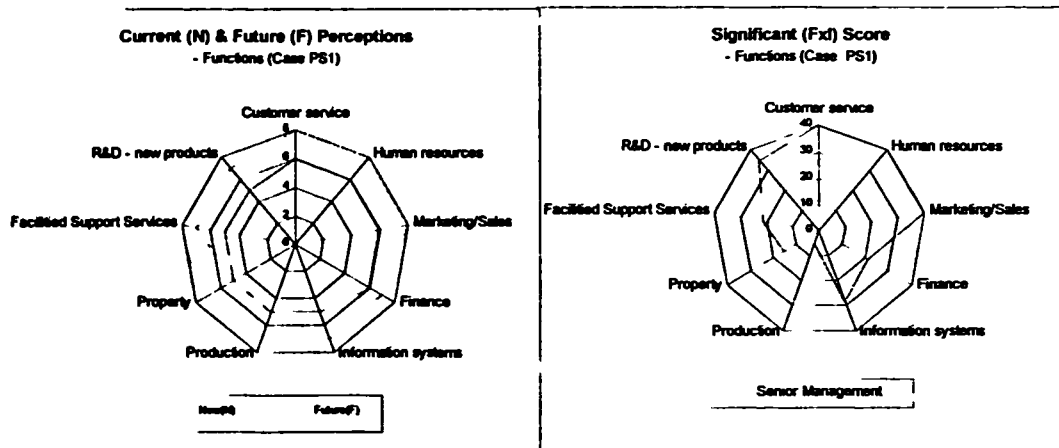


Figure PS1-D: *Now (N) & Significance (Fxl) Scores Analysis - Functions*



Only the SM's views are illustrated in Figure PS1-D as the Facilities Director declined to complete the question because of lack of guidelines and information from senior management on mostly core business variables. The *N* and *F* scores radar diagram (LHS) reflects a higher expectation of performance from almost all the variables considered except for *Property*, confirming a relatively stable operational portfolio for the near future.

The Significance (*Fxl*) Score radar diagram (RHS) shows a growing importance being attached to three key variables: *Customer Service*, *Human Resources* and *Marketing/Sales*.

For the second group of variables under *Challenges*, Figure PS1-E illustrates only the results of three of the group's variables, again because of non-completion by the facilities director. The current perception, *Now Score*, diagram (LHS) shows a greater concern by OM compared to that of SM in both *Property* and *Facilities Support Issues*. In terms of the *Significance Score* (RHS) diagram, OM rated a higher priority for *Property Issues* than SM.

Figure PS1-E: Now (N) & Significance (FxI) Scores Analysis - Challenges

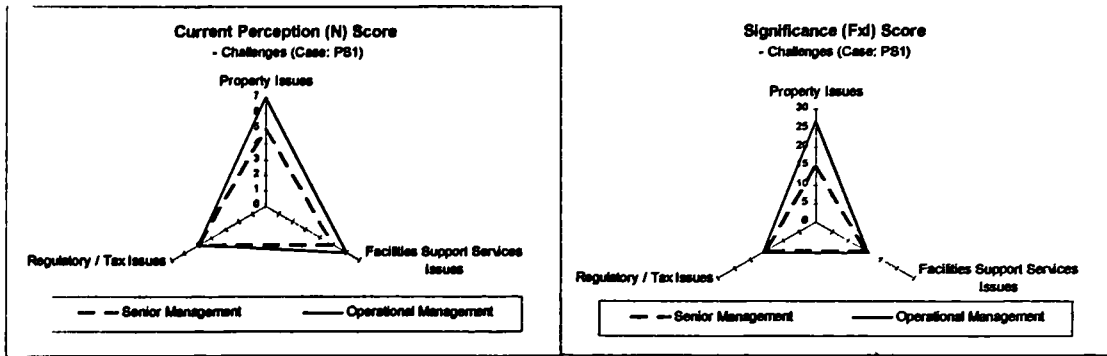
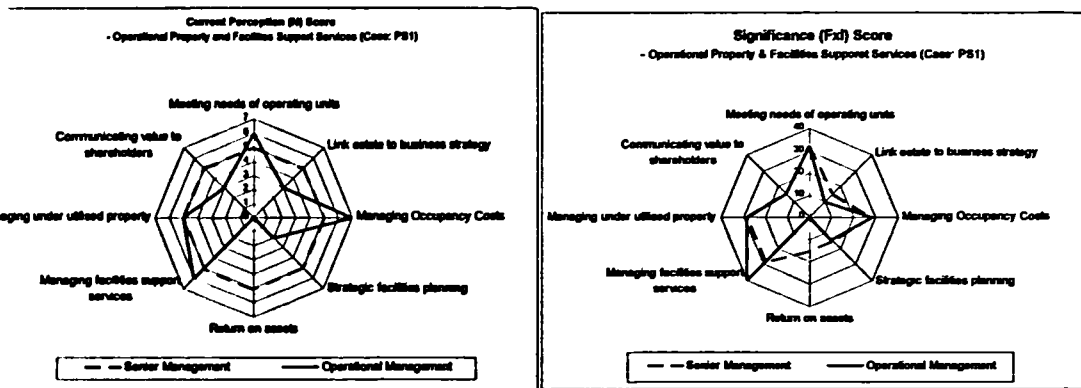


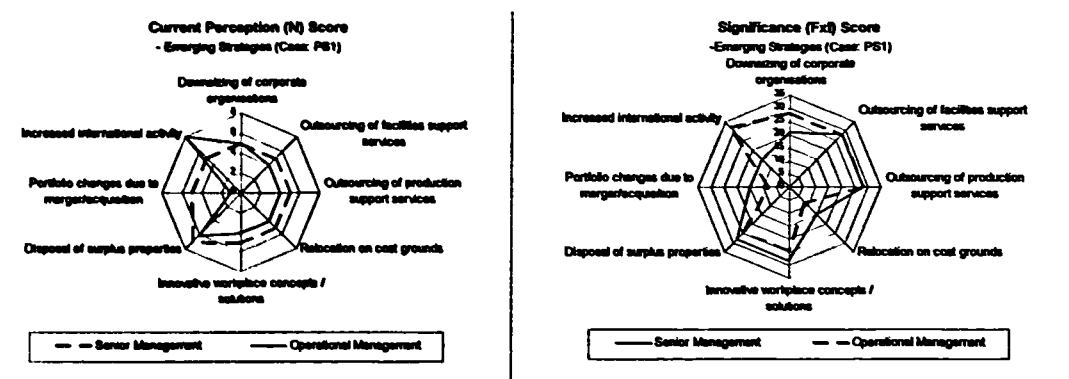
Figure PS1-F: Now (N) & Significance (FxI) Scores Analysis -Property & Facilities Services



SM indicates a consistent scoring of 5 out of a maximum of 9 for the current performance of activities relating to operational property and support services. OM recorded a low performance rating for *Strategic Facilities Planning* and *Linking real estate to business strategy* and *Communicating value to shareholders* - inferring a strong desire to contribute in strategic evaluation of business decisions from a property and facilities services perspective.

There appears to be a convergence on most of the variables in terms of the *Significance Score*, with OM giving particular emphasis to the importance of *Managing facilities support services* within the company.

Figure PS1-G: Now (N) & Significance (FxI) Scores Analysis -Emerging Strategies



With reference to Figure FS1-G, the views of SM and OM differ in two respects in terms of emerging managing strategies and their likely adoption: OM appears to place a high emphasis on *Increase international activity*.

The above analyses provided a consistent basis for considering the attitudes and perceptions of the two key stakeholders to the practice of REAM. In the main, the results supports a convergence of views between SM and OM on the majority of variables considered.

Positioning within the Strategic Awareness Grid and Strategic Readiness Grid

This part of the analyses illustrates the positioning of the five sets of variables within the four quadrants of the two strategic management grids. The results for this case study organisation, PS1, are illustrated from Figure PS1-H to PS1-L.

Figure PS1-H

Variables: Functions - performance and importance

- A. Customer service
- B. Human resources
- C. Marketing /Sales
- D. Finance
- E. Information systems
- F. Production
- G. Property - facilities
- H. Support services - facilities
- I. R&D - new products

Legend:

- Senior Management
- Operational Management
(elected not to complete this section because of lack of knowledge)

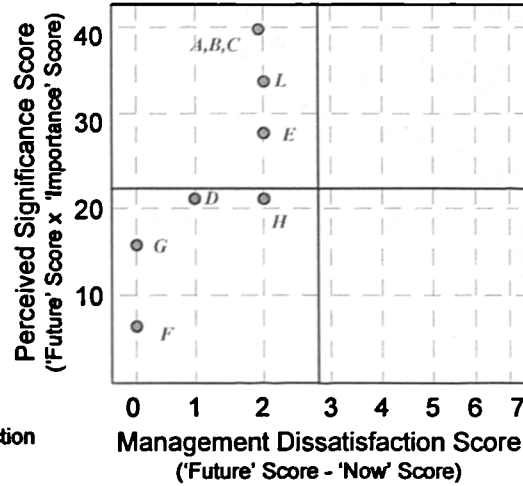


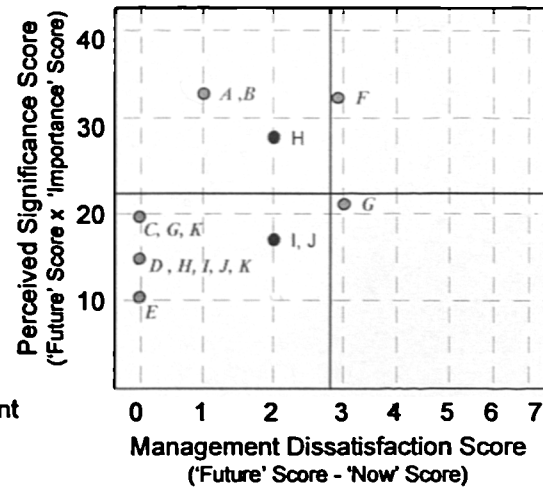
Figure PS1-I

Variables: Challenges - importance and priorities

- A. Market share
- B. Increase profit / reduce costs
- C. Increased competition
- D. Finance / debt structuring
- E. Corporate reorganisation
- F. Rapid changes in technology
- G. Workforce issues
- H. Property / Facilities issues
- I. Support services issues
- J. Regulatory/Tax Issues
- K. Pressures from Dir./shareholders

Legend:

- Senior Management
- Operational Management



Figures PS1-H and I reflect primarily the results of SM because of non-completion to the questions by the respondent representing OM. It is worth noting that on the whole, SM expressed an overall satisfaction on the performance of the variables and issues raised - as reflected by the low scores on the *Management Dissatisfaction (F-N)* axis. The positioning of the variables within the top LHS quadrant, clearly reflect SM concerns of the key factors that affect or influence overall core business performance - i.e. from Figure PS1-H, customer service, human resources, marketing/sales, new products and information systems; from Figure PS1-I, market share, increased profit and changes in technology. Similarly, the bunching of the remaining variables on the lower LHS quadrant can be inferred as being non-strategic in terms of importance, rather than being *uninformed*.

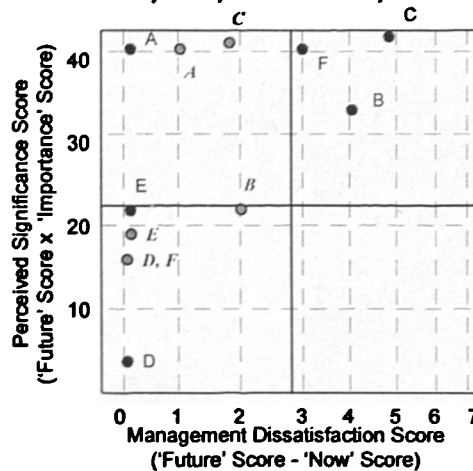
For Figure PS1-I, there is a clear divergence in perceptions in terms of likely challenges posed by *Property/Facilities Issues*, between the two principal stakeholders, OM expresses not only a higher level of performance dissatisfaction, but also a much higher *Significance Score*.

The results from Figures PS1-J and K, are considered particularly important in that they consider variables which are directly related to the context of REAM within the case study organisation.

Figure PS1-J

Variables: *Key Business Resources - perceptions and importance*

- A. People
 - B. Property
 - C. Technology
 - D. Financial Value
 - E. Operational Value
 - F. Use Value
- Legend:**
- Senior Management
 - Operational Management

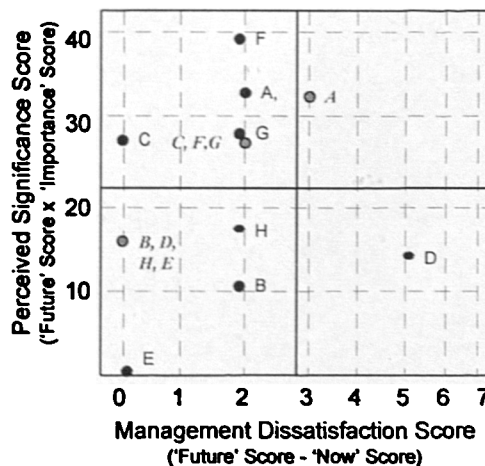


From Figure PS1_J, the results from the SM's perspective seems to indicate that SM acknowledges the strategic importance of the three business resources of *People*, *Property* and *Technology* (as reflected by their positioning within the LHS quadrant). The results also indicate (through the *Dissatisfaction Score*), that SM expect better future performance from the resources, *Property* and *Technology*. However, this view seems to be at odds with the zero *Dissatisfaction Score* for the three value variables associated with operational property. One interpretation of the latter can be that SM are not fully aware of the value measures for operational property.

Figure PS1-K

Variables: *Real Estate & Facilities Support Services - performance and importance*

- A. Meeting needs of business units
 - B Link real estate to business strategy
 - C Managing occupancy costs
 - D Strategic facilities planning
 - E Return on assets
 - F Managing facilities support services
 - G Managing under utilised property
 - H Communicating value to shareholders
- Legend:**
- Senior Management
 - Operational Management

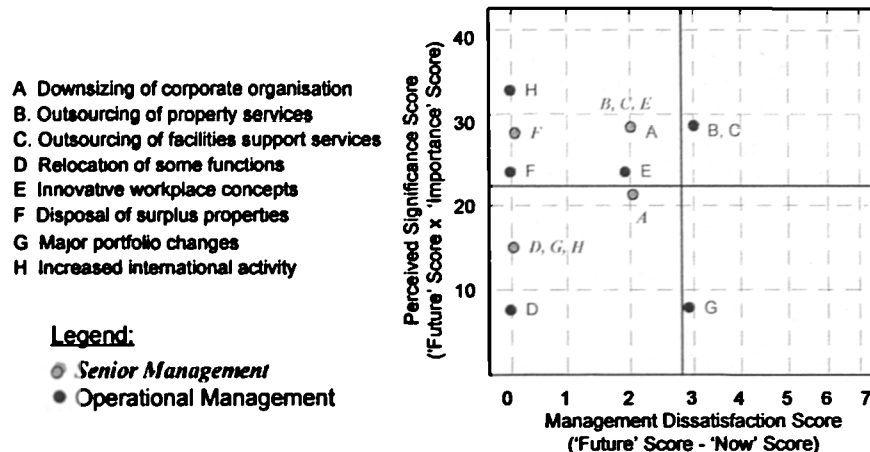


In terms of real estate and facilities services issues, SM's views appear in two distinct groupings. The first grouping of variables express a strategic concern for managing occupancy costs, facilities support services and under utilised property. *Meeting the needs of business units* is seen by SM as an important variable. The second group of variables dealing with the need to link strategic facilities planning to business strategy, return on assets, and communicating value to shareholders, did not attract a high *Significance Score*. The corresponding Zero *Dissatisfaction Scores* for these variables can also be inferred as a lack of full awareness of the need to consider real estate and facilities dimensions of business decisions.

OM expressed a high dissatisfaction for the lack of strategic facilities planning, places high significance for meeting the needs of business units, managing under utilised property, occupancy costs, facilities support services.

Figure PS1-L

Variables: *Emerging Real Estate & Facilities Support Services Strategies*
- relevance and likely adoption



In terms of response to emerging real estate and facilities services strategies, both SM and OM share the relevance of strategies relating to possible outsourcing of both property and facilities service, the need to dispose of surplus properties, and the need to adopt innovative workplace concepts, in the near future. Relocation and major changes to the existing operational portfolio rated low in significance.

In summary of the above analyses, most of the positioning of the 43 variables for SM appeared to bunch within the two LHS quadrant, indicating a clear distinction of awareness of variables/issues of strategic importance to the success of the business (top LHS quadrant), and other variables perceived to be of lesser importance or as a result of lack of knowledge or awareness (bottom LHS quadrant).

For OM, there are clear indications of an awareness of key variables and issues that impact on its performance as seen by SM, as well as current constraints imposed by lack of strategic involvement in the business decision making processes.

Comparison with Respondents' Self Assessment

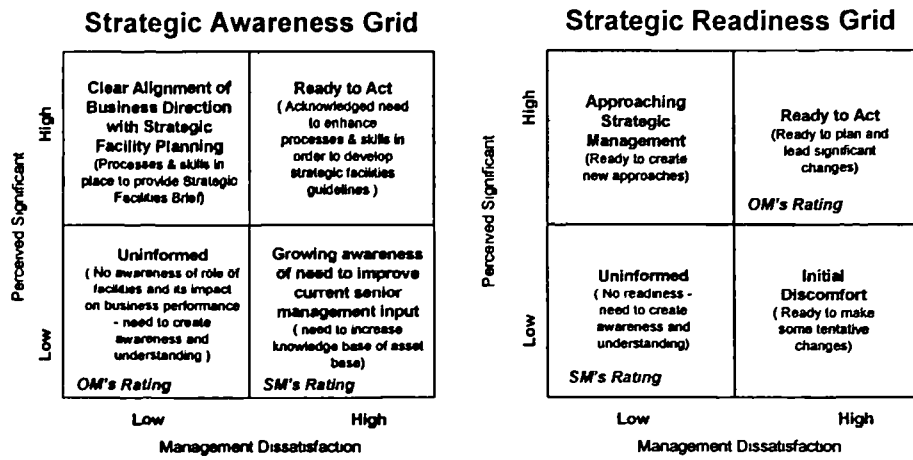
In using the positioning of the variables as a quantitative measure of placing the prevailing culture of case study organisation PS1 in relation to REAM within the Strategic Awareness Grid and Strategic Readiness Grid, the result has proved to be inconclusive.

In making a valued judgment, based on the above analyses and the qualitative statements as stated in the two strategic management grids, the author suggests the following outcome for case study organisation, PS1:

- For the Strategic Awareness Grid, the appropriate quadrant reflecting the current situation - GROWING AWARENESS.
- For the Strategic Readiness Grid, the appropriate quadrant reflecting the current situation - READY TO ACT.

As a comparison, the feedback obtained from the respondents, based on their own assessments are shown below:

Respondents' Self Assessment - Case Study PS1



The above results of case organisation PS1 give a detailed account of the analysis methodology adopted to assess the prevailing attitudes and perceptions of two key stakeholders that directly influence the practice of REAM within the organisation.

6.2.2.4 An Example from the Manufacturing Sector

Brief of Case Study Organisation M2:

This is one of the sites of an international group of companies operating in Scotland. It is one of the world's leading providers of wireless communications, semiconductors and advanced electronic systems, components and services. The main product line of the case study organisation is cellular telephones, one of the company's equipment manufacturing businesses.

The case study data comprised of interviews and completed questionnaires from both senior management (represented by the Finance Director and Human Resources Director) and operational management (represented by the Site Engineering Manager and the Facilities Manager).

The data sheets for case organisation M2 is included in the Appendix G.

Author's Comments:

This is a good example of a manufacturing-based organisation which is part of a large international company with a global network of production, research and office facilities. The case study site is largely a manufacturing plant with office, storage, and other essential facilities necessary for supporting twenty-four hours operations. Recently, a gymnasium and crèche have been added to the existing facilities on the site.

The analysis of the case study organisation revealed a culture that is driven by international competition, but at the same time providing the best possible working environment and amenities for its employees within the confines of its operational physical infrastructure. Unlike FS1 and PS1, for M2, the occupancy costs component as a cost item does not feature as prominently in terms of overall costs to the organisation since the cost of a production line can well exceed the capital cost of the entire building infrastructure. Also, being a manufacturing plant, raw materials costs are substantially higher than building-related costs. In this respect, the corporate concerns in respect of the practice of REAM, are primarily production-output driven, with the emphasis on minimising disruption to production processes. However, the demands imposed by twenty-four hours operations throughout the year entails a rigorous

management regime of ensuring that the working environment and amenities provisions (e.g. catering, etc.) are economically sustained, in addition to the routine requirements for building and services maintenance, production plants maintenance, health and safety monitoring and long-term asset management.

Case Study Organisation : M2

Nature of Business and Organisation Profile:

Principal business lines and services: wireless communications, semiconductors and advanced electronic systems and services.

Primary products: portable cellular telephones, pager and paging systems, cellular infrastructure equipment, semiconductor chips.

Annual turnover: Estimated £1 billion per annum.

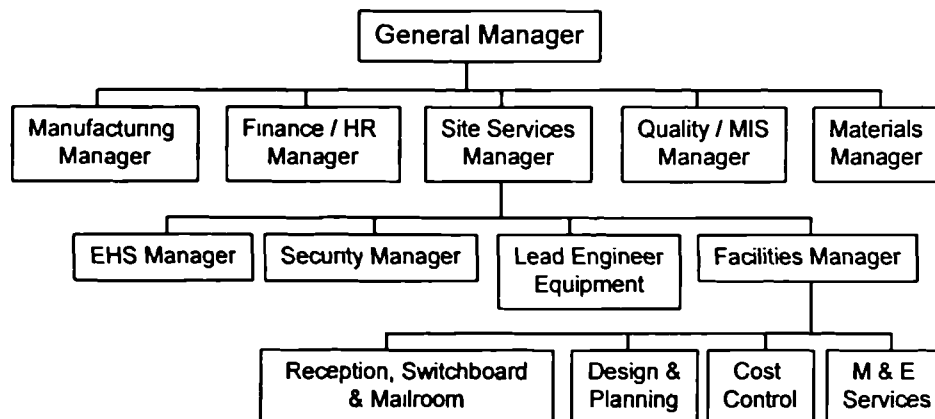
Operations in 29 countries : US, Europe, Israel, Malaysia, Japan, China. HQ in Chicago.

Global Real Estate Portfolio: 29m sq.ft.(2.7m sq.m.) in 1994, about 25% outside the U.S. and the growth of real estate outside is projected to grow dramatically in the next 3-5 years. The corporate company prefers to own its own facilities, adapting the buildings to accommodate specific production processes. Only 10% of the portfolio is leased, mainly offices.

Case Study Site in Scotland: Part of the European Cellular Subscriber Division, one of two plants in Europe, with about 2000 production staff in a facilities of about 45,000 sq.m.

Organisation Structure and Positioning of RE/FM Function:

Site Services Organisation Chart



The Site Services Department has 30 staff with an annual budget of £5.9 million covering the range of services as shown above.

The Department's stated mission is "to provide an environment appropriate to the needs of the organisation and the manufacturing businesses."

The current operational objectives are driven by:

maintain the general environment within cost parameters,

ensure no manufacturing downtime due to utilities/services provision, and

support the manufacturing plan - capacity and new product introduction.

Current Real Estate and Facilities Services Operating Systems and Features:

Structure: As shown above, the Site Services Department is functionally organised and headed by the Site Services Manager who is a member of the senior management group reporting to the General Manager. In this respect, access to strategic business decisions is not a problem.

Strategic Facilities Planning: There is currently no formal strategic plan for operational property, although it is acknowledged that the facilities department must be able to respond to the strategic business plan.

The context of REAM for this case study organisation is therefore restricted to the ongoing management of the facilities related services for the site since any substantial capital plans will be subjected to corporate approval.

The main drivers for forecasting facilities requirements are sales, projected headcount and production capacity.

Information System Adequacies: The current information system is primarily cost control driven aimed at budgetary control. Actual spending is monitored against planned spending and variance reported on a monthly basis.

Plans currently being initiated to computerise cost tracking of jobs raised internally. There is not internal charging for property and facilities services, apart from apportioning of utilities costs to the business units.

Performance Monitoring Systems:

Current performance measures are production related rather than building related. Examples include: units produced per sq.ft.; units produced/person/year, etc.

The only facilities related performance monitoring system is imposed by the parent corporate company known as "Facility Quality Systems Review". This two-yearly review is carried out by staff from the corporate headquarters based on a scoring system on a number of quality criteria for each area. The areas covered by the review include:

- Facilities Management Administration,
- Maintenance Programmes,
- Space Planning'
- Construction
- Engineering
- Operation
- Community Involvement.

Analyses and Results of Attitudes Survey:

The results of this part of the attitudes survey follow a similar format to the previous two cases, but only emphasizing variables relating to operational property and facilities support services. Related results are included in the data sheets for case study organisation M2 in Appendix G.

Senior Management - Operational Management Attitudes Profile

Given the competitive and product nature of the company, it is not surprising that both SM and OM rated *Technology* the highest in terms of priority and impact of the three resource bases of people, property and technology. *Property* is ranked lowest of the three resources, reflecting an essentially supporting infrastructure role for housing the production processes and employees. (see Figures M2- A & B)

Figure M2-A: Resource Perceptions

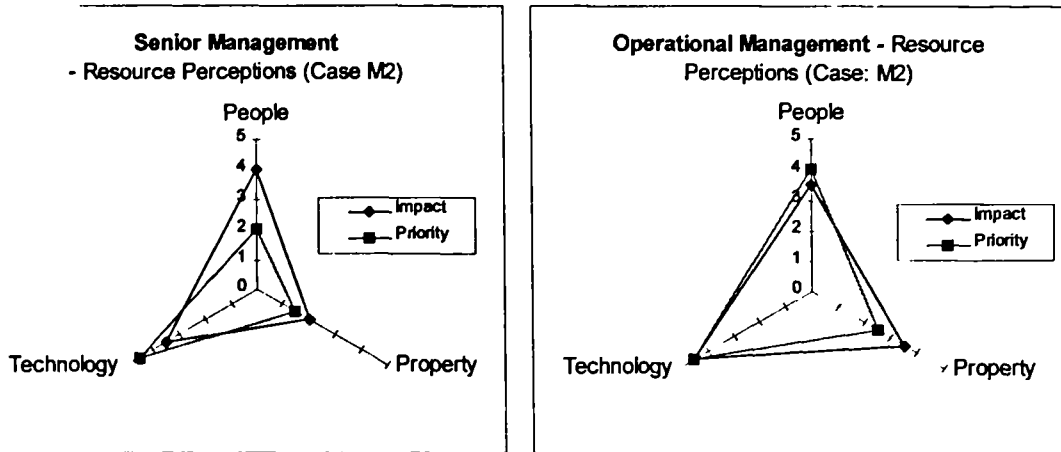
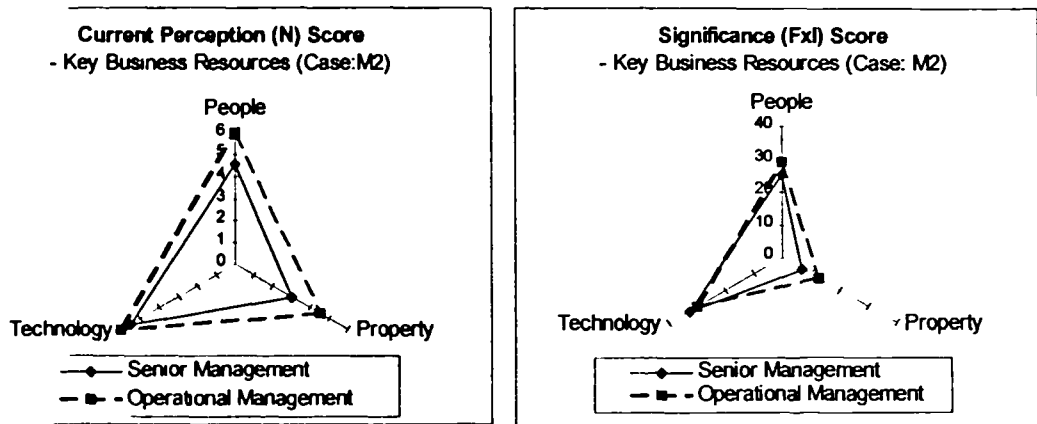
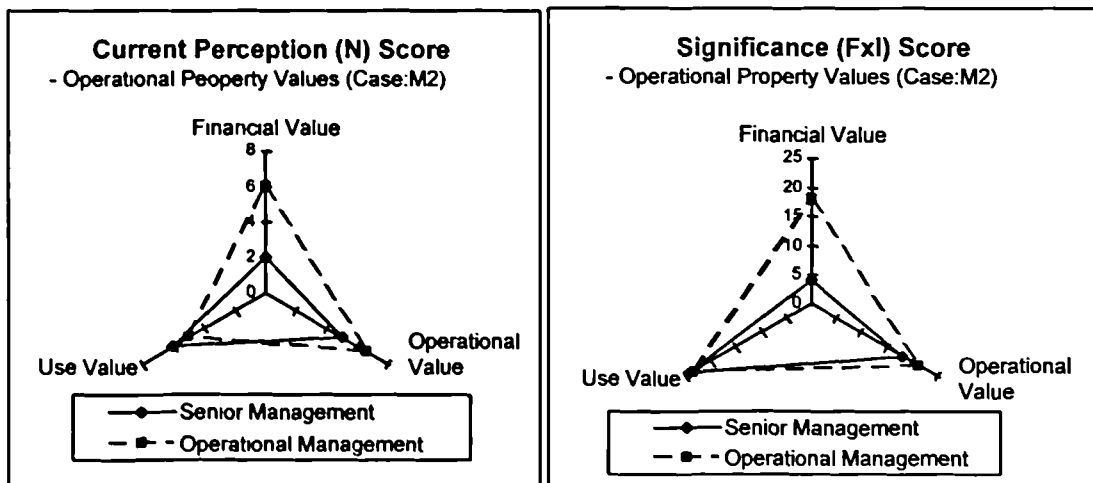


Figure M2-B: Resource Perceptions



The production emphasis is also clearly reflected in both SM and OM perceptions on the role of the operational property as illustrated in Figure M2-C, which placed high on *Use Value* and *Operational Value*.

Figure M2-C: Perceptions of Operational Property



On issues relating to current and future performance of property and facilities services, Figure M2-D, both SM and OM display similar profiles. While SM expressed a higher interest in maintaining *return on assets* and *efficient management of the facilities support services*; OM showed a consistent desire to be able to *link real estate considerations to the business plans* and placed considerable emphasis on *meeting production support services*.

Figure M2-D: Now (N) & Significance (Fxl) Scores Analysis - Real Estate & Facilities Services

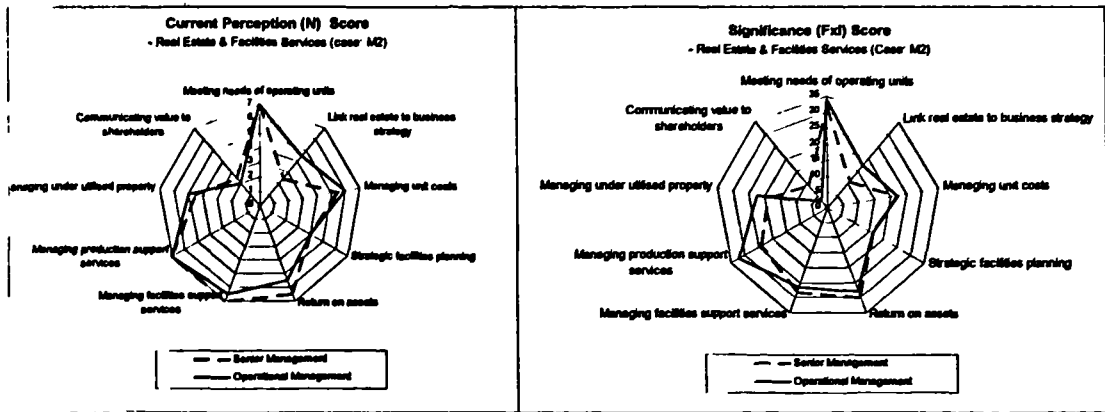
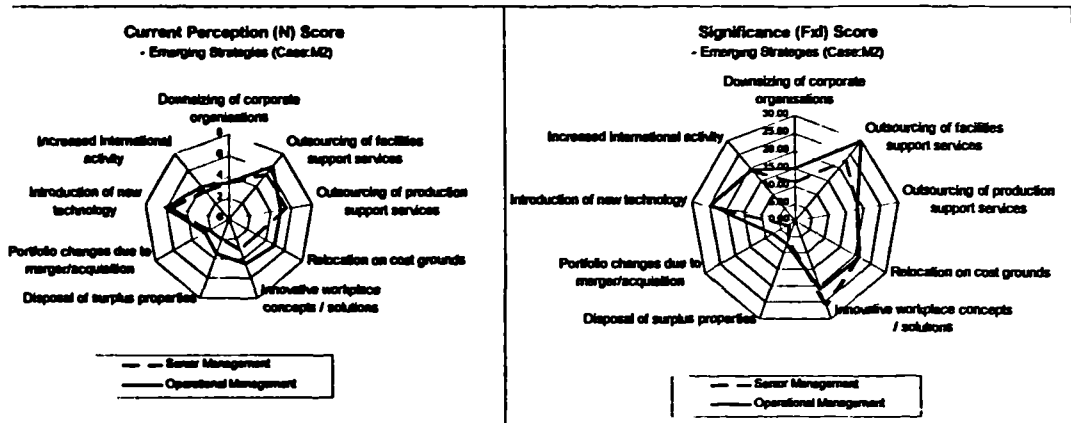


Figure M2-E: Now (N) & Significance (Fxl) Scores Analysis - Emerging Strategies



In response to some of the possible emerging issues relating to REAM as a whole, both SM and OM again produced fairly similar profiles, Figure M2-E. OM appears to placed high relevance to issues involving the introduction of new technology and new workplace concepts, and possibilities of further use of external service providers for support services. SM also appears to support both potential initiatives.

Figure M2-F

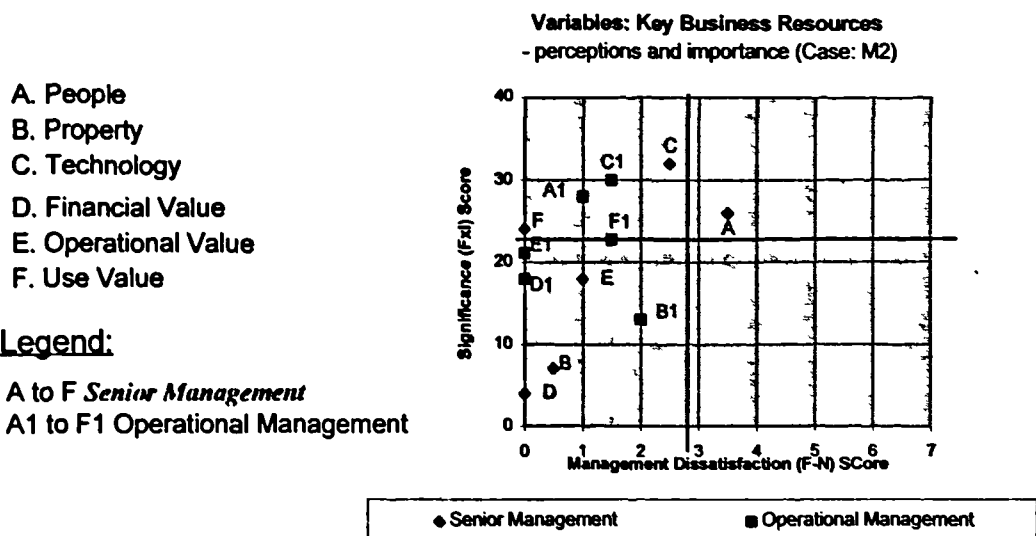


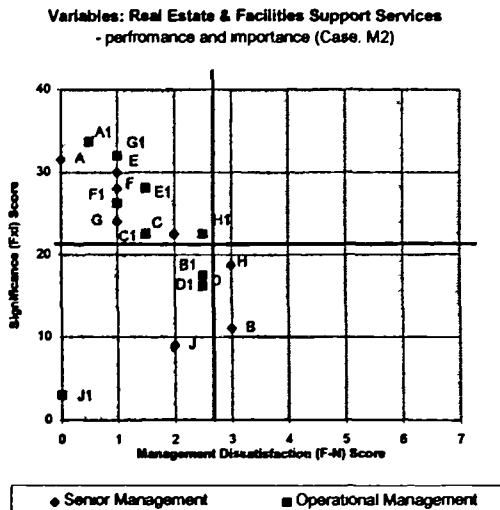
Figure M2 - F shows the positioning of SM and OM perceptions relating to the three key business resources and their value attributes. Apart from a higher *Dissatisfaction* level expressed by senior management on the resource, People, both SM and OM appear to be in congruent in terms of the *Significance* score. OM expressed a higher level of potential improvements in terms of the *Property* resource and its *Use Value*.

Figure M2- G

- A. Meeting needs of business units
- B. Link real estate to business strategy
- C. Managing unit costs
- D. Strategic facilities planning
- E. Return on assets
- F. Managing facilities support services
- G. Managing production support services
- H. Managing under utilised property
- J. Communicating value to shareholders

Legend:

- A to J *Senior Management*
- A1 to J1 *Operational Management*

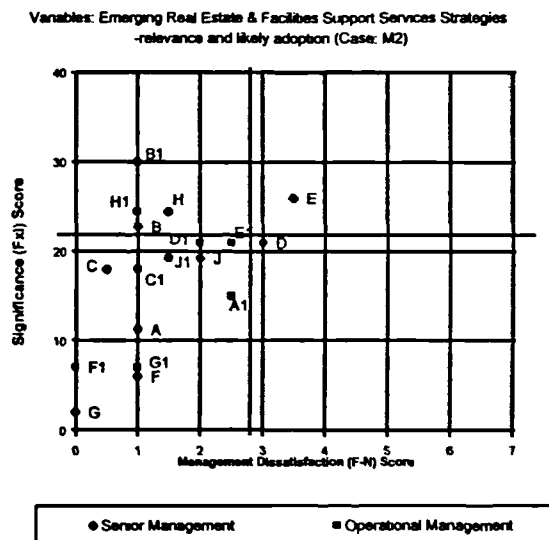


In terms of real estate and facilities services issues, there appears to be an agreement on the importance placed on a number of the variables listed. The bunching of the results on the top left-hand quadrant indicates a good working relationship between SM and OM. This is perhaps a reflection of the Site Services Manager representation at the Senior Management level (see organisation chart).

Figure M2- H

- A. Downsizing of corporate organisation
- B. Outsourcing of property services
- C. Outsourcing of facilities support services
- D. Relocation of some functions
- E. Innovative workplace concepts
- F. Disposal of surplus properties
- G. Major portfolio changes
- H. Increased international activity

- A to H *Senior Management*
- A1 to H *Operational Management*



A similar pattern of alignment between SM and OM is again evident from the above figure, with bunching of the results on the LHS quadrants.

Comparison with Respondents' Self Assessment

In making a valued judgment, based on the above analyses and the qualitative statements as stated in the two Strategic Management Grids, the author suggests the following outcome for case study organisation, M2:

- For the Strategic Awareness Grid, the appropriate quadrant reflecting the current situation - *READY TO ACT*.
- For the Strategic Readiness Grid, the appropriate quadrant reflecting the current situation - *READY TO ACT*.

The respondents' own assessment of within the pair of Strategic Management Grids are illustrated below.

Respondents' Self Assessment - Case Study M2

Strategic Awareness Grid

Perceived Significance	High	<p>Clear Alignment of Business Direction with Strategic Facility Planning (Processes & skills in place to provide Strategic Facilities Brief)</p> <p><i>SM's Rating</i></p>	<p>Ready to Act (Acknowledged need to enhance processes & skills in order to develop strategic facilities guidelines)</p>
	Low	<p>Uninformed (Low awareness of role of facilities and its impact on business performance - need to create awareness and understanding)</p>	<p>Growing awareness of need to improve current senior management input (need to increase knowledge base of asset base)</p> <p><i>OM's Rating</i></p>
		Low	High
		Management Dissatisfaction	

Strategic Readiness Grid

Perceived Significance	High	<p>Approaching Strategic Management (Ready to create new approaches)</p>	<p><i>OM's Rating</i></p> <p>Ready to Act (Ready to plan and lead significant changes)</p>
	Low	<p>Uninformed (No readiness - need to create awareness and understanding)</p>	<p><i>SM's Rating</i></p> <p>Initial Discomfort (Ready to make some tentative changes)</p>
		Low	High
		Management Dissatisfaction	

6.2.2.5 An Example from the Telecommunication/Utilities/Distribution Sector

Brief of Case Study Organisation, C2:

This is a mobile communications company which over the last decade have invested heavily in building up its national network in the UK. As a result its real estate portfolio, comprising mainly of offices, has growth substantially. Its core business is a national cellular network operator selling analogue and digital voice transmission services and other related value added services. The company operates in a very competitive environment where the pace of technological development is rapid and changing constantly.

The case study data comprised of interviews and completed questionnaires from two key staff from the Property Services Department; the Head of Property and the Property Operations Manager.

The data sheets for the case study organisation C2 is included in Appendix G.

Author's Comments:

This is a good example of an organisation that can be classified as in the growth stage typified by a rapid growth in staff number from 600 to 1500 over a relatively short period, accompanied by an continuous expansion programme of infrastructure projects.

The analysis of the case study organisation revealed a corporate culture that is driven by putting customers first in terms of service and maintaining technological excellence in its core technologies. The pace of change experienced by the company and the dynamics of an expanding infrastructure and staff number posed particular challenges for the Property Services Department, charged with providing property management and facilities support services for all the company's operational properties.

Case Study Organisation : C2

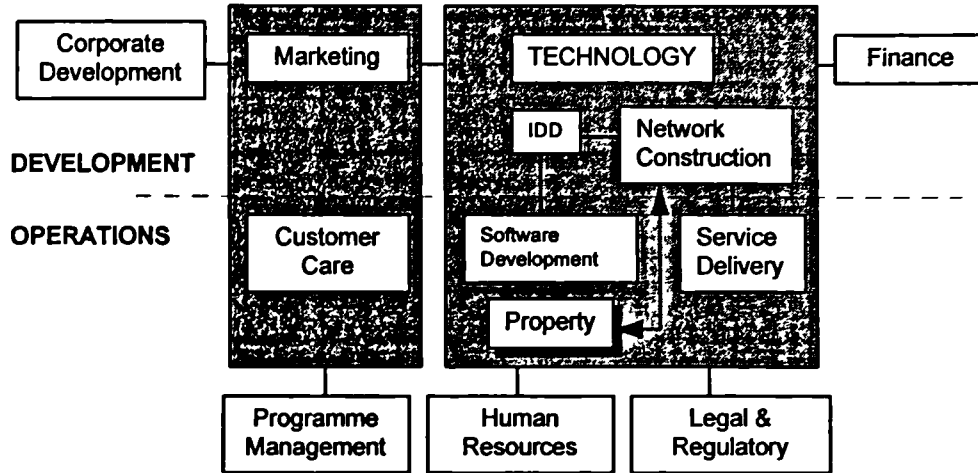
Nature of Business and Organisation Profile:

Principal business lines and services: Cellular Network Operator selling 'air-time' for subscribers of mobile telephones and other digital transmission.

The Property function is within the Technology Division of the corporate structure which is responsible for both the 'software' and 'hardware' i.e. physical infrastructure - network and non-network accommodations; aspects of the business.

Real Estate Portfolio: The company rent or leased most (97%) of its office space requirements (about 250,000 sq.ft.) and owns and maintains about 1500 unmanned radio stations forming the network infrastructure.

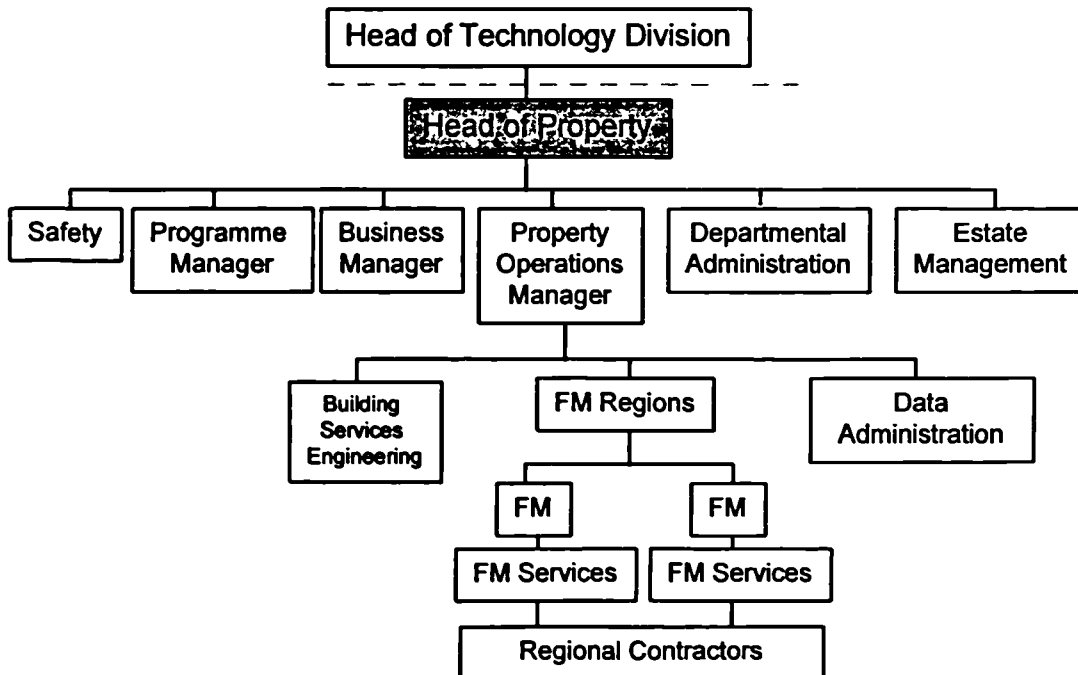
Corporate Organisation Chart



The Head of Property reports to the Head of Technology Division.

Organisation Structure and Positioning of REAM Function:

Property Services Department Organisation Chart



The Property Department role is "to provide, manage and maintain the company's physical infrastructure and working environment, currently catering for the needs of 1500 staff."

The department currently has 29 staff with an annual operating budget of more than £36 million. The services provided by the Property Services Department include two components:

- Project management of building, fit-out and refurbishment planning and works in non-network accommodation from receipt of the clients requirements to final occupation of the premises.
- management of property security, safety, fire precautions and building maintenance and where appropriate the management of the receptionists and postal services. Employing the appropriate consultants and contractors for building maintenance and other services required.

In a competitive market, the challenges facing the Property Department include a constant pressure to reduce costs and yet, maintaining a quality office environment with a level of facilities services within its operational real estate in order to attract and retain skillful staff.

The current development strategy in the Department is to create a small central team to co-ordinate the intelligent client role with competencies aimed at:

specifying standards and guidelines in order to better control the use of space to assist the company's growth,

- vendor management, and
- procurement activities - working closer with the procurement department.

Current Real Estate and Facilities Services Operating Systems and Features:

Structure:

As shown above, the Property Services Department is functionally organised. Access to senior management is via the Head of the Technology Division. Although positioned relatively close to corporate management (being two levels down from the CEO), the nature of the current interactions does not allow for access to strategic business decisions. A prevailing perception by senior management is aptly reflected by this statement by the Head of Property:

"The core business sees facilities as 'easy' compared to service and product development."

The current operational objectives of the department are driven by the need to:

- develop capabilities to enable the company to move quickly (flexibility in facilities provision and support services) while reducing occupancy costs, and
- add value through increased productivity by managing the operational facilities as effectively as possible to support employees' tasks.

Strategic Facilities Planning:

In terms of strategic planning, the Head of Property acknowledges the need to consider a number of issues that are of increasing concern as a result of projected planned growth of the company. Some of these include:

- property response to business plans,
- developing strategic plans for space needs,
- benchmarking of property services costs, and
- environmental 'green' concerns.

Information Systems Adequacies:

The current information support systems is seen as inadequate, as reflected by the following statements from the questionnaire:

"We have lots of data but very little information and no easy way of analysing it in particular: leasebreaks, rent reviews, values. ..."

Need better customer perception data to prove /disprove service suitability. Also need good external benchmarking information."

Performance Monitoring Systems:

Within the department, a series of performance measures have been developed to monitor a number of aspects:

- Effectiveness of the Department,
- Effectiveness of strategies implemented, and
- Measures for comparing effectiveness of each building within the corporate portfolio.

For each of the above, a number of measures were chosen to assess its effectiveness. (please refer to data sheet for case study organisation C2).

Analyses and Results of Attitudes Survey:

As access to senior management was not obtained for organisation C2, the results of this part of the attitudes survey are restricted to the views expressed by two respondents from the operational asset management. Only a brief summary is provided here. Related results are included in the data sheets for the case study in Appendix G.

The results from the analyses support a view that whilst the Property Services Department are clearly aware of its operational support role, it seems to lack access to strategic business intent in order for it to be more proactive in responding to facilities demand by business units.

It is interesting that both respondents cited corporate culture at senior management as the most critical factor in terms of barriers that are currently limiting a greater consideration of property and facilities services issues.

"The convergence between strategic business drivers and changes in the market place is already evident. We must ensure that corporate planning reflects the efficiencies that can be achieved.

In my experience, Board level management are not usually aware of how much changes have taken place in this field. To progress with the business to be "Intrapreneuers" or "Business Strategists" requires a major cultural change coupled with an acceptance of the credibility and value of what can be offer."

6.2.3 Case Studies Sector Summary

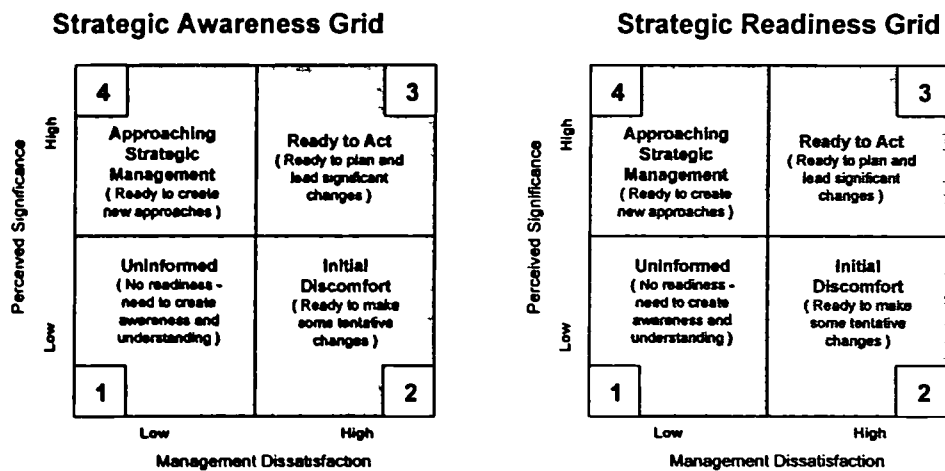
The previous section has provided some examples of detailed analyses of a case study from each of the four commercial sectors. The purpose of this sector summary is to identify factors which may be unique to the particular sector of the industry that influence the practice of REAM. As mentioned earlier, the summaries of the sectors analyses will focus on the following two aspects:

- Nature of business environment.
- Responding facilities strategies.

6.2.3.1 Introduction

In order to provide a basis for comparison, the results of each case study within each industry sector is summarised into a tabulated form. Each case study organisation, based on the analyses, has been evaluated against two conceptual frameworks:

1. The pair of Strategic Management Grids.



1. The IDRf Competence Framework¹



¹ Please refer to Table 2.4, Chapter 2, pp. 48 for a description of the 5-stage model and the features from 'Taskmasters' to 'Business Strategies'.

6.2.3.2 Summary of Banking and Financial Services Sector

This sector has the largest number of respondents (11) comprising five banks(5) and seven financial services companies(6). Table 6.3 summarises the results of the eleven(11) case studies organisations evaluated against the two chosen conceptual frameworks.

Table 6.3: Summaries of Case Studies in Banking and Financial Services Sector

Case Study Organisation Reference	Strategic Awareness Grid				Strategic Readiness Grid				IDRF Competence Shift Model - Stages				
	1	2	3	4	1	2	3	4	1	2	3	4	5
BK1		2					3				3		
BK2		2					3				3		
BK3	1					2				2			
BK4	1					2			1				
BK5			3				3				3		
FS1		2					3				3		
FS2	1					2				2			
FS3			3				3				3		
FS4	1					2				2			
FS5	1					2			1				
FS6		2					3				3		

Banks and Financial Services Sector

Nature of Business Environment:

Banks and Financial Services companies have been described as 'cash-rich' organisations operating within relatively stable market conditions. In terms of the provision of the real estates and facilities support services, they were usually regarded as operational issues, often left to the technical professional staff or consultants once a decision has been made to build or acquire a building. Location and image factors often predominant the decision processes at senior management levels, at the expense of functional and long term asset management criteria.

For the banking sector, in particular, the last decade has seen a dramatic change in the market environment within which they are used to operate in. Three principal factors have accounted for these changes:

- Increased competition as a result of deregulation leading to new providers of traditional banking services;
- An increasing awareness and expectations by customers for new and more convenient ways of conducting business incorporating the latest technology;
- Impact of information technology on the traditional 'over-the-counter' services;

The above factors have a direct impact on the provision and ongoing management of the supporting physical infrastructure for the banking sector in the future.

The evidence from the case studies analyses suggests that while some (BK1, BK2 and BK5) are fundamentally reviewing their entire operational assets strategies in the light of the above listed factors (that is, strategically driven); others (BK3 and BK4) appear to maintain the status quo, content to adopt a reactive response to demand.

For the group of financial service companies, the last decade had seen both a rapid expansion of the market offerings as well as increased competition within a volatile financial market.

The evidence from the case studies analyses suggests a range of awareness levels from: "we can afford to bear the costs of the spare capacity" (FS2, FS4 and FS5), to a strategic review of the whole portfolio with a view of incorporating major rationalisation and introduction of innovative workplace concepts (FS1, FS3 and FS6).

Responding Facilities Strategies:

In summarising the emerging responding facilities strategies from the case studies organisations, an important determining factor is the level of strategic awareness of the corporate (senior) management levels to the role and impact of its operational assets on the overall performance of the company.

Emerging real estate and facilities support services strategies include:

- Commissioning of strategic review of current operational real estate portfolio with a view of restructuring or reconfiguring to meet future requirements.

This type of review seeks to provide strategic guidelines on criteria for key variable like location preferences, corporate image, corporate standards for working environment. In essence the focus of the evaluation is managing change; they are akin to the first two levels of the development of the *Strategic Facilities Brief* (refer to section 6.3.2, pp.321).

- Commissioning of strategic review of current provision of facilities support services with a view of suggesting more cost effective and efficiency improvements

This type of review can be all embracing or specifically focused on one or several aspects for examples, current utilisation patterns, benchmarking of space standards, or a review of facilities support services procurement. At the strategic level, the objective is to provide guidelines for service provision within the corporate business plans by defining service parameters like criticality and expectations, level of demand and utilisation patterns. In essence, the focus of the evaluation is in managing over time; they are akin to the first two levels of the development of the *Service Levels Brief* (refer to section 6.3.2, pp.323).

- Commissioning of operational review of current practice or procedures within business units and functional departments with a view of improving communication between service purchasers and service providers in order to raise overall service performance.

Operational reviews are often a consequence of strategic reviews with the focus on implementation and culture change at the delivery end of facilities services provision.

Project outcomes resulting from the above strategic and operational reviews could be in the form of a combination of the following initiatives:

1. Real Estate related programme:

- Development of corporate property information system - property register, database, CAD, CAFM, CIFM evaluations.
- Estate rationalisation - leading to a disposal of properties surplus to requirements or functionally obsolete properties, and/or the development of new purpose-built facilities in light with project future requirements.

2 Facilities Support Services related programmes:

- Evaluation of occupancy costs trends with a view of developing a better understanding of cost drivers with individual services.
- Evaluation of sourcing options for existing range of support services provision with a view of developing service level agreements.
- Rationalisation of procurement of existing support services into 'service bundles' with a view of outsourcing in order to optimise administrative efforts.

6.2.3.3 Summary of Professional Services Sector

This sector has seven (7) organisations which share a common element in terms of operational assets - predominantly office accommodations. However, the 'office accommodation' support covered in the case study organisations vary in the types of businesses; from professional accountancy and management consultancies services (PS1 and PS7), marketing and sales, to research and development (PS2 to PS6).

Table 6.4 summarises the results of the seven(7) case studies organisations evaluated against the two chosen conceptual frameworks.

Table 6.4: Summaries of Case Studies in Professional Services Sector

Case Study Organisation Reference:	Strategic Awareness Grid				Strategic Readiness Grid				IDRF Competence Shift Model - Stages				
	1	2	3	4	1	2	3	4	1	2	3	4	5
PS1 (Accountancy)		2					3			2			
PS2 (Marketing & Research)		2					3				3		
PS3 (Administration & Sales)				4				4				4	
PS4 (Administration & Sales)			3					4				4	
PS5 (Admin. & Research)			3					4				4	
PS6 (Research & Training)		2				2				2			
PS7 (Accountancy)			3				3					4	

<p>Professional Services (Office) Sector</p> <p><u>Nature of Business Environment:</u></p> <p>The provision and management of office accommodation has seen a dramatic transformation in concepts and practice in recent years. As more and more corporate managers accept that change is for most organisations today a matter of survival, and that its compelling nature affects every facets of organisation, the role and context of REAM in the provision of the workplace environment will become increasingly apparent. The following quotation from Becker and Steele(1995) aptly explains the rationale:</p> <p><i>"The reason is simple: when planned, designed, and managed with imagination, the workplace becomes a fundamental element of the business and its competitiveness."</i>²</p> <p>The evidence from the above case studies suggests that the above vision is far from the realities of practice in the provision and management of the functional workplace in many organisations.</p> <p>Current practice is still not necessarily related to demand but arose through inertia of bygone days of stable markets and product demand, typified by 'status with space' rather than economics since space is a hidden cost absorbed by corporate overheads and expenses.</p>
--

² Becker, F, and Steele,F. (1995), Workplace by Design. Jossey-Bass Publishers. pp.7.

In recent years, competition and the dynamics of the global marketplace has revealed for many companies, the following economic realities:

- Surplus space due to optimistic view of the world, based on assumptions of status quo - i.e. stability of market and product demand is no longer a valid assumption. One consequent facing current management is how to get rid of surplus space?
- Occupancy costs are coming under scrutiny. Comparative analyses (benchmarking) are revealing a wide gap between what was paid for and what the market benchmark should be.

Responding Facilities Strategies:

For the seven case study organisations investigated, the emerging real estate and facilities support services strategies to the pressures to reduce premises-related costs can be grouped under three categories:

- Strategic review of current operational real estate portfolio with a view of aligning current supply to anticipated demand through rationalisation of locations and disposal of surplus requirements.
- Development of information system to track number, location, size, usage of corporate real estate portfolio with a view of developing competencies to evaluate 'what-if' options in response to business plans.
- Evaluating occupancy costs profile and drivers with a view of introducing internal charging of property and facilities support services cost to business units.
- Review of current procurement policies with a view of identifying savings in administrative costs by taking advantage of economies offered by external service providers.
- Introduction of training to in-house staff in order to acquire relevant competencies essential for the effective and efficient management of the corporate real estate resource

6.2.3.4 Summary of Manufacturing Sector

This sector is made up of four(4) manufacturing companies, each quite different from one another in terms of the manufacturing processes and the end product(s). Organisation M1, is part of an international group of contract manufacturers of bulk chemicals for the pharmaceutical industry, operating from Ireland. Organisation M2, described in detailed above, is an electronic product manufacturer operating from central Scotland. Organisation M3, is an aircraft components manufacturer and designer operating in Northern Ireland. Organisation M4 is a manufacturer of lighting products operating in central Scotland.

Table 6.5 summarises the results of the four case studies organisations evaluated against the two chosen conceptual frameworks.

Table 6.5: Summaries of Case Studies in Manufacturing Sector

Case Study Organisation Reference: (main product lines)	Strategic Awareness Grid				Strategic Readiness Grid				IDRF Competence Shift Model - Stages				
	1	2	3	4	1	2	3	4	1	2	3	4	5
M1 (pharmaceutical)		2				2			1				
M2 (electronic)			3				3				3		
M3 (aircraft components)		2				2			2				
M4 (lighting products)		2					3				3		

Manufacturing Sector

Nature of Business Environment:

The diverse range of products from the four case study organisations makes generalisation a difficult proposition. However, in terms of the business environment which the companies are operating in, competition are fierce and on a global, rather than a national scale. For examples, organisations M1 and M3 are particular prone to international competition, having experienced the lost of major production contracts in recent years resulting in a period of economic uncertainties.

In comparison to the banking and financial sector, the requirements of manufacturing operational facilities are more exacting in the specific requirements of the production processes, but at the same time, demanding flexibility in layout in order to accommodate for changing product lines. Another important differentiation for manufacturing facilities is the relative low capital value of the building when compared to the value of the specialised production plants. In this respect, it is understandable that the operational emphasis of such facilities are with minimising unit production cost and ensuring that the operational real estate assets do not in any way constraints the production runs. The specialised nature of such facilities also meant that they are built for a specific purpose and owned by the company.

The analyses of the case studies revealed that each organisation is confronted by a different set of core factors that are particular to its industry. For example, M1 is subjected to strict regulatory monitoring on its facilities operating conditions and capabilities as a licensed manufacturer for certain pharmaceutical products and processes. M4, on the other hand, has been manufacturing the same range of products for many years without much changes to its operational real estate portfolio on the same site. M3 relies on technological and engineering excellence in its processes to remain competitive in a competitive global market.

The evidence from the case studies' analyses suggests a range of awareness levels from: *"a shell to house the production process"* (M1 and M4); *"the resulting over-capacity represents a serious drain on scarce resources"* (M3); to a clear strategic approach to use *"the working environment as a lever to influence employees' working behaviour, as well as, attracting new staff, retaining them and growing them."*(M2)

Responding Facilities Strategies:

The dominant motivation of REAM in the context of manufacturing based organisations is to minimise the unit costs of product output. In this respect, premises/occupancy related costs are seen as adding to the production overhead costs. However, evidence from the case study organisations indicate a growing awareness of the principles of life-cycle management and the general acknowledgment of the benefits of a conducive, enabling working environment.

- Emerging real estate and facilities support services strategies include:
- Performance measures to relate premises-related costs e.g. maintenance costs, to level of production output using both financial and non-financial criteria, e.g. uptake by employees of in-factory amenities like, level of use of crèche, gymnasium.
 - Benchmarking of utilities usage and level of utilisation of space or space standards per workstation.
 - Introduction of internal charging to operating business units for property services and facilities support services.

6.2.3.5 Summary of Communication / Utilities / Distribution Sector

The sector is made of two(2) organisations from the telecommunication industry, one(1) utilities company, and one(1) company from the distribution/delivery service industry. Three of the case study organisations operate on a national scale, the fourth has operations both nationally and internationally.

Table 6.6: Summaries of Case Studies in Communication / Utilities / Distribution Companies Sector

Case Study Organisation Reference: (products / services)	Strategic Awareness Grid				Strategic Readiness Grid				IDRF Competence Shift Model - Stages				
	1	2	3	4	1	2	3	4	1	2	3	4	5
C1 (Telecommunication)			3				3	4			3		
C2 (Telecommunication)	1						3				3		
C3 (Distribution)		2					3				3		
C4 (Utilities)	1					2				2			

Communication / Utilities / Distribution Sector

Nature of Business Environment:

The nature of the four case study organisations in this sector deserves some explanation. Case study organisation C1 and C4 were former public sector organisations which had been privatised. Case study organisation C3 is still partly owned by the government, but operating independently.

All the organisations in this sector are currently operating in very competitive market environment which had been open up from a previously 'closed' market protected by legislation. In this respect, apart from C2, the other three organisations had gone through of period of reorganisation and culture change.

Again, apart from C2, (see section 6.2.2.5, pp. 315) the other three organisation have inherited the legacies of their former public sector real estate portfolio. The fact is important in that part of the culture change that was initiated for case study organisations C1 and C3 was to charge market rents for property occupied by operating units. In effect, the practice of charging of internal rent has caused operating business units to regard space as a resource in their business planning. One of the consequences of the introduction of internal rent has been the problem of surplus properties.

In particular for case study organisation C1, with a property portfolio of more than 9500 building(1993), the problem of surplus properties has led to a strategic programme to reduce 15 million sq.ft. from its property portfolio over a five year period from 1993. The programme is reported to have saved the organisation £130 million per year in running costs.

Responding Facilities Strategies:

The emerging supporting facilities strategies from the case study organisations within this sector can be categorised by the stage of development of the organisation.

C2 typifies an organisation at the growth stage with a growing employees and an expanding infrastructure development programme.

On the other hand, organisations C1, C3 and C4 are faced with a situation of surplus properties which are either obsolete or surplus to requirements as a result of organisational restructuring, leading to a substantiate reduction in staff numbers.

The following quotes from the respondents reflect the approach taken by the organisations concerned:

"Advances in telecommunications technology mean that an improved service can be delivered using fewer resources, including people and accommodation. So we are focused on formulating strategic plans that give sufficient flexibility to enable the business to develop without undue restraint whilst seeking to minimise operating costs."

Organisation C1.

"Property is managed with a view to holding a good 'fit for purpose' stock and having regard to valuation in commercial accounts. Essentially the business requires a large and dispersed building portfolio to support its operations - the primary desire is 'operational need' tempered by considered judgements about the options.

However, a strategic plan is meaningless without an accurate knowledge of the resource. we have created a fully audited, comprehensive database, resulting in the formulation of a detailed five year real estate plan which enables all those involved with space use and planning to be aware of programmes for development, refurbishment, restacking and re-use and, where appropriate, disposal."

Organisation C3.

The case studies analyses had to grapple with a vast amount of organisation-specific, as well as industry sector specific data. In attempting to validate the preliminary models, the intention has been to explain context of each case study organisation against the conceptual frameworks evolved. In this respect, the analyses within this section (6.2) have attempted to provide details (as illustrated by the individual case study descriptions) as well as broad sector attributes (as illustrated by the sector summaries).

In conclusion, three factors are discernible from the overall analyses of the case studies investigated:

1. It is not the positioning of REAM within the corporate structure that matters. Rather, it is the influence that the real estate/facilities executive can bring to bear on the senior management decision making processes that ultimately affects the outcome in relation to implications of business decisions on the provision and ongoing management of the operational real estate assets. This only serves to reinforced the importance of the level of interactions, and the quality of communication (formal and informal) between senior management and operational asset management
2. The need for better information support to improve the credibility and justification of real estate and facilities issues within the business case.
3. The competence base needed within real estate/property/facilities departments to derive appropriate supporting facilities strategies that are aligned to the corporate strategic business plans.

6.3 Implications of Findings on Preliminary Models

This section reports on the findings that relate to the second organisational variable from the case studies organisations - *processes*. It forms the second component of the three-part conceptual models - *Model B* (see Figure 5.8, pp. 251).

The findings from the case studies are analysed in terms of their impact on the preliminary process models. The analysis conducted is based on comparing empirical data from the case studies against the models generated in Chapter 3. The objective is to set current practices against the preliminary models and frameworks deduced from published literature (theory and practice) using systems approaches and grounded theory analysis techniques.

The case studies data provided the much needed context for critically examining factors and variables which framed the preliminary models and frameworks. The analysis process conducted was an iterative one in that the experiences from the case study organisations were scanned for best practices and inadequacies in process practices in relation to the proposed overall integrated management process of REAM. Any inconsistencies which do not accord with the REAM model components (Chapter 3, Figures 3.17 & 3.18.) were resolved by inclusion as a contributory variable within the models/frameworks, matrices or considered as unique industry sector specific factors.

The ensuing sections will discuss the implications of empirical data from the case study organisations on three aspects of the REAM model:

1. REAM model components
2. Domain of Strategic Facilities Brief (SFB)
3. Domain of Service Levels Brief (SLB)

6.3.1 REAM Model Components: *strategic - operational interface*

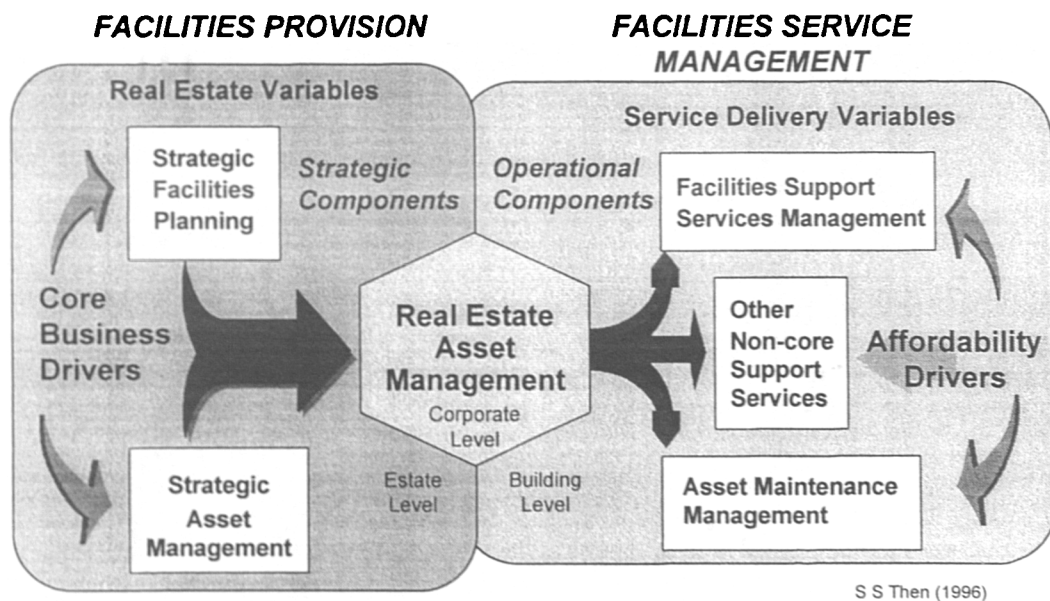
In Chapter 3, a distinction was made between *core business drivers* which impact on facilities provision, and *affordability drivers* which influence the nature of facilities service management in an organisational setting. The two sets of drivers are inextricably linked in considering the physical and spatial requirements of the business, in that the core business drivers are concerned

with resolving real estate issues while the affordability drivers are concerned with service delivery issues within the established real estate portfolio.

The justification for the model components proposition was based on a critical examination of the drivers for change and their implications on the management of corporate real estate portfolio (Section 3.2.1, pp. 163-167). The need to improve the communication interfaces between strategic business planning and operational asset management resulted in a model proposition for REAM comprising of four related components of *Strategic Facilities Planning, SFP, Strategic Asset Management, SAM, Facilities Service Management, FSM, and Asset Maintenance Management, AMM* (Section 3.3, pp.175-188).

Figure 6.2 illustrates the crucial relationship between strategic decisions relating to *facilities provision issues*, and tactical-operational decisions relating to *facilities service provision and management* within the real estate portfolio.

Figure 6.2: Critical Interfaces within REAM



Evidence from the case study organisations were analysed by industry sector trend rather than by individual case. Changes to the preliminary models will be incorporated in the emerging models and framework which will then form the basis for the evaluation workshop.

6.3.2 The Domain of Strategic Facilities Brief - managing change

At the strategic business planning level, the major concern is in reading the market trends and adjusting to likely fluctuations in demand for the company's products or services. The concept of the *Strategic Facilities Brief (SFB)* was introduced (Chapter 3, 3.1.2.2, pp.157) to provide a communication platform whereby the implications of any changes in strategic business direction can be considered in terms of their implications on the corporate real estate resource. The real estate resource is viewed here as a functional asset supplying appropriate functional space to business units within a corporation. The role of property as a physical resource is to house the production processes (products and/or services) by providing a conducive workplace environment for the building users (i.e. people).

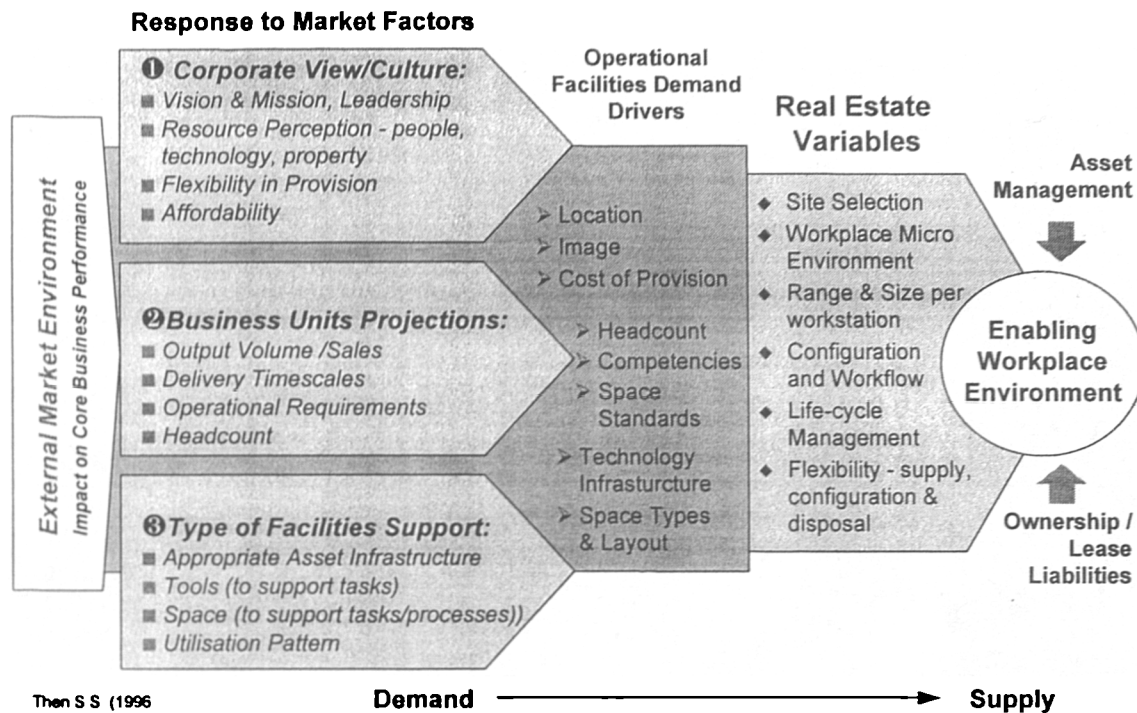
The ultimate objective of the SFB is to ensure that real estate as a resource does not act as a barrier or hindrance to the achievement of business plans. The aim being to provide facilities that are fit for purpose and at an affordable price. The two key outputs from the SFB are:

1. Anticipating and managing changes in demand for functional space as a result of changes in the corporate business plans, and
2. Managing changes in facilities services provision, as a direct consequent of the revised strategic business plans.

It is the close inter-relationship between the *demand* for facilities and *supply* of facilities support services in operational properties that supports the proposition that operational asset management must be aligned to strategic business management.

Figure 6.3 represents an encapsulation of key factors within the domain of SFB, operating at three cascading levels leading to the resulting enabling workplace environment as the outcome. The external market environment has a direct bearing on the core business performance of an organisation in terms of its capacity to response to changes which impact on the viability and profitability of the core business.

Figure 6.3: Defining the Domain of Strategic Facilities Brief



Within the domain of SFB, the response to the market factors can be considered by examining three main aspects which influence or have an impact on the existing real estate portfolio:

1. **Corporate culture:** - This is concerned with organisational variables which are embedded in the organisation culture, from the setting of corporate visions and missions, to perceptions of the roles of business resources. In terms of the corporate real estate asset base, this involves the setting of strategic guidelines and key parameters for the facilities provision and service expectations.
2. **Business units' projection:** - This is concerned with ascertaining likely changes in output levels in line with the strategic business plans. In facilities terms, the demand variables relate to delivery time-scales, operational requirements and projected manpower levels.
3. **Type of facilities support:** - This is concerned with identifying the nature and scope of facilities provision in terms of fitness for purpose in meeting anticipating demand as a consequent of strategic business plans. Apart from the likely utilisation pattern, the outcome of the enabling working environment for an organisation will be influenced increasingly by

parameters which determine how the workplace space are configured and designed to support the work tasks.

The strategies adopted in response to the market factors are then translated into *operational facilities demand drivers* at the intermediate level, which will in turn determine the appropriate real estate variables for the business it is supporting.

The *real estate variables* represent the output of the domain of SFP. The variables listed represent the strategic parameters that govern the facilities provision from demand initiation through to the supply of the appropriate functional space (i.e. from Demand to Supply). At any point in time, the emerging supporting facilities strategies will be influenced by the relative weightings given to the real estate variables identified in the above figure.

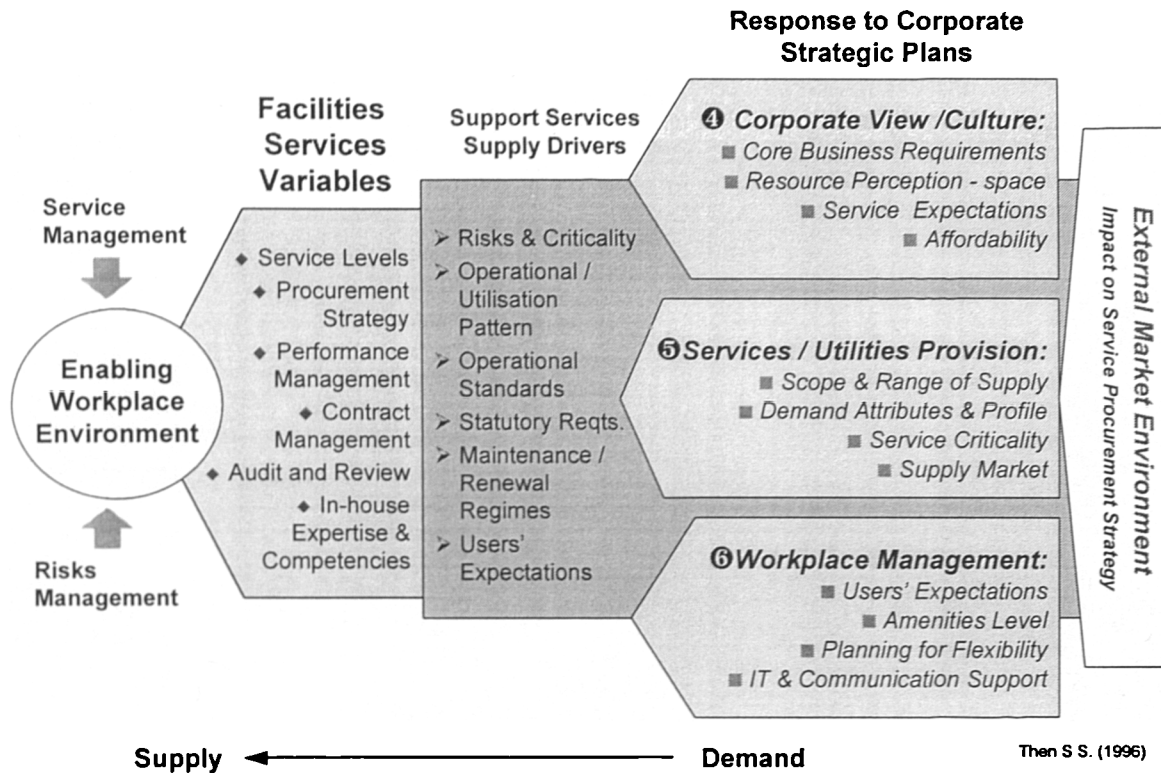
Within the domain of SFB as illustrated in Figure 6.3, the strategic management concerns are with managing mismatch between demand and supply as a response to the dynamic market environment within the organisation operates. The primary concerns of REAM within SFB are with decisions relating to asset ownership and asset management.

6.3.3 The Domain of Service Levels Brief -managing over time

The outcomes from the *Strategic Facilities Brief* have a direct impact on the evaluations within *Service Level Brief (SLB)* in that any strategic change in corporate direction will, in facilities term, lead to a next 'steady state' in the corporate real estate asset capacity - i.e. changes in number of facilities and size of functional space to be serviced (i.e. the level of provision of facilities support services).

Figure 6.4 represents an encapsulation of key factors within the domain of SLB operating at three cascading levels, similarly leading to the resulting enabling workplace environment as the outcome. In responding to the dynamic demands of the corporate strategic plans, it is essential to constantly monitor the performance and economics of current service provision in order to sustain an appropriate balance between minimising the risks of disruption against the quality and reliability of delivery.

Figure 6.4: Defining the Domain of Service Levels Brief



Within the domain of SLB, the response to corporate strategic plans can be considered by examining three main aspects which influence or have an impact on the service delivery and performance to the working environment within the operational real estate portfolio:

1. **Corporate culture:-** In the same way that the corporate culture will influence the internal and external image of the company in its physical assets, it will also dictate the service expectations of the facilities support services. In terms of facilities service provision this involves the setting of service guidelines in line with business units' requirements and affordability.
2. **Services / Utilities provision:-** This is concerned with parameters which define the scope and range of services needed to support the business operational tasks. In terms of service demand and procurement evaluations, a clear understanding of internal demand profiles and criticality must be supplemented by knowledge of external supply market offerings.
3. **Workplace management:-** This is concerned with issues relating to facilitating the work tasks within the workplace environment by appropriate space configurations and settings with the necessary information technology and

communication infrastructure. Planning for flexibility to support project teams being seen as increasingly essential element.

The strategies adopted in response to corporate strategic plans are translated into facilities support services supply drivers at the intermediate level, which will in turn determine the appropriate facilities services variables for the working environment within the existing operational real estate portfolio.

The *facilities service variables* represent the output of the domain of SLB. The variables listed represent the tactical and operational parameters that govern the facilities service provision from demand initiation through to the supply of the appropriate levels of facilities services (i.e. from Demand to Supply). At any point in time, the practice of the support services delivery process will be influenced by the relative weightings given to the facilities services variables identified.

Within the SLB domain as illustrated in Figure 6.4, the management concerns are with managing the existing property assets over time; with the emphasis on meeting operational and users requirements within agreed parameters of service and financial limits. The primary concerns of REAM within SLB are with decisions relating to minimising risks of disruption and service management.

6.3.4 REAM as Managing the Enabling Working Environment

It is clear that the external environment impinges on both the core business performance as well as the facilities support services delivery strategy. The *enabling workplace environment* within an organisation is an outcome of the response to these two sets of variables:

- I. *real estate variables*, and
- II. *facilities services variables*.

Figures 6.3 and 6.4 together, provide a framework for considering the various factors that impact on the output from the *Strategic Facilities Brief and Service Levels Brief*. In deriving the variables that are ultimately reflected in the quality of the enabling working environment, evaluations are carried out at three

cascading levels: (i) external market environment, (ii) organisational response, and (iii) key demand and supply factors.

Figure 6.5: REAM as Managing the Enabling Workplace Environment

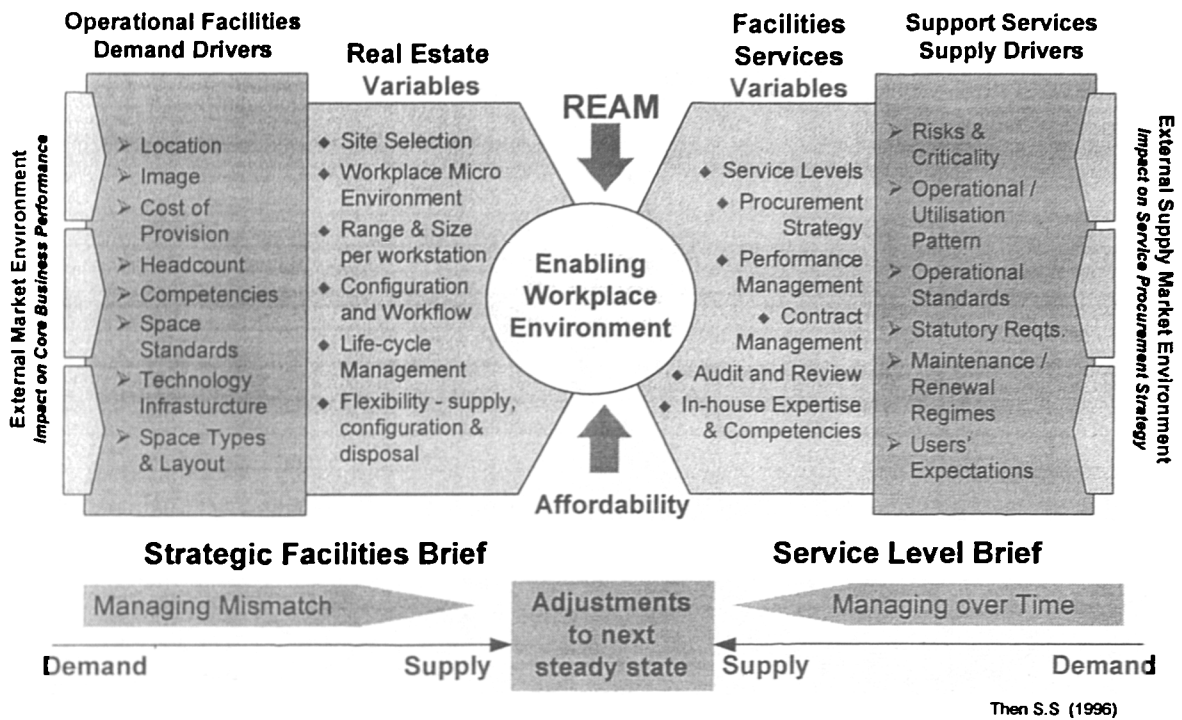


Figure 6.5 emphasizes the need to constantly adjust to a next 'steady state' in response to external factors is the common denominator, the goal being to provide an enabling workplace environment to support the achievement of the corporate goals, whatever the final product(s).

An emerging theme in the dialogue between SFB and SLB is the significance placed by senior management on the capability of options evaluation or having alternative 'strategic scenario' against possible business outcomes.

The dominant concept of REAM is to provide an informed interface between strategic business planning and operational asset management via SFB and SLB. The scope of REAM takes as its inputs - the business response to the changing market factors, the process - evolving the most appropriate supporting facilities strategies in support of the new strategic direction, and as outputs - action plans for adjusting the existing asset base to a new 'steady state'.

The emphasis on *affordability* as a central driver for the practice of REAM is important in that the concept of 'living within one's means' accords with key stakeholders concerns within the management process:

- senior management's preoccupation of the costs associated with real estate asset provision and facilities occupancy costs;
- business units' demand for value for money from service providers being met by performance related service contracts based on mutually agreed service levels and performance measures;
- service providers, in-house or external, working within a strategic framework of provision guided by continuous constructive dialogue via SFB and SLB.

The definition of affordability is clearly relative to the organisation concerned. However, it is useful to distinguish between 'hard' and 'soft' elements of affordability when evaluating issues within the domains of SFB and SLB. The 'hard' elements of affordability comprise of factors or variables which can be objectively assessed, quantified and measured; for example, the capital budget for building projects or the scope of facilities service and service levels. The 'soft' elements of affordability comprise of factors which are subjectively determined and very often a product of the corporate management culture. For example, the branding of the corporation through its corporate real estate assets or the use of the workplace as a corporate differentiator to attract and retain key staff, are both strategies with cost implications that could be consciously adopted.

For an organisation, the emerging supporting facilities strategies will be a reflection of the organisation's evaluation bias or inclination towards the 'hard' or 'soft' elements of affordability.

6.3.5 Emerging REAM Process Model

The preceding discussions described the convergence of real estate variables and facilities services variables leading to the creation of the appropriate enabling workplace environment as an outcome of REAM in an organisation

setting. The range of factors to be considered clearly demonstrate the need for an integrated management process.

This section builds upon the preliminary models presented in Chapter 3 and incorporates the empirical evidence from the case study organisations, to propose a pair of conceptual process models to elaborate the management roles associated with:

- Facilities Provision, and
- Facilities Service Management.

6.3.5.1 Model for Facilities Provision

Figure 6.6: Management Framework for Facilities Provision

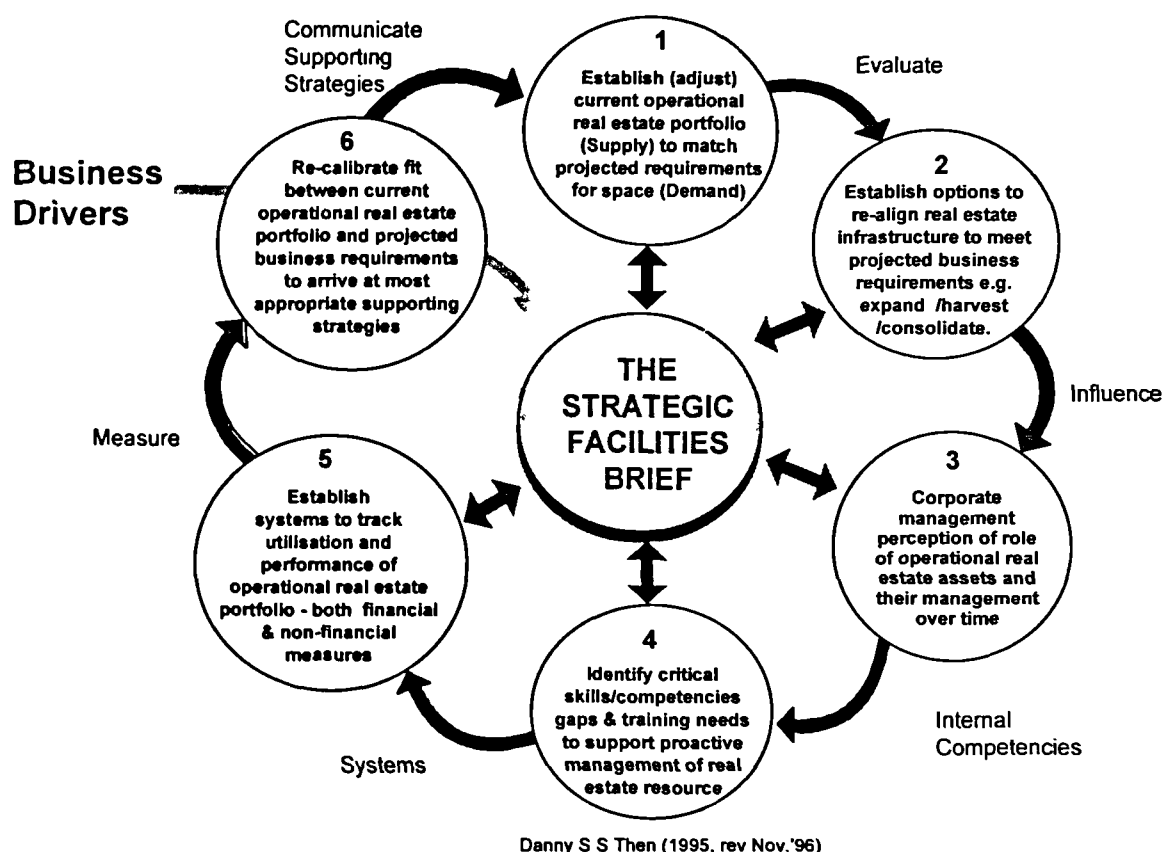


Figure 6.6 illustrate a conceptual process model of a management framework for placing the role of operational real estate assets (or operational property) within the realm of business management. The model centres on the key role of the *Strategic Facilities Brief* in defining the parameters for facilities provision. The model describes a 6-stage process that is aimed at continuously aligning the real estate resource to the strategic intent of corporate business plans.

The depiction of the model as a cyclical process is intended to reinforced the fact that the re-alignment process of the operational assets to the business plans is a continuous one of adjusting to the 'next steady state' in response to external market forces. The 6-stage process has been derived from published literature and reinforced by evidence from empirical data from the case studies and interviews. It attempts to incorporate elements of best practices in a generalised model that focus on the key stages and management emphasis between any two stages. (Please refer to Figure 6.6)

Stage 1 - This stage represents the start of the re-evaluation cycle in response to the emerging supporting facilities strategies from Stage 6. The main task at this stage is to assess the current operational asset base (i.e. current supply) in the light of the projected requirements for space (i.e. anticipated demand) as indicated by the latest corporate business plans. A pre-requisite at this stage is the ability to describe the current real estate portfolio in terms of parameters defined within the domains of SFB and SLB described earlier.

Stage 2 and 3 - The main task at this stage is the generation of options to re-align the existing real estate portfolio to meet projected business requirements. The operational facilities drivers highlighted within the domain of SFB (Figure 3, pp. 287) will feature prominently in the generation of options. Typically, this re-alignment can take one of three scenarios - (i) expansion in capacity, (ii) contraction in capacity or (iii) optimisation of existing capacity. At this stage, the internal information from stage 1 above, must be supplemented by external information sources of supply market intelligence. Depending on the existing competency level of the in-house real estate/facilities team, external expertise may be necessary. The outcome from this stage is critical and is closely linked to stage 3, in that the existing corporate perception of the role of the operational assets (from a business *overhead* to a business *resource*) could result in a suboptimal solution being chosen. In this respect, the tools and techniques used in analysis and the final presentational format to senior management deserves careful consideration.

Stage 4 - This stage is concerned with the state of internal competencies of the in-house real estate/facilities team or division. The growing trend towards

outsourcing of support services makes this strategic assessment particularly important for any organisation. The evaluation process is strategic in content in that how the facilities dimensions of the business should be provided for, catered and managed over time; is a product of the corporate management style. In this respect, the requirements of a proactive approach to managing the facilities provision and its ongoing management will influence the profile of in-house competencies that are necessary for an effective in-house intelligent client role, whatever the corporate procurement preferences.

Stage 5 - The emphasis at this stage is with administrative systems and procedures for control and monitoring. The concerns are with systems capabilities to track and report on, utilisation and performance of the operational real estate assets in both financial and non-financial measures. The systems capabilities within this stage provide the necessary facilities measures for management feedback and review. The discussions described in Chapter 2 on performance measurement in facilities provision are particularly relevant at this stage (Section 2.4.2.1, pp. 84-93)

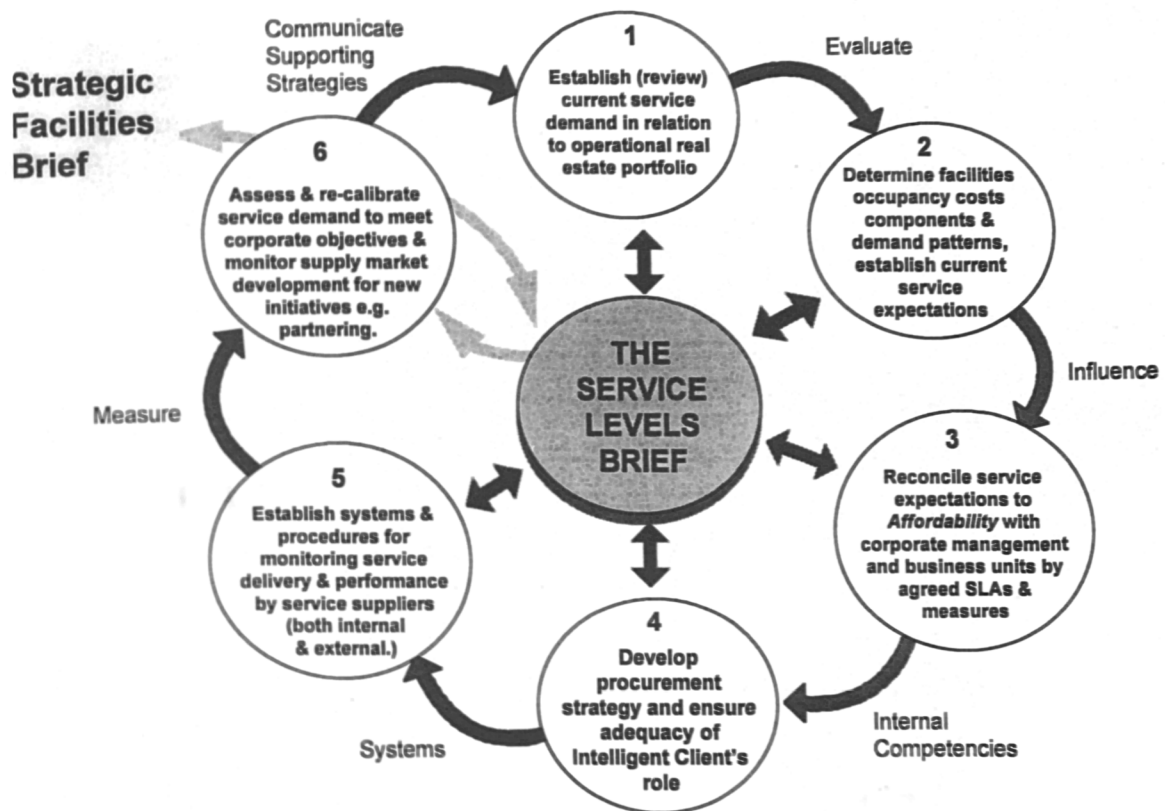
Stage 6 - The output from this stage is the emerging supporting facilities strategies which set the strategic direction and guidelines for the operation of the real estate and facilities service decisions. The emerging supporting strategies is a product of the corporation's strategic business review where factors from the external market environment that impacts on core business performance are considered. The main concerns at this stage are assessing the implications of the corporate business plans on the existing real estate portfolio. The inputs to the assessment process come from two sources, the strategic facilities brief and performance information on the existing portfolio from stage 5.

It is clear from the above description of the 5 stages that the management focus shifts as one moves from one stage to the next. The emphasis progression from; evaluate -> influence -> competencies -> systems -> measurement -> communicate, as depicted in Figure 6.7, gives an indication of the wide range of skills necessary within REAM.

The outcome of the facilities provision component of the process model is the appropriate supporting facilities strategies based on the organisation's capability to generate alternatives or scenarios to ensure that the existing corporate real estate assets maintain its strategic relevance in supporting the corporate business plans.

6.3.5.2 Model for Facilities Service Management

Figure 6.7: Management Framework for Facilities Service Provision



Danny S S Then (1995, rev Nov.'96)

Figure 6.7 shows the companion model to Figure 6.6 above. It illustrates a conceptual process model of a management framework for placing the role of facilities support services in business. The model centres on the key role of the Service Levels Brief and proposes a similar 6-stage process that is aimed at continuously aligning the service performance to the operational real estate portfolio in line with the strategic intent of business plans. Similarly, the proposed model incorporates elements of best practices in a generalised model that focus on the key stages and management emphasis between any two stages.

Stage 1 - The resolution of an appropriate real estate asset portfolio to meet the projected level of operations arising out of stage 6 of the facilities provision model (Figure 6) also sets the basis upon which the facilities services delivery will be assessed at this stage. The main task here is to assess the current service demand in relation to likely changes to the operational real estate portfolio. A pre-requisite at this stage is the ability to describe and quantify the current service demand scope and profile in terms of parameters defined within the domains of SFB and SLB described earlier.

Stage 2 - The main task at this stage is the assessment of the service demand profile in line with changes to the operational portfolio. The facilities service supply drivers highlighted within the domain of SLB (Figure 6.5, pp.326) will feature prominently in this assessment. The discussions described in Chapter 2 on facilities service demand assessment are particularly relevant at this stage (Section 2.4.2.2.2, pp. 103-120).

Stage 3 - This is the stage where dialogue between the purchaser of services (business units) and the in-house service provider (or external supplier) is critical. The main task is to reconcile service expectations to cost of provision. In this respect the use of service level agreements have led to a constructive dialogue between service purchasers and service providers. The growing practice of recovery of overhead costs from business units has also raised awareness to the actual cost of provision of a whole range of support services.

Stage 4 - This stage of evaluation is primarily concerned with the economics of service provision. The rapid growth of the supply market in recent years has altered the economics of in-house provision of facilities support services in many organisations. The decision to outsource is clearly a strategic one, taken into consideration issues of control and risks. The discussions described in Chapter 2 on sourcing delivery are particularly relevant at this stage (Section 2.4.2.2.3, pp. 121-127).

Stage 5 - The emphasis at this stage is with the administrative systems and procedures for facilities service management. The concerns are with systems capabilities to monitor service delivery, cost of provision and performance. The systems capabilities within this stage provide the necessary facilities

service performance measures for management feedback and review. In this area, the increasing use of external service providers have encouraged many in-house departments to conduct external comparisons (benchmarking) of service and costs level. The discussions described in Chapter 2 on performance measurement in facilities service delivery are particularly relevant at this stage (Section 2.4.2.2, pp. 94)

Stage 6 - The outcome from this stage is a facilities service management strategy that results from a strategic assessment of feedback from stage 5 on current service performance, as well as, external supply market developments. The implications of the corporate business plan on the projected facilities needs may offer opportunities in the restructuring of the overall procurement strategy relating to facilities support service delivery to take advantage of economies of scale. The main concerns at this stage are obtaining the best value for money in support service delivery without comprising service quality and reliability.

In the evaluation of services levels, it is important to balance the needs of the various business units against the relative contributions to the total corporate business by each individual business unit. In practice, there will be several service levels even for an individual service as dictated by the relative importance of each business unit's contribution to the business profitability.

The outcome of the facilities service management component of the process model is the appropriate supporting facilities service strategies with the emphasis on managing the operational assets over time and supporting the enabling working environment within the real estate portfolio.

It is to be emphasised the cyclical processes represented in Figures 6.6 and 6.7 above, are not necessarily sequential but an iterative one emphasising the advantages associated with organisational learning. Within an organisational setting, the pair of models provide a management framework that supports two important interfaces:

1. strategic interactions with senior management and business units; access to vital *business information*, in order to sustain (by being proactive), and to

continue to maintain strategic relevance (by having the capacity to generate solutions), in terms of the operational asset base;

2. operational interactions with business units, as purchasers of services; the provision of *service performance information*, in order to ensure economical and consistent delivery of the appropriate service packages through effective procurement and performance monitoring.

6.3.5.3 Emerging Proactive Management Model

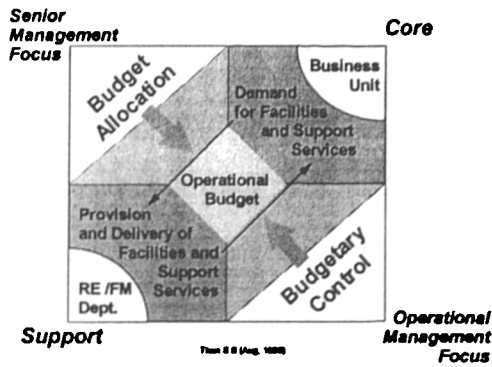
In the context of the development of the following conceptual models, the scope of Real Estate Asset Management (REAM) embraces both, the processes associated with the management of the provision of real estate assets, as operational facilities, and the associated facilities support services required within the operational facilities. The emerging models are derived from three principal sources of data:

1. established management and economic theories applied to a particular class of durable physical assets, real estate assets, in an organisational setting.
2. published case studies and interviews from practitioners in the related fields of real estate (property) management, facilities management, maintenance management, etc.
3. case studies and interviews conducted as part of this study.

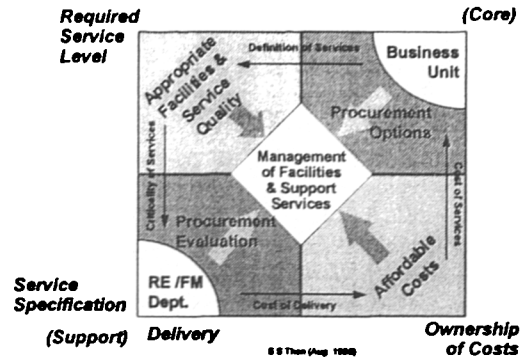
The emerging models presented here are iterations of preliminary generalised models developed in Chapter 3. The models are presented as concepts to explain context, causes and implications in practice.

In Chapter 3, a traditional reactive management model for the practice of REAM was presented as the starting point of theory generation for an integrated proactive model. (Figure 3.27, pp. 193). A preliminary proactive management model encompassing both the facilities provision and facilities service management dimensions of REAM was also proposed. (Figure 3.29, pp. 195). The two models represent the extremes along a continuum rather than typical representation in reality. For convenience, the figures are repeated here.

Traditional Reactive Model



Preliminary Proactive Model

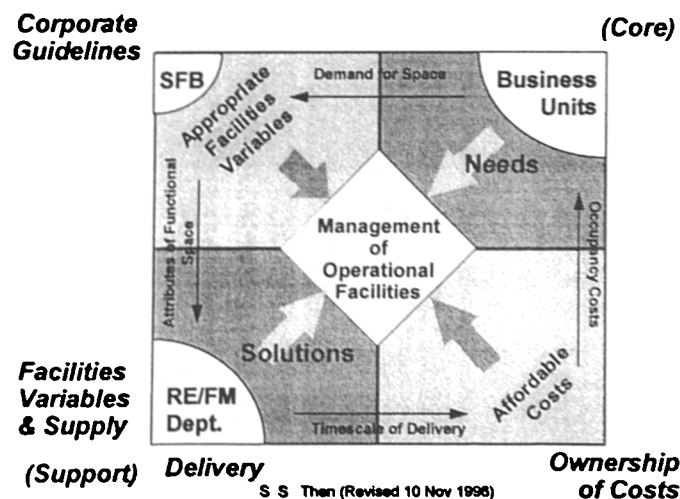


The traditional reactive model contrasted sharply to the preliminary proactive model in both, management approach and focus, and in nature of relationship between the business units and service providers (i.e. the in-house real estate/facilities department). The former being essentially a cost(budget)-driven approach while the latter relied on a proceed-driven approach guided by clear articulation of facilities and service demand via the SFB and SLB.

Following the analysis of feedback from the validation workshop, it was decided that in the case of the preliminary proactive model, the real estate variables from the domain of SFB and the facilities service variables from SLB (see Figure 6.6, pp.332) were sufficiently unique to warrant separate considerations.

Figures 6.8 and 6.9 below provide a revised emerging proactive model as two components; one focusing on the management of operational facilities (i.e. real estate assets), the other focusing on the management of facilities support services.

Figure 6.8: Emerging Proactive Model for Management of Operational Facilities

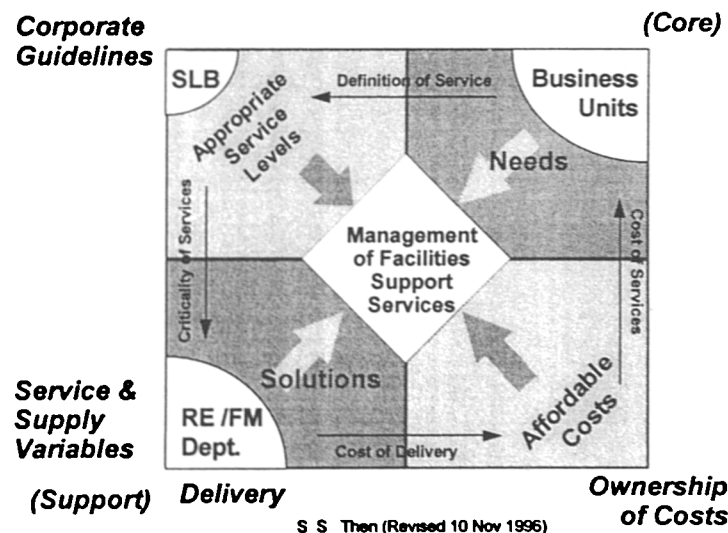


The acknowledgement of a shift in emphasis, from fulfilling transactions on demand under the traditional reactive approach, to a process-driven management approach is fundamental in justifying and defining the emerging role and scope of REAM.

The context and role of the SFB in providing a corporate perspective of the real estate resource ensure that demand are clearly defined and articulated as corporate facilities guidelines, and supply are effected with affordable cost criteria without lost of criticality and quality. Within a corporate setting, the proactive model caters for the translation of business units needs by providing affordable solutions via a process cycle comprising of:

- demand for space,
- defining key attributes of functional space,
- ascertain time-scale of delivery, and
- recovery of facilities occupancy costs

Figure 6.9: Emerging Proactive Model for Management of Facilities Support Services



In a similar manner, the business units' demand for facilities services can be meet via a process cycle comprising of:

- definition for service,
- criticality of service (which influence procurement options),
- ascertain cost of provision, and
- recovery of facilities service costs.

The key features of the *emerging proactive management models* illustrated in Figures 6.8 and 6.9 above are summarised as follows:

1. A growing awareness of the need to understand fully, each business units cost structure has promoted a closer scrutiny of occupancy costs of operational facilities.
2. The shift in culture from being a 'free goods' absorbed as a 'hidden' corporate overhead expense, to full ownership of occupancy costs has had the impact of dramatically altering the approach, as well as, the focus on the management of functional space provision and support services procurement.
3. The continuing restructuring of the supply market in facilities support services, has altered the traditional role of facilities service management side of REAM; shifting from management of directly employed staff, to management of service providers and ensuring performance standards are met. On the facilities provision side of REAM, however, the real estate (property) supply market has remained relatively static, development innovations and opportunities largely constrained by inflexibility in funding arrangements.
4. The concerns of senior management are in defining the *appropriate* service requirements and quality in line with ensuring business continuity and success. In this respect, the onus has shifted to the business units to define their service requirements and criticality, tempered by the economics of *affordability*.
5. A service relationship between the business units, as purchasers of functional space and related services, and the in-house service provider, acting as an intelligent client interface with the relevant competencies to provide effective and economical solutions to business units expressed needs with full awareness and ownership of the cost of provision.

The current emphasis on appropriateness and affordability in space demand and facilities support services calls for a management approach that is underpinned by a clear understanding of the drivers of business demands and the processes required to meet the business requirements.

6.4 REAM Developmental Matrices as Output of Analysis

This section reports on the findings that relates to the third organisational variable from the case studies organisations - *competencies*. It forms the third component of the three-part conceptual models - *Model C* (see pp. 251).

The conceptualisation of *Model C* is based on a distillation of best practice knowledge from both the literature survey of theory and practice, and empirical data from the case studies investigation. The output of the analyses presented in the format of management development matrices, is designed to fulfill the following objectives:

1. To explain the relationships between key stakeholders in the developmental cycle inherent within REAM³.
2. To define the scope of REAM in terms of essential competence sets.
3. To provide a series of matrices for organisations to map a management development path aimed at focused continuous improvement.

The matrix format is seen as an ideal way of summarising the growing sophistication of the practice of REAM as an organisation develops the essential knowledge base of its existing real estate portfolio and evolves the appropriate supporting facilities strategies in line with its corporate business plans. The matrices are not exhaustive, but do represent, in the author's opinion, one of the best ways of representing a distillation of best practices from theory and practice.

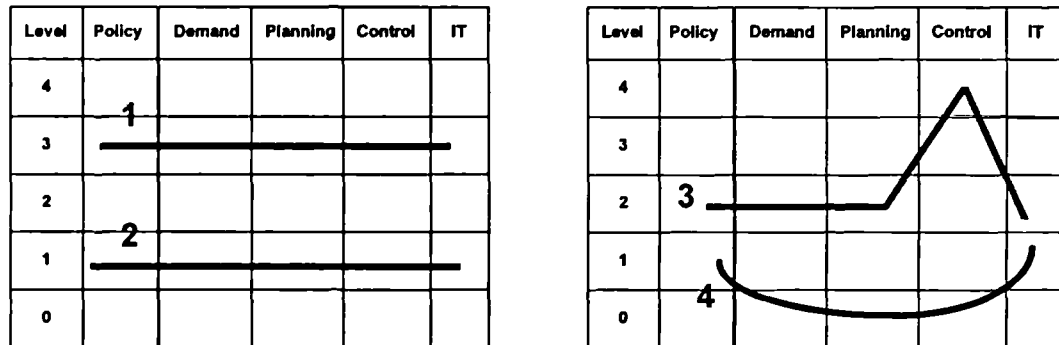
As a tool for self evaluation, the matrices provide a simple basis for individuals/managers within a real estate/facilities department to chart their current performance against the incremental developmental stages represented by the functional or management feature of a column. The resulting profile built up across a matrix or the series of matrices provides a telling picture of the organisation's current strengths and weaknesses. The current profile can then acts as a firm basis for charting a deliberate focused improvement programme

³ REAM - *Real Estate Asset Management*, defined here as 'the management of the provision of operational real estate assets and the delivery of related facilities support services, and their ongoing management as an enabling resource to support the fulfilment of corporate business objectives'.

aimed at 'lifting' the performance of one or a combination of features represented along the columns of the matrices.

Figure 6.10 shows some examples of possible profiles resulting from using a matrix format for evaluating current performance.

Figure 6.10: Illustrative Examples of Matrix Profile of Current Performance



6.4.1 Purpose and Objectives of Management Development Matrices

Matrices 1 to 3 seek to highlight the roles and concerns of the key stakeholders who are directly or indirectly affected by the outcome of activities within REAM.

Matrices 4 to 8 have been developed with a different intent to that of the preceding three. One of the essential prerequisites of any strategy for improvement is to be able to assess your current strengths and weaknesses and then plot a *roadmap* for continuous improvement. The objective here is to map a path for improvement represented by an incremental development stage from 'Taskmaster' to 'Business Strategist'.⁴

Each stage from 'Taskmaster' to 'Business Strategist' describes a characteristic feature of the variable represented by a column. The contents of each cell in each matrix have been derived from various sources: published literature, case studies interviews and personal knowledge in the emerging area. A number of criteria have been used to differentiate between each incremental row including:

- level of influence,
- level of expertise in management,
- financial evaluation
- level of information

¹ Terminology adopted from CRE 2000 Report by IDRF. Refer to Chapter 2, Figure 6, pp. 34

- decision support capabilities.

The column variables in each matrix are chosen to reflect key attributes of the chosen management aspects of REAM that are being mapped.

6.4.2 Mapping Stakeholders Concerns and Involvement

This matrix represents a mapping of key stakeholders involved in the provision of facilities and ongoing management of facilities support services.

The four key attributes of real estate assets are generic to all types of facilities - i.e. *Physical, Financial, Functional* and *Operational* considerations. They are represented by the columns in the matrix.

Matrix 1: Mapping Real Estate Assets by Stakeholders Concerns

Real Estate Attributes Stakeholders	Physical Location / Image	Financial Value / Cost	Functional Form / Layout	Operational Adaptability / Maintenance
Corporate	[Shaded]		[Shaded]	[Shaded]
Business Units	[Shaded]	[Shaded]	[Shaded]	
Occupiers / Users	[Shaded]	[Shaded]	[Shaded]	
Real Estate Function	[Shaded]		[Shaded]	[Shaded]
Support Services Function	[Shaded]	[Shaded]	[Shaded]	

Note Shading corresponds to the degree of concern by each stakeholder

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Each row in the matrix represents an organisational perspective. The first three stakeholders of *Corporate, Business Units* and *Occupiers/Users*, represent the 'clients' demand in terms of operational facilities and associated support services. The *Real Estate* and *Support Services Functions* represent the 'service' supply role in the matching of supply and demand.

The shading across the columns is indicative to the degree of concern by each stakeholder.

Matrix 2:- Mapping Stakeholders' Involvement in REAM

Competencies Stakeholders	Physical Site Selection / Design	Financial Investment / Life-cycle Cost	Functional Capacity / Utilisation	Operational Asset Management
Corporate				
Business Units				
Occupiers / Users				
Real Estate Function				
Support Services Function				

Note Shading corresponds to the degree of involvement by stakeholders

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Matrix 2 represents a mapping of key stakeholders' involvement in the provision of facilities and ongoing management of facilities support services.

The generic attributes of *Physical*, *Financial*, *Functional* and *Operational* are retained from Matrix 1, but the emphasis here are on the competencies/expertise required to define/specify requirements within each attribute in relation to each stakeholder.

In many respects, Matrix 1 and 2 together, provide a basis for explaining the different perceptions currently held by each group of stakeholders which makes the management of the interface between the parties involve particularly challenging.

6.4.3 Mapping Real Estate Assets' Critical Concerns and Performance Measures

Matrix 3 has the same organisational perspectives (i.e. stakeholders) and real estate attributes as the previous two, but it is used to illustrate two aspects:

- (1) critical real estate concerns by the stakeholders - represented by text in *italics* in each cell in the matrix; and
- (2) examples of performance measures/indicators - represented in each cell by the most relevant measures relating to the two intersecting parameters.

Matrix 3:- Mapping Real Estate Asset Critical Concerns and Performance Measures

Category of Stakeholders	Physical Portfolio Mix / Capacity	Financial Value / Affordability	Locational location / Image	Operational Performance / Fit for Purpose
Corporate	<i>Return on Assets</i> Return on Assets of BUs	<i>Occupancy Cost</i> Occ. Cost / unit area	<i>Community Relations</i> Rating based on Exchange Behaviour	<i>Corporate Image</i> Rating based on Building Attributes
Business Units	<i>Flexibility & Utilisabon</i> footprnt / employee output / area / man	<i>Occupancy Cost</i> Occ. Cost / unit area	<i>Site Proximity</i> Distance to other Sites & Business	<i>Employee Satisfaction</i> Users Satisfaction Survey
Occupiers / Users	<i>Building Amenities</i> Amenities / unit area area / workstation	<i>Commuting Time</i> Commuting Distance to Work	<i>Local Amenities</i> Convenience & Availability	<i>Work Environment</i> Users Satisfaction Survey
Real Estate Function	<i>Rate of Return</i> Vanous Measures of Return	<i>Leve of R sk Exposure</i> Vanous Measures of Risk	<i>Market Cond tion</i> Measures of Market Supply & Demand	<i>Customer Satisfaction</i> Service & Operational Performance
Support Services Function	<i>Bu d gs Systems</i> User Demand & Capacity	<i>Operat ng Cost</i> Operating Cost /unit area	<i>Local Infrastructure</i> Site Constraints (e.g zoning)	<i>Physical Condition</i> Deferred Maintenance Liability

Adapted from Duckworth S L TQM A team-based approach to monitoring real property performance, ct 1993 Industrial Development, pp 21

The former can be used to communicate the different concerns expressed by each stakeholder across the four attributes of real estate assets. The latter can strive to produce relevant performance indicators that reflect a measure of the expressed concern in each cell.

It is to be emphasised that the contents in each cell of the matrix cannot be determined in isolation by each of the stakeholder represented by each row. By seeking to express their critical concerns and attempting to measure them, the development of the matrix has the advantage of promoting a much needed dialogue between the stakeholders. Once an appropriate set of performance indicators has been developed, analysis of trends can be conducted and performance tracked against set targets.

6.4.4 Mapping Financial Approaches in Real Estate Decisions

Matrix 4 has been abstracted from the IDRf influential report on “Corporate Real Estate 2000 Phase 1 Report”. The acronyms of the matrix rows, namely, *Taskmaster*, *Controller*, *Dealmaker*, *Intrapreneur* and *Business Strategist*, have been adopted for the remaining matrices.

Matrix 4:- Mapping Financial Approaches in Real Estate Decisions

Variable Stage	* Coping Strategies	* Decision Criteria	* Capital Cost	* Pricing	Transfer Pricing Practice
Business Strategist	Business Strategy Approach - using R E. decisions to support business objectives.	Business strategy drives R.E. decisions - responding to both BUs needs and market constraints.	Business units must justify market rents on an economic basis.	BUs needs & wants are fully integrated with capital market pricing.	BUs responsible for full costs of property & facilities support services.
Intrapreneur	Market Design Approach - developing market-led options to meet R E requirements	R E unit makes decisions like a R E. company - providing space which meets market costs & quality	Business units pay market rent for their space.	Real estate market pricing.	Economic-based allocation system
Dealmaker	Market Cost and Usage Standards Relies on external market for standard in cost & quality	Market economics drive R E decisions.	Business units may pay opportunity cost of capital.	“Value adding” by lowering costs and realising hidden asset values R E beginning to be seen as a business resource.	Partial recovery of property & facilities support services costs
Controller	Becoming aware of cost of real estate Starting to adopt cost minimisation measures.	Traditional cost control and capital budgeting models.	Business Units only pay depreciation	Accounting cost. Support costs separately apportioned to business units.	Revenue-based allocation system
Taskmaster	Engineering Approach with in-house expertise, cost not a concern	Business units’ wants & desires drive the process -usually expensive solutions.	Costs incurred absorbed as corporate overhead	Accounting cost. Global cost head, not distinguished by user departments	Pooled Costs absorbed as corporate overheads, not separately identified.

Source *Abstracted from CRE 2000 Phase 1, pp 50-53

S S Then (1996)

Matrix 4 attempts to map financial approaches in real estate decisions in organisations. It identified five basic real estate finance approaches that correspond to the five successive stages.

The most basic and traditional is the Taskmaster’s engineering approach which almost ignores cost. The most advanced is the Business Strategist’s approach, which is grounded in real estate and capital markets and forces business units to justify the true cost of occupancy. The approaches found between these two represent decreasing reliance on market forces. Each approach is summarised in the above matrix.

6.4.5 Mapping Senior Management Perception of RE/FM Roles

Matrix 5 provides an overview of the state of art of the emerging area of Real Estate Asset Management. It represents a review of corporate perceptions of the role of real estate assets, essential competencies, organisational positioning of real estate/facilities management roles; against the business environment upon which their performance are assessed.

Matrix 5:- Mapping Management Perception (strategic & operational)

Variable Stage	Senior Management View of Property	Senior Management View of FM	Essential Competencies / Skills	Positioning within Organisation	Business Environment
Business Strategist	Facilities seen as strategic enabler to achieve business objectives Concern with affordability & continuous improvement. Flexibility in provision.	Intelligent client role in the procurement & management of support services delivery Monitoring supply market to ensure best value for money Supports partnering with service providers.	Understanding business trends and changing operational needs Supply market knowledge Negotiation and contracts/ vendor management skills	Real estate and facilities support representation close to or at senior management level with access to strategic business planning	Volatile environment. Core business emphasis. Value and service quality regarded as basis of evaluation & procurement.
Intrapreneur	Facilities provision seen as opportunity to match business operational demand to existing supply Concern with value and service reliability	Provider and manager of support services based on agreed service levels with business units. Trend towards more external service providers	Translating business operational requirements in facilities and service level terms. Specification and contractor selection Supply market knowledge & options evaluation	Representation at business units level - interpreting facilities & support services implications of proposed business plans. Proactive response	Competitive business environment. Emphasis on obtaining VFM from external suppliers. Bundling of service provision using SLAs, risk & profit sharing.
Dealmaker	Facilities planning not part of business planning Concern with economic provision and performance, internal or external	Efficient procurement and management of facilities support services by rationalisation - service bundling / package procurement.	Customised service provision based on needs and cost of provision Growing customer awareness as internal service provider	General acknowledgement by business units of expertise in support services specification and procurement. Negotiation of service level promote constructive dialogue	Emphasis on effectiveness and efficiency. Awareness of external suppliers options. Business units growing awareness of support services costs.
Controller	Facilities planning not integrated as part of business planning. Concern with cost of internal provision.	Cost conscious internal provider of operational services within budget allocation. Predominantly in-house services.	Growing awareness of financial cost drivers of service provision & business units expectations. Financial service evaluation skills.	Representation still fairly remote. Growing dialogue with business units on cost of provision.	Emphasis on cost control within agreed budget allocation. Focus on efficiency of support service provision by in-house provider.
Taskmaster	Facilities as overheads / a cost to business.	Internal provider of services & fixer of problems. Historical budgeting.	Functional division / dept. providing specific technical expertise /services	Representation several managerial layers below the business decision-making level. Reactive response	Relatively stable business environment, facilities & support services costs regarded as necessary evils.

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When considered by an individual variable (i.e. one column), the movement from a lower level to a higher level reflects a growing awareness of the need to align with the corporate strategic direction by taking actions that support the achievement of the corporate goals. In terms of competencies, the path from *Taskmaster* to *Business Strategist* will be represented by a dramatic shift in culture from being a technical specialist with a narrow focus, to being a manager of operational assets with a clear understanding of the business requirements and the target customers.









When considered at a particular level across the columns, the cells' contents paint a representative view of the culture, constraints and operating systems of the practice of REAM. The objective of the matrix is to provide a tool for self-

evaluation with the intention of identifying areas of strengths and weaknesses in current practice, as a driver for continuous improvement.

6.4.6 Mapping Requirements of Strategic Facilities Planning

Matrix 6 attempts to capture the key variables that influence the strategic evaluation of real estate provision. The quality of the link between strategic business planning and operational asset management is a key consideration and is influential in the choice of variables chosen for this matrix.

Matrix 6: - Mapping Strategic Facilities Planning

Variable Stage	Evidence of Corporate Policy for Facilities	Key Drivers of Facilities Plans	Planning Time-frame / Techniques	Planning Style	Focus of Evaluation Techniques used
Business Strategist	Part of corporate strategic planning team. Interprets facilities implications & plan for effective delivery	Supporting strategic business direction by appropriate facilities and support services that promotes staff productivity	Event-based planning - emphasis on strategic response to market & legislative events	Strategic - proactive response to business units' strategies by providing options evaluations	Value and Service, Partnering with external suppliers. Value adding measures. 
Intrapreneur	Evaluation of service scope & optimum procurement - using external expertise & partnering arrangements	Strive to meet business units demands for facilities and services at affordable costs & optimising corporate asset value	Programmed planning - focus on effectiveness		Performance & Value for money. Effectiveness & quality measures.   
Dealmaker	Evaluation of service demand based on overall internal demand assessment and external market supply	Growing awareness of external market opportunities. Emergence of comparative analysis	Management of bundled services based on agreed service levels	Tactical - emergent of customer service culture. Responsive, co-ordinated delivery	External comparison of cost of provision. Primarily cost and time measures.  
Controller	Evaluation of service package solution budget allocation driven by focus	Focus on controlling occupancy costs with budget allocation	Time-based planning - driven mainly by budgetary cycle		Cost of provision, internally focus, efficiency driven. 
Taskmaster	Technical driven, remote management. Tasks driven activities	Facilities costs as a necessary technical overhead/business expense	Little/no planning - driven mainly by ad hoc demands	Reactive - technical / functional set-up un-coordinated response	Resource allocation on historical basis - annual budget. 

S S Then 1996

 Cost  Time  Quality  Value and Service







In conceptual terms, the progression from *Taskmaster* level to *Business Strategist* level depicts a progression in role on the part of the real estate/facilities management from one typified by distance from corporate management and reactive in operational mode; to one that is close to corporate management and closely aligned to support business units goals.

The column variables of *Evidence of corporate policy for facilities* and *Key drivers of facilities plans* reflect the positioning and influence of the real estate / facilities management role, while the last three variables of *Planning timescale*, *Planning style* and *Evaluation techniques*; depict the competencies and expertise required.

6.4.7 Mapping Space Planning and Management Practice

The objective of Matrix 7 is to provide a platform for considering issues relating to space as a unit of measure of real estate assets. The practice of space planning and management have been transformed by the impact of technology at the workplace. The growing awareness of rising occupancy cost trends against a backdrop of depressed economic performance has led to the implementation of innovative strategies to optimise on especially office-type space.

Matrix 7:- Mapping Space Planning and Management Practice

Variable Stage	Link to Strategic Business Planning	Space Demand Assessment & Forecasting	Space Planning & Utilisation	Performance Measurement	Senior Management Focus
Business Strategist	RE FM roles seen as a strategic in line with technology and human resource. Access to specialist competences seen as important.	Plan for flexibility in provision & optimisation in use. 	Off premises options - satellite office, home working, virtual office, etc concepts	Implementation of workplace strategies to incorporate flexible working & non-dedicated workspace. External benchmarking.	Staff Productivity Workplace environment and facilities seen as key component in enhancing productivity of workforce.
Intrapreneur	Functional serviced space recognised as business resource that needs to be managed with strategic guidelines.	Focus on measures to intensify space use within existing portfolio by relating to tasks. 	On premises options by introducing 'free-address, hoteling etc	Full recovery of premises & support services costs from BUs. Competitive market rates.	Value & Service Recognised as a business resource that must be optimised.
Dealmaker	Recognition that BUs plans must consider space allocations in terms of delivery timescale and service needs.	Focus on measures to rationalise space use & allocation to BUs.  	On-premises options by modifying / developing space standards to improve functionality and space efficiency.	Partial recovery of premises & support services costs from BUs by cost per head, cost per unit area occupied.	Space Utilisation Growing awareness of the need to track and manage amount & use.
Controller	Not considered in planning but track space in terms of projected headcount.	Focus on understanding drivers of space demand by BUs. 	Growing awareness of occupancy costs as a variable expense in budgetary control.	Analysis of occupancy costs - users & cost drivers. Some central apportionment to BUs e.g. depreciation.	Occupancy Costs Growing unease of increasing trend.
Taskmaster	Real estate and support services provision as technical tasks. A necessary business expense of no strategic impact.	Plan to meet demand based solely on headcount projection. 	Allocation on a basis of space with status', as a hidden overhead.	Corporate Overheads - pooled cost, premises cost not separately identified.	Overheads Cost Not clear definition, not separately identified.



Then S S (1996)

In conceptual terms, the progression from *Taskmaster* level to *Business Strategist* level depicts a progression from regarding functional serviced space as a 'free goods', the cost of which is hidden in the corporate overhead; to a situation in which the full occupancy costs are recovered from business units. The column variables chosen reflect strategic and operational dimensions, i.e. link to strategic business planning, senior management focus, demand assessment and forecasting, space planning and utilisation, and performance measures.

6.4.8 Mapping Asset Maintenance Management Practice

The Asset Maintenance Management Matrix provides a much needed 'big picture' view of the asset management and maintenance function. In putting together the matrix, the author, in his research, sought to identify the key components that encapsulate the essence of asset maintenance management as applied to operational property assets. Being a long-life durable asset, the emphasis must be to manage over time. As such, any policy decisions or development strategies must be capable of being periodically reviewed and adjusted in order to retain currency and aligned to the corporate business plans.

Matrix 8:- Mapping Asset Maintenance Management Practice

Level	Maintenance Policy	Assessing Maintenance Demand	Planning & Scheduling	Monitoring & Control	Information System
4	Written formal policy endorsed by senior management	Budgetary proposal with clear idea of maintenance workload & impact	Medium-term strategic planning incorporating end-of-life renewals	Ad hoc reporting and interrogation of database, in addition to standard reports	Integrated, distributed system - planning, budgeting, control and analyses and benchmarking data.
3	Existence of policy but not fully endorsed by senior management	Strategic profiling of needs incorporated in budgetary evaluation	Clear prioritisation of workload, planning horizon more than 1 year	Management reports incorporated as routine. Local input.	Need for Property Register recognised. IT applications - planning, budgeting & feedback analysis.
2	Informal policy set at departmental level	Cyclical inspections backed by one-off condition surveys	Evidence of shift towards planned maintenance	Need for improved technical feedback leading to audit of paperwork system	IT potential recognised, supported by local PC applications. Beginnings of trend analyses
1	Ad hoc policy set at local level	Some element of planned work from cyclical inspection	Predominantly reactive maintenance	Quality of information inhibited by lack of adequate coding.	Applications driven by external department, low internal IT literacy
0	No formal policy	Workload determined by user ad hoc demand	Reactive, user driven demand	Global monitoring, budget heads (category) only	Manual systems with minimum or no technical analysis

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In conceptual terms, the levels from 0 to 4 depict a general progression from a reactive approach to a proactive management style supported by or close to senior management level. Similarly, the column headings from *Maintenance Policy* to *Information System* (from left to right) reflect measures which progressively shift from strategic choices and considerations to tactical choices and implementation.

Taken as a whole, the matrix provides a fairly rigorous platform for a *snapshot* self audit of the overall state of affair of any division or department charged with the management and maintenance of operational assets in an organisation. By

concentrating on the key components of asset maintenance management practice, the matrix offers an incremental scale of clearly focused targets that can be derived from critical self evaluation in order to arrive at an internal consensus view of the best achievable improvements.

6.5 Summary

The original models presented in Chapter 3 were based primarily on theory and published literature. The revised models took into consideration feedback from the analysis of the case studies.

The models and matrices were presented as a series of diagrams that encapsulate the key elements/factors that impact on the outcome of a number of aspects of Real Estate Asset Management, as defined in the context of this research, namely:

- the physical resource base as a business resource
- the perception of the role of operational assets,
- the linking mechanism as the informed interface (REAM),
- the tools for monitoring the dialogue between strategic management and operational management (SFB and SLB)
- the key management focus in REAM - facilities fit-for purpose at affordable prices through planning and management of four key variables:
 - ◆ Affordability
 - ◆ Flexibility
 - ◆ Adaptability, and
 - ◆ Manageability.

The concept of REAM is to provide an informed interface between strategic business planning and operational asset management via SFB and SLB. The scope of REAM takes as its inputs - the business response to the changing market factors, the process - of evolving the most appropriate supporting facilities strategies in support of the new strategic direction, and as outputs - action plans of adjusting the existing asset base to a new 'steady state'.

All the elements of the above are captured in the Figure 6.11.

Figure 6.11: Strategic Monitoring and Management Focus



At the strategic business planning level, the major concern is in reading the market trends and adjusting to likely fluctuations in demand for the company's products or services.

The concept of the Strategic Facilities Brief is to provide a communication tool whereby the implications of any changes in strategic business direction can be considered where they have some implications on the corporate real estate resource. The real estate resource is viewed here as a functional asset supplying functional space as a resource to business units within a corporation. The overriding theme in REAM is management of the corporate physical asset base (corporate real estate) through time. In this respect, the strategic monitoring role and management focus in REAM are critical. Key management aspects within REAM include:

- **FLEXIBILITY** at the Corporate (Portfolio) Level
Issues: strategic asset management, ownership/lease, location, capacity.
- **ADAPTABILITY** at the Individual Estate (Site) Level
Issues: asset value & liabilities adaptability to change of use, affinity, layout.
- **MANAGEABILITY** at the Individual Building Level
Issues: occupancy costs, asset maintenance, service monitoring.

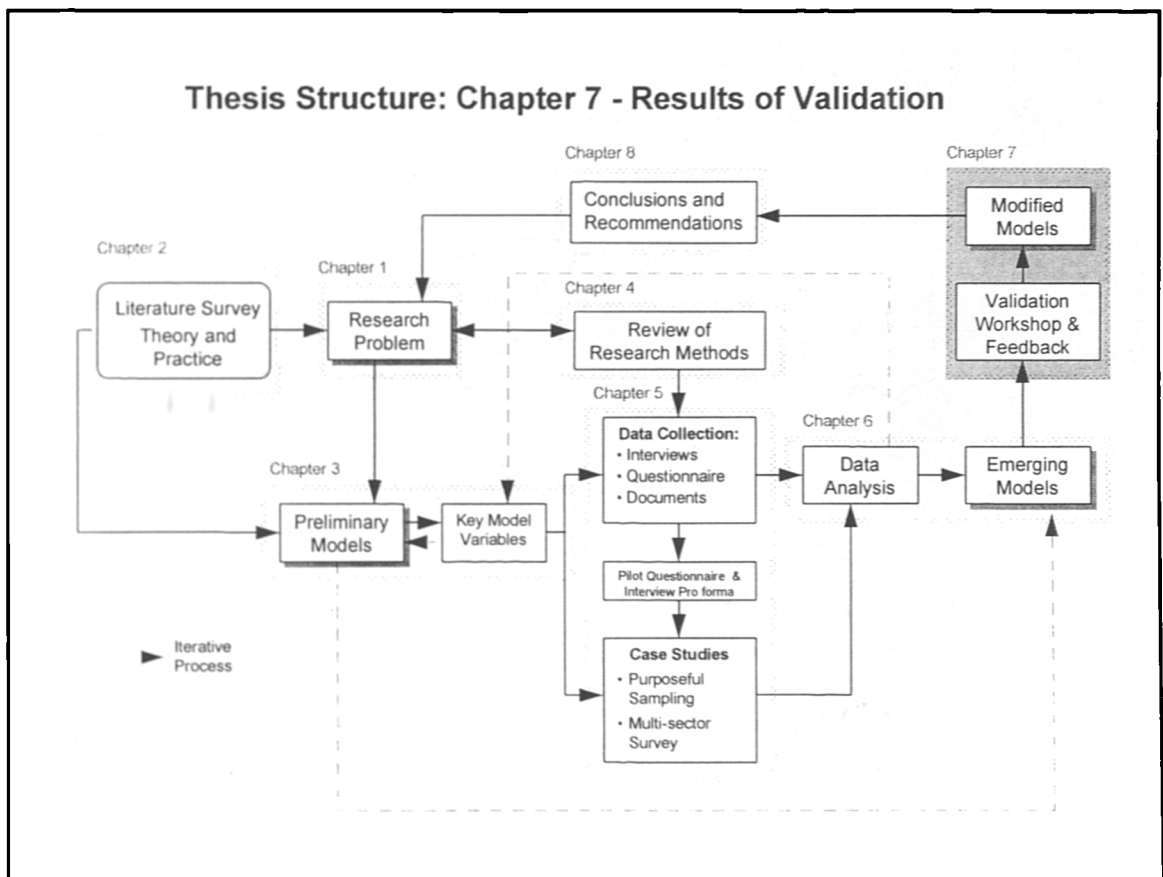
Underlining the focus on *flexibility*, *adaptability* and *manageability* is the economics of *affordability* - not living beyond the means. This is an important element which involves a major shift in corporate culture of their perception of the real estate resource. In the recent past (up to the 1980s), corporate success and excellence were closely associated with opulent facilities without much serious evaluation of impact on the ongoing occupancy costs. Many corporations on both sides of the Atlantic, in North America and Europe are now having to deal with the 'baggage' of surplus requirements as competition becomes intensive and revenue falling against a trend of rising occupancy costs burden.

The desired outcome from REAM is an appropriate portfolio structure that is aligned with the organisation's business operational requirements. Buildings and land, as physical assets are relatively static products. Effective matching of demand for and supply of functional accommodation and associated support services to meet operational requirements in a dynamic business environment demands the management of the real estate resource as dynamic products. Herein lies the challenge of REAM.

The next chapter will discuss the results from the validation workshop and extended postal validation.

Chapter 7

Results from Workshop and Postal Validations



Chapter 7 - Results of Workshop and Postal Validations

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7. Results from Workshop and Postal Validations

7.1 Introduction

The previous chapter discussed the implications of empirical data from the case studies organisations on the preliminary models and frameworks derived in Chapter 3. Revisions were made to the models and frameworks from analyses of the case study organisations.

The analyses of the organisational variables of *structure*, *processes* and *competencies*, which guided the investigation of empirical data from the case studies, provided valuable insights into the complexities of organisational relationships and how they impact on or even influence the emerging practice of REAM within organisations. In this respect it is appropriate to surmise that, in reality, no two organisation's approach in dealing with their operational real estate assets will be the same. The validation process adopted for this study acknowledged this constraint at the outset. The motivation for the study has been to attempt to provide a greater understanding of the intrinsic role of the operational assets in supporting the fulfillment of organisation's business objectives.

The models/frameworks generated from the study attempt to provide an integrated resource management framework in which the desired outcome from the practice of REAM (as defined in this study) is not driven by architectural splendour or technical excellence, but guided by clearly articulated business drivers that take cognizance of the practical limitations inherent in the cycle of facilities provision (real estate assets), facilities service management and long term asset management. In many respects, the emerging models/frameworks represent an attempt to present this integrated view of the management role inherent in the provision and ongoing maintenance of the *enabling workplace environment* created within the corporate physical infrastructure.

The research propositions that have driven this study sought to unravel the constraints that have prevented such an integrative approach being applied to the operational asset base within organisations. The literature sources and empirical evidence from the case studies, both suggest that for many, the

barriers can be attributed to organisational factors as much as technical factors associated with the physical assets and systems. A common theme that emerged is the quality and nature of communication between seemingly two 'communities' within the corporate world. The first is represented by the corporate decision makers who are charged with charting the course for the company as an economic entity; the outcome of their strategic decisions will impact on how corporate resources will be directed to achieve business goals. The second community within the company refers to executive/managers who are delegated the responsibilities of ensuring that the means to achieve the strategic objectives of the company are provided at an affordable cost. In respect of the corporate operational facilities as a *supporting resource*, the concept is a relative recent one, only gradually receiving acknowledgment (as oppose to recognition) at the corporate management levels. The more recent literature sources in areas within the scope of REAM, in particular, testify to a growing body of knowledge dedicated to bridging the gap between these two 'communities' within organisations. This study represents one such endeavours.

This chapter reports on the findings from the validation workshop and the extended postal validation conducted following the workshop. The participants of the workshop were drawn from a combination of respondents from the case study organisations and practitioners in the field of real estate, property and facilities management. The focus of this study has been to develop models to explain the emerging strategic role of the real estate resource in the context of business management. In this respect, an early decision was made to deliberately present the emerging concepts and models in a diagrammatic format accompanied by supporting text. The choice is also influenced by the decision to use a workshop presentation as the primary means of validating the models derived from the study.

Out of the total of twenty-six(26) organisations who participated in the case study investigation, nine(9) also participated in the validation exercise. Tables 7.1 and 7.2 list the case study organisations which also participated in the validation workshop and the respondents to the extended postal-validation.

Table 7.1: Case Study Respondents and Workshop Participants

SM = Senior Management, OAM = Operational Asset Management

Participating Organisations	Case Study	Workshop Participant
Manufacturing Sector (N=1)		
M2	SM & OAM	Facilities Manager
Banks and Financial Services (N=1)		
FS2	OAM	Senior Engineer
Professional Services - Offices (N=1)		
PS5	SM & OAM	Property & Office Services Manager
Utilities/Distribution Companies (N=2)		
C2	OAM	Director of Property/Facilities, and Property & Operations Manager
C3	OAM	Director of Facilities
Other Workshop Participants (N=5)		
Miss E. McFazean	Consultant	Symonds FM (Edinburgh)
Mr. D. Reid	Consultant	Procord (Scotland)
Mr. M Cant	Consultant	Larch Consulting
Mr. A. McNaughton	Maintenance Manager	Perth City Council
Mr. D. Ferguson	Estates Manager	Edinburgh Telford College
		N = 11

Table 7.2: Extended Sample Postal Validation (N=15)

Participating Organisations (N=3)	Job Title	Employing Organisation
Mr I Wills	Senior Engineer	M1
Mr J Fitchie	Manager, Facilities Engineering	M2
Mr D. Lawson	Zone Portfolio Manager, Scotland	C1
Other Participants (N=12)	Job Title	Employing Organisation
Mr D Toone	Consultant	Symonds FM (London)
Mr W McGregor	Consultant	Advance Workplace Associates
Mr N Joslyn	Surveying Services Manager	Moat Housing Association
Mr D Spiller	Project Manager	Gleeson Group, Construction Div.
Mr D O'Gorman	Project Manager	Chiyoda Petrostar Ltd
Mr C. Atkin	Facilities Planner	Edinburgh City Council
Mr. J. Thomson	Maintenance Manager	MOD
Mr W Gardner	FM Contracts Manager	Taylor Woodrow FM
Mr R Hipperson	Maintenance Manager	Centre Parc
Mr. D. Twentyman	Maintenance Engineer	British Nuclear Fuel Ltd.
Mr. J. Housley	Assistant Director of Building and Estate	University of Durham
Mr. C. Blair	Assistant Director of Building and Estate	University of Huddersfield
	Total (postal validation)	N = 15
	Total Validation Response (workshop + postal)	N = 26

7.2 Framework of validation - workshop and wider sample

The framework adopted as the basis of validating the results from the study was a validation workshop which was conducted over a day from 10.00 a.m. to 3.00 p.m. In order to maintain impartiality during the workshop sessions, a third party was brought in to act as an independent facilitator. The author's role was confined to presenting the slides and answering any queries about the content of the slides. The facilitator led all the discussions and final summing up of the workshop. A total of eleven (11) delegates participated in the validation workshop held at Heriot-Watt University on the 2nd August 1996.

The presentation for the validation workshop consisted of two parts with two accompanying documents (see Appendix E and F):

- Part 1 - a presentation of twenty (20) selected slides illustrating model development and frameworks, presented in groups varying from 2 to 6 slides. The documentation of the slides were arranged in pairs with accompanying text on a facing page. Participants at the workshop were requested to score on a number of parameters following each presentation session and invited to add any comments and suggestions.
- Part 2 - a presentation of eight (8) matrices presented one at a time, in which participants were requested to score on a similar set of parameters relating to each matrix after a brief description of the purpose and scope of each matrix. Participants were invited to add any comments and suggestions either in writing on the workshop documents or during the discussions.

The parameters chosen for validating the models and matrices fall under two groups: Qualities and Emphasis.

A. The *Qualities* parameters measure the completeness, robustness and practical relevance of the models/frameworks in question.

- *Completeness* - rates the comprehensiveness in coverage of the principles and concepts.
- *Robustness* - rates the validity of concepts across organisation types and industry sectors.
- *Practical Relevance* - rates the extent to which the models/matrices presented reflect reality as a guide or aid to decision making.

B. The *Emphasis* parameters measure the degree of usefulness of the models in question, in terms of explanation, benchmarking, and identifying competence gaps.

- Explanation - rates the ability of the models/matrices to explain principles, context and content.
- Benchmarking - rates the usefulness of the models/matrices in benchmarking against the respondents' current practices.
- Competencies - rates the usefulness of the models/matrices in identifying competence gaps against the respondents' current practices.

Table 7.3 and 7.4 list the headings of the slides (illustrating emerging models and frameworks) and matrices (mapping emerging/developing trends in best practices) contained in the documentation that accompanied the validation workshop.

Table 7.3: Validation Workshop Presentations - Slides (Models/Frameworks)

Slide Number	Title
1	Strategic Management Impact on Operational Asset Management
2	Strategic Management Impact on Operation Asset Management
3	Real Estate Asset Management (REAM) as the Informed Interface
4	The Context of Real Estate Asset Management
5	Business Resources
6	Raising Strategic Awareness of the Role of Property
7	Defining the Domain of Strategic Facilities Brief
8	Defining the Domain of Service Levels Brief
9	REAM - Components and Relationships
10	REAM - Strategic and Operational Components
11	REAM - Critical Interface
12	REAM - Business Drivers and Affordability Drivers
13	Managing Interfaces - Context of SFP
14	REAM - Process Model
15	Facilities Provision Process Model
16	Facilities Service Management Process Model
17	Impact of Strategic Business Planning on Operational Asset Management
18	REAM - Strategic Monitoring and Management Focus
19	Traditional Reactive Model
20	Emerging Proactive Model

For ease of reference, a copy of the presentation slides and matrices are included as Appendix H. It is to be noted the slides enclosed represent the final version at the time of submission of the thesis. Being an iterative process, changes were made to original slides following the feedback from the workshop session and the analysis from the extended postal survey.

In order to facilitate the discussions ensuing, the following brief summaries describe the key concepts in relation to the twenty(20) presentational slides.

Slides	Key Concepts in Models and Frameworks
1 to 6	Background and context of REAM in the management of business resources.
7 & 8	Key concepts of Strategic Facilities Planning(SFB) and Service Levels Brief(SLB) as integrated planning and management processes in the creation of the appropriate enabling working environment in an organisational setting.
9 &10	Components and Relationships of REAM.
11 & 12	Facilities Provision and Facilities Service Management Interface.
13 & 14	Managing Interfaces and Processes within REAM.
15	Cyclical Facilities Provision Process Model.
16	Cyclical Facilities Service Management Process Model.
17 & 18	Overall Input-Output Framework and Management Framework for REAM
19 & 20	Traditional Reactive and Emergent Proactive Model for REAM.

Table 7.4: Validation Workshop Presentations - Matrices

Matrix Number	Title
1	Mapping Real Estate Assets by Stakeholders Concerns
2	Mapping Stakeholders' Involvement in REAM
3	Mapping Real Estate Asset Critical Concerns and Performance Measures
4	Mapping Financial Approaches in Real Estate Decisions
5	Mapping Management Perception (strategic and operational)
6	Mapping Strategic Facilities Planning
7	Mapping Space Planning and Management Practice
8	Mapping Asset Maintenance Management Practice

The difference in presentational format between the models and matrices necessitated that for the Matrices validation, the 'Robustness' parameter was substituted by 'A tool for building internal consensus'.

Each parameter has a descriptive scoring range from *low* to *high* corresponding to a numeric score of 1 to 5 respectively. An example is as shown below.

Please rate the following and add any relevant comments.

Model / Matrix Parameters: (please circle appropriate score)

Completeness	Low >	1	2	3	4	5	< High
Robustness (for Models validation)	Low >	1	2	3	4	5	< High
A tool for building internal consensus (for Matrix validation)	Low >	1	2	3	4	5	< High
Practical Relevance	Low >	1	2	3	4	5	< High
Ability to explain context	Low >	1	2	3	4	5	< High
A means to benchmark process requirements	Low >	1	2	3	4	5	< High
A tool for mapping competence gaps	Low >	1	2	3	4	5	< High

Please add any comments: _____

The test of validation for the models and matrices in terms of numeric score is taken as an average value of 3.5 or more. An average score of 3.0 is taken as being neutral, and a score below 2.0 is taken as failing to meet the parameter's requirements.

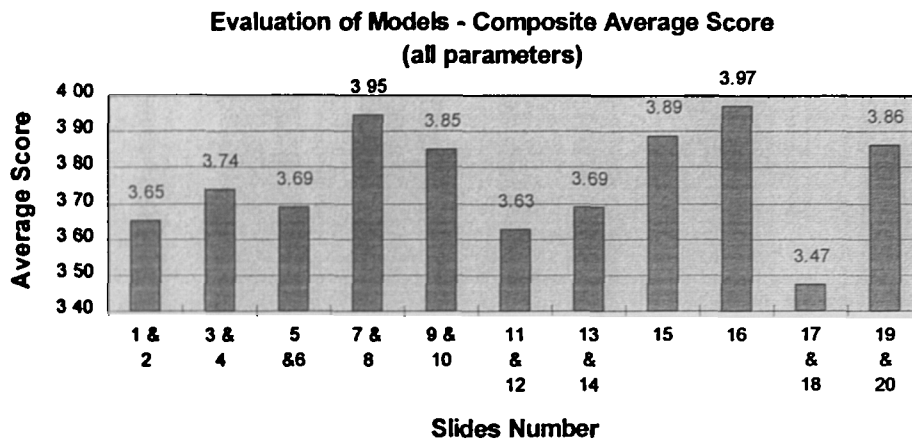
7.3 Results from Validation Workshop and Extended Postal Validation

This section reports on the results from both the validation workshop and the extended postal validation. The principal technique used to describe the results is descriptive statistics. The results are presented in two parts: (i) analysis relating to the models/framework, i.e. the twenty (20) presentational slides, and (ii) analysis relating to the eight (8) matrices. A broad summary is provided initially on both sets of results, followed by a detailed discussion of results for each of the *Qualities* and *Emphasis* parameters

The summary of results from the validation of the models and the matrices are analysed using a composite overall average score across the six parameters for both the models (slides) and matrices.

Figures 7.1 and 7.2 show the results of responses from a combined workshop and postal sample size of 26 (N=26). The statistics for each column is compiled by calculating the average score across all the six parameters for each model concept or matrix. This section will only report the overall trend, a more detailed discussion will be covered under the evaluation of the individual parameters (Sections 7.3.1, pp.324 and 7.3.2, pp.329).

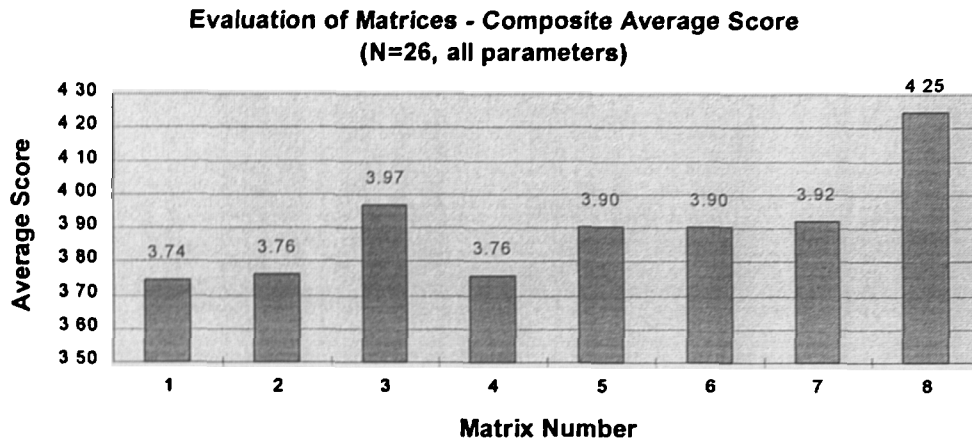
Figure 7.1: Composite Overall Average Score - Models (N=26)



Taking the datum of a score of 3.5 or more as a test of positive validation, the overall results were encouraging, all scoring a composite average above 3.40. The only models/concepts that marginally failed the test were represented by slides 17/18 - *Impact of Strategic Business Planning on Operational Asset Management / Strategic Monitoring and Management Focus* (see Appendix G for slides and description). An analysis of the comments from the workshop and postal respondents both indicated that the figures illustrating the input-output relationships presented were too complex as they attempted to not only demonstrate cause-effect relationships, but also key management concepts operating at different levels within an organisation.

It is encouraging to note that slides 7/8 (SFB and SLB), 9/10 (REAM components model), slides 15/16 (cyclical process models) and 19/20 (reactive and emerging management models), all scored closely to a composite average score of 4.0 out of a maximum of 5.0.

Figure 7.2: Composite Overall Average Score - Matrices (N=26)



The composite average score profile for the set of 8 matrices shown in Figure 2 provided a high consistent overall approval rating ranging from 3.74 (Matrix 1) to 4.25 (Matrix 8).

In summary, the profiles of Figures 7.1 and 7.2 above, indicate an encouraging response to the emerging concepts from the study. It is to be conceded that the sample of twenty-six (26) participants/respondents came almost exclusively from the operational asset management side of the participants' organisations. In this respect, the study, again, confirmed the general apathy of corporate senior management's perception of the non-strategic role of operational assets in the context of business management (as reflected in the similar findings of other research in recent years, reported in Chapter 2).

The next two sections will provide a more detailed discussion of the individual parameters in relation to each of the models/frameworks and matrices.

7.3.1 Discussions of Results from Evaluation of REAM Models

Table 3 summarises the average scores of the models/frameworks in relation to the six parameters used in their evaluation. Figure 4 provides a breakdown of the average score for each of the six parameters.

Table 7.5: Summary of Validation of Models - Average Scores (N=26)

Slides No:	Completeness	Robustness	Practical Relevance	Explanation	Benchmark	Competence Gaps
1 & 2	3.88	3.58	4.04	3.85	3.23	3.35
3 & 4	4.02	3.81	4.04	3.88	3.35	3.35
5 & 6	3.92	3.77	4.08	3.83	3.31	3.23
7 & 8	4.19	4.00	4.00	4.00	3.73	3.75
9 & 10	4.27	4.00	4.15	4.00	3.38	3.31
11 & 12	3.92	3.88	3.77	3.81	3.19	3.19
13 & 14	3.96	3.96	3.88	3.73	3.31	3.29
15	4.08	3.96	4.12	3.96	3.65	3.56
16	4.15	4.08	4.27	4.00	3.73	3.60
17 & 18	4.00	3.73	3.50	3.35	3.12	3.15
19 & 20	4.15	3.96	4.19	4.10	3.46	3.31

Figure 7.3 Results from Evaluation of Models' Parameters

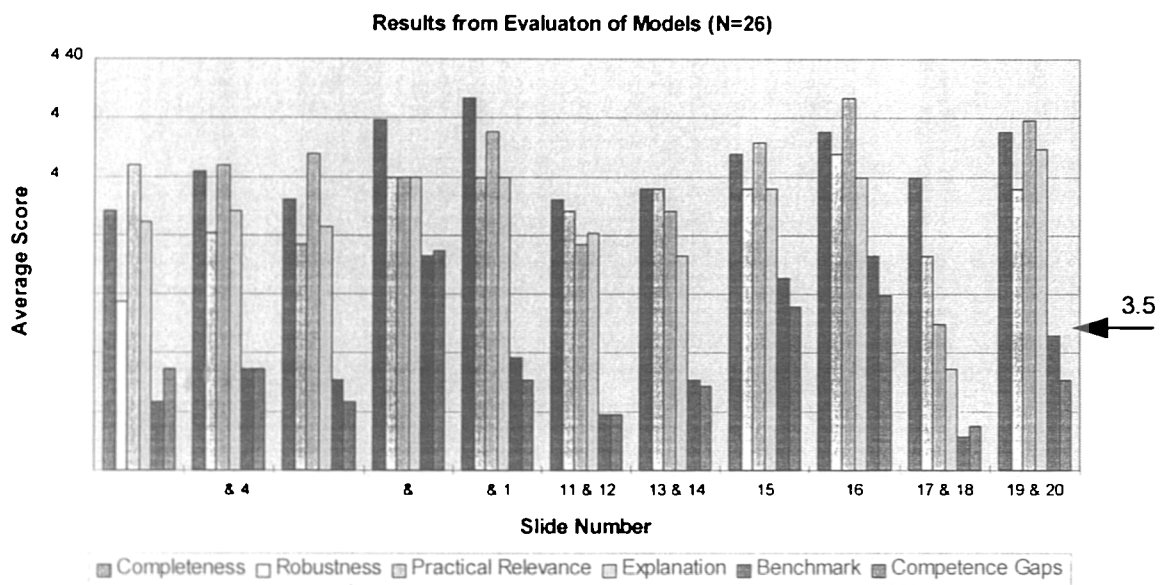


Figure 7.3 provides a much richer perspective than that presented by Figure 7.1 above relating to the composite overall average score. It explains that the low score of slides 17/18 is a result of the last two parameters of *Benchmarking* and *Competence Gaps*. As explained earlier, the complexity of the figures presented are probably reflected in the relatively low score for *Practical Relevance* and *Explanation* as well.

With reference to the datum score of 3.5, it is clear that the two parameters of *Benchmarking* and *Competence Gaps* do not rate well with the respondents except for slides 7/8 which relate the two key concepts of SFB and SLB; and slides 15/16 which relate to the cyclical process models for facilities provision and facilities service management.

7.3.1.1 Evaluation of Models' Qualities Parameters

This section of the analysis provides a detailed breakdown of the 'Qualities' parameters relating to the respondents' evaluation of the models/frameworks in slides 1-20. Figure 7.4 shows the composite average score of the three *Qualities'* parameters: *Completeness, Robustness and Practical Relevance*.

Figure 7.4: Composite Average Score for Qualities' Parameters

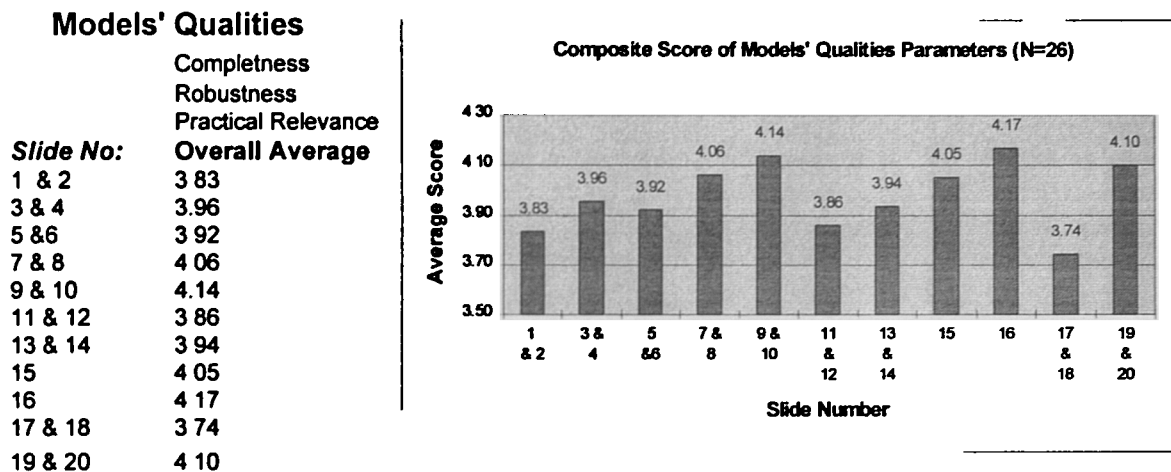


Figure 7.4 shows that all the slides were rated above the 3.5 datum score indicating an overall agreement to the models/frameworks presented. The following slides showed a high rating with an average score above 4.0:

Slides 7/8 - Key concepts of SFB and SLB.

Slides 9/10 - Components and Relationships of REAM.

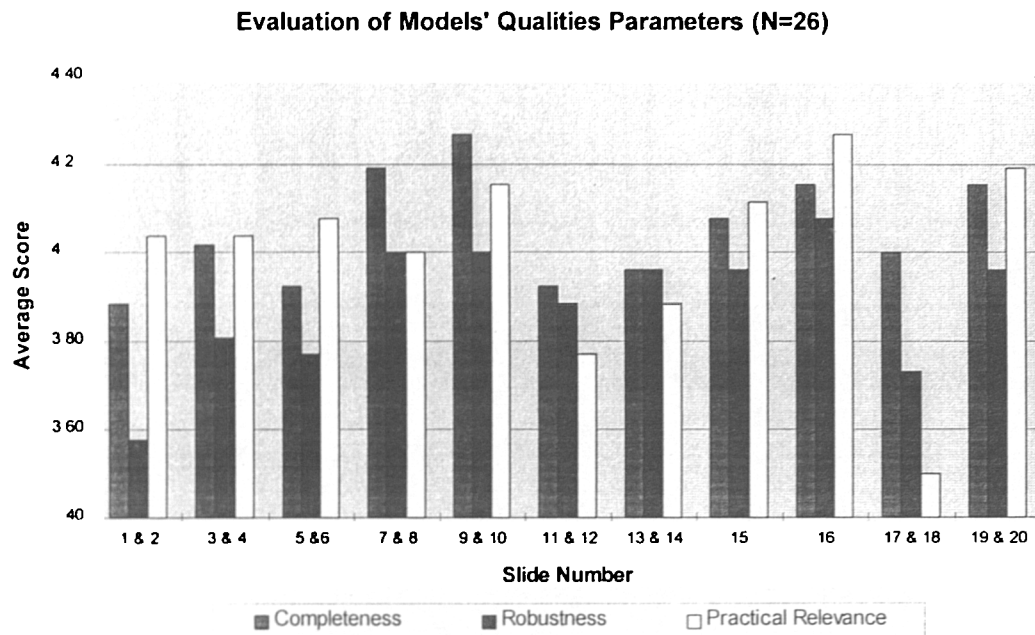
Slides 15/16 - Cyclical Process Models for Facilities Provision and Facilities Services Management.

Slides 19/20 - Traditional vs Emerging Proactive Model for REAM.

Figure 7.5 provides a detailed breakdown of the responses on each the individual Qualities' parameters. The following results are discernible from Figure 7.5:

- Apart for slides 17/18 on the parameter of *Practical Relevance*, all the parameters scored above the 3.5 datum average score.
- Strong validation on all three parameters for slides 7/8, 9/10, 15/16 and 19/20, particularly for *Completeness* and *Practical Relevance*.

Figure 7.5: Breakdown of Scores for Qualities' Parameters



Comments on *Completeness*' parameter:

- Score consistently high ranging from 3.88 to 4.27
- Highest band score above 4.0 - Slides 7/8, 9/10, 15/16 and 19/20

Comments on *Robustness* parameter:

- Score consistently above the 3.5 datum.
- Apart from slides 17/18 and slides 1-6 which emphasised the background and context of REAM, all the other slides achieved an average score of 4.0 or above.

Comments on *Practical Relevance* parameter:

- Apart from slide 17/18, consistent scoring above the 3.5 datum.
- Particularly high validation for slides 9/10, 15/16. 19/20.

7.3.1.2 Evaluation of Models' Emphasis Parameters

Figure 7.6 shows the composite average score of the three Emphasis' parameters: *Ability to explain context*, *A means to benchmark process requirements*, and *A tool for mapping competence gaps*.

Figure 7.6: Composite Average Score for *Emphasis'* Parameters

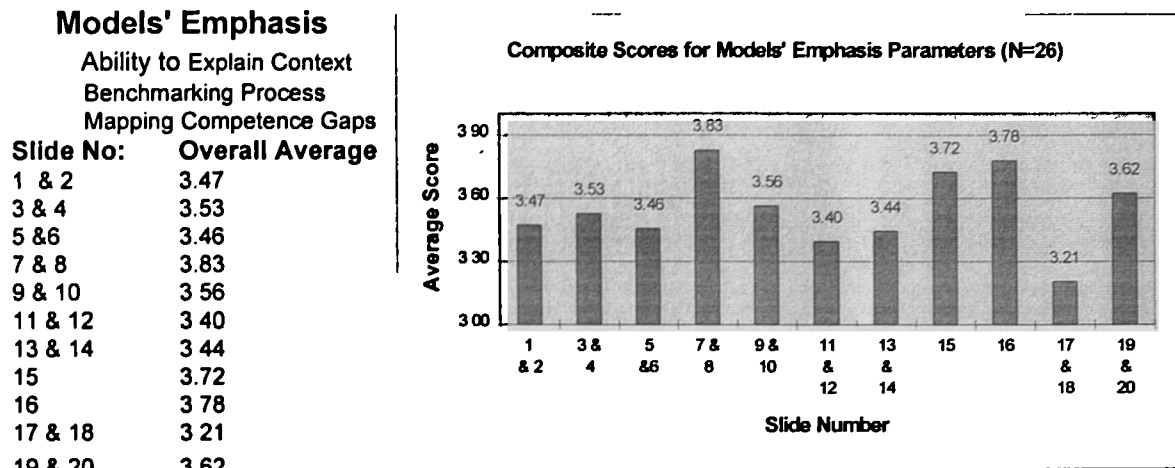


Figure 7.6 shows a less consistent validation for the *Emphasis'* parameters compare to the *Qualities'* parameters with five of the eleven histogram bars below the 3.5 datum score. However, a high rating with average score above 4.0 being maintained for the same set of slides as in Figure 7.4 above.

Figure 7.7: Breakdown of Score for *Emphasis'* Parameters

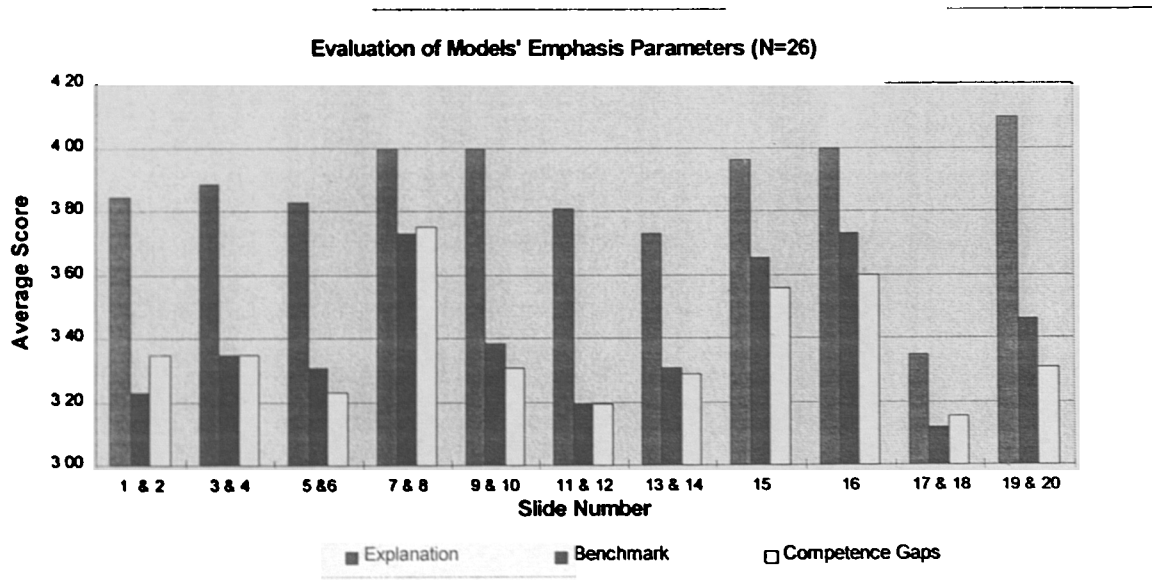


Figure 7.7 provides a detailed breakdown of the responses on each of the individual *Emphasis'* parameters. The following results are discernible from Figure 7.7.

- Of the three parameters, *Explanation* scored the strongest support from the respondents for all, except slide 17/18 for reasons explained earlier.
- For the majority, *Benchmarking* and *Competence Gaps* were not supported by the results, scoring below the 3.5 datum score. Analyses from the comments and feedback from respondents cited the reason for the comparative low score for both these parameters as inappropriateness in the presentational format (i.e. diagrams) for the purpose of comparative analysis.
- All three parameters were supported for slides 7//8 (SFB and SLB concepts) and slides 15/16 (cyclical process models).

Comments on *Explanation*' parameter:

- Apart from slides 17/18 which recorded a score of 3.35, all the others meet the 3.50 datum score, with the similar high scoring profile of a score of 4.00 or higher for slides 7/8, 9/10, 15/16 and 19/20.

Comments on *Benchmarking* and *Competence Gaps* parameters:

- Both these parameters were not well supported, scoring below the 3.5 datum score for most except slides 7/8 and 15/16.

7.3.2 Discussions of Results from Evaluation of REAM Matrices

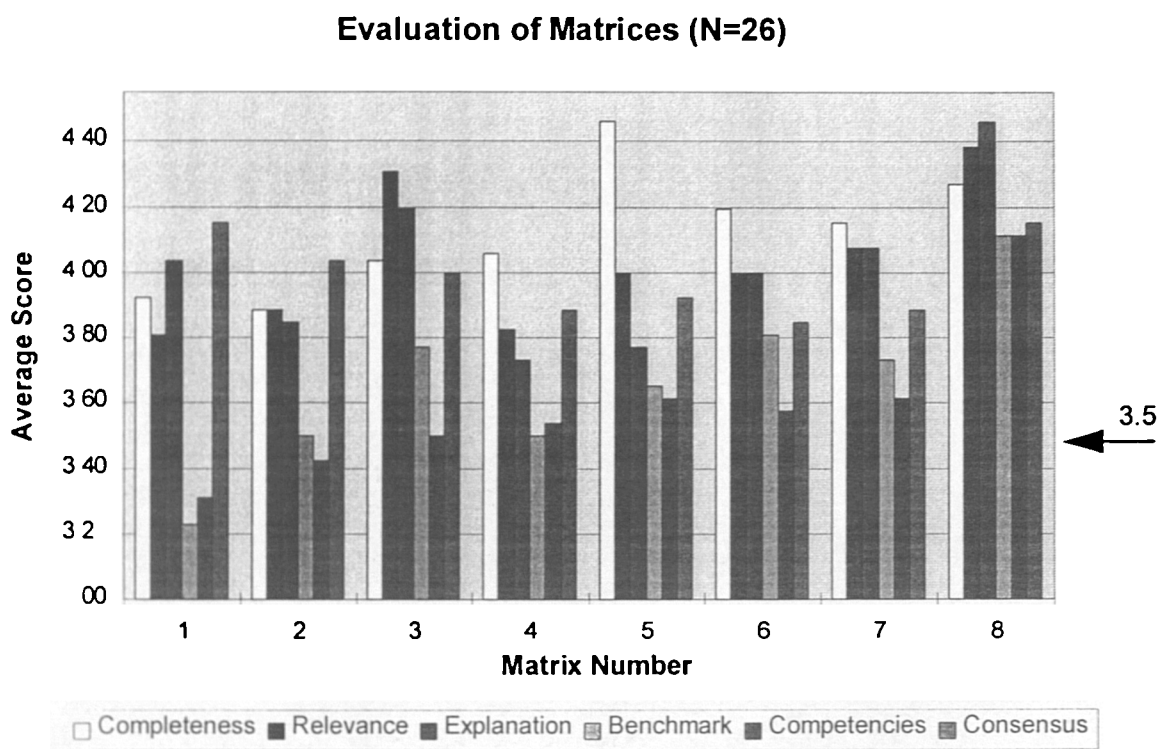
Table 7.6 summarises the average scores of the matrices in relation to the six parameters used in their evaluation. Figure 7.88 provides a breakdown of the average score for each of the six parameters.

Table 7.6: Summary of Validation of Matrices - Average Scores (N=26)

Matrix No:	Completeness	Relevance	Explanation	Benchmarking	Competencies	Consensus
1	3.92	3.81	4.04	3.23	3.31	4.15
2	3.88	3.88	3.85	3.50	3.42	4.04
3	4.04	4.31	4.19	3.77	3.50	4.00
4	4.06	3.83	3.73	3.50	3.54	3.88
5	4.46	4.00	3.77	3.65	3.62	3.92
6	4.19	4.00	4.00	3.81	3.58	3.85
7	4.15	4.08	4.08	3.73	3.62	3.88
-	-	-	4	4.12	4.12	4.15

While Table 7.6 above showed a consistent profile for the composite average score for all the six parameters to be above the 3.5 datum score, Figure 7.8 below revealed that, on the whole, the *Qualities'* parameters fared better than the *Emphasis'* parameters.

Figure 7.8: Results from Evaluation of Matrices' Parameters



With reference to the datum score of 3.5, Matrices 1, 2 scored on or below the datum score for the *Benchmarking* and *Competence Gaps* parameters. The results could be explained in term of inappropriateness since Matrices 1 and 2 attempts to show the context of stakeholders primary concerns and involvements in the processes within REAM rather than providing a context for comparative analysis.

7.3.2.1 Evaluations of Matrices' Qualities Parameters

This section of the analysis provides a detailed breakdown of the 'Qualities' parameters relating to the respondents' evaluation of the 8 matrices presented. Figure 9 shows the composite average score of the three *Qualities'* parameters: *Completeness*, *Practical Relevance* and *Ability to explain context*.

Figure 7.9: Composite Average Score for Qualities' Parameters

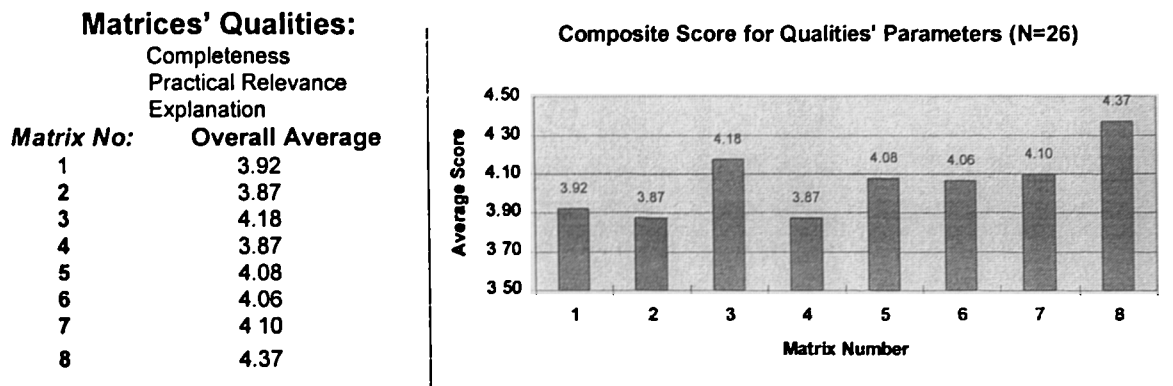


Figure 7.9 shows that the composite average scores for all the matrices were rated well above the 3.5 datum score, indicating an overall agreement to the set of matrices presented. The following matrices showed a high rating by respondents with an average score above 4.00, with Matrix 4 scoring particularly well (4.37):

Matrix 3 - Mapping critical concerns and performance measures.

Matrix 5 - Mapping management perceptions.

Matrix 6 - Mapping strategic facilities planning.

Matrix 7 - Mapping space planning and management

Matrix 8 - Mapping asset maintenance management practice.

Figure 7.10: Breakdown of Scores for Qualities' Parameters

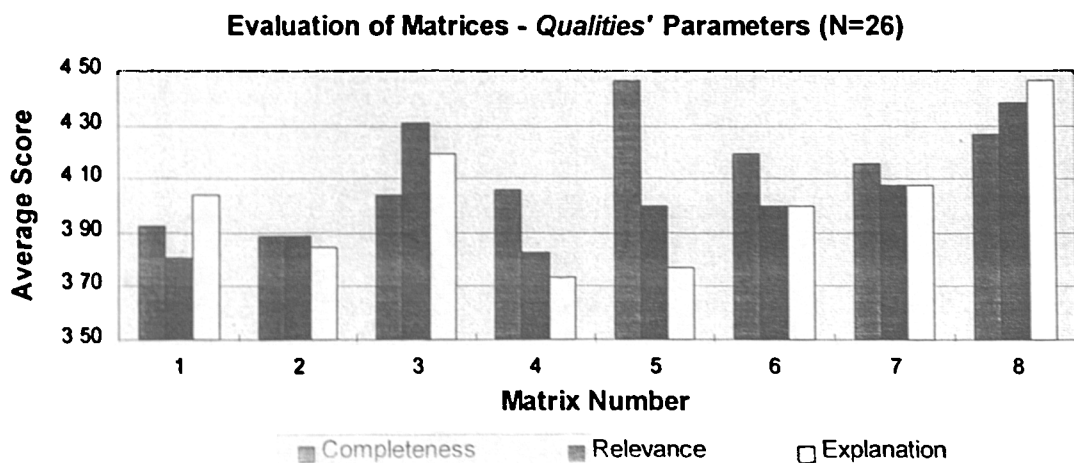


Figure 7.10 provides a detailed breakdown of the responses on each of the individual *Qualities'* parameters.

The following results are discernible from Figure 7.10:

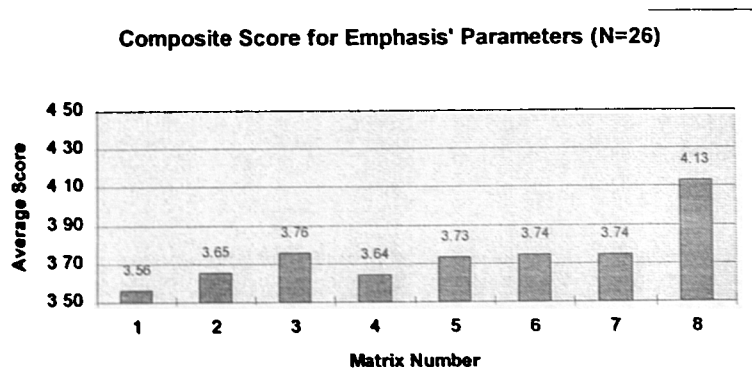
- All eight matrices scored above the 3.5 datum ranging from 3.73 to 4.46 suggesting strong support for the matrices presented.
- Strong validation of all three parameters for matrices 3, 6, 7, and 8, particularly for Matrix 8.
- In comparing the relative performance between the three parameters, the *Completeness* parameters had six matrices scoring 4.0 and above, with the highest average score of 4.46 given to Matrix 5 - mapping strategic facilities planning. The *Explanation* and *Practical Relevance* parameters both have five matrices scoring 4.0 and above, with a highest average score of 4.46 and 4.38 given to Matrix 8 - mapping asset maintenance management.

7.3.2.2 Evaluation of Matrices' Emphasis

Compared to the composite average score profile for the *Qualities'* parameters (Figure 7.9), the profile for the *Emphasis'* parameters shown in Figure 7.11 indicated a lower overall weighting given to the parameters of *Benchmarking*, *Competencies* and *Consensus Building* although all six matrices scored above the 3.50 datum score.

Figure 7.11: Composite Average Score for Emphasis' Parameters

Matrices' Emphasis:	
	Benchmarking
	Competencies
	Consensus
Matrix No:	Overall Average
1	3.56
2	3.65
3	3.76
4	3.64
5	3.73
6	3.74
7	3.74
8	4.13



Only Matrix 8 is supported by a high composite average score of 4.13. Matrices 3, 5, 6 and 7 scored marginally higher than 1, 2 and 4.

Figure 7.12: Breakdown of Scores for Emphasis' Parameters

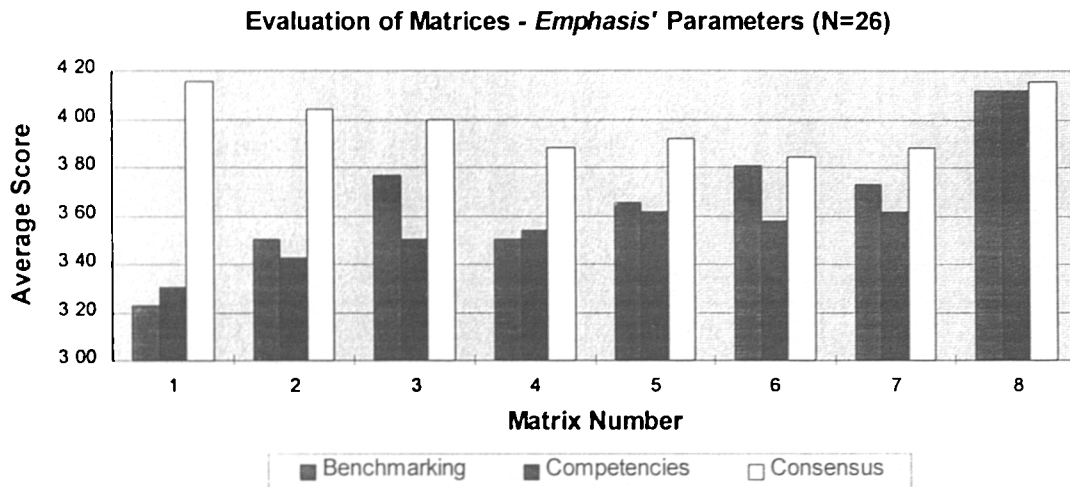


Figure 7.12 provides a detailed breakdown of the responses on each of the *Emphasis'* parameters. It is clear from the profile of Figure 7.12, the composite average score for Matrices 1 to 7 were influenced by the comparatively high score for the *Consensus* parameter alone. The following results are discernible from the profile:

- The *Consensus* parameter was particularly well supported for all the eight matrices ranging in value from 3.85 to 4.15.
- Apart from Matrix 1 and 2 which have two parameters at the datum score of 3.50 or lower, all three parameters were supported for the other matrices. Matrix 8 (mapping asset maintenance management) scored particularly high for all three parameters scores above 4.0.

7.4 Summary

In summing up the analyses from the validation exercise carried out, it can be concluded that the models and matrices generated from the study were supported by the respondents. The lack of senior management participation in the validation process is clearly a weakness. This weakness, however, far from invalidating the study's findings, confirms the dire need for the supply side to understand the nature and motivation of the demand side for facilities provision and their management over time. In this respect, in the author's opinion, the validation exercise had been invaluable in promoting this awareness to the

strategic dimensions of the real estate resource in an organisation setting. The challenge for the real estate/facilities executives is one of crossing the business language barrier as an informed adviser that supports the corporate strategic intent through the effective management of the real estate resource from facilities provision through to facilities service management..

It is acknowledged that there were some mismatches between the parameters chosen to evaluate the models and matrices. For example, in the validation of both the models and matrices, the two *Emphasis'* parameters chosen; (i) to benchmark process requirements, and (ii) to identify competence gaps; were considered by most respondents to be inappropriate because concepts were being considered, not practice.

As a conceptual model for portraying a practical framework for the practice of Real Estate Asset Management (REAM) within an organisational setting, the results from the workshop and extended sample clearly support the following key propositions from the study:

1. The concept of Strategic Facilities Brief and Service Level Brief as an integrative mechanism within the practice of real estate asset management. (slide 7/8)
- 2 The critical interfaces between the strategic components [Strategic Facilities Planning SFP) and Strategic Asset Management(SAM)] and operational components [Facilities Service Management(FSM) and Asset Maintenance Management(AMM)] of REAM. (slides 9/10)
- 3 The cyclical process models for Facilities Provision and Facilities Service Management. (slides 15/16)
- 4 The Reactive and Emerging Proactive Management Model. (slides 19/20)
- 5 The use of matrices as a format of mapping key aspects of REAM. (particularly Matrices 3, 5, 6, 7 and 8)

The next chapter will provide a summary of the main findings in relation to the research propositions as a conclusion to the study.

Chapter 8 - Conclusions

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8. Conclusions and Implications

8.1 Introduction

This research was initiated on the premise that the operational real estate assets should be regarded as a *business resource* in the same way that people(staff), finance(capital), technology(hardware and software) and information, have been generally acknowledged as major corporate resources by senior corporate managers. The context of the study is set against a period of rapid changes on a global scale where organisations are confronted by intense competition within a business environment that is characterised by dynamic changes from all sides. In this respect, the study has focused on the evolving role of the operational asset base within organisations. In particular, how organisations response to the management of their operational property asset as a strategic business resource. The term 'Real Estate Asset Management' (or REAM in abbreviation) has been adopted to define the scope of activities from the initiation of demand for functional space by business units, to the supply of fully functional facilities and their associated support services within the corporate physical infrastructure.

This chapter brings together and discusses the main findings and their implications on organisational issues and practice issues, the outcome of which will influence the practice of real estate asset management in an organisational setting. This is followed by a more detailed discussion of the main contributions to knowledge in the field of study. The last section to this chapter lists a number of recommendations for further investigations and research in this rapidly developing area of real estate asset management.

8.1.1 Research Propositions and Results

Three research propositions drove the chosen research design following a comprehensive literature review of core and related subjects within the scope of REAM.

Research Proposition 1 - that a strategic view of the role of the supporting physical resource (operational property/real estate asset) provides the planning

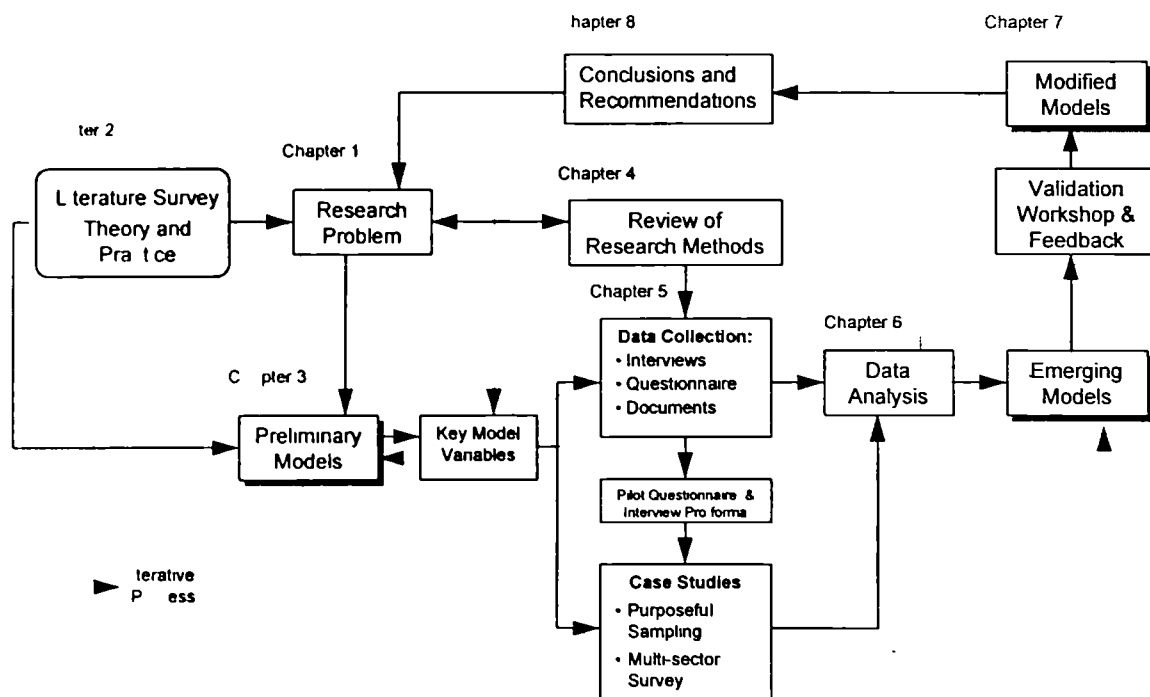
framework for linking corporate demand for facilities(functional space) and related services to the ongoing management of the operational property assets.

Research Proposition II - that a process model for the proactive management of operational real estate assets and their associated facilities support services can be evolved with the emphasis on management over time.

Research Proposition III - that the practice of operational asset management and facilities services delivery can be mapped as an incremental developmental management model that seeks to integrate the demands arising from strategic business decisions to the delivery of operational facilities and associate support services as a dynamic management process.

The outcomes from the study are structured within an organisational setting for generating a conceptual framework for modeling the development of an integrated resource management approach that continuously assesses the alignment of the operational real estate assets to the corporate strategic business intent.

The overall research methodology framework and thesis structure of the research carried out are summarised in Figure 1.6 .



Chapter 1 introduced the area of study and provided an overview of the research propositions, the research methodology and a summary of the research outcomes from the study and limitations. Chapter 2 provided a comprehensive review of relevant literature specific to the area of study and related cognate areas. The review covered the theoretical and economic backdrop within which the practice of real estate asset management is currently based, and provided the context upon which the research propositions were framed and the justifications for their further investigation. It is the interactions between strategic business management and operational asset management and how the corporate operational real estate assets are managed over time that formed the focus of this research. Chapter 3 concentrated on theory development and discusses the development of preliminary models and frameworks that explained the context, role and components of Real Estate Asset Management. The derivation of a model framework for REAM was explained. Chapter 4 provided a comprehensive review of research principles and research methods. The chapter concluded by considering issues relating to the evaluation and selection of an appropriate research strategy for the study. Chapter 5 described the research design which defined the basis of the data collection tools and data analysis techniques. Chapter 6 reported the results of the data analysis from the case study respondents and how the results impact on the preliminary models developed in Chapter 3. Chapter 7 described the rationale of the workshop validation and extended postal validation and reported on the outcomes from the analyses from the participants and respondents.

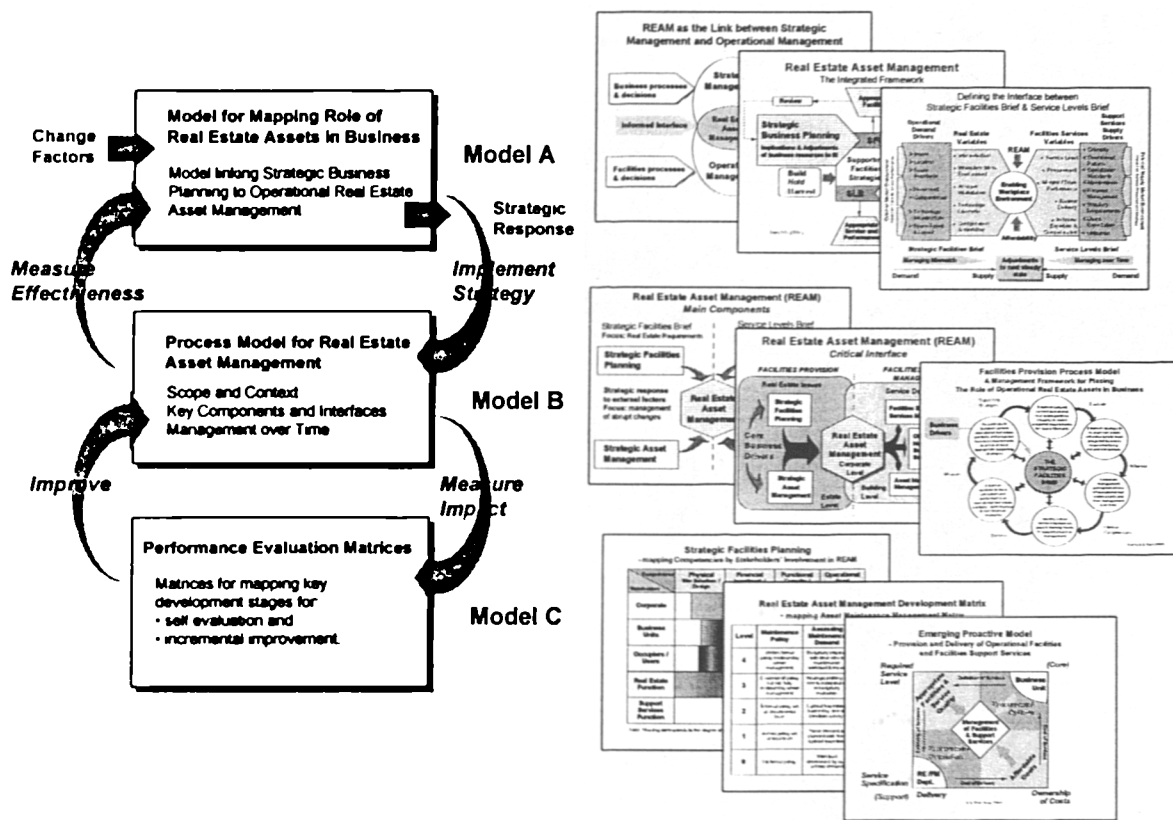
8.1.2 Developmental Model/Framework for Real Estate Asset Management

It is clear from the study that the task of providing for, and managing the corporate operational facilities within an organisational setting is a complex one which involves many different stakeholders from a varied business and professional background. The proposal of an integrated view of business resource management is justifiable on the premise that the real estate resource represents the embodiment of the corporate outcome in the form of the desired workplace environment.

The comprehensive literature survey conducted provided a firm basis for consolidating a number of concepts from theory and practice from a number of discipline areas. The conceptual framework of REAM has been built on bringing together two main elements, the strategic and operational dimensions of the provision and management of the corporate real estate infrastructure.

Figure 8.1 summarises the roles and relationships between the conceptual models that link the study and output models and matrices (Model A, B and C) resulting from the study.

Figure 8.1: Relationships between Conceptual Models and Outputs



The results from the case studies analyses and interviews provided for the validation of outcomes of Model A - mapping the role of real estate assets in business, and Model B - development of a process model for real estate asset management based on a proactive management approach. The results from the validation workshop and extended postal survey formed the basis of validating the outputs of Models A, B and C - emerging models and frameworks of REAM, and management development matrices for performance evaluation and continuous improvement.

Figure 8.2: Integrated Management Framework for Real Estate Asset Management

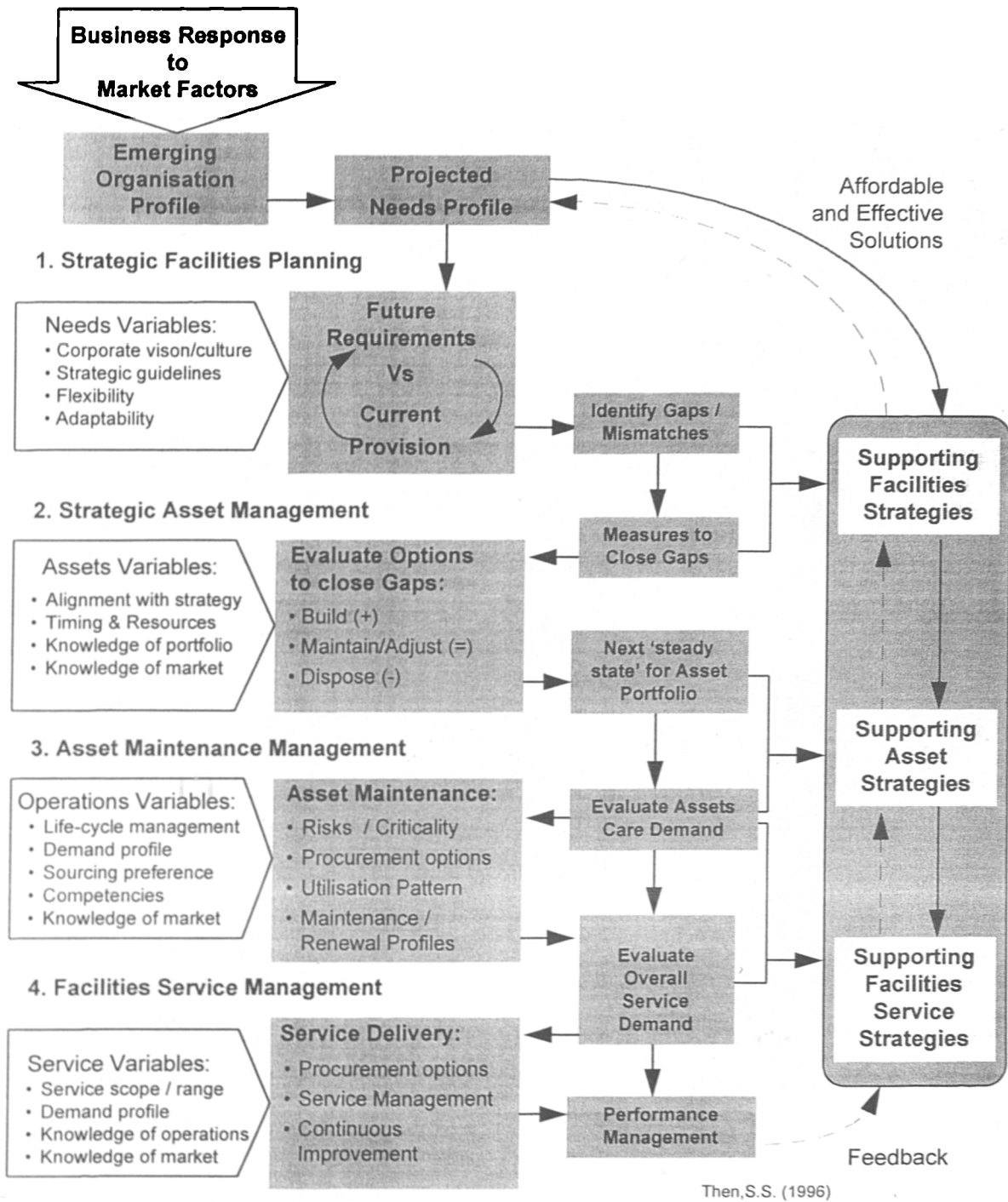


Figure 8.2 illustrates the proposed Integrated Management Framework for REAM, summarising the main components, their relationships as well as input variables and outputs from the integrated management processes. The overriding driver for the proposed integrated management framework is matching supply to emerging demand as a continuous response to the organisation's strategic business initiatives. In this respect, *the Supporting Facilities Strategies, the Supporting Asset Strategies and the Supporting*

Facilities Service Strategies can be viewed as cascading from the top-down, whilst the performance feedback loop operates from bottom-up.

The justification for the above integrated management framework can be viewed in the context of the pressures and constraints which businesses must operate within today's market environment. Many organisations must compete in uncertain, dynamic and turbulent environments where change pressures are continuous and changing. New opportunities and threats appear at short notice and require a speedy response. Strategies which were appropriate *yesterday* are unlikely to be suitable *today*, let alone *tomorrow*. The latter challenge finds particular relevance in REAM which is the congruent of pressures arising from business planning at the strategic management level, and facilities and service delivery, at the operational management level. In short, the above framework provides a coherent basis for investigating the factors and variables that will ultimately decide the quality of the actual working environment in organisations.

The results from the validation workshop and extended survey largely supported the models/frameworks and matrices that have resulted from the study. The need for an integrated resource management framework that considers the operational real estate assets as a vital business resource supporting the realisation of the corporate objectives was fully endorsed by workshop participants and survey respondents. However, there were some concerns expressed by respondents, who were largely from the 'supply' side of the organisation, as to *how* senior management, who initiates the 'demand' side', can be made more aware of the need to consider the likely implications of their business decisions on the existing operational real estate portfolio.

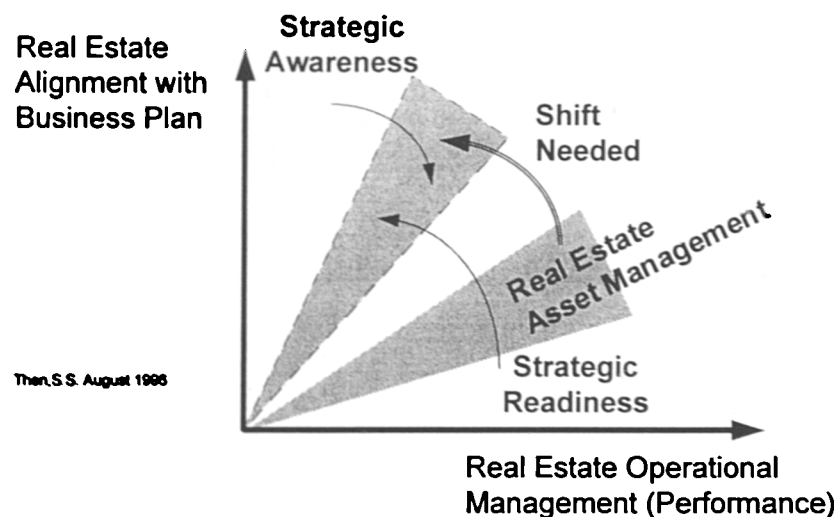
The case studies evidence largely confirmed the sentiments expressed by numerous published case interviews of corporate real estate / facilities executives, that the task of bridging the communication gap between the initiators of *demand*, and those charged with delivery of the *supply*, demands a change in mind-sets from both sides.

On the part of corporate senior management, a period of consistently low or negative growth combined with intense competition, have heightened their awareness on the significance of facilities-related occupancy costs as a

proportion of total operational costs, which for many companies are second only to human resource costs. The growing practice of internal recovery of occupancy costs from business units by property/facilities departments (i.e. internal charging), has also raised the significance of such cost to business units managers, who have, hitherto grown accustomed to regarding such a cost as a hidden corporate overhead item. The exposure of occupancy cost trends through the growing practice of comparative analysis (i.e. benchmarking) has also contributed to a fuller understanding of occupancy costs to business.

Results from the case studies analyses suggest that senior managers' *strategic awareness* of the strategic role of the corporate real estate assets needed to be heightened substantially. In contrast, there are strong evidence to support that the *strategic readiness* of the real estate/facilities executives are strong and growing, giving weight to the proposition that the strategic 'swing' needed for raising the status of REAM is likely to come from a 'supply' side push, rather than an initiation from the 'demand' side. Figure 8.3 illustrates this likely shift conceptually.

Figure 8.3: Strategic Shift Needed in REAM



In terms of positioning within the organisational hierarchy, the results from both the case studies and validation respondents point to a greater need for the real estate/facilities executives to be in a position to *influence the direction* of strategic management outcomes that have a direct consequence on real estate and facilities issues; than a mere desire for being a level closer in the corporate organisational hierarchy.

Both the literature survey and the case study organisations provided data for the development of the series of competence matrices for real estate asset management by consciously mapping an incremental management developmental model for the key components of real estate asset management practice. The descriptive matrices developed provided a useful format for charting the key features of incremental implementation from an operational 'taskmaster' role to a proactive management 'strategist' role in management of the corporate real estate assets. The mapping the various stakeholders concerns and their involvement in the complex processes of facilities provision and service management provided a simple framework for building the much needed dialogue between the demand side (business units managers) and the supply side (facilities and service providers) within the corporation. In the main, the matrices were well supported by the results from the respondents.

As the details of the analyses and results of the above are covered in Chapters 6 and 7, it is decided that the following discussions will consider the likely implications of the results on two aspects: (i) knowledge issues, and (ii) practice issues.

8.1.3 Knowledge Issues

The consideration of *knowledge issues* are regarded as important because one of the main motivation that led to the definition of the research problem had been the need to seek explanations to questions that focus on the *Why ?* and the *How ?*

"The research focus is aimed at identifying factors that promote (or hinder) the proper consideration of real estate issues at senior management level that is characterised by a closer alignment with strategic business direction and a proactive real estate asset management (REAM) regime" (Chapter 1, Figure 1.1, pp. 5).

In this respect, the emphasis of the study has sought to provide explanations that either perpetual current practices, hinder new developments, or continuously promoting constructive development, in the practice of REAM in organisations. Given that the study are clearly skewed towards the respondents from the 'supply side' within the case studies organisations, it is inevitable that

views expressed are more pertinent to practitioners from the operational side of REAM.

The following summarises some of the implications from the study conducted:

1. Impact of study in terms of what was learned:

The quest to understand why the corporate real estate is generally under managed in many organisations with large operational real estate portfolio had proven to be a multi-dimensional problem with root causes that can be attributed to organisational and cultural factors, rather than the merely the competence of the real estate/facilities division or department. As a non-core support function to the core business, it is often perceived as a non-strategic issue by senior management and considered as such. This uninformed view is often reflected in a facilities support service provision that is typify by a reactive regime that operates from a basis of sub-optimum information, budget driven and technically-oriented in management approach.

The picture emerging from the study (literature, case studies and validation) is a gradual realisation (measured in terms of *strategic awareness*) on the part of corporate managers, and a growing impatience (measured in terms of *strategic readiness*) on the part of real estate/facilities executives, of the need for a more strategic approach to consideration of issues relating to real estate provision and their ongoing management as an integrated management process of providing for a cost effective business support.

Two main factors could have accounted for this shift in mind-sets:

- Importance of strategic dimension of real estate asset management - the acknowledgement that the operational asset base of any business, if not managed properly or aligned to business operational requirements, can constraint the full potential of the business and affect the productivity of its most expensive resource - its staff.
- Changing business environment (competition and customer orientation) demands proactive management of the real estate resource - need for flexibility in organisation, exploitation of technology and an adaptive resource base (people, technology as well as the physical asset base).

The above can be regarded as the emergence of an integrated resource management view to the proactive management of the operational real estate asset.

2. Alternative explanations to the findings:

A probable alternative explanation that has brought about the same shift in mind-sets could be purely as a result of a thorough scrutiny of business operating costs (during a period of low growth) as a priority to improve the corporate financial performance to satisfy shareholders expectation. Viewed purely in financial terms, property-related costs as one item of expenditure ranking next (or close to) staff costs, clearly raises corporate attention. This in turn, has had the effect, for some of the larger organisations like banks and financial services companies, of causing a fundamental shift in the approach to managing their operational facilities; namely, from a traditional 'supply-driven' management approach to a 'demand management' approach.

A demand management approach focuses on defining the needs for functional space in clearly defined parameters from the tasks level through to adjacencies considerations; in contrast to the traditional supply approach which is driven almost exclusively by location and projected floor area parameters. This alternative proposition equally results in the need for aligning the corporate real estate portfolio to the strategic business intent of the organisation.

3. Implications on scholarly understanding of the field:

In the author's opinion, the study findings support the view that issues relating to the provision of operational facilities and associated support services in a corporate setting, can no longer be considered in isolation as the technical preserve of specialist functional divisions or departments. Faced with the need to cope with a dynamic business environment, it can be say that it is becoming incumbent upon real estate/facilities executives to broaden their competence base; to understand the business they are supporting, to understand the potential constraints of their existing real estate portfolio, to plan for flexibility in provision, to evaluate options and communication performance, with the intention of influencing outcomes as an informed advisor to senior management.

The above view of real estate asset management will have implications on traditional academic and professional training in related fields or disciplines.

4. Research approaches to organisational studies:

The study reinforces the importance of research design in the overall research process. In particular, given the apparent polarisation of research paradigm between the culture that governs quantitative and qualitative approaches, the justifications relating to the choice of data collection and analysis tools, and the validation of results are particularly important.

The focus on model development and explanations have influenced a largely qualitative approach in data collection, analysis and validation. In the author's opinion, the research design adopted for the study has proved to be successful, and hopefully adds to the richness of research design variations in organisational studies.

8.1.4 Practice Issues

The consideration of *practical issues* relates to potential implications of the findings on professional development and practice, and on organisation structure and positioning of the REAM-related functions within an organisational setting.

The following summarises some of the main implications from the study conducted:

1. Implications for professional development and practice:

The scope of coverage for REAM for the current study necessarily impinges on a number of current professional disciplines like property management, portfolio management, facilities management, to name but a few, in the UK arena. The choice of REAM (as explained in Chapter 1) was motivated by the processes it embraces as a business resource, rather than by professional divide. In this respect, the integrated management model for REAM proposes the enabling workplace environment as the end product of the processes inherent in the provision of operational assets and their associate support services. This integrative resource management view is considered as particularly important from the demand side of the organisation, with emphasis on promoting the much needed dialogue between business managers and the real estate/facilities operational staff.

The implications of such a development on professional development and practice of existing professions in the related fields are particularly important. For managers within the real estate/facilities function who interface with business units managers, the additional competencies described above (Section 8.1.3, bullet point 3., pp.379) are critical..

2. Implications on organisational structure and relationships

The positioning and structuring of the real estate/facilities role vary considerably from organisation to organisation. As mentioned earlier, it is not the level within the organisational hierarchy that the function is positioned that is a reflection of status or power, what is crucial is the level of influence the real estate/facilities role commands, in terms of guiding strategic business decisions by fully considering their likely impact on the current operational real estate assets.

8.2 Contributions to Knowledge

This study was initiated on the premise that the role of the corporate operational real estate assets represents an increasingly important component of business resources in the overall management of corporate success. Evidence from published literature in recent years from the more mature economies in Europe, North America and Asia, points to a call for a more integrated approach to the provision and ongoing management of the physical infrastructure that is needed to support business initiatives in an ever changing market environment. Accompanying this growing awareness of the need to align the operational assets to the corporate strategic intent is the realisation that promoting a move to a more proactive management approach against a background of largely reactive practices, is both a complex and slow process. This change process will involve changes in cultural and organisational perceptions embedded in long-established practices that affect a number of stakeholders charged with initiating the demand-supply chain for functional space in a corporate setting.

It is against the above backdrop that the following contributions of the study are proposed.

8.2.1 Conceptual Thinking .

The author would not lay claim to practical process development in the area of REAM, but would suggest that any tangible contributions would be in terms of conceptual thinking in an area that hitherto, has been almost exclusively the domain of the practical realists whose focus have been and still very much so, in 'fixing the problems as they arise'. In other words, the approach is transaction-driven.

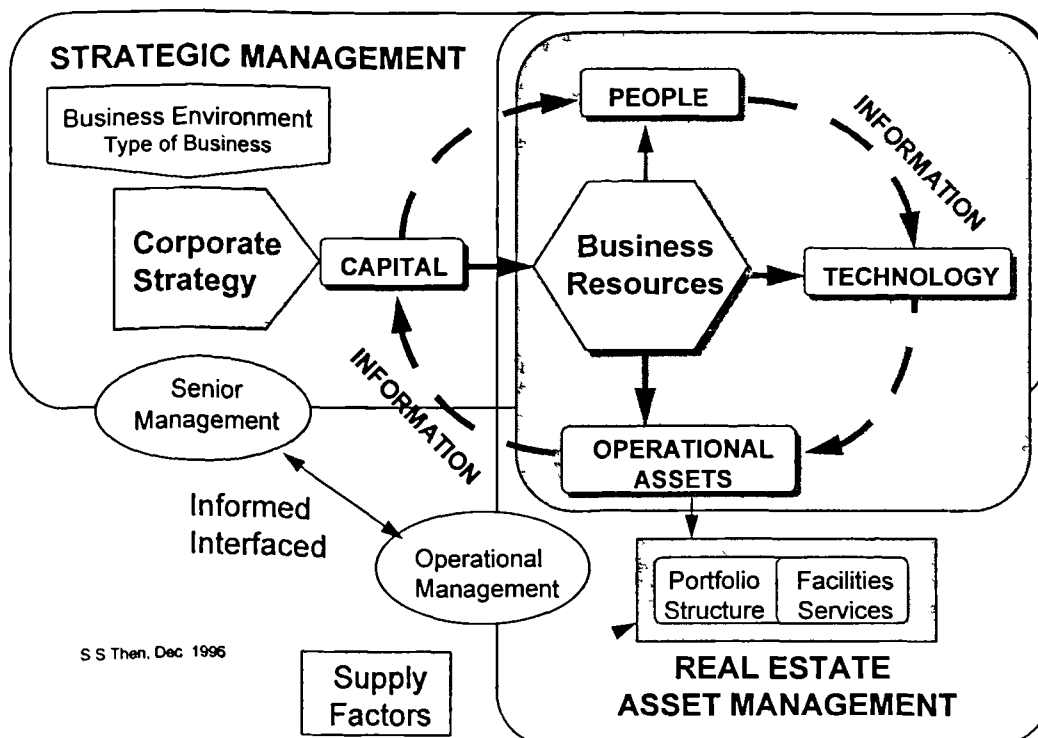
In the business environment of the 1990s, organisations, as clients, are likely to be more critical in their evaluation of procurement of a whole range of support infrastructure and ongoing services. In response, the supply market has evolved to provide more competitive options.

There is now a dire need for business entities to relate more effectively, the role of their physical asset base and their associated support services to the fulfillment of their corporate objectives. This research, together with others in closely related areas, offers an opportunity for real estate/facilities executives "to break out of the box," to leap forward, to change their mind-sets, by managing the corporate real estate asset base as a true business resource in concert with human resource and technology. This opportunity lies at the heart of business management at the strategic level.

The research has revealed that the gap between senior management and operational management as it relates to the delivery of operational assets and facilities support services is a real one. This gap is being bridged by only a few organisations; is narrowed by some, but still wide for the majority of organisations. However, there are indications that there is a growing awareness by senior management that their corporate asset base may be under-optimised, and their facilities support services under-performing or unrelated to customers' need. For the real estate and facilities management professionals, there is a clear realisation that to be able to *influence* senior management to invest in improving the overall performance of their asset base (i.e. as enabling working environment), they must 'get a handle' of the business they are supporting and the customers they are serving.

In order for both sides to work towards the common end of realising the corporate goals, they must move their respective “mind-sets” to a common platform. That common platform must be derived from an understanding of the need to integrate the considerations of three principal resources, *people*, *property* and *technology*; in the provision of *enabling* workplace environment which will require to be *sustained*, *adjusted* and *improved* continuously. Put another way, the traditional held view of buildings as a class of static end-product, can no longer be sustained. It is in this respect that the strategic importance of the *provision, maintenance and management* of operational real estate assets over time, as a unique class of durable assets, is clearly demonstrated. Their under-management is often painfully felt, in financial consequences as a result of inappropriate and ineffective workplace environment.

Figure 8.4: Integration of Business Resource Management



The increasing content and integration of technology in the workplace to support the tasks of the users within the operational built assets necessitate that decisions relating to their provision and management can no longer be taken independently. Figure 8.4 depicts the overlapping concerns between strategic

business management and real estate asset management that impacts on the key related business resources of people, property and technology.

The practice of REAM in organisations will have to be guided by a clearly defined supporting and contributory role where the real estate assets and facilities support management are aligned with the strategic business plans. The figure acknowledges the prerogative of senior management in the allocation of scarce resources via the implementation of the corporate strategy, but also emphasised the crucial role of information management in facilitating and promoting the essential dialogue between senior management and operational management.

8.2.2 Raising Corporate Awareness to the Strategic Role of Real Estate Resource

A common theme that emerged from the literature survey through to the case studies and the validation exercise carried out is the prevailing perception or attitude of the role of operational assets held by senior management, and the profound impact it had on the practice of operational asset management in an organisation. This perception is fundamental in that it is always the prerogative of senior management to allocate resources to the various functional divisions within the organisation.

It is important to acknowledge that almost all strategic business decisions has a real estate/facilities dimension, the crucial question is, *to what extent are such implications thoroughly evaluated, articulated and presented at senior management level, where strategic business decisions are made ?* Executives charged with responsibilities for the real estate and facilities support roles must develop the competencies and capabilities to provide realistic options within the business proposition's remit in the hope of influencing senior management decisions to arrive at appropriate optimal *facilities solutions to meet business needs*. In this respect, raising the corporate strategic awareness to the strategic role of the real estate resource is a fundamental pre-condition for the informed interface to materialise.

It is stressed that this strategic awareness is not so much in terms of the detailed specification of delivery parameters of functional space and associated

support services, but more in terms defining the 'limits of affordability' of such provisions. An important assessment at this state is how strategic business decisions are likely to impact on the existing real estate portfolio and its future provision. One of the most effective way of demonstrating to core business managers how effective management of the corporate real estate asset base can directly affect the overall performance of the organisation is through financial analysis. In this respect, it is incumbent upon the real estate/facilities executives to understand the businesses they are supporting and relate property performance measures to the corporate measures of success. Where one does not already exists, an overall strategic assessment and rationalisation plan based of clearly defined and agreed strategic facilities parameters (see Figure 8.4) often presents opportunities for managing the portfolio and occupancy costs more effectively. Developments in performance management already point to the use of 'balanced scorecard' applied to the operational real estate portfolio where non-financial (or 'soft') measures are included to compliment the traditional 'hard' financial measures. However, it is essential such measures are developed in joint agreement with senior management in order to ensure their relevance in strategic assessment of corporate performance.

Figure 8.5: Providing Facilities Solutions to Business Needs



The fundamental role of REAM is to provide *facilities solutions* to the core *business facilities need* as illustrated in Figure 8.5.

The study pointed to a framework of analysis of current practice based on a detailed analysis of three organisational variables: structure, processes and competencies; as a basis for incremental improvement.

8.2.3 Development of Workplace Strategies

The issues surrounding, and the decisions involving the most appropriate workplace strategy to fulfill the corporate strategic intent is likely to dominate the corporate agenda of many organisations in the immediate near future. Organisations are increasingly having to grapple with the pervasive nature and realities of technological development that will directly impact on the way “work” is carried out, value is added, as part of the business delivery processes.

The motivation for improving the workplace environment are driven by the recognition that the functional space is an economic resource which must be clearly defined, consciously designed, created and managed to support the tasks of the enterprise. The functional space within operational real estate assets must be regarded and more importantly, treated as a business resource. The main implication is that the basic economic principles of resource utilisation based on matching of supply to demand must be the governing rule for resource allocation.

For many organisations, the current practice is still not necessarily related to demand but arose through inertia of bygone days of stable markets and product demand, typify by ‘status with space’ rather than economics of scare resource, since space is a ‘hidden’ cost absorbed by corporate overheads and expenses.

In recent years, fierce competition and the dynamics of the global marketplace have revealed to many companies, the following economic realities:

- The legacy of surplus accommodations as a result of a persistent over optimistic view of the world, based on assumptions of status quo. In today’s dynamic and volatile market environment, stability of market and product demand is no longer a valid assumption. One consequence of this mismanagement of the corporate real estate portfolio to be confronted is - how to get rid of surplus space?

- Occupancy costs are coming under scrutiny. Comparative analyses (benchmarking) are revealing wide gaps between what was paid for and what the market benchmark should be.

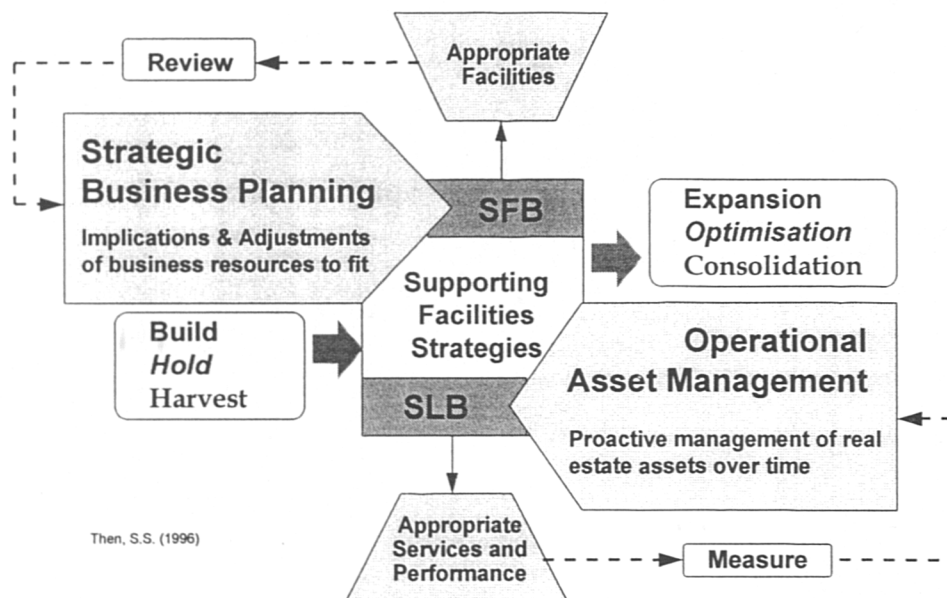
The potential savings released from above are reinvested in better technological support and improvements in the workplace environment with the emphasis on 'fitness for purpose' in terms of support to the tasks being performed rather than status or rank.

Managing functional space as an economic business resource have the following implications:

1. Space, as a business resource, must be tracked to establish 'current' supply; guided by strategic space guidelines.
2. Demand for space must be established through a clear understanding of the purpose it serves and the range of tasks it is supporting. The key determinant of demand being the business processes and growth (+ or -) projections.
3. Establish parameters for the provision and supply of the appropriate functional space i.e. type / quantity / size / flexibility /affordability / manageability; as basis of evaluating 'real' supply need in facilities terms (as oppose to 'current' supply as dictated by the current portfolio).
4. Develop options for matching demand (as defined by 'real' supply needs) and 'current' supply - with potential options for optimisation, for examples: how to deal with surplus requirements ? or how to meet extra demand ?
5. Decide and communicate preferred *supporting facilities strategies* for implementation, supported by a reliable real estate utilisation information system and guided by 'what-if' scenario evaluations.
6. Implement and measure impact of changed strategies through a performance management system that is externally focused through comparative analysis aimed at optimising emerging opportunities to effect cost savings or improve productivity gains.
7. Monitor and adapt facilities supporting strategies as required through strategic monitoring in order to maintain relevance to corporate strategic intent.
8. Review and re-calibrate fit of real estate resource with strategic business plans as a result of external market developments through market reviews.

In order to achieve the above, continuous dialogue must permeates from strategic business planning to the facilities delivery end. At the same time, senior management will have to be convinced by appropriate performance measures that relate to investments in the real estate assets and associated services in order to create the desired enabling workplace environment. The time-lag inherent in the delivery of real estate assets necessitates a constant monitoring of external market conditions (real estate and service provisions) and internal business demands in order to develop appropriate supporting facilities strategic options. Figure 8.6 summarises the requirements described above.

Figure 8.6: Real Estate Asset Management
- An Integrated Resource Management Framework



In any organisation the practice of REAM will be reflected in the perceived role and responsibilities carried out by, in most cases, the estate or property services department.

Apart from the ongoing management of the delivery of the operational services, one of the principal role of REAM is to monitor the changing business environment and be in a position to be proactive in response to business demands in terms of adjustments to the real estate resource base. Typically, the response will be one or a combination of the following actions:

- *Projected demand expected to exceed current supply* for functional space with implications for the need to build new buildings or leasing of new premises to meet projected demand. This is typify by an organisation in an

expansion phase which corresponds to a **Build-Expansion** supporting facilities strategies as illustrated in Figure 8.6.

- *Existing supply expected to exceed projected demand* for functional space with implications for the need to dispose of surplus space or leases. This is typify by an organisation at a contraction phase; which corresponds to a **Harvest-Consolidation** supporting facilities strategies as illustrated.
- *No significant projected change in demand for functional space* with emphasis being given to sustaining or enhancing the current stock of buildings through modernisation or adaptation. This is typify by an organisation on an optimisation phase; which corresponds to a **Hold-Optimisation** supporting facilities strategies as illustrated.

8.2.4 Evaluation and Decision Support

Perhaps the clearest messages that emerged from the case studies conducted were the crucial importance of the information base on the real estate portfolio, and managing service expectations of facilities support services. For some organisations, the initial concern is not the ability to “see the wood for the trees”, but “to count the trees in their patch”. For others, who can answer to what we currently own and lease, the immediate need is to understand the drivers behind occupancy costs trend. In the longer term and at the strategic level, the need to develop the competence of “asking the right questions” and developing the strategic capabilities to do “scenario planning” will become crucial for many organisations, particularly multi-national corporations with dispersed real estate asset portfolio. In order to manage proactively, the current and likely future demands of the business operational needs must be clearly defined and closely aligned with the corporate business plans and strategic direction. An adequate information support infrastructure is a key prerequisite to attain such a strategic capability.

For the real estate/facilities executives, there is a clear shift from expertise needed for *supply management* of real estate resource, to *demand management* of real estate resource adopting a total resource management approach. Such a management approach is driven by the need to balance the corporation’s consumption of its business’ resources taking full cognisance of the interdependence of factors that impinge on the physical (real estate asset),

technological (equipment and software) and human resource (people) dimensions. The drive is to improve efficiency through more effective demand management, principally in balancing the total effect of occupancy costs in concert with the combined costs of technology and human resources as the two primary consumers of space, while at the same time, exploiting opportunities in the real estate market.

In order to fulfill the above role, corporate senior managers and real estate/facilities executives must acknowledge the close interplay of factors that are involved in the creation of the desired corporate working environment.

8.2.5 Emerging Proactive Management Approach

In terms of contribution to the management of operational property assets over time, the added value can be seen in demonstrating the importance of the strategic dimension of real estate asset management. There are tangible evidence from the literature review and case studies to support the proposition that for any business, the operational asset base, if not managed properly or aligned to business operational requirements, can act as a constraint to realising the full potential of the business and as a result, affect the productivity of its most expensive resource - employee. In addition, changing business environment (competition and customer orientation) demands a proactive approach to the management of the real estate resource in order to accommodate changing work practices. Emerging key drivers include the need for flexibility in organisation, exploitation of technology and an adaptive resource base (people, technology, as well as the physical asset base).

In summary, there is an emerging new realism in the practice of real estate asset management within organisations that is characterised by an acknowledgment of the following features:

- Real estate and associated facilities services are supporting resource to the achievement of corporate objectives. Maintaining alignment to the corporate business plans is a strategic objective in the ongoing management of the corporate real estate resource.
- Managing the availability of affordable facilities is the key driver in the role of facilities provision.

- Managing customers' expectations and affordability are the key drivers for the delivery of facilities support facilities within the corporate real estate portfolio.
- In managing real estate assets over time, value and service considerations are central in the development of performance measures.
- Management and measurement procedures must shift from a focus on tasks and transactions, to a thorough understanding of processes that add value to the core businesses of the business units. This is only attainable by having a clear understanding of the nature of the core business drivers and how these are translated in facilities dimensions or measures that affect the overall performance of the core business results.

The quality of interface between senior management and operational asset management is clearly a vital element in the shift from a reactive to a proactive management approach.

Table 8.1: Emerging Requirements for An Integrated Proactive Management Framework for REAM

Senior Management	Operational Asset Management
Operational Assets/Facilities regarded more than just a cost to business.	Requires strong leadership.
Acknowledgment that the operational facilities provide the corporate environment for value-adding processes.	Good quality information of the corporate real estate portfolio and utilisation profiles.
Acknowledgment that the workplace environment affect staff productivity.	Develop clear understanding of corporate goals in terms of facilities implications.
Acknowledgment that the provision of the workplace/business environment carries liabilities which must be provided.	Plan for economic provision.
Acknowledge that real estate and facilities support services provisions require competent management and specialist expertise.	Demonstrate how appropriate facilities and service levels can add value to business processes. <ul style="list-style-type: none"> • by more effective and efficient use of existing portfolio, • by relating investments (expenditure) to potential return, measured in terms of savings in potential failures/disruptions and enhancing staff productivity.
Inform and/or involve property and facilities services department in business plans so that any likely facilities implications can be timely incorporated into the operational delivery processes.	Provide and plan for flexibility in provision.

Table 8.1 provides a summary of emerging requirements from both sides aimed at promoting a continuous constructive dialogue. These requirements are prerequisites for moving from a traditional reactive approach to the proactive management framework for Real Estate Asset Management advocated by findings of this study.

8.3 Recommendations for Further Research

The following recommendations for further research are primarily driven by emerging supporting facilities strategies from theory and practice.

1. Further development of the Strategic Facilities Brief and Service Levels Brief as management development tools for communicating the real estate (property) and facilities services dimensions of Business Planning. Methodology to operationalise their use to facilitate an integrated dialogue that befits the central role of REAM in providing the enabling working environment for organisations.
2. The two emerging themes, '*managing change*' and '*managing over time*' that correspond to *real estate provision* and *facilities support services management* respectively, offer scope for further research into how 'affordability criteria' can be defined for corporate business managers and real estate/facilities executives charged with their provision and ongoing management.
3. Cost Benefits Evaluation of Alternative Workplace Strategies. Given senior management's focus on cost justifications as the primary basis of making investment decisions, research into techniques to demonstrate an '*Investment-Return Equation*' based on a combination of financial and non-financial parameters(quantified by surrogate measures) that relate to the corporate physical working environment as the outcome of REAM.

4. More research is needed to identify strategic response to competitive demands and their implications on the physical assets. Supporting issues for this line of investigation can be guided by two issues of concern to corporate management:

- How can the corporate real estate resource enhance the strategic goals of the corporation ?
- How can the relationship between human resources(people), information systems (technology) and real estate (property) be best managed for competitive advantage ?