Real Estate Master Planning for Multinational Corporations: A Developing Model

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Abstract

This thesis examines the recent evolution of real estate master planning for multinational corporations. The research and analysis reveal the external forces that are driving the demand for corporate real estate master planning on a global basis and provide a look at the ways in which multinational corporations have been reacting to these forces.

The findings demonstrate that the discipline of corporate real estate master planning is evolving, as multinational corporations learn how to more efficiently allocate their resources and utilize their real estate interests as strategic support for core business operations. In addition, the thesis suggests how a real estate master plan could be used as a tool by a multinational corporation to effect change throughout their organization.

The thesis begins by providing a definition of corporate real estate master planning and then examines, through a literature review, three primary forces: technological change, cost reduction and globalization, that are driving the demand for corporate real estate master planning.

A framework for analyzing corporate responses to these forces is developed by examining six surveys conducted by industry trade associations, academic institutions, and professional consultants to chief corporate executives, business unit managers, and corporate real estate staff of multinational corporations. This framework, supplemented by discussions with outside consultants currently involved in global corporate real estate master planning, is utilized to analyze nine real estate master plans of three different multinational corporations.

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I. INTRODUCTION: HISTORICAL OVERVIEW

Multinational corporations are quickly recognizing that the ongoing cost of their real estate commitments (i.e. their land, leaseholds and improvements) can be a substantial drain on bottom line profitability. For most, the expense of housing the organization is the second largest operational expense incurred after labor costs.[1] As a result, the real estate staff at many corporations today have been assigned the responsibility of searching out ways to reduce operating expenses, improve the work environment and increase the flexibility of these commitments for the organization, while meeting both the current, as well as future, needs of the staff and operating requirements of the business units.

This recognition has not just happened overnight. There has been a definite evolution of how multinational organizations view their real estate interest, along with an evolution of the competencies and tools of corporate real estate (CRE) professionals. For instance, during the post World War II economic expansion of the 1950's and early 1960's, few corporations paid sufficient attention to their real estate interest to devote full-time staff to its management.[2]

Then, in an attempt to cope with economic, political and social turbulence during the late 1960's and early 1970's, several Fortune 500 corporations began forming CRE units

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[1] Joroff, Louargand, et. all. 1993.
[2] Ebert. 1993.

staffed with engineers and other professionals with real estate transaction experience.[3] At the time, these CRE units were formed as a reactionary strategy rather than a proactive approach in the management of corporate real estate assets.

In the second half of the 1970's and first half of the 1980's, after inflation continued to rise and break through into double digits, the value of real property appeared to increase dramatically.[4] Suddenly, the corporate world "discovered" real estate. Articles in key business publications, such as the Wall Street Journal and Harvard Business Review, started to refer to corporate real estate as "hidden or unlocked treasures," since real estate now accounted for a significant percentage of the total worth of most companies, in some instances accounting for up to 25% of a company's book value.[5]

More importantly, on a current (cash) basis, this real estate actually accounted for 50% to 75% of many companies true stock market value.[6] This meant that sizable portions of both corporate equity and ongoing revenues were committed to the firm's real estate interest. These corporate assets and obligations, fueled by favorable changes in the tax regulations, actually played a part in a couple of the Wall Street/corporate raider acquisition campaigns of the decade.[7]

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[3] Joroff, Louargand, et. all. 1993.
[4] Ibid.
[5] Ebert. 1993.
[6] Ibid.
[7] Louargand. 1995.

Following the late 1980's crash of the capital and real estate markets worldwide, organizations started to look for ways to reduce and control cost as these unlocked treasures rapidly became large losses.[8] Consequently, in the depressed real estate markets of the early 1990s, costs were often reduced by renegotiating leases and, in some instances, by centralizing real estate decision making.[9]

This type of cost cutting policy, however, considered space as simply a place to house current business operations, and typically did not address real estate as a strategic support function for the staff and business unit operations. In addition, many economists and business consultants now believe that, in recent years, we have not been experiencing a typical economic cycle, but a basic restructuring of the economy driven by technological advances, globalization and ever increasing competition.[10]

Multinational corporations are now also beginning to realize that the ways they utilize their real estate can have a positive impact on business operations and, as a result, can add to the future profitability and overall competitiveness of the organization. This is especially true in today's increasingly competitive global environment, which has some companies reengineering themselves into strategically linked business units that continually focus on gaining efficiencies by implementing policies like "Just In Time" production functions and "Total Quality Management" organizational structures and processes.

[8] National Real Estate Investor, March 1994.
[9] Ibid.
[10] Ebert, Larry. 1993.

As part of the process, corporate real estate (CRE) staff in some organizations are being asked to identify how to further reduce real estate expenses in ways that go beyond conventional market driven solutions. There are also increasing mandates from senior management to further reduce costs by utilizing real estate as more of a strategic resource, that can leverage the core capacities of various business groups, as well as the individual skill sets of the staff located at different facilities throughout the world, by utilizing many of the ever-expanding advances in technology .

Business strategists and innovators in multinational companies are also thinking about work environments and workplace strategies. In these organizations, CRE staff, often in conjunction with other support operations like technology and human resource departments, have been asked to identify and create ways in which the workplace can not only support business operations, but also help make the organization more competitive.

One common example is the utilization of open, shared and group work areas to encourage the exchange of ideas and to foster creativity, as exemplified by the new DUSP headquarters.[11] Proponents suggest that these environments allow for increased density and, more importantly, help link skills and capacities of the individual business units towards a more efficient allocation of corporate resources. These examples and ideas are typical of some of the practices coming into use and approaches applied by CRE staffs within multinational corporations as they try to reduce cost and gain influence over

[11] Department of Urban Studies and Planning, MIT.

existing real estate commitments, while they learn to better understand and utilize the real estate being used by their organization.

The forces underlying these approaches point to the need for more comprehensive real estate master planning for multinational corporations than has generally been used in the past. This process is evolving within CRE departments of multinational corporations. They are attempting to effectively plan real estate decisions and strategies for the overall corporation as one fully integrated organization, while still servicing and providing for the needs of each individual business unit.

Multinational organizations that have undertaken real estate master planning in various degrees hope that these efforts will guide the formulation of real estate decisions and strategies. Their approach is to qualify and quantify the current and future space requirements, combined with any other special real estate requirements, needed to house business unit operations. Likewise, they are also hoping that, as the name implies, the process will help "plan" the implementation and subsequent evaluation and refinement of these same real estate decisions and strategies.

This thesis will examine and help define the evolving concept of corporate real estate master planning and its benefits from the perspective of a multinational corporation. The goal of this thesis is to answer the question; "Why might a multinational corporation want to allocate the time and resources required to develop a real estate master plan for its organization?" Answering the question will help lay a foundation for future research into the discipline of real estate master planning from a corporate perspective, and in so doing help with the further development and evolution of a CRE master plan model.

II. METHODOLOGY & THESIS DEFINITION OF A CRE MASTER PLAN

A) Methodology and Thesis Outline

As noted in Chapter I, the goal of this thesis is to answer the question:

Why might a multinational corporation want to allocate the time and resources required to develop a real estate master plan?

To more fully address this question this thesis will:

- provide a definition of a corporate real estate master plan (CRE MP);
- define the demand function(s) of corporate real estate master planning;
- identify the impact(s) these demand issues have on multinational corporations;
- provide examples of CRE and business unit responses to these directives; and
- demonstrate CRE value added strategies to support business operations.

The steps followed in the formulation of this thesis are to:

1. construct an argument as to why a CRE MP is needed;
2. support and document the framework with examples and referenced data;
3. lay out a sample outline of the CRE master planning process; and
4. demonstrate with examples how the CRE master planning process works.

Data utilized for this thesis includes:

1. Arthur Andersen Survey of Senior Corporate Officers
2. NACORE International Survey of Leading Corporate Real Estate Executives
3. Ernst & Young Survey of Leading Economist and Real Estate Professionals
4. Deloitte & Touche Survey of Real Estate Professionals
5. Ernst & Young Corporate Real Estate Digest and Fax survey of NACORE members
6. MIT / IDRC, CRE 2000 Corporate Real Estate Research Reports
7. Nine CRE master plans developed by Richard Ellis Global Corporate Services
8. Operating cost from several of the above mentioned real estate master plans
9. Questionnaire and responses from 32 senior managers relating to existing facilities
10. Conversations with real estate master/strategic planning service providers

The research for this thesis involved a thorough review of relevant literature identified in global databases available on the internet. The literature covered corporate real estate, information and communication technology, globalization, competing for the future and reengineering. Additionally, surveys completed by senior corporate management, corporate finance and corporate real estate executives were reviewed to uncover the primary issues in the operations of multinational corporations, so as to determine what is driving the demand for strategic corporate real estate services, such as real estate master planning, and how this demand is being met. In addition, professional and academic studies and surveys were examined to further verify and support the premise and findings of this thesis.

Building on the basic background material provided in chapters I and II, chapter III explores the primary issues that are driving the demand for RE MP throughout multinational corporations. Chapter IV examines the strategic responses taken by multinational corporations to deal with these demands. Chapter V undertakes a comparative review of actual RE master plans and outlines a framework for a real estate master planning process. Finally, chapter VI summarize the findings of this thesis.

B) What is a Real Estate Master Plan?

A real estate (RE) master plan (MP) is typically a document compiled within a regional or local government to help that entity prepare for its future within the boundaries of a certain rationale spelled out in the plan.[12] The purpose and scope of these plans vary depending on the need driving the demand for the MP, but generally center around "planned growth." A typical plan covers issues pertaining to the infrastructure, economic base, and population base of the locale.[13] This type of RE MP has been well researched and well documented.

In contrast, RE master planning at the corporate level, unlike municipal master planning, is an emerging discipline that does not yet have an established model. The model and process are evolving. Several multinational corporations are currently in the process of creating real estate master plans for portions of their real estate portfolio throughout various regions around the world.[14] These various plans address some similar issues, such as employee headcount and financial analysis of options. However, there are also numerous differences in content, methodology and scope.

Some of the differences may be attributable to motivational differences within firms that have commenced planning, and others may be attributable to the actual forces driving the

[12] Association of Collegiate Schools of Planning. 1993.
[13] American Planning Association. 1990.
[14] Nine real estate master plans were reviewed for this thesis.

demand for the CRE MP. In the developing CRE master plans of other companies, the issues may even be a function of differences in resources, capabilities, management directives, type of organization, etc. within the firm.

The CRE master planning process and model are evolving parallel and in response to tremendous changes occurring within corporations. For instance, many well known multinational corporations are being reinvented as a result of management directives within those corporations to reduce operational overhead.[15] Accordingly, those corporations are looking for ways to cut cost and are busy planning consolidations, divestitures and even complete re-organizations. These efforts are found in every industry, across business units and job functions throughout the world.[16]

Like the more established public sector RE master planning discipline noted above, the corporate real estate master plans also discuss issues pertaining to the infrastructure, economic base and population of the organization. Each of theses issues may have a significant impact on RE master planning at the corporate level.

Because there still is not an established model of a CRE MP a basic definition was needed for the purposes of this thesis. The reference and interview data gathered while researching this topic suggests that, depending upon the plan's stated purpose, a corporate

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[15] Hamal and Prahalad. 1994.
[16] Ibid.

real estate master plan could have four main functions, including:

1. provide a summary of quantified and qualified data on the needs of the business units;
2. act as a tool for implementing real estate decisions and strategies;
3. provide the opportunity for implementing change; and
4. provide benchmark data so strategies can be evaluated and measured for effectiveness.

A definition derived from these primary CRE MP functions indicates that:

A CRE MP can be viewed as a real estate strategic plan that evolves with the overall organization and is customized to meet and plan for the current, as well as future needs of the business units.

A comprehensive CRE MP should guide CRE staff, business unit managers, financial officers and country officers in formulating the most informed real estate decisions and strategies in support of the goals of the corporation as one fully integrated organization, while still servicing and providing for the individuals needs of each separate business unit.

III. FORCES DRIVING DEMAND FOR REAL ESTATE MASTER PLANNING

According to the 1993 Arthur Andersen survey of senior managers, "Virtually every major company, regardless of industry, is initiating structural changes in its business operations and organization."[18] The motivations for these are consistent: to reduce costs, increase profits, increase productivity and increase competitiveness.[19] Results of a Harvard Business School World Leadership Survey of senior executives of well known multinational organizations demonstrated similar observations three years earlier. At that time, 59% of executives responding to the survey had undertaken a significant restructuring of their companies; 35% were involved in a merger, divestiture or acquisition; 31% recently reduced their workforce, and 26% are / were expanding internationally.[20] Obviously businesses are reengineering the way they do business in an attempt to adapt to the numerous forces that are changing their business.[21]

The organizational and operational changes and motivating factors behind these structural change initiatives demonstrate a growing complexity that will need to be understood and then managed by chief executives.[22] Each change brings evolving questions regarding the strategic management and use of corporate real estate required to support core corporate businesses.[23] Each also results in new challenges for the organization as a whole,

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[18] Arthur Andersen. 1993.
[19] Ibid.
[20] Harvard Business School. 1991.
[21] Harvard Business Review. 1993.
[22] Groth. 1995.
[23] Arthur Andersen. 1993.

individual business units, and the CRE support staff.[24] Each, as a result, is also driving the demand for real estate master planning.

To better understand these changes and examine their real estate ramifications, this chapter examines the primary forces driving the demand for change and identifies what influence these have on the overall organization. The following chapter then draws on this foundation and examines the pressures these forces impose on the business units, as well as the subsequent directives and support requests relayed to CRE departments.

Research for this thesis demonstrates that, regardless of the company or industry, there are three primary forces: cost reduction, technology and globalization driving the demand for real estate master planning at multinational corporations. Often there are linkages within and between categories, depending on the issues. Additionally, within each of these three primary categories there are also sub-classes. The three primary categories of "demand drivers" and their accompanying subcategories include:

- **cost related (cost reduction and cost avoidance)**

  - limit cost: achieving line-item cost reductions thereby increasing profit margins

  - manage cost: managing the full cost of RE through better analysis and use of data

- **technology driven (space utilization and actual physical facility)**

  - work related: advances in information and communication technologies

  - workplace: advances in facility design, development, and materials

[24] Ibid.

- **globalization driven (internal and market)**

  - efficiencies: employing resources in support of overall business strategy

  - flexibility: reaction to global integration of product and capital markets

It is useful to provide some examples of these demand drivers. A cost-related issue could be a specific item, such as a reduction of real estate taxes, or a service activity, such as cleaning, where there is potential for a direct reduction of a particular operating expense within the organization's property portfolio.[25] A cost-related issue could also mean reporting, tracking, and using cost data to evaluate operating cost and performance statistics to make more informed cost-effective decisions.[26]

A technology-related issue could involve acquisition of the latest information and communications equipment,[27] or it may relate to a new or replacement building material that could be used to improve the form, function, or utility of a facility.[28] Likewise, a global issue could relate to the organization positioning itself to obtain operational scales of efficiency within business units by matching resources with the overall business strategy,[29] or it could involve maintaining flexibility in the product and capital markets to be less vulnerable to exchange rate fluctuations, as well as labor and political uncertainties.[30]

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[25] Journal of Property Management. 1993.
[26] Arthur Andersen. 1993.
[27] Ernst & Young. 1994.
[28] Solar Today. 1995
[29] Bartlet and Sumantra, 1992.
[30] Kanter. 1994.

The issues driving the demand for CRE master planning seem to have stimulated a belief on the part of many senior executives (CEOs, CFOs, & COOs) that real estate master planning is an activity their organizations should pursue. When asked by the Arthur Andersen Real Estate Group in a major recent survey, "What are or were the top real estate actions taken or planned by your organization?," executives throughout the finance, manufacturing, technology, and service industries responded that their priorities were to: develop a strategic plan for space needs; sell / sublet underutilized real estate; relocate to reduce cost; and, improve operating efficiencies.

In the following sections each of these three key factors driving CRE master planning demand are further developed and referenced with more detailed current market examples to demonstrate more fully the scope of their potential influence and impact on corporate policy and business unit operations. The purpose is to elaborate the factors driving the demand for real estate master planning and to demonstrate the influence of these demand drivers at the macro or corporate level. Chapter IV explains the ramifications of these changes on the business units, and details the resulting strategic support directives passed down to the CRE units.

A) Cost-Related Issues Driving the Demand for Real Estate Master Planning

i. Limiting Cost

Management consultants are increasingly concerned with reducing cost. The findings to the 1993 Arthur Andersen survey of senior executives stated that; "In all industries, senior management overwhelmingly cite cost reduction as one of the top challenges to increase profitability."[31] In fact, 68.5% of CEOs, CFOs, and COOs responding viewed reducing overhead and cutting cost as permanent functions of an overall corporate directive to improve profits.[32] In addition, a quote from a recent major publication further stated that; "Too many companies are squandering their resources,"[33]

These views on cost reduction and avoidance held by the senior management of multinational corporations are easy to understand in relation to real estate considering that the fixed and variable cost of owning and leasing facilities for business operations is one of the largest expenses incurred by any organization.[34] In most instances, the commitment to real property interests is the second greatest overall expense the organization incurs after employee wages.[35] This effectively means that the ongoing business of the business, i.e. new and on-going business projects and general business development, have to compete with the organization's facilities for funding.[36]

[31] Arthur Andersen. 1993.
[32] Ibid.
[33] Harvard Business Review. 1993.
[34] Joroff, Louargand, et. all. 1993.
[35] Ibid.
[36] Breely and Myers. 1991.

It is also important to note that a significant chunk of corporate equity has often been committed to the real property of many multinational corporations. On average, 25% of corporate equity is in the form of real estate from funding build-to-suit and other freehold property interests.[37] Whereas most multinational corporations lease the majority of their office and warehouse space for sales, marketing, and finance functions, as well as general office support departments, etc., they have traditionally owned "mission critical" real estate, such as core business research, headquarters, and manufacturing facilities.[38] A change, however, is evident: The 1993 Arthur Andersen survey shows that managers across the board are questioning whether real estate ownership is an efficient use of corporate capital, especially since they are under pressure to reduce cost and provide flexibility in today's rapidly evolving business environment.

The combination of a high percentage of corporate equity invested in real estate, as well as the high percentage of business unit revenues required to meet operational expenses, especially within manufacturing industries, demonstrates the significant role real estate plays on the balance sheets of most corporations.[39] Accordingly, the large percentage of equity and ongoing revenues channeled into real estate suggests that it is fiscally responsible for senior management to utilize real estate master planning as a management tool, since a RE MP should help to reduce the required equity and ongoing operating cost by identifying the least cost alternative for meeting the space needs of the business units.[40]

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[37] Arthur Andersen. 1993.
[38] Ibid.
[39] Breely and Meyers. 1991.
[40] Bouris. 1995.

ii. Managing Costs Data

This section concentrates on senior management's understanding and utilization of the cost data of their facilities that would typically be contained within a RE MP to enable them to make more effective, strategic business decisions. It examines the data that would generally be included in a MP, how it is now typically used, and how it could be utilized in the future.

In the Arthur Andersen survey of corporate executives, nearly two-thirds of senior management reported that they use real estate information in making business decisions.[41] More than half of those same senior executives also reported that they receive no regular information on real estate cost and performance.[42] Where information is provided it tends to be limited data outlining the cost of occupying a general purpose facilities. These data rarely provide specifics on operating costs in single or special purpose facilities that might use significant energy and utility resources, such as central data centers, or research and manufacturing facilities.[43] Still, the basic data show that there has been a vast improvement in obtaining and utilizing real estate cost data. A study that was done by the Massachusetts Institute of Technology Department of Architecture and Planning in 1987 reported, "they (corporate managers) do not have sufficient information or methodology to clearly evaluate the physical performance or effective use of a company's buildings."[44]

[41] Arthur Andersen. 1993.
[42] Ibid.
[43] Ibid.
[44] Veale. 1987.

The most common type of real estate operating cost data typically reported has been the basic commercial real estate cost measurement figures[45] namely, total cost per square foot, rent per square foot, operating expenses per square foot, or outside of the U.S., on a cost per square meter basis.[46] However, among the chief executives that responded to the 1993 Arthur Andersen survey and who are actually utilizing such measurements, only 61% thought cost per square foot (cost per square meter) was very useful.[47]

In contrast, there is an increasing awareness of the importance and relevance of using measurements that are more directly related to business operations, corporate finance, and asset portfolios.[48] Aligning and integrating financial and cost data with business operations and corporate finance frames real estate issues in a language common to all departments.[49] This makes implementing cost reduction scenarios, such as downsizing and outsourcing, easier to analyze, plan, implement, evaluate, and, if necessary, revise.[50] As noted in the Andersen Survey, "Information systems provide the infrastructure for tracking and delivering real estate cost and performance data, but it is the type of information communicated to senior management that determines how useful that information will be."[51]

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[45] Bruggerman & Fisher. 1993.
[46] Arthur Andersen. 1993.
[47] Ibid.
[48] Ibid.
[49] National Real Estate Investor. 1995.
[50] Breely and Myers. 1991.
[51] Arthur Andersen. 1993.

Examples of measurements that are less of a "facility statistic" and more of an evaluation of business operations include return-on-asset, return-on-equity, occupancy cost per unit produced, as well as occupancy cost per employee and space per employee (square foot or square meter per employee).[52] In the Arthur Andersen survey, "more than half of all chief executives stated that return on assets is very useful, and of those in senior management positions who actually use this indicator, 80 percent say it is very useful."[53] Other useful real estate cost measures from a senior management standpoint include: return on equity, total occupancy cost as a percentage of total business operating expenses, revenues or sales per square foot and occupancy cost versus others in the same industry.[54]

These are the performance and operating cost data that are the most useful in assisting senior management with integrating business strategy considerations into their decisions impacting real estate facilities.[55] The Arthur Andersen Real Estate Group predicts that by focusing on profit margins and cost reduction, that senior management will permanently change how they view real estate. Similarly, they are also substantially more likely to make real estate decisions that coincide with and support the corporate business strategy.[56] For example, one officer of an industrial company seemed to consider reducing cost and generating profits a shareholder mandate. He stated that, "Our responsibility is to provide adequate return for our investors. We are competing for investors."[57]

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[52] Bruggerman and Fisher. 1993.
[53] Arthur Andersen. 1993.
[54] Ibid.
[55] National Real Estate Investor. 1995.
[56] Journal of Property Management. 1993.
[57] Arthur Andersen. 1993.

Other facility operating cost data and performance measurement tools that are and could be of value from a senior management, decision making standpoint and similarly are also driving the demand for ongoing real estate planning include: discounted cash flow / net present value analysis and internal rate of return analysis .[58] These would be extremely useful as part of a master plan to help evaluate and determine the least cost alternative on both a before-and after-tax cash, as well as a before-and after-tax book basis.[59] Clearly the need to utilize accurate real estate cost data effectively is driving the need for ongoing real estate planning.

[58] Richard Ellis. 1995.
[59] Bruggerman and Fisher. 1993.

B) Technological Issues Driving the Demand for Real Estate Master Planning

i. Information Technology

A 1994 Ernst & Young survey of the National Association of Corporate Real Estate Executives reveals a business world in transition due to technological innovation and application.[60] Advances in communication and computer technology are rapidly driving the evolution of new work patterns globally, as well as regionally. According to one commentator: "Managers won't just react to technology. They'll use it to shape the organization."[61] Computers are making it possible to transfer data, text, graphics, voice, and video information from one part of the world to another instantly, via systems we know as e-mail, voice-mail, fax, data networks, and computer and video conferencing.[62]

Workers are now exchanging messages and data rapidly over long distances, virtually ignoring geography, to conduct trans-global activities as if they were local. Powerful and flexible laptop computers are becoming increasingly widespread allowing staff to work just about anywhere. The fax machine is increasingly being replaced by direct electronic transmission from the computer. In addition, the use of voice mail and electronic mail are growing, as is video conferencing, which can already reach down to the individual desktop.[63]

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[60] Ernst & Young. 1994.
[61] Harvard Business Review. 1988.
[62] PC Magazine. Feb 20, 1995.
[63] Ouye, Darwish and Young. 1993.

In addition, it is believed that CD-ROM and other optical storage technologies, including large-scale relational databases and electronic libraries, will become indispensable. There are also wireless communication technologies that are utilizing both infrared and radio technologies that are increasingly in use, as well as the strong possibilities of cable-free peripheral sharing using a building's AC circuitry.[64]

This technology boom is providing multinational organizations with the ability to link employees on group projects, even when they may be located on different continents, by allowing them to share the same computer work screen at the same time, while video conferencing with each other.[65] Although this may reduce space requirements by reducing the number of workers required at a particular site, it increases the real estate's technical requirements for equipment and infrastructure to transfer images, voice and data at high speeds.[66] There are increased space, power, cooling and insulation requirements that also need to be met.

In many instances firms are also increasing the density of workers on a given floor plate, at the same time those workers are employing a greater number of electrically powered high-tech tools. Consequently, the HVAC (heating, ventilation and air conditioning) has to handle higher heat loads, electricity requirements and the number of electrical outlets

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[64] Ibid.
[65] Harvard Business Review. 1988.
[66] National Real Estate Investor. 1995

increase, and the increased use and reliance on equipment dictates the usage of additional flexible space requirements.[67]

A master planning process could help to identify these increased RE requirements, while the CRE MP could detail the most cost effective and readily implementable way by which to provide for these and other similar RE requirements.

ii. Technological Advances in Building Materials, Design and Infrastructure

Technological advances are also occurring within physical aspects of an organization's real estate portfolio and are increasingly being utilized to drive down both organizational and operating expenses.[68] For instance, new technologies are allowing organizations to reallocate millions of dollars each year due to energy costs savings, reduced absenteeism and increased productivity.[69] Sensors and computer programmed building mechanicals can now provide just enough light, heat or cool air to a particular part of the facility based on who or what is located in that area at that point in time.[70] The improvement in staff comfort seems to result in a more desired and effective working environment.[71]

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[67] Louargand. 1995.
[68] Solar Today. 1995.
[69] Ibid.
[70] Ibid.
[71] Ibid.

Of course, this is not a new or isolated phenomenon. Changes in building technology have always affected the functions and environment of the workplace, but technological advances are occurring substantially faster today than before due to rapid advances in computer technology and application. For instance, the fabrication and utilization of steel frame support structures and elevators are part of what made modern commercial facilities possible in the first place.

Similarly, modern building mechanical systems allow firms to build and utilize the space in use today.[72] Advances in building and construction technology are resulting in the design, manufacture and use of new, stronger, more flexible and more energy efficient building materials. As an example, in most facilities built today, internal walls are just space partitions and do not contribute structural support to the building.[73] This means that the internal space can be more efficiently configured to provide the size and shape of space in accordance with the operation to be performed.

In addition, there seems to be three critical information / communication infrastructure technologies that are having a substantial impact on the workplace. These are, fiber optic networks, Integrated Services Digital Networks (ISDN) and Personal Communication Networks (PCN). Fiber optic networks are becoming increasingly more cost effective, since they can transfer vast amounts of integrated data, such as video and still images,

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[72] Construction Materials and Methods. 1991.
[73] Ibid,

much quicker. This is having an impact on meetings, team and other remote transactions by linking staff in major world cities.[74]

ISDN technology makes possible the integration of voice and data transmissions over a single telephone line at a 56 Kbps transmission rate, which is about 20 times faster than a typical data transmission rate. ISDN permits users to receive and transmit both voice and data simultaneously and to use their modems without tying up their single telephone line. This technology has made possible two-way video meetings and conferences from personal computers and workstations.[75]

And PCN technology is a wireless communication network based on cordless and cellular telephony. This technologies allows users that increasingly depend on their desktop communication tools to access these tools in any combination from any location. The flexibility provided by this technology could allow staff to be located in almost any developed area.[76]

Unfortunately, continued advances in systems technology and its required infrastructure have also made many of the buildings that are currently housing business operations for many multinational corporations around the world physically and functionally obsolete.[77]

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[74] Ouye, Darwish and Young. 1993.
[75] Ibid.
[76] Ibid.
[77] National Real Estate Investor. 1995.

This is especially true in office, manufacturing and research facilities.[78] As mentioned in the previous section, communication and information technology continues to have a powerful effect on existing buildings by requiring better HVAC, electrical and cabling capacity, lighting and ergonomic furniture.[79]

Many of the manufacturing and research facilities that are showing signs of obsolescence are frequently owned by the corporations or are leased under long-term commitments.[80] Dealing with obsolescence is further complicated by the fact that senior management's business planning efforts in today's organizational environment favors conservative downsizing to reduce cost, while effectively maintaining flexibility for tomorrow.[81]

This would seem to indicate, while needing to reduce cost and remain flexible, that the organization would now be faced with the need to provide new space that could meet the new technical and physical requirements, as well as devise an exit strategy for the obsolete freehold or long-term leasehold commitments. In this instance a CRE MP could be utilized to evaluate cost and viability of alternative solutions in comparison to these existing commitments to not only determine the scope of the existing obligations, but also to quantify new capital requirements. A CRE MP might also help to identify a use for the obsolete commitment, or quantify the cost of any potential exit strategy.

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[78] Ibid.
[79] Sims. 1994.
[80] Richard Ellis. 1995.
[81] National Real Estate Investor. 1995.

C) Global Influences Driving the Demand for Real Estate Master Planning

i. Efficiencies

Multinationals are still learning how to cope with competitive pressures to obtain both global operational efficiencies, as well as global economic efficiencies.[82] Organizations need to focus more systematically on allocating resources in conjunction with a global business strategy to capture greater efficiencies.[83] Such an efficiency could be obtained by integrating worldwide operations.[84] This involves planning to help managers share resources between regions and business units to integrate skill-sets of an increasingly diversified staff across job functions and cultural or regional boundaries.[85]

A strategic approach of this nature would foster cooperation and teamwork.[86] It would result in leveraging available skills and resources not only towards increasing productivity, but also towards building a truly globally focused organization.[87] The challenge is for a multinational organization to think globally, not just operate internationally.[88] Global thought involves thinking about resources, competencies and capacities in the broader context of global opportunities and possibilities.[89] After all, the building blocks of most worldwide companies are their national subsidiaries.[90]

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[82] Hamal and Prahalad. 1994.
[83] Hout, Porter, et. all. 1982.
[84] Kanter, Rosabeth. 1994.
[85] Hamal and Prahalad. 1994.
[86] Global Business Strategies. 1994.
[87] Hamal and Prahalad. 1994.
[88] Ibid.
[89] Ibid.
[90] Bartlet and Ghoshal. 1992.

ii. Flexibility

Global efficiency considerations driving the demand for real estate master planning also focus on global advantages in the cost of production, such as availability, quality, and cost of labor, capital and materials.[91] Similarly, harnessing global efficiencies would also require taking advantage of ready markets for goods and services, as well as developing new markets, goods and services.[92] From a real estate and business planning standpoint, trying to align and integrate the asset and resource base is key.[93] Determining where major plants, technical centers and sales offices should be located is definitely driving the demand for a more active real estate planning strategy.

Although multinational organizations are concerned with optimizing their resource configuration both currently and long-term, they are also concerned with maintaining flexibility while minimizing short-term cost.[94] They want to be less vulnerable to exchange rate fluctuations, as well as less vulnerable to economic, labor, and political uncertainties. In addition, they want to insure that strategic business operations are insulated from regional economic and regional property market cycles.[95] All of these considerations require considerable flexibility to respond to changes and uncertainties in ways that maximize the performance of the organization.

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[91] Hamal and Prahalad. 1994.
[92] Competing for the Future. 1994.
[93] Harvard Business Review. 1992.
[94] Global Business Strategies. 1993.
[95] Arthur Andersen. 1993.

The difficulty lies, however, in reaching all of these goals. For example, when the multinational organization owns the facility or is under a long-term lease commitment they would probably not be concerned with short-term regional economic and property market cycles. But as was stated previously, long-term commitments do not typically provide the flexibility to deal with the changes in technology and the work environment.

The RE master planning process and resulting RE MP could allow senior managers to consider these factors in relation to business operations and in conjunction with their strategic business plans. There may have to be compromises on cost, flexibility or even quality and quantity of supporting real estate. The master planning process typically provides for an open discussion with senior managers after the initial findings are presented, so as to determine the viability of potential alternatives that would then be further reviewed. This could aid the senior managers in making the most informed strategic real estate decisions possible that maximize support for key business operations.

IV. STRATEGIC RESPONSES TO THE DEMAND DRIVING FORCES

The previous chapter examined the forces driving the demand for real estate master planning from the perspective of the multinational corporation as an organizational entity and its senior management. This section addresses the impact of those forces from the perspective of the business units and the CRE departments that will be charged with implementing any resulting senior management organizational policy or directive. This section looks at how business units respond to the mandates and policies of senior management and explores some of the ways in which CRE units utilize real estate strategies to mitigate the impacts of the aforementioned issues.

Multinational corporations are expecting more from their CRE strategic support departments, both from a quick response and in anticipation of future problems and developments.[96] There are two ways business units and CRE departments respond to organizational or senior management directives; reactionary or proactive.[97] From a reactionary standpoint, a real-estate-related action or policy is an action that is a direct response to a corporate directive. Pro-actively, a real-estate-related policy, practice or function adds value to a senior management directive in terms of furthering the objective of the organization. Examples of both of these approaches are provided in this section to demonstrate how business units and CRE support departments are, in some instances,

[96] Arthur Andersen. 1993.
[97] Cameron & Duckworth. 1995.

rising to the challenge and discovering how real estate can be used to provide additional value to the organization. These examples are framed in terms of the categories of response developed in the previous chapter: cost reduction, technology enhancement, and response to global change.

A) Cost Reduction Response Strategies

"In what area can CRE make the single greatest contribution to your company?" was the question asked of senior managers in the Arthur Anderson survey. Their top three responses during this era of corporate reengineering and restructuring: reduce costs, provide flexibility for growth or contraction, and provide an efficient work environment.[98] There are a number of interesting examples provided in the survey of how multinational corporations are operationally responding to present challenges.

i. Accountability Enhancement

From a pure cost reduction standpoint there are an increasing number of examples of how business units and CRE departments are being held accountable in an effort to make cost reduction and efficiency a focus throughout all levels of the organization.[99] For instance, at IBM, managers are now evaluated on their ability to shrink property bills, which is resulting in increased awareness and greater interaction between business units and the CRE unit.[100] The purpose of such a strategy is to initiate financial accountability as low in the organization as possible.[101] The CRE department at one firm has been altered to be more process driven requiring business cases complete with financial impacts, as opposed to the more traditional transaction driven approach that concentrated on the terms and

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[98] Arthur Andersen. 1993.
[99] National Real Estate Investor. April 1995.
[100] Business Week. February 20, 1995.
[101] National Real Estate Investor. April 1995.

conditions of individual real estate transactions. The goal of this change is to ensure that managers negotiate more than just a good real estate deal. The hope is that they will acquire a facility or feature that helps to better support the business unit and contribute to an improved bottom line.[102]

An example of a more strategically aligned CRE department is the Whirlpool Corporation, where clients of the CRE unit, the individual business units, are asking the same question as senior management; namely, how is the real estate contributing to the corporation's financial results? This attitude appears to be increasingly prevalent in CRE departments worldwide.[103]

What is also becoming more readily apparent is that trends in core businesses will continue to drive CRE actions.[104] This is important because rapidly changing business needs are likely to be more common, thereby increasing the need for flexibility and creativity in real estate strategies.[105] As a result, senior management will increasingly demand pro-active, cost cutting strategies from CRE staff that will be aimed at reducing costs of acquiring, using and redeploying assets for use by their businesses.

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102 National Real Estate Investor. January 1994.
103 Ibid.
104 Arthur Andersen. 1993.
105 Ibid.

ii. Dispositions

From a reactionary standpoint, numerous examples exist that demonstrate current strategies to shed unwanted space, as well as drastically reduce real estate operational expenses. For instance, in 1994 IBM sold 25 properties representing over 20 million square feet.[106] Shedding these 25 properties will save over 1.75 billion in operating costs in addition to the 1.4 billion in savings they are attaining from shedding other properties during 1993.[107]

Leading up to these dispositions IBM, as well as many other multinational organizations, have been restacking and consolidating existing facilities.[108] For example, IBM Personal Computer Company recently consolidated two manufacturing facilities into one in Raleigh, North Carolina.[109] Overall, IBM has consolidated 39 manufacturing facilities into 19 in the past two years alone.[110] Unfortunately, where restacking and consolidating existing facilities can provide a substantially more efficient use of existing space, the intermediate result can also be a substantial amount of space that is left unwanted and unneeded.[111]

To further complicate the issue, often manufacturing and research facilities have been owned by the corporation for over twenty years and consequently can be carried on the

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[106] Sager. 1995.
[107] Ibid.
[108] Management Review. November 1993.
[109] Sager. 1995.
[110] Ibid.
[111] Management Review. November 1993.

corporate books at substantially depreciated values.[112] In this instance a property disposition could result in a substantial tax obligation.[113] In contrast, facilities purchased ten years ago might be worth substantially less in today's market. In this instance a property disposition could result in a substantial loss of equity.[114] In addition, depending on the depreciation scheduled utilized for accounting purposes, the property's basis might even be substantially below current market value. A disposition in this instance could result in a sizable tax obligation, in addition to a loss of the equity that was originally invested.[115]

Making matters worse, these research and manufacturing facilities may also be in need of environmental cleanup.[116] Environmentally contaminated properties can typically not be abandoned or disposed too lightly because of their potential for substantial added costs.[117] In each of these instances the financial analysis undertaken as part of a CRE MP would be useful in evaluating the cost of alternative space scenarios on both an after-tax cash and book basis. And more importantly, "an exit strategy for real estate assets is as important as satisfying the operating needs of a business unit and should be put in place when the decision is first made to acquire the space in the first place."[118] Accordingly, acquisition and disposition issues could be addressed as part of the CRE MP and planning process.[119]

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[112] Urban Land. January 1995.
[113] Bruggerman and Fisher, 1993.
[114] Ibid.
[115] Ibid.
[116] Real Estate Finance Journal. 1994.
[117] Urban Land. Jannuary 1995.
[118] National Real Estate Investor. April 1995.
[119] Younce. 1995.

In addition, some sophisticated real estate and business strategies are beginning to be formulated to address the above mentioned weaknesses of conventional disposition methods. A few businesses are looking at redeveloping properties as a way to increase their value.[120] Some of IBM's facilities have been taking in non-IBM work. In Germany, IBM has recently entered into a joint venture with Phillips who will take over and operate this IBM owned facility in Stuttgart.[121] A firm is using a Sale and Leaseback strategy with non-investment grade real estate in the hopes of getting a better price for the facility than they would through a simple disposition, as they try to get old facilities off of their books.[122] In many instances, however, there still might not be a market for the property.[123] There is, however, clearly room for innovation, and the overall trend seems to be one of upgrading and customizing existing facilities when ever possible, instead of closing old facilities.[124]

iii. Minimizing Overhead Expenses

Some very effective strategies are also being increasingly employed to reduce operational overhead, which is important because even the smallest consolidations will typically result in unwanted space that is still under a lease obligation.[125] One option is to sublet the space, even at below market or nominal rent to reduce the operating expenses and if

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[120] Urban Land. January 1995.
[121] Sager. 1995.
[122] National Real Estate Investor. April 1995.
[123] Sager. 1995.
[124] Bartlett & Ghoshal. 1992.
[125] National Real Estate Investor. April 1995.

possible help to offset the cost of the contracted rent under the existing lease obligation.[126] IBM has generated $6.3 billion in savings by subletting to reduce electrical and heating costs.[127] Another option is to negotiate with a utility company for rate concessions.[128]

A non-market, real estate cost reduction method is the establishment of a shared service facility that allows all business units in the region to share one legal, accounting and technology department, or to share one training and data center. Through this strategy real estate costs could be reduced by eliminating redundancies. In theory, this approach should also provide operational efficiencies to the business units.

iv. Benchmarking Strategies

Firms are also increasingly using benchmarking to compare costs and standards, both internally within business units and externally with the market area and competitors. This process often leads to the adoption of more stringent space standards.[129] Ameritech, for example, is implementing a space usage average of 200 square feet per employee and measuring how many BTUs per square foot are used.[130] Similarly, American Express Financial Services is establishing a similar standard of 85 square feet per workstation at their headquarters in Minneapolis, MN.[131]

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[126] Ibid.
[127] Sager. 1995.
[128] Younce. 1995.
[129] Deloitte & Touche. 1995.
[130] National Real Estate Investor. April 1995.
[131] Ibid.

This strategy allows for measurable and consistent space standards throughout all business units and consequently should provide operational efficiencies. Depending on the location of the facility, this strategy is not always practical. Different countries may have different regulations, customs, building materials and methods which could make such a practice impractical.

v. Outsourcing Strategies

Additional cost reduction strategies might also involve outsourcing and utilizing alliance partners for more specialized services and support. There is a growing number of examples of CRE units contracting out to an alliance partner or service provider for property management, facilities management, and leasing services. Some firms are utilizing an activity-based cost accounting system to identify opportunities for outsourcing.[132] Other firms are looking to outsource ancillary functions not related to the core business to reduce the number of employees and amount of space required.[133] One Corporation has recently implemented a property tax program managed by an accounting firm that has already realized over $7.5 million in savings.[134]

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[132] Management Review. November 1993.
[133] National Real Estate Investor. April 1995.
[134] Ibid.

B) Technology Driven Solutions

Firms are increasingly utilizing technology to improve the operations and management of their facilities. They are also incorporating new technologies and materials directly into their facilities to reduce cost and to improve workplace operations.[135]

i. Materials and Design

Lockheed is one example of a firm that has benefited from technology driven solutions related to materials and design. The company has saved over $7 million in energy costs alone from a 585,000 square foot office building that was designed to bring daylight deep into the office space interior, while eliminating any direct sunlight and the resulting brightness problems that can hinder productivity and effectiveness at workstations.[136] The actual cost of the building was $50 million and the estimated energy savings are upwards of $500,000 annually.[137] Lockheed also estimates that they have saved approximately several times more from reduced absenteeism. Moreover, compared to all of their other facilities, there also seems to be increased productivity from its workforce in the new building.[138]

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[135] Solar Today. May - June 1995.
[136] Ibid.
[137] Ibid.
[138] Ibid.

Another recent example of material and design innovation is the seven story Joint Research Centre for European Community in Ispra Italy. By producing 25 kilowatts of electricity on its own, the Centre is substantially reducing the operational cost of the facility.[139] The building was retrofitted with a large photovoltaic facade to replace the old curtain wall. The photovoltaic facade added 20% to the cost of the curtain wall system and less than 1% increase to the typical cost of a multi-story building. Similar structures are utilizing photovoltaic panels for roof cladding and curtain wall facades by incorporating the photovoltaic panels directly into the structure. These methods are becoming increasingly accepted and successful, where earlier practices simply attached the photovoltaic panels to the top of a more traditional roof cladding or curtain wall facade.

ii. Communication and Information Technology Solutions

a) Information Solutions

Computers are making it possible to transfer data, text, voice, images, video and audio information from one part of the world to another instantly.[140] More importantly, corporations are increasingly utilizing sophisticated analytical, graphical, and computer interface capabilities to aggregate, integrate, and present data in flexible and easy to use formats.[141] Consequently, one business unit manager recently stated, "The CRE department is not going to make business decisions. CRE is going to provide information

[139] Ibid.
[140] Harvard Business Review. November - December 1988.
[141] Ibid.

so managers can make good business decisions."[142] Computers are helping to identify and keep track of staff, skills and project load, which will help to allocate resources more efficiently and, therefore, should result in the need for fewer staff and less space.[143]

b) Systems Integration

Computer platforms and processing applications are also beginning to allow for systems integration.[144] Multi-national corporations are increasingly utilizing automated support for portfolio related activities, such as leasing, on-site property management, facilities management, budget preparation, portfolio management, cash flow and expense / yield projections, purchasing, as well as other operational responsibilities. In addition, they are increasingly able to implement analytical and performance measurement and evaluation activities of business operations due to increasing compatibility between popular platforms and processing environments that allow for systems integration.[145]

In response to these new developments, there is a trend to use software for real estate operations and financial reporting that supports the company's systems in accounting and finance. This allows for data to be put in a consistent and usable format that is also compatible with the company's basic financial accounting requirements. This allows the data to be readily incorporated into the corporate finance department's business case format to facilitate the accurate preparation, analysis and presentation of issues to be

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142 National Real Estate Investor. April 1995.
143 Harvard Business Review. November - December 1988.
144 National Real Estate Investor. February 1995
145 Ibid.

included in the organization's strategic business plan. As a result, there is now a consensus that advances in information and communications software and systems have increased management's awareness of opportunities to reduce costs and is furthering the demand for integrated planning.[146]

c) Flexibility and Communication

Firms are also beginning to take advantage of reduced space and flexible space arrangements. Mobility is becoming increasingly possible due to existing technologies, such as lap-top personal computers with built in multi-media and modem capabilities, as well as cellular phones.[147] "Telecommuting and hotelling are definitely on the rise."[148] And "bottom line, industry experts believe that telecommuting and hotelling could reduce a firm's space requirements from approximately 250 square feet per employee to about 125 square feet per employee."[149] Even though these are relatively new concepts, initial data suggests that firms that have adopted telecomuting have realized savings in real estate costs of 25 to 40 percent.[150] Furthermore, homes are beginning to accommodate interactive telecommuting, which will allow for fewer cars on the road, less workspace required, and more flexible families and workdays.[151]

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[146] Arthur Andersen. 1993.
[147] Urban Land. January 1995.
[148] Ernst & Young. 1994.
[149] Ernst & Young. 1994.
[150] Urban Land. January 1995.
[151] Builder. July 1994.

In one example, MCI has decided that they want their mobile sales staff to be equipped with a laptop, portable phone, and a beeper, so that they have all they need to access files and electronic mail when they are on the road. For those few times each month when they are in the office, MCI has replaced their salespeople's offices with shared workstations.[152]

[152] National Real Estate Investor. March 1995.

C) Globally Focused Strategies

To more effectively compete in an increasingly competitive global market, multinational corporations are trying to learn how to allocate resources with greater efficiency and in conjunction with a global business strategy.

i. Managing Geographically Dispersed Holdings to Increase Efficiency

As noted earlier, searching for global efficiencies is increasingly becoming a priority for multi-national organizations.[153] Many firms are now explicitly trying to understand how they can utilize their spatially dispersed real estate interests to increase global efficiencies. Amoco's real estate department, for example, has recently established an in-house real estate team. Each member is responsible for knowing about Amoco's operations in a specific area, as well as knowing all of the potential externalities that could impact real estate and business matters in each of those given regions.

On a similar track, Whirlpool has, over the last seven years, grown from a domestic appliance manufacturer to the world's leading appliance company. They now have business units in over 100 countries and have increased sales from $4 billion to $8 billion. They felt it was important to centralize their real estate staff for consistency in policy and direction, and to manage efficiently across their dispersed real estate interests, but to

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[153] National Real Estate Investor. January 1994.

remain decentralized on an actual work basis for primarily local decisions. Their strategy for meeting business unit needs is to make the person doing the work the accountable and responsible manager to the business units and organization.[154]

ii. <u>Location Flexibilities</u>

Multinational organizations are also searching for ways to establish and maintain flexibility, as well as adapt to changes within the business units.[155] In one case, Electrolux decided to allocate important development and manufacturing tasks to a facility within each of the companies major markets to avoid concentrating facilities in one region or one facility. In this way they would be substantially less vulnerable to currency and interest rate fluctuations, as well as political uncertainties.

In another instance, multinationals looking to break into expanding European markets might want to locate a command center in London or on the Continent to take advantage not only of a closer proximity to customers, but also a different perspective on business and the markets.[156] This would provide a labor force more accustomed to multiple languages and customs. Organizations would also benefit from the different perspectives reported by a more diverse news media.

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[154] Ibid.
[155] Bartlet and Goshal, 1992.
[156] Hamal. 1994.

V. COMPARATIVE REVIEW OF SAMPLE MASTER PLANS

The last chapter reviewed and recommended a variety of strategic responses to the three primary forces: technological change, cost reduction and globalization, that are driving the demand for CRE master planning. This chapter undertakes a comparative review of actual RE master plans of three multinational corporations. The purpose is to demonstrate a more comprehensive approach for dealing with these forces and to tie the master plans and master planning process to the literature reviewed and the responses introduced in the preceding chapters. In addition, to further synthesize the data presented thus far, relevant observations that were made during the review of these plans are detailed within this chapter.

The people who participated in the formulation of these plans typically included:

- CRE staff of the multinational corporations that commenced RE planning;
- Business unit managers from the core businesses within these multinationals;
- Country and finance managers of these multinationals; and
- Outside corporate real estate consultants.

A) Structure and Findings of the Comparative Review

Each plan reviewed was labeled as a country specific, corporate real estate master plan. However, each tended to detail a specific area, such as a region or city, within a particular country and in effect, grouped or segregated the corporation's real estate according to the current location of existing facilities. This occurred for several reasons. Each organization was reevaluating existing facilities as opposed to planning for new or additional facilities, and specific country plans were the result of the organizational structure, as these firms have senior country officers in addition to business unit managers. More importantly, the plans detailing specific regions needed to preserve employee and workforce location advantages and were hoping to further capture operating efficiencies among the business units.

The need for a multinational corporation to inventory their real property commitments was detailed in the 1993 Phase I report of Corporate Real Estate 2000, *Strategic Management of the Fifth Resource: Corporate Real Estate*, as a stage of development for an organization to move from simply evaluating their real property as a cost or accounting function to evaluation methods more in tune with corporate finance, such as net present value analysis.[157] The findings of this report further stated that, "The CRE field needs to define and create an information base that will assist in internal analysis and meaningful communication with senior management and business unit customers."[158] This directive,

[157] Joroff, Louargand, et. all. 1993.
[158] Ibid

more than any other, lays the foundation for an effective CRE master planning effort, as this data is the base of every potential variation of real estate strategic planning. It is also important to recognize that; "the information required for strategically-oriented real estate management has to be drawn from many parts of the organization, such as finance, human resources, and the legal department, as well as from real estate."[159]

Each of the plans standardized data and evaluated the cost of commitments in comparison to the market. The data documented existing RE interests and detailed the operating expenses in a consistent and usable format. In some instances this took several months and required support, not only from the portfolio manager, but from the country officers and financial officers, as some business units used different categories and software to collect and report the scope of the commitments and operating expenses.[160] Discussions with CRE staff revealed that there was no internal requirement to report this information on a regular basis and business units that became part of these organizations due to mergers and acquisitions were utilizing different recording and reporting systems. In others, there was a requirement to provide the information regularly and in a usable format, but this requirement was not as yet being met.

Each of these plans also compared and contrasted the cost of possible market driven space scenarios, such as relocation and redevelopment, in an attempt to decide whether to

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[159] Joroff, Louargand, et. all. 1993.
[160] Younce. 1995.

acquire new space, or dispose of, or refit existing space. Each also desired an efficient allocation of resources, as is evidenced by staff consolidation and space reconfiguration.

In summary, what became evident from reviewing these 9 plans is that before a RE MP can be effectively designed, written and implemented, the master planning team, business unit managers and finance officers need to address four critical issues. They need to:

1. Assure the availability and consistency of data;
2. Identify the data that is of critical importance to the scope of the plan;
3. Create a comparability standard for evaluating alternatives; and
4. Formulate an objective method by which to select the best alternative.

As a result of going through the planning process the planning participants listed above seem to be gaining a much better understanding of the relationship between the organization's basic financial structure, its productivity and its real estate.

The findings of the comparative review demonstrate that the discipline of CRE master planning is evolving as multinational corporations learn how to more efficiently allocate their resources and utilize their real estate interests as strategic support for core business operations; in other words, how to position the organization's real estate assets so that opportunities are maximized in the most cost effective manner and with the lowest possible amount of downside risks. Specific findings of the comparative review of the master plans are as follows:

i. The forces driving the demand were not directly or adequately addressed;

ii. Real estate decisions or strategies must be linked to business goals;

iii. Real estate master planning is a dynamic process; and

iv. Each plan typically covered the same topics and had the same ommissions.

Each of these is now discussed in turn.

i. <u>The Forces Driving the Demand were Not Directly or Adequately Addressed</u>

The review of these plans revealed that, in every instance, the forces driving the demand for RE master planning identified in Chapter III have not been directly and adequately addressed by the planning participants. One explanation is that the planning participants are not fully aware of these external influences effecting change within their organization. Another is that the planning participants are still going through the evolutionary stages of corporate real estate unit development identified in Phase I of the Corporate Real Estate 2000 (CRE 2000) research report.

Briefly stated, CRE 2000 details a model that demonstrates five evolutionary stages of corporate real estate unit development required to provide strategic insight into the evolving discipline of corporate real estate services. Those five stages of evolution include:

1) Taskmasters supplying the corporation's physical space as requested.

2) Controllers satisfying senior management's need to understand and minimize RE costs.

3) Dealmakers solving RE problems in ways that create financial value for business units.

4) Intrepreneurs operating as an internal RE company, proposing RE alternatives to the business units that match those of the firms competitors.
5) Business Strategists anticipating business trends and then monitoring and measuring their impacts. These units contribute to the value of the corporation as a whole by supporting core competencies with RE strategies that optimize business results.[161]

In addition, the CRE 2000 Research Report detailed four critical characteristics of this evolutionary cycle of learning to utilize RE as strategic support. "First, each skill that must be mastered cannot be abandoned in later stages, as each stage builds on the capabilities of the prior stages. Second, the stages are focus-driven, each linked to a targeted mission and dependent on enhanced information and communication systems to succeed. Third, these organizational stages are closely linked with the real estate finance and information systems in addressing a firm's space requirements. And fourth, the stages are increasingly driven by process, and, therefore by people. They require human capital development for successful execution."[162]

Since RE MP for multinational corporations is a developing discipline it was important to see how closely the findings of the industry sponsored, corporate real estate research report compared to the findings of this thesis. What is evident is that the master plans reviewed for this thesis seem to be closely aligned with the early stages of the corporate real estate evolutionary model, the Controller and Dealmaker stages, whereas the

[161] Ibid.
[162] Ibid.

evolutionary schedule suggests that the last stage, Business Strategist, is the level required to undertake CRE master planning most effectively. This demonstrates the need for further evolution of a CRE MP, real estate master planning process, as well as the CRE master planning participants. Plans that were completed more recently, however, were more comprehensive, concise, and insightful than earlier efforts. This seems to indicate that the participants are continually developing their own internal role and version of a CRE MP.

More importantly, the CRE 2000 research report also found that the evolution or growth in capacity through these stages does not have to be linear, meaning that the stages of development do not have to be achieved in succession. In addition, the evolution of these skills could be leveraged. For example, changes in policies or goals could require the development of additional skill-sets at a particular point in time. It was also determined that skills of more than one stage could be acquired at the same time.[163]

Consistent with CRE 2000 Phase I findings on evolution in the corporate real estate skill set, many of the participants in the planning process for the plans reviewed here believe that these efforts fall short on issues of significant importance.[164] It appears that the planning participants were not fully aware of what was actually driving the changes within their organization and consequently the need for CRE master planning. This may explain why most of the initial strategies developed as part of the business scenarios derived

[163] Ibid.
[164] CRE staff participating in master planning process.

within these plans have not as yet been implemented.[165] This makes sense, particularly in view of the fact that the omitted categories tend to be directly related to the issues that are driving the demand for real estate master planning in the first place.

ii. Real Estate Decisions or Strategies Must be Linked to Business Goals

The surveys and literature reviewed in the process of writing this thesis suggest that there are substantial benefits that can be gained by formulating a real estate plan which is aligned with the goals of the business units, such as improving an organization's productivity and competitive advantage.[166] The research and analysis further demonstrate that real estate solutions detailed in an CRE MP need to be designed to meet the needs of the individuals who make up the organization, such as by creating more comfortable and more efficient work environments, as well as to support business unit operations.

In practice, however, even though each plan analyzed for this thesis could be linked to basic business unit goals to reduce operational overhead and gain operational efficiencies, only three were designed to improve finished products, production functions, the workplace environment, or address other staff needs. In retrospect, the plans that did not directly consider the core functions of the business units, globalization issues, human resource issues or information technology issues have either fallen short of their intended goals or have not been implemented. Discussions with some of the planning participants

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[165] Ibid.
[166] Ettorre. 1995.

revealed that, in many instances, the plans that were not implemented failed because they were no longer financially feasible when other costs, such as moving expenses and new information systems, were added to the financial models being used and compared against existing commitments. Others failed because they met with opposition from business unit managers because they noticed that key issues had not been adequately addressed.

In contrast, the planners firmly believe that these plans were written to meet the needs of the business units, which sounds like it would lead to a successful master plan if this purpose was indeed met.[167] However, in each of the plans the stated purpose of the business unit was narrowly defined as a desire to shed unwanted space and provide for recent requests for additional space, while reducing what is perceived internally as excessive occupancy costs. This could be interpreted as more of a real estate decision making directive, than the purpose of a comprehensive real estate master plan.

It might be argued that a strategic plan should begin with a global strategic view from senior management. But these simple cost saving measures fall short on considering how best to help the business units achieve their strategic goals.[168] Reducing a business unit's overhead will increase its profit, but this comes from obtaining operational efficiency, which is very different than meeting a broader business goal.[169]

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[167] Ibid.
[168] Nourse. 1992.
[169] Ettorre. 1995.

More importantly, the need to reduce and control cost is but one of the forces driving the demand for RE master planning discussed in the previous two chapters. As Bill Agnello of Sun Microsystems recently pointed out, most companies have already been tightening their real estate costs via methods like site consolidation and lease negotiation in a soft market. But if organizations are to be competitive going forward, they must find strategic and new ways to reduce overall demands on space. Agnello further stated that, "Companies have squeezed an awful lot out of their systems, and those cost advantages will soon be felt. Beyond that, well, they will have to see there is no disconnect between real estate and the workplace. Companies cannot save their way to prosperity."[170]

By focusing on operational efficiencies, the real estate is treated as a simple space requirement, as opposed to a strategic resource of the corporation. Such planning attempts are not comprehensive, but are, however, more in line with historical responses to an organization's need for space. For instance, typically the local business unit manager obtained space independent of headquarters and without input from CRE staff, but this independence would not provide strategic support or link business unit operations.[171]

One of the multinational organizations whose master plans were reviewed for this thesis is re-examining their real estate planning shortfalls now that some of their completed plans have not been implemented. Even though the completed plans did not provide the intended results, the planning participants seem to have learned a great deal about using

[170] Ibid.
[171] Lyne. 1993.

the real estate plan as a tool to support actual business unit objectives. In the terms of the CRE 2000 model, the participants seem to be moving toward acquiring the skills associated with stages four and five, the Intrapreneuer and the Business Strategists.

It must be emphasized that CRE master planning by multinational organizations is still in its infancy. Even though much is being written on obtaining operational efficiencies, such as maximizing space utilization and reducing expenses, organizations are first learning how to truly plan for the physical needs and requirements of the individual business units, especially in keeping these requirements narrowed within the scope of the organization's overall statement of purpose. More than anything else research for this thesis suggest that a real estate master plan should be used as a tool that helps to leverage the core competencies and capacities of the organization in order to increase global competitiveness, obtain operational efficiencies and function as a seemlessly integrated global operation.

This is not an easy strategy to implement, since workplaces and workplace environments are undergoing structural shifts that are dramatically impacting how and where employees do their work, as well as how they perceive and value their work contribution. In addition, major economic shifts in the capital and consumer markets, rapidly advancing technologies and evolving societal attitudes all continue to put new pressures on an organization's abilities to compete globally.[172] Consequently, CRE master plans should increasingly be utilized as a flexible agent for adapting to changes in the workplace.

None of the master plans reviewed have any real process for linking the goals of the business units to their real estate. Therefore, it is suggested that the following 4-step approach be adopted within the master planning team's organizational framework to strategically link real estate decisions with the business goals. First, the team could list the primary directives of the business units for meeting overall corporate goals. Second, they could then detail business operation strategies used to support the efforts of the business units. Third, they could design real estate strategies to support business unit operations. Finally, the team could formulate an action plan to implement the real estate strategies that support business operations.

Another way in which real estate decision and strategies could be linked more effectively to business goals is for the planning participants to understand the interrelationship between the business plan and the plan for the facilities.[173] It might be argued, however, that it is becoming increasingly difficult to strategically plan for facilities to support the business plan because the business plan is becoming so unpredictable and subject to almost continuous change.

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[172] Ettorre. 1995.
[173] Ouye, Darwish & Young. 1993.

One of the real keys here is to try and understand the opportunities and cost of various alternative decisions. Each real estate decision should probably be viewed not just in terms of being the least cost or a good deal, but also in terms of flexibility for leaving future options opened or closed. In addition, the potential range of real estate options continues to increase beyond choices of one facility or transaction and another to also include non-traditional options, such as hotelling, satellite offices, and home officing. The entire potential spectrum of occupancy and technological driven solutions should probably be evaluated in terms of cost, productivity and future opportunities.

iii. Real Estate Master Planning is a Dynamic Process

The number one observation from reviewing these CRE master plans is that real estate master planning is a dynamic, ongoing process that evolves by adapting to changes both inside and outside the organization. More than anything else, the master planning process and detailed master plan must remain flexible. Change is inherent in the process.

Internal changes could include changes in core business due to product development and innovation, changes in organizational structure or capitalization, management changes, or changes in ownership. Each of these can have a dramatic impact on the future direction of the organization.

More importantly, as detailed in Chapters III and IV, the potential for external changes are numerous and diverse. Pressures driving external changes include technological factors, cost / economic-related factors, and considerations relevant for competing in a global arena. For example, globalization means that multinational business now operate 24 hours a day. Something can happen anytime, anyplace that effects business operations. For instance, changes in the capital markets, production markets, product distribution markets, as well as a broad range of social, regulatory and policy related issues could also potentially have an impact on staff, business units and the organization as a whole.[174]

One important consideration is that current changes in social attitudes regarding quality of life and work satisfaction need to be carefully taken into account in designing the physical workplace environment. Likewise, increased regulation on both the physical work environment and natural environment could also become extremely costly if not considered by any real estate scenario recommended for implementation by the plan.

In essence, since the plan should be geared towards providing for the future needs of the organization, it should be used as a tool to direct the organization to where it wants to be. Considering the forces driving an organization's need to plan, no plan will probably ever perfectly lead an organization, because of the unforeseen influences that will impact the plan along the way. With the plan and process in place, however, the organization will be in a substantially better position to adapt to change as it happens, or to learn how to plan for change, using it as a competitive advantage. Consequently, participants in the process

[174] Ouye, Darwish & Young. 1993.

need to be constantly aware of what is driving the future direction of their organization and utilize the opportunities provided by a CRE MP to keep themselves strategically positioned for the future.

In addition, because the decisions surrounding an organization's real estate have the ability to impact so many and result in such a high cost, the CRE MP has to be perceived as credible throughout the organization. The stakes are too high for the planning participants to risk just putting out a plan without considering who might support or reject the plan and its implementation.

Even when care has been taken to build a planning team, develop a consensus on the issues contained in the plan, and successfully manage the planning process, the potential remains for any stockholder to disagree with a component of the plan or a potential scenario in the plan, and hence move to disrupt distribution or worse, oppose implementation. The net effect would be to turn the process in political gamesmanship.

The CRE staff assigned to spearhead the planning process are typically viewed as service providers throughout the organization. Consequently, the are charged with meeting the needs of their clients, which are the business units. Depending on the stockholders and participants, this relationship could be manipulated if there was an unbalanced distribution of power among the planners in the process. In situations where influence is distributed unequally or the planning team in not sufficiently empowered, there could be a risk that the real estate scenarios detailed in the plan are supporting a personal agenda instead of working to support the needs of the business units in the context of what is in the best interest of the entire organization. This is a common problem for multinational corporations in many cities and countries around the world.[175]

In summary, the ongoing changes caused by the globalization of markets and production, advances in technology, increased regulation of the environment and the workplace, shareholder activism, product innovation, etc., results in a planning atmosphere that is not only loaded with uncertainty, but also inevitable albeit unforeseeable change.

iv. Each Plan Reviewed Covered or Failed to Cover Similar Topics

Each of the master plans reviewed covered similar topics. There were, however, various topics of potential importance that were conspicuously absent from all of the plans. The fact that similar issues were either covered or not covered seems to indicate a degree of standardization throughout the industry. It also seems to indicate that more strategic thought towards planning for the future needs of these organizations is definitely warranted. For example, missing from each of the master plans reviewed was a definitive goal and objective for the corporate real estate master plan. Can a MP truly meet an organization's current and future space needs without a definitive goal?

[175] Younce. 1995.

The scope of the material in the plans was also examined in relation to the CRE 2000 Model. The data suggests that the early plans were more closely aligned with the second and third stage of their evolutionary model. This was evidenced by the observation that the main purpose of the plan was to support the space needs of the business units at the lowest possible costs, while satisfying the concerns of senior management.

An additional similarity with the CRE model was the observation that most of the skills utilized in compiling these plans were analytic, concentrating on disposing of vacant space within the company's existing stock that was typically brought about by reducing the space requirements of individual business units. At the same time, the planning team was working with the business units to identify optimal space needs, as well as comparing the corporation's facilities to the market. Each of these activities were again associated with the earlier stages detailed in the CRE 2000 model.

There are additional commonalties of potential benefits to be derived by including certain "missing" items detailed in the next section, in comparison with what the CRE 2000 Research Project model suggest could be obtained with further development of the strategic support role for corporate real estate staff. These potential benefits are closely aligned with the final stages, the Intrapreneur and Business Strategist stages, of the CRE 2000 evolutionary model.

The model indicates that at later stages, the real estate unit will meet new challenges. "It will be called on to build consensus about space utilization policies and strategies that enhance the competitive position of the business units and the corporation as a whole."[176] It is anticipated that the CRE staff will increasingly become aligned with the CFO, as well as the senior management of other strategic support functions like human resources and information technology. The intent is to contribute to the direction of the corporation as a whole, by developing a comprehensive real estate strategy in conjunction with anticipating and planning for market and business trends.[177] The model goes on to suggest that at this stage of development the real estate planning unit would ultimately be concerned with influencing the corporation's strategic advantage, productivity and stakeholder value.[178] In addition, the model further suggests that the business units and the real estate support staff will go on to integrate the space requirements, as well as a real estate occupancy strategy into their global initiatives.

By moving through increasingly more sophisticated data assembly, analysis and use, it will be possible to reach the advanced stages of evolution identified in the CRE 2000 Research Project.

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[176] Joroff, Louargand, et. all. 1993.
[177] Ibid.
[178] Ibid.

B) Categories Included in Each of the Master Plans Reviewed

This section and the following one address the scope of the plans reviewed and comment on the issues that were both included and conspicuously absent from each of these RE master plans. The purpose is not only to demonstrate the tremendous breadth and depth of significant issues that could be addressed in the formulation of a comprehensive MP, but also to take particular notice of items of critical importance.

Listed below are items that were typically included or omitted from the plans reviewed. The unincluded items, which are items that were identified during the course of researching this thesis, are categorized as "missing, " since the literature reviewed and conversations with CRE master planning participants demonstrated that these items can have a significant impact on business unit and facility operations.

INCLUDED	MISSING
1. Executive Overview	1. Stated Goal for the Master Plan
2. Purpose and Methodology	2. Workplace & Work Strategies
3. Findings and Significant Issues	3. HR, Social & Cultural Issues
4. Inventory of Facilities	4. Commun. & Information Technology
5. Business Unit Documentation	5. Management Policies and Practices
6. Economic and Market Overview	6. Detailed Site & Engineering Issues
7. Financial Analysis of Alternatives	7. Environmental Regulation Issues
8. Recommendations	8. Evaluation & Success Measurement

This section takes a more detailed look at each of the categories included in the master plans reviewed for this thesis. Provided is a brief description of the items included and why this information is important. Each category, in one way or another, helps to define the space requirements of the individual business units, as well as the entire organization.

1. Executive Overview

Typically, the executive overview summarizes the findings and recommendations detailed in the plan, highlights the planning process and methodology, and identifies significant issues that were uncovered during the data gathering stage. In addition, the highlights of each main category are summarized to brief the reader on the key issues, even if they do not read the entire master plan.

According to the CRE staff involved in producing three of the master plans, in many instances, the formal plans, complete with all of detailed data, can be several inches thick. Consequently, the senior managers receiving these massive, final finished plans typically never read more than the executive summary, unless there is a problem or disagreement with the actual plan. This supports the concept of an executive summary to provide a synopsis of key issues.

2. Purpose and Methodology

The purpose behind a RE MP will in all likelihood continue to evolve, however the research seems to indicate that the purpose of a RE MP should be to develop a framework of information that is useful in aligning the real estate with the overall corporate strategy, which includes criteria for measuring how real estate impacts the corporation's bottom line and its productivity.[179] As such, a RE MP should help senior corporate and business unit managers address their space needs and requirements as they consider how to be more cost effective or when new space needs are proposed.

When an organization's real estate requirements are clearly defined, opportunities exist to maximize efficiencies and minimize waste. Sufficient space provides for maximum productivity. Excess space wastes valuable resources and becomes a drain on the bottom line. Furthermore, space that is poorly configured undermines the efficient use of a facility. Likewise, commitments to space that is technically or physically obsolete puts undue constraints on business operations.

Of the plans reviewed, the differences in scope of the master plans analyzed seemed to be traceable back to the purposes for which the plan was commissioned. In addition, the scope varied depending on the how strongly the organizations perceived the need to use real estate to support the competencies and capacities of the business units. In five instances, the real estate was examined in the context of which space could be restacked, or which facilities could be reconfigured to reduce the cost of providing space for a certain number of employees.

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[179] Joroff, Louargand, et. all. 1993.

A methodology section must be included in any strategic plan to establish validity and credibility. A good synopsis of the methodology and how it supports the purpose of the plan can be extremely important in situations where the plan was contested or opposed.[180] In addition, a methodology section helps the reader to understand the scope of the document being presented.

3. Findings and Significant Issues

The findings and significant issues are typically those items that could have a dramatic impact on the real estate master plan. These are items that generally need to be qualified, quantified, or both in order to properly evaluate their potential impact in relation to the base-line data and in comparison to other potential real estate strategies. In addition, these items are generally specific issues that need to be brought to the attention of senior management.

In the event these issues require a substantial capital expenditure, then in each of the multinational corporations whose plans were reviewed, these items would typically also require a separate corporate finance business case analysis for senior management's approval. With cost reduction being such a high priority, it is becoming increasingly common for corporate finance to be involved in decisions requiring capital expenditures.

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[180] Tomasko. 1993.

4. Inventory of Facilities

Each one of the plans reviewed began the process by detailing the existing real estate commitments and related costs. In the majority of instances, leases were tabulated and sorted along various dimensions: lease term, rent, review, break, option to renew, etc.. Operating data were obtained that detailed, rent, operating expenses, rates, utilities, maintenance, and insurance costs, as well as capitalization or depreciation of improvements, and net book values. In addition, site visits and interviews with facility managers were conducted to document the premises and quantify current occupancy costs. In a few instances, floor plans, blue prints, and design schematics were also provided to detail problems or opportunities, such as restacking or refitting existing space. These visuals are also extremely useful when demonstrating other inefficiencies or obsolete components of the facilities.

5. Business Unit Documentation

In every instance, the business unit documentation included was obtained both by direct interviews and formal questionnaires. The questionnaires were completed and interviews were conducted with key management personnel to understand future business trends more fully, quantify current/future headcount, and to discuss specific real estate requirements. The interviews were also checked against the questionnaires for consistency and variances in the data provided by the business unit, finance and regional managers.[181]

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[181] Wehrli. 1995.

Business unit documentations are frequently the most sensitive types of the data provided to the planners, since they detail senior management's focus and level of commitment to the core businesses of the organization. In fact, confidentiality agreements would typically be signed in situations where outside consultants have been brought in to assist with the planning process.[182]

This information seeking exercise is also one of the best opportunities within the planning process, since it affords the opportunity to link the real estate master plan to the strategic business plans of the business units.[183] As Michael Bell, Director of Real Estate at Dun & Bradstreet pointed out; "Organization's can use physical real estate change to signal a strategic change in organizational format, size and culture. It's absolutely disruptive."[184] In 1994 D&B moved their headquarters in conjunction with the consolidation and relocation of several offices throughout the world.

In every master planning instance reviewed, more could have been done to leverage the skill-set of the employees and core competencies of the business units. For instance, at Sun Microsystems it was discovered that informal chance encounters among engineers and scientists have often developed into productive ideas at Sun. Recognizing the importance of a work environment conducive to these encounters, Sun is spending U.S. $200 million on a facility that will consolidate 15 older facilities located throughout the San Francisco

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[182] Younce. 1995.
[183] Tomasko. 1993.
[184] Ettorre. 1995.

Bay area.[185] It is anticipated that this building will cost less because of increased worker productivity, state-of-the-art construction economies and the elimination of these other leases.

Finally, none of the master plans identified the location of suppliers as part of a planning consideration and this is important. It might generate an economy of scale from a production function standpoint, such as a direct savings on the volume of production, or a lead time reduction providing savings on the scope of production. Similarly, another idea might even be to co-locate a supplier on-site in conjunction with production processes.

6. Economic Overview

The economic overview varied substantially between the master plans analyzed. Although there was consistency in the types of data provided, which typically included basic documentation of general real estate trends and other relevant economic background information, there were noticeable differences in the breadth and depth of actual information provided.

Some of this variation was attributable to the regions detailed in the plan. For example, in some international markets, especially former eastern block and developing countries, the amount of data available and sources of data can vary a great deal. In more established markets, economic and real estate market information is typically readily available from numerous sources.

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[185] Ibid.

7. Analysis of Alternatives

In most instances the analysis of alternatives involved a discounted cash flow analysis of the various alternatives for real estate commitments, where the interest rate assumptions were tied to the internal cost of capital and investment return hurdle rates. In addition, in almost every instance the discounted cash flow analysis involved both a before-tax and after-tax computation on both a current cash and book basis. Each alternative scenario was also evaluated against a "base case," which is benchmarked data that details all existing commitments on a net present value basis.

In addition, in most instances the alternative scenarios analyzed were refined by open discussions between the planning participants, business unit managers, finance managers and senior country officers. The primary reason for this is that the intent of the plan was to meet the needs of the clients, which are the business units. This means that any real estate plan derived must support the business plans of the business units. In most instances, planning participants will probably not be provided with copies of the business plans of the various business units. Consequently, the planning participants need to solicit substantial feedback from the business unit managers and country officers, or even make them a part of the process.

Planning participants, especially the business unit managers and finance officers, need to recognize that by implementing a well conceived MP they should more frequently be able to meet earnings growth projections through a combination of a more efficient allocation of available resources and a disposition of redundant or obsolete space. The operating costs of underutilized space are often so great that an increase in net present value would occur even by giving away this space at below market or no rent in return for reassigning the obligation of paying real estate taxes and operating expenses.[186] However, this does not mean that a MP is suppose to be concerned with reducing cost within individual facilities, but rather with controlling and planning for overall portfolio costs and planning for an efficient use of existing and potential facilities in a manner that might actually improve productivity and business operations.

8. Recommendations

In almost every instance the recommendations seemed to be driven by corporate finance initiatives. Generally, in the plans reviewed the recommended solutions were a function of which scenario had the lowest, in terms of costs, net present value. Unfortunately this approach really just takes into account those issues that can be readily quantified.

In order to preclude such a situation, when developing conclusions and formulating the foundation for recommendations that are going to be detailed in the final MP, it is imperative that data be presented as an open presentation of issues and ideas, rather than as a statement of results. This way, all viable solutions can be explored and evaluated relative to the benchmarked data and in keeping with the direction of the business units.

[186] Richard Ellis. 1995.

There are bound to be trade-offs between financial and business considerations, and the eventual recommendations must be workable within the context of local business practices. When the conclusions and recommendations are presented they should be able to draw management to logical conclusions, even though at this point recommended scenarios will still probably be modified to take into account new developments and issues that will undoubtedly be put forth during the presentation.

C) Additional Categories that Probably Should have been Included

Discussions with the CRE staff and outside consultants responsible for writing these plans revealed that in some instances information not provided was purposely omitted because it was not within the desired scope of the master plan or planning process. In others, the data or data classes were never identified by the planning team during the organizational phase of the master plan. In a few cases, the data were not readily available, and, were therefore excluded from the master planning exercise.

If data were omitted because they were never targeted by the planning team as being relevant to the planning process, then the team may need people with additional skills and expertise. If it was omitted because it was deemed to not be readily accessible, then a usable database needs to be created as quickly as possible to provide for informed decisions in the future. Effective decisions, plans, and strategies for the future cannot be made without complete and correct information.

1. Stated Goal for the Master Plan

The most glaring omission in each of the plans analyzed may also be the most critical; a clearly stated goal and objective of the master plan was missing from each plan. Each plan did have a loosely defined purpose such as, "develop a long-term real estate strategy for its facilities," "provide an in-depth analysis of the facilities" and "provide a guide to real estate investment strategy." But not one of the plans even loosely stated as a goal, the utilization of real estate in strategic support of future business operations. This may partly explain why data was either not targeted, or not sufficiently gathered to provide maximum input to the planning process on this issue.

Criticizing these plans because they did not appear to have a clear goal, or one that can clearly be called the best goal attainable, is not entirely fair, since the CRE industry is still learning about using RE to meet business needs, and most of these planning attempts were completed by multinational corporations that did not have any true real estate master planning experience. Consequently, these plans seem to have been more of a pilot planning program that was run to learn about real estate master planning than a successful real estate master plan.[187]

At the same time, excusing the team charged with master planning for not defining clear goals because they are new to real estate planning is not objective either. By focusing on operational efficiencies, firms are still treating real estate as a requirement of the business unit, as opposed to looking at the workplace and workplace environment as a resource of the entire corporation.[188] Each multinational corporation whose real estate plan was evaluated regularly puts together teams charged with planning business objectives and planning business strategy. Given this expertise, they should be able to undertake more effective real estate planning.

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[187] Tomasko. 1993.
[188] Becker. 1990.

What is encouraging is that one of these organizations whose plans were reviewed have explicitly recognized the need to re-examine real estate master planning, and they are forming a team to further refine their RE planning process and their RE planning model. As previously stated, this decision was a direct result of earlier master planning attempts that heretofore have not been implemented.

2. Workplace and Work Strategies

It should be noted that each of the multinational corporations whose master plans were reviewed are in the process of experimenting with new methods of space utilization, as well as new ways of working, which was emphasized by team members from each of the groups. In some instances these team members were even a part of these work and workspace experiments. However, not one of the plans mentioned anything about workplace strategies.

This seems to be a missed opportunity, since the business units of these firms are also involved in reengineering many of their processes and work practices. By including these workplace strategies as part of the real estate master plan, the corporate real estate staff would be in a better position, at least an active position, to help reengineer how employees are interacting with the real estate. Even a rudimentary understanding of how these new work methods utilize space would seem to be important information that any corporate real estate employee should take into account. In addition, how can simple headcount growth and space allocation per employee figures be utilized to predict net square meters or net square feet required without even thinking about workplace strategies, such as group work areas, shared work space, telecommuting, or hotelling?[189]

Again this seems to demonstrate that the corporate real estate staff and business unit personnel involved with the master planning are still treating real estate as a requirement of the business unit, as opposed to looking at the workplace and workplace environment as a resource of the organization. Data recently gathered by the CRE 2000 research team at MIT demonstrates that the creation of new workplace strategies designed to help organizations to become more competitive and more globally focused are quickly taking off throughout the world. By not incorporating workplace strategies, the CRE planners are also not completely considering the needs of the employees, nor are they helping to position their corporation to leverage the competencies and capacities of the employees.[190]

3. Human Resource Issues

Human resource (HR) issues can be critical roadblocks to implementing real estate scenarios recommended in the plan, especially considering that many countries around the world have strict regulations that could potentially limit implementation strategies. Accordingly, moving and relocation costs, scheduling, worker and union regulations, employee health and employee training might all have a potential impact.

[189] Brill. 1992.
[190] Brill. 1994.

Consequently, it is important that these HR issues be quantified and adequately addressed by any planning attempt. Because of these potential costs involved, an HR staff person should be included on the master planning team.

4. Communication and Information Technology

Businesses have been continually changing from the office automation period of the late 1960s and 1970s, through the information processing period of the 1980s and into the integrated electronic communications period of the 1990s.[191] The Institute for the Future has termed this new technology "group technology," because it is characterized by the ability of groups and individuals to communicate "any time, any place."[192]

As a result, communication and information technology staff should also be on the master planning team. Given these rapid technological advances that continue to influence everyday lives and the proliferation of new forms of communication and information technologies, assumptions that have employees working remotely at least part of the time seem practical and highly likely.

This has to be taken into account when projecting space and workplace requirements, especially when existing space commitments can be for five, ten, fifteen, and even twenty years, depending on the typical terms and practices of obtaining real estate interests in the many cities and countries around the world. Each of the plans reviewed for this thesis

[191] Ouye, Darwish and Young. 1993.
[192] Johansen, Robert. et. all. 1991.

have existing leasehold commitments that run until 2015. Only one of the plans reviewed is currently undergoing a revision to include alternative office implications.

5. Management Policies and Practices

Management policies and practices are rapidly evolving as multinational organizations change to adapt to the many changes impacting their business, many of which are driving the demand for real estate master planning. Multinational companies need to be able to increasingly respond to the many possible changes previously discussed that can impact the business environment and business operations.

Consequently, the task is to position the organization's real estate assets so that business opportunities are maximized at the least possible cost and with the least downside risk. For example, the planning participants need to understand the risks and benefits of each real estate option in terms of both the loss of future options or the creation of new opportunities resulting from each strategic real estate decision. This practice should probably become an integral component of management decision making practices.

6. Site and Engineering Issues

Also typically missing from the CRE master plans, were physical site issues, such as mechanical and structural engineering issues that could have a dramatic impact on the future use of the facilities, unless there was an obvious limitation of the building that was well known by the planning participants.

Site and engineering issues are actually more of a physical science issue and consequently does not readily fit within the framework of forces driving the demand for RE master planning. However, these issues can have a significant impact on the real estate, balance sheet and business operations of any organization. Consequently, they should be addressed within the scope of any comprehensive RE MP.

7. Environmental Issues and Regulations

Environmental issues and regulations were not even mentioned in any of the real estate master plans reviewed for this thesis. Sustainable development and ecological economic issues could easily have been included. The importance of doing so should have been particularly recognized for three of the plans analyzed, for Germany, the United Kingdom, and Switzerland. These are areas with substantial environmental regulation, both with respect to the physical workplace environment to protect employees of the organization, and with respect to the natural environment to protect the dynamic of the ecosystem and communities located in the areas where the existing or potential facilities were sited. If environmental concerns continue to escalate, then these issues could have a significant impact on the real estate interest of these multinational organizations.

In addition, health and comfort in the workplace is of increasing importance to productivity. Some human health issues are increasingly being regulated. For example, carpal tunnel syndrome, indoor air pollution and radiation emissions from video display terminals are increasingly impacting the workplace and employee productivity. Facility responses to these issues increasingly include more thorough investigation of equipment safety, indoor workstation heating, ventilation and air conditioning controls, and provisions of daylight and operable windows. For instance, workplaces in Germany and in the Scandinavian countries are under environmental regulations that require that each staff person must be located within 7 meters, which is about 21 feet, of access to outside air.

8. Evaluation and Success Measurement

Numerous articles and studies on corporate restructuring, reorganization, reengineering, resizing etc., all recommend that an evaluation and success measurement criteria be built into the model and process of strategic and master planning.[193] Missing from each of the plans reviewed was any process to revisit the plan to evaluate both successes and failures. This is critical, especially considering the dynamics of the master planning process, as well as the many forces driving the demand for CRE master planning.

In all likelihood, the firm whose plans were reviewed that is now revisiting their CRE MP and master planning process would have benefited from a preestablished structure. More importantly, a solid RE MP can help provide not only flexibility to facilitate an efficient allocation of resources, but also a means by which to evaluate the success of experimenting with alternative office solutions. By not including a review and success measurement capability as part of the master plan, the participants seemed to miss one of the most important opportunities provided by the master planning process.

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[193] Lyne. 1993.

D) Observations on the Planning Process

It is impossible to overemphasize the importance that should be placed on "socializing" the findings of the qualitative and quantitative data gathered during the corporate real estate master planning process. If this is done, when the business unit, finance and regional managers finally meet with the planning team, there will not be any surprises and the participants will feel that they have been included in the process and kept informed of all relevant issues.

More importantly, the planning participants should fully understand that solutions to requirements for a particular site will probably not work very well if the intent is to simply copy the solutions for one facility around the globe at all other facilities. Each facility is unique, even though similarities typically exist between the various facilities of an individual organization. Accordingly, job functions may vary, attitudes, values, and mix of the staff might be different, and there will undoubtedly be physical differences between the various facilities. Undoubtedly, there will be other differences that also impact operations of the facility, business unit and staff, such as local market influences, available services, and transportation infrastructure.

These various types of differences explain why traditional attempts at standardization have not worked very well. The one-size-fits-all single approach may have appeal because of presumed efficiencies, but it does not provide the flexibility required to help position the organization for future growth, or for further evolution. A more flexible strategy would be to incorporate a multi-disciplinary approach, such as is provided in this thesis, to real estate master planning, which will focus on developing a process by which solutions can be generated within a framework of guiding principals and cost and space parameters.

The research demonstrates that RE MP should direct the organization to move away from standardizing facilities and work spaces, always understanding that work functions are complex, diverse, and typically localized, especially in an increasingly global environment.

Master planning is a customer focused process that is customized for the business units. Consequently, the real estate needs to be specifically designed to serve the job function.

As such, RE MP is in itself process management, in that incorporated into the plan is the ability of the planners to understand how the organization functions, before moving forward with workplace solutions. In an organization that is positioning itself for future evolution this also means possessing an understanding of the importance and ability of the participants to build a consensus, set goals and establish a team.

The challenge for the planners is to learn and understand the needs of the corporation from a macro perspective and the needs of the business units from a micro perspective, and then to develop strategies for meeting those needs, even if the answers do not involve solutions that incorporate traditional real estate configurations and workplace solutions.

The primary focus is not simply to control cost through real estate transactions, but rather to be concerned with corporate productivity and competitive advantage. This mandates that the planning participants understand prospective productivity strategies of the organization. That they be process managers and strategist whose focus is to align with core competencies and core business interest of the organization. As such, the planning participants are critical to the growth to the entire firm, learning to think not only about saving or making money, but also learning to aid creativity and forward thought.[194]

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[194] Hamal & Prahalad. 1994.

VI. CONCLUSION; THE BENEFITS OF REAL ESTATE MASTER PLANNING FOR A MULTINATIONAL CORPORATION

Planning is generally regarded essential to the overall success and further development of any organization. Organizations always benefit from going through the planning process, as opposed to, by default, failing to plan. Real estate master planning is no exception. Real estate master planning undertaken by a multinational corporation can be an effective tool that can be utilized in the implementation of an overall business and globalization strategy. The master planning process increases awareness and fosters forward thought, not only in creating operational economies of scale, but also in considering the organization's operations as an integrated framework of resources.

By planning for the space needs and requirements of the entire organization, a MP will assist multinationals with integrating assets, competencies, and a diverse labor pool across business units, job functions, and geographical boundaries, providing substantial leverage to the overall capacities of the organization. Initially, this will result in reduced labor and space overhead, which will increase profitability. Thereafter, this should also result in productivity increases to further sustain earnings growth. But these are all tangible, quantifiable benefits. There can also be intangible benefits to planning for the space needs and requirements of multinationals.

A MP that helps to integrate the physical assets and resources of an organization will also help to link critical intangible resources such as, shared goals, values, perspectives and vision, which represent the future and life-force of the organization. This includes looking at the space needs and requirements and trying to determine how to improve the working environment and consequently maintain and improve positive employee moral. In this way real estate master planning can approach real resources not just comprehensively, but holistically.

In other words, also recognizing how the space is going to be used and realizing the benefits that can be gained by integrating the physical and emotional resources of the organization is an integral component of real estate master planning. Accordingly, research for this thesis demonstrates that there are three main advantages that can be obtained by incorporating real estate master planning into the business practices of a multinational organization.

1. strengthening internal unity and global thought;
2. increasing competitive advantage; and
3. creating value for stockholders.

Each of these is briefly discussed below.

A) Strengthening Internal Unity and Global Thought

A well orchestrated and implemented master plan can really help managers share resources between regions and business units to integrate skill sets of an increasingly diversified staff across job functions or other cultural or organizational boundaries. For example, a master planning scenario may include providing physical space for staff consolidations and staff realignment, or it may aim for even greater integration and economies of scale by providing for shared service facilities, such as shared accounting, legal, human resource, and information technology services. Similarly, a RE MP could also be utilized to provide for the creation of alternative workspace and group work areas, as well as plan for additional alternative office experiments.

The goal of real estate and workplace planning is to improve and foster cooperation and teamwork. This would result in leveraging the skills and resources not only towards increasing productivity, but also towards building a truly globally focused organization. A multinational organization must think globally, not just act internationally. Global thought involves thinking about resources, competencies and capacities in the context of global opportunities and possibilities.

But this involves sharing goals and perspectives across the boundaries of job function, business unit, or facility. It also means building trust and creating a common vision of the organization's future not of where the organization is now, but where the organization would like to be in the future. This becomes possible with workplace integration across skill-sets and business units, which can be greatly enhanced by a well thought out real estate master plan. The opportunities to affect global thought, to influence the corporate real estate environment, to facilitate integration of corporate resources are too good to pass up.

Real estate master planning, in essence, aligns the facilities with the future direction of the organization incorporating substantially more than just physical space requirements. More importantly, master planning promotes forward thought regarding how space is going to be used, in addition to considerations about what other alternatives to the current physical workplace can be incorporated into business operations.

B) Increasing Competitive Advantage

A strategically designed and well executed master plan can greatly influence the organizations ability to increase their competitive advantage. By planning the space needs of business units in context with the needs of the organization, the master plan assists with integrating regional resources towards leveraging the global capacities of the organization. A real estate master plan has one overriding responsibility, which is to meet the space needs and requirements of the organization in conjunction with obtaining operational efficiencies that will reduce overhead while increasing the ability of the organization to compete. The result is increased cooperation between business units, regional and financial managers as they strive to link capabilities. In this manner the real estate master plan and the planning process work to create global scales of efficiencies that will capture the full benefit of integrated operations.

This scenario allows the business units to purposefully and more effectively link core competencies and leverage business operations. The result is to create global scales of efficiencies on a regional basis, which is increasingly possible due to advances and ready availability of data, video, and audio transfer technology. Consequently, a RE MP will assist with increasing organizational competitiveness on a global basis by highlighting the physical space needs and working environment issues contained in a typical plan, as well as providing a medium by which these issues could then be linked with the individual business unit plans.

An additional result of planning the space needs of business units in terms of the needs of the organization is to leverage the capacity of each employee to learn. Leveraging interdisciplinary skills will also foster creativity by providing a fertile learning environment and by providing an awareness of the individual competencies of the business units and overall mission of the organization as a whole.

C) Creating Value for Stockholders

The fixed cost and variable cost of owning and leasing facilities for business operations is one of the largest expenses incurred by any organization. The obvious direct benefit of a RE MP is the reduction of overhead that can be obtained by implementing various real estate occupancy and cost reduction scenarios, such as reducing existing real estate commitments by maximizing underutilized facilities. This could mean restacking inefficient occupancies, as well as refitting antiquated space. It could also involve shedding redundant space, or upgrading space that is technically and physically obsolete.

Cost reduction could also include implementation of more standardized data and information reporting and tracking processes and systems to more efficiently manage existing space by identifying and implementing economies of scale from a facilities management standpoint. All of these actions also reduce the direct overhead expense of building operations, as well as provide for increases in profits by cost reduction methods.

The benchmarking of data on existing facilities can be used as a reference for comparing scenarios detailed in the plan and for evaluating improvements in property operations. These base-line data also provide for more easily quantifiable measurements from a business and investment perspective. For instance, such analysis would more readily demonstrate whether or not an organization was achieving corporate return-on-equity and return-on asset hurdle rates, as well as track cost per employee, cost per unit of production, and break even expense rations. Each of these are important to analysts and investors due to their impact on share price.

But real estate master planning is even more about adding value than it is about controlling costs. Value is added when a RE MP consciously links business units and operations through group work areas and shared service facilities. In this context, master planning can help foster cultural diversity while building shared values. Both of these are invaluable towards building trust and creating a common vision for the organization's future. This is extremely important, considering that adding value for all stakeholders and not just shareholders, is really the bottom line directive of any organization. Such stakeholders to a RE MP include participants in the planning process, shareholders, employees, the principalities where the facilities are located, suppliers, customers, and even competitors.

By going through the master planning process and then revisiting the plan, the planning participants will acquire a greater appreciation and understanding of these linkages, and in so doing move towards maximizing the benefits associated with the real estate master planning process. The more comprehensive the planning process, the more comprehensive will be the understanding of where an organization is headed and the possible routes that can be taken for the organization to get there.

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