Time, Place, Space, Technology and Corporate Real Estate Strategy

Authors

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Abstract

Few corporations take a strategic approach to managing real estate. This survey finds that corporate real estate managers and service providers in Australia, Hong Kong, the United Kingdom and the United States continue to fulfill a traditional transactional role within their organizations. Real estate is not cooperating with other parts of the organization to provide their companies with flexibility that could increase competitiveness. While the use of technology is growing, real estate managers remain uncertain about its role in their future. Corporate real estate managers believe that to be effective in the future they will need strategic planning skills and business knowledge.

Introduction

Although all corporations lease and own real property that they use to support their core business, very few use a strategic approach to acquiring, managing and disposing of real estate. Often corporate real estate officers and others in the organization make daily decisions about facility location, building design, space layout and lease obligations without a plan as to how those real property holdings could contribute to the company's productivity and profitability. To be most effective, organizations should follow a corporate real estate strategy that is consistent with overall corporate strategy and coordinated with other functional areas. Yet, in the past, most real estate managers were not members of corporate strategy teams and many corporate real estate officers were not involved in decisions regarding the changing workplace.

The purpose of this study was to analyze the results of a 2000 survey of corporate real estate managers and service providers to determine whether the role of real estate in corporate strategic planning is changing and whether real estate managers are adjusting to changes in the business environment. Responses from Australia, Hong Kong, the United Kingdom and the United States are compared to analyze differences between corporate real estate management in different parts of the world. This study also explored the role of corporate real estate in the future and the knowledge and skills corporate real estate managers will need to be successful in the changing business environment.

Background

The traditional role of the corporate real estate officer was to find facilities based on specifications set by operations, negotiate the best price, manage the space, then dispose of it when operations did not want it any longer. Operations determined their goals, decided what real property they needed to support those goals, and only then contacted the real estate manager to locate the property and negotiate the lease or purchase. This exemplifies a transaction-based corporate real estate function, with the strategic decision-making handled by operations (Veale, 1989). Even among companies that employ a corporate real estate officer, few have placed the head of property issues at a major decision-making level in the organization (Avis, 1990). Therefore, in many organizations the corporate real estate manager is not involved in the company's strategic planning process. Rather, real estate decisions are made on a property-by-property basis with no overall guiding plan for real estate assets. In addition, these real estate choices are often made without consultation and coordination with other important business units such as marketing, information systems and human resources.

An International Development Research Council (IDRC) study (Joroff, Louargand, Lambert and Becker, 1993) identified five evolutionary stages of corporate real estate unit development: (1) taskmaster; (2) controller; (3) dealmaker; (4) intrapreneur; and (5) business strategist. This sequence recognizes the need for real estate executives to move from order taking and care taking to tackling company-wide competitiveness issues. The question is whether corporate real estate officers have evolved into the business strategist stage.

Real Estate as Part of the Corporate Strategy

Handling corporate real estate operations as individual transactions reduces real estate's ability to effectively contribute to the company's profitability. Without involvement in corporate strategic planning, the corporate real estate manager must assume a reactive role (Avis, 1990), which is costly and time consuming (Veale, 1989).

For real property to fully contribute to the corporation, senior management must consider real estate issues when developing strategic plans (Manning and Roulac, 1999). Thus, the corporate strategic plan would logically lead to a real property strategic plan that would guide real estate decisions. This implies a proactive, comprehensive and portfolio-wide decision-making process with the commitment of upper management (Veale, 1989). Yet surveys, such as reported in Avis (1990), indicate most organizations in the late 1980s found it difficult to incorporate real estate into their strategic planning process. For example, most had planning periods of less than five years, making it difficult to optimize the company's real estate holdings, which are often long-term investments.

The role of the corporate real estate officer in an organization that incorporates real estate into strategic planning is to establish and maintain a close match

between the organization's business and real estate strategies (Bon, 1994). To ensure this match, the real estate unit must shift: (1) from a real estate orientation to a business focus; (2) from a transactional orientation to a process orientation; (3) from control-oriented to service-oriented; (4) from reactive to proactive; (5) from automation to information systems; (6) from standardization to customization of workspace; and (7) from real estate skills to general management capability (Joroff, Louargand, Lambert and Becker, 1993).

Real estate managers surveyed by Arthur Anderson & Co. (1993) agreed that linking strategic real estate planning to overall business strategy is important for the success and profitability of the company and that property can contribute to the organization's competitive advantage. However, real estate managers interviewed by IDRC in the 1980s reported their companies were not consulting the real estate department about real property's role in corporate strategy nor keeping the real estate department fully informed of corporate business strategy (Pittman and Parker, 1989).

Corporate Executives' Understanding of Real Estate

One impediment to real estate being included in corporate strategic planning is corporate executives' lack of knowledge and understanding of real property. For example, New Zealand executives tend to believe real estate decision-making is not an integral part of their corporate strategic planning (Teoh, 1993). An Arthur Andersen & Co. (1993) survey indicates that senior managers in the U.S. perceive real estate activities not as strategic, but as meeting the ongoing needs of business units. They believe that real estate has little effect on how effectively a company competes in the marketplace. Similarly, only 16% of chief executive officers in the U.K. view property as an important strategic resource. While they think property is a moderately important resource for the company's success, these CEOs believe it is less important than people, technology, information or finance (Gibson, 1995).

Only real estate professionals can educate general managers about real property and its role in contributing to corporate success. To accomplish this goal, corporate real estate managers need direct and ongoing communication with senior management as well as involvement in the strategic planning process. Yet one-fourth of the real estate executives surveyed in the late 1980s said they were not regularly exposed to overall corporate strategy and planning (Veale, 1989). Similarly, almost half of those surveyed by IDRC during that time reported communicating with their CEOs no more often than every six months (Pittman and Parker, 1989).

A later IDRC survey found that although many corporate real estate officers can document that their new workplace strategies reduce occupancy costs, enhance employee productivity and improve employee satisfaction, recruitment or retention, many are evidently not reporting these results to senior management

(Lambert, Poteete and Waltch, 1995). Yet, the Arthur Andersen & Co. (1993) study found that senior managers would use real estate information in business decisions when that information is effectively communicated. Bon (1994) suggests that corporate real estate officers need to develop a mechanism to gather data on property performance, use indicators or benchmarks to assess performance, and deliver the resulting information to management for use in analyzing the effect of real property on the overall performance of the organization.

The Changing Business and Workplace Environment

Among the biggest challenges facing business today are globalization, consolidation, downsizing, restructuring, streamlining, technological changes, changes in the workforce and the increased emphasis on flexibility. To meet these challenges businesses need efficient, innovative and productive work environments with flexibility for expansion and contraction in response to the market. Decisions about site selection, building design and contractual relationships are critical in matching a company's physical resources with business realities.

Flexibility to enable a company to quickly react to changes in the marketplace is not a new problem. Even in Veale's (1989) survey, three-fourths of real estate executives said flexibility was a critical issue. Since that time companies have flattened their hierarchies while trying to organize as networks, encouraging teams that bring workers together to perform a job then break apart and reform as new teams. New voice and image communication technologies can bridge geographic distances, allowing teams to work together from different locations.

''Although great attention is given to plant layout in the manufacturing setting and to store design in the retail context, very little attention has been given to how the design of physical work space for knowledge work complements the doing of knowledge work. . . . Almost without exception, the selection of space in which businesses operate is made without explicit consideration of how that space prospectively might complement the work of the workers who will work in that space,'' (Nourse and Roulac, 1993:483). Providing workers with an environment that promotes creativity, effectiveness, productivity and efficiency means producing goods and services faster, cheaper and more efficiently.

Workplace efficiency can be achieved through reducing space per employee through redesign, consolidating workspace, intensifying space use through non-territorial offices (such as hotelling) and making capital improvements that reduce the time and cost of churn when new product teams are put in place (Lambert, Poteete and Waltch, 1995). Such redesign can create team environments and interaction areas. Similarly, technology such as virtual offices and teleconferencing can increase efficiency even further.

In addition to workplace design, site selection can support strategic human resources objectives. Location and quality of space, nearby amenities and complementary facilities can aid in attracting and retaining skilled workers.

Yet, a U.K. study in the late 1980s found none of the participating organizations had addressed the issue of how buildings affect the company's organizational performance (Avis, 1990). An IDRC survey of business unit real estate customers in the early 1990s revealed that only about half believe workplace location and design significantly contribute to access to qualified workers and employee satisfaction, 44% believe it contributes significantly to efficiency improvement, 43% to productivity improvement and 28% to cost reduction (Lambert, Poteete and Waltch, 1995).

Many real estate experts surveyed by Carn, Black and Rabianski (1999) believe that corporate real estate needs to provide greater flexibility for quicker responses to technical change and shorter product life cycles. By producing real estate strategic plans that address the business units' objectives (efficiency, customer satisfaction, productivity, etc.), corporate real estate executives can best demonstrate their value and provide a platform for being involved in broader corporate planning processes (Lambert, Poteete and Waltch, 1995).

Yet, Gibson and Lizieri's (2001) study of corporate real estate executives in the U.K. found that while a majority of the firms had undertaken some form of business process re-engineering, corporate restructuring, downsizing or outsourcing, the result was only a small proportion of workers with home working arrangements or some form of hot desking supported by email, voice mail and videoconferencing. They found instead that increased need for teamwork had led mainly to changes in internal office layouts and that corporate downsizing had permitted reduction in office space requirements. While corporate real estate executives in the U.K. believe the increasing use of information technology and new work practices to be the most important issues their organizations face in the future, at this point the lack of information and communication technology, the lack of flexible office leasing terms in the market and the resistance of middle management are constraining the use of alternative work practices.

Cooperation with Other Business Units

A coordinated strategic approach to real estate planning requires corporate real estate managers to work with related business units. Yet, according to the Arthur Andersen & Co. (1993) and IDRC (Lambert, Poteete and Waltch, 1995) studies, most real estate managers do not work closely with human resources, MIS or marketing departments. However, a majority do work closely with legal, operations and facilities departments.

The Skills Real Estate Managers Need to Be Effective

If real estate managers are to be included in the strategic planning process, they must become strategists and creative problem solvers who take a management view of real estate over a long-term planning horizon (Schaefers, 1999). Most

importantly, the real estate manager must possess the skills and education to understand the changes taking place in the business environment and anticipate their impact on the company's real property needs.

Real estate managers increasingly need to understand how site selection, facility design and space utilization decisions affect a company's business operation and profitability. They must be involved in designing new space and re-engineering existing space to accommodate changing technology. Thus, to be effective, the real estate manager must be knowledgeable about how telecommunications and other technology integrated into workspace can improve worker productivity.

The Carn, Black and Rabianski (1999) survey indicates that real estate experts believe corporate real estate executives need business, engineering and technological abilities to be successful. Earlier, Arthur Andersen & Co. (1993) respondents said understanding the company's business, negotiation and deal-making and strategic planning skills are required for success. Thus, those involved in the industry appear to recognize the need for general management skills.

In addition, if corporate real estate managers are to evolve from taskmasters to business strategists, they must develop better means of communication with top executives to explain how real estate contributes to the company's profitability and success. The real estate manager must explain how decisions regarding space can affect flexibility, productivity and other critical business issues. However, the key to this evolution of the real estate function within organizations is the inclusion of real estate planning as part of the strategic planning process. Therefore, this study examined how far corporate real estate has come as of 2000.

Methodology

The Corporate Real Estate Management Research Unit at the University of Reading in conjunction with Johnson Controls Incorporated annually conducts a survey of corporate real estate executives and service providers who advise on the corporate real estate portfolios of other organizations. This survey is conducted with the endorsement of the IDRC and the International Association of Corporate Real Estate Executives (NACORE). Both the IDRC and NACORE distribute the questionnaire to their membership. A total of 190 chief real estate officers, real estate executives, real estate service providers and others in similar positions from around the world responded to the 2000 survey. This analysis focuses on the eighty U.S. respondents, thirty-four Australians, thirty-seven from the U.K. and fifteen from Hong Kong because of the large number of responses from each country and their geographic dispersion.

The first section of the questionnaire asked for professional and organizational background information (experience, main business, portfolio data, staffing and organization). The second section asked executives to indicate the five most important corporate real estate management objectives and initiatives they are currently pursuing from a list of nineteen possible objectives. Respondents were

also asked to identify which of thirty-two policies, functions and activities were new initiatives, part of their business as usual or not undertaken by their companies.

The third section contained the opinion section of the questionnaire. Respondents were presented with a list of eleven possible characteristics and roles for corporate real estate and asked to indicate whether they believe each statement is characteristic of their own organization and characteristic of other organizations using a scale of 1 to 5, with 1 representing ''strongly disagree'' and 5 representing ''strongly agree.'' The next part of the questionnaire asked the respondents to rate the future importance of thirty-eight knowledge and skill areas to corporate real estate management, using a scale from 1 ''least important'' to 5 ''most important.''

The final section of the questionnaire asked the respondents to indicate the impact the Internet is having on corporate real estate by indicating agreement on a scale of 1 to 5, with 1 representing ''strongly disagree'' and 5 representing ''strongly agree,'' with a list of ten statements relating to the Internet.

The responses to the questionnaire were organized for analysis by country where the respondent is located. The answers were summarized for the entire sample, the Australian respondents, the U.S. respondents, the Hong Kong respondents and the U.K. respondents. The overall results provide information to determine the current role of real estate in strategic planning, the most important issues facing real estate executives today, their current initiatives, and what skills and knowledge they believe are needed to be successful in the future.

The Australian, U.S., Hong Kong and U.K. responses were compared to determine if the status of corporate real estate differs around the world and whether real estate executives in each location have the same vision for the future. Chi-square tests and Kruskal-Wallis tests, as appropriate, were applied to test for significant differences among the countries. A significance level of .05 was used.

The knowledge and skill items were also factor analyzed once a correlation analysis indicated significant correlation among several of the items. The Bartlett sphericity test on the data is significant ($\chi^2_{(703)} = 2479$, $P = .00$), indicting the data are approximately multivariate normal and acceptable for factor analysis. An exploratory factor analysis was employed using principal component extraction and varimax rotation with a selection criterion of minimum eigenvalue >1. Eleven factors were extracted. Five variables were removed that did not load well on any factor and the number of factors was reduced to eight. The resulting factor loadings were all greater than .500, and all of the coefficient alpha measures of internal consistency were greater than .600.

Results

Exhibits 1 and 2 present a summary of the respondents. The majority of the respondents are corporate real estate executives, but not the most senior real estate

Exhibit 1 | Respondent Characteristics

	Total		Australia		Hong Kong		U.K.		U.S.	
Characteristic	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
Total	166	100.0	34	100.0	15	100.0	37	100.0	80	100.0
Education										
Higher degree (Ph.D./masters)	62	37.3	5	14.7	7	46.7	7	18.9	43	53.8
Other postgraduate	29	17.5	12	35.3	1	6.7	9	24.3	7	8.8
Degree	60	36.1	12	35.3	6	40.0	17	45.9	25	31.3
Other post secondary	7	4.2	3	8.8	0	0.0	2	5.4	2	2.5
Secondary/high school	4	2.4	1	2.9	0	0.0	1	2.7	2	2.5
Other	4	2.4	1	2.9	1	6.7	1	2.7	1	1.3
Role in corporate real estate/property industry										
CREO	45	27.1	10	29.4	3	20.0	5	13.5	27	33.8
Real estate executive	61	36.7	10	29.4	9	60.0	11	29.7	31	38.8
Real estate management service provider	40	24.1	7	20.6	3	20.0	18	48.6	12	15.0
Other	20	12.0	7	20.6	0	0.0	3	8.1	10	12.5
Experience in current position										
<5 years	104	62.7	22	64.7	8	53.3	21	56.7	53	66.3
5–14.9 years	47	28.3	10	29.4	7	46.7	11	29.7	19	23.8
15+ years	13	7.8	2	5.9	0	0.0	4	10.8	7	8.8
Not reported	2	1.2	0	0.0	0	0.0	1	2.7	1	1.3
Experience in corporate real estate										
< 5 years	18	10.8	6	17.6	3	20.0	2	5.4	7	8.8
5–14.9 years	58	34.9	15	44.1	4	26.7	13	35.1	26	32.5
15+ years	82	49.4	13	38.2	6	40.0	20	54.1	43	53.8
Not reported	8	4.8	0	0.0	2	13.3	2	5.4	4	5.0

Exhibit 2 | Respondent's Company Characteristics

	Total		Australia		Hong Kong		U.K.		U.S.	
Characteristic	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
Total	166	100.0	34	100.0	15	100.0	37	100.0	80	100.0
Strategic planning horizon										
<3 years	27	16.3	2	5.9	2	13.3	8	21.6	15	18.8
<3–9 years	88	53.0	21	61.8	8	53.3	17	45.9	42	52.5
10+ years	8	48.0	2	5.9	1	6.7	0	0.0	5	6.3
Not reported	43	25.9	9	26.5	4	26.7	12	32.4	18	22.5
Corporate real estate management organization										
Cost center	103	73.0	18	64.3	10	76.9	19	65.5	56	78.9
Separate subsidiary	14	10.5	2	7.4	1	8.3	3	10.7	8	12.1
Profit center	39	28.5	10	35.7	4	33.3	11	39.3	14	20.3
Organized by function	106	75.2	19	67.9	13	100.0	20	71.4	54	75.0
Organized by region	62	44.6	9	31.0	6	50.0	16	57.1	31	44.3
Organized by internal client/business unit	51	37.8	12	44.4	7	63.6	10	37.0	22	31.4
Number of properties owned or leased										
< 25 properties	38	22.9	9	26.5	5	33.3	7	18.9	17	21.3
25–99 properties	24	14.5	8	23.5	3	20.0	5	13.5	8	10.0
100+ properties	63	38.0	11	32.4	2	13.3	12	32.4	38	47.5
Not reported	41	24.7	6	17.6	5	33.3	13	35.1	17	21.3
Portion of properties owned in total property used										
<34%	39	23.5	6	17.6	4	26.7	7	18.9	22	27.5
34%–66%	27	16.3	7	20.6	0	0.0	2	5.4	18	22.5
67%+	40	24.1	10	29.4	7	46.7	8	21.6	15	18.8
Not reported	60	36.1	11	32.4	4	26.7	20	54.1	25	31.3

Exhibit 2 | (continued)

Respondent's Company Characteristics

	Total		Australia		Hong Kong		U.K.		U.S.	
Characteristic	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
Industry										
Construction	5	3.0	1	2.9	0	0.0	0	0.0	4	5.0
Energy / mining	3	1.8	1	2.9	0	0.0	1	2.7	1	1.3
FIRE	63	38.0	10	29.4	6	40.0	18	48.6	29	36.3
Governmental / institutional	20	12.0	8	23.5	3	20.0	0	0.0	9	11.3
Manufacturing	14	8.4	2	5.9	0	0.0	2	5.4	10	12.5
Services	9	5.4	1	2.9	0	0.0	4	10.8	4	5.0
Tech / telecom	17	10.2	0	0.0	2	13.3	8	21.6	7	8.8
Transportation	8	4.8	0	0.0	2	13.3	0	0.0	6	7.5
Utilities	6	3.6	4	11.8	0	0.0	0	0.0	2	2.5
Wholesale / retail trade	12	7.2	6	17.6	1	6.7	1	2.7	4	5.0
Other	7	4.2	1	2.9	0	0.0	2	5.4	4	5.0
Not reported	2	1.2	0	0.0	1	6.7	1	2.7	0	0.0

officer in the organization. Most of the respondents from the U.S., Australia and Hong Kong are either the chief real estate officer or real estate executive in their companies while a large proportion of the U.K. respondents work as real estate service providers or investors. The majority has at least a college degree, with many holding an advanced degree. Most have less than five years experience in their current job, but more than five years experience in corporate real estate, perhaps indicating significant turnover in corporate real estate positions that would hamper development and implementation of long-term real estate strategies.

The respondents' companies represent organizations of every size across a wide spectrum of the economy. More than one-third (38%) of the respondents work in finance, insurance or real estate companies, 12% for government or institutional organizations and 10% in the technology or telecommunications industries. The companies are satisfying their real estate needs with a variety of approaches, some leasing most of their space and others purchasing most of their properties. Organizational structures vary. Most of the companies treat their real estate unit as a cost center, but a substantial proportion, especially outside the U.S., treats their real estate unit as a profit center. The strategic planning horizon for most companies is five years or less, with many using only a two- or three-year planning horizon.

Real Estate as Part of the Corporate Strategy

Although the survey results indicate that companies are satisfying their real estate needs with a variety of approaches and organizational structures, there is little evidence that real estate decisions have yet been integrated into overall corporate strategic planning. The strategic planning horizon for most companies remains five years or less, with many using only a two- or three-year planning horizon, similar to what Avis (1990) reported. Such a short-term view limits the company's ability to approach a long-term commitment such as real estate in a strategic manner.

The rank order of importance of objectives and initiatives that the respondents are currently pursuing, as shown in Exhibit 3, indicates the top three objectives are: meeting the workplace needs of business growth, meeting the individual needs of business operating divisions and minimizing the operating expense of the portfolio. Some of the objectives that few identified as important are: minimizing real estate staff through flexible outsourcing and minimizing property oriented operational constraints on the organization. These results demonstrate most corporate real estate officials are pursuing the traditional objectives of supplying needed space at the lowest cost rather than focusing on productivity and flexibility. Australian respondents are the only group to rank enhancing the organization's image as a top objective.

Exhibit 3 | Corporate Real Estate Managers' Current Objectives

	Rank Order					
Objectives Currently Pursuing	Total	Australia	Hong Kong	U.K.	U.S.	χ^2
Meet the workplace needs of business growth	1	3	1	1	1	4.4
Meet the individual needs of business operating decisions	2	2	3	2	2	0.8
Minimize the operating expense of the portfolio	3	1	2	4	3	3.9
Maximize the quality of the workplace in support of work activity and team productivity	4	6	3	5	4	1.8
Minimize the liabilities and risks to the organization caused by property and its use	5	4	6	3	5	10.9*
Enhance the organization's internal and external image through its property and working environments	6	4	6	6	12	3.8
Maximize the work practice flexibility of the workplace	7	16	10	7	5	2.7
Maximize the physical flexibility of the workplace	8	7	12	8	10	1.5
Maximize the organizational benefits from a 'global' property resource	9	9	12	14	7	2.2
Liquidation of property asset value for business investment	10	7	12	14	13	2.2
Develop and/or implement an e-business strategy	10	9	17	13	11	3.2
Minimize the capital investment requirement of the portfolio	12	13	17	14	7	4.4

Exhibit 3 | (continued)

Corporate Real Estate Managers' Current Objectives

	Rank Order					
Objectives Currently Pursuing	Total	Australia	Hong Kong	U.K.	U.S.	χ^2
Integration of an acquired/merged organization's portfolio	12	13	12	17	7	3.4
Reduce the portfolio's size/divest space	12	9	17	8	13	2.7
Achieve more integration and benefits with other organisational infrastructure/support functions	12	9	6	17	13	1.6
Support dynamic cultural change through the workplace	16	18	10	8	13	2.1
Maximize the investment capital value of the portfolio	17	16	12	8	17	1.5
Minimize property oriented operational constraints on the organization	18	13	6	8	19	3.1
Minimize direct real estate/FM headcount requirement through flexible outsourcing	19	19	3	17	18	16.8*

Notes: Total: $n = 166$; Australia: $n = 34$; Hong Kong: $n = 15$; U.K.: $n = 37$; U.S. $n = 80$.
*Proportion responding as one of five most important significantly different at .05 level.

Corporate Executives' Understanding of Real Estate

Real estate officers believe the most representative statements in this survey about their organizations are that the primary aim of real estate is to provide appropriate working environments for the least overall cost and real estate is only a part of the working environment their organization requires. They do not believe that their corporate executives recognize that every organization that occupies space is in the real estate business nor that real estate financial returns are the same or higher than overall returns (Exhibit 4). Thus, most real estate managers do not believe their senior management approaches real estate as a component of the company's investment portfolio that can be managed strategically, but rather as a cost of production. Not much seems to have changed since the Arthur Andersen & Co. (1993) or Gibson (1995) surveys.

Most respondents think more highly of the role the real estate manager is playing in their own organization than in others (comparing results in Exhibits 4 and 5). The respondents believe they are in a better position than their colleagues at other organizations in terms of reporting to senior executives and exposure to corporate strategy. In addition to the shortcomings they recognize in their own companies, they believe that real estate executives in other companies do not generally take the lead in integrating all aspects of workplace delivery nor do they believe they have a responsibility for enhancing workforce productivity.

Once again, some geographic differences are apparent. Real estate officers in the U.S. and Hong Kong more strongly believe that real estate information is regularly reported to corporate executives in other organizations. Perhaps corporate real estate management relationships with senior executives in the U.S. and Hong Kong are in the lead. This would indicate an improvement in the U.S. from the IDRC surveys (Pittman and Parker, 1989; and Lambert, Poteete and Waltch, 1995).

The Changing Business and Workplace Environment

The most common business policies, functions and activities that real estate managers consider business as usual are e-mail, in-house purchasing, in-house facilities management, organization intranets/networks and in-house move planning/management, as is shown in Exhibit 6. Few companies are undertaking clear desk policy, desk sharing, hotelling or a property-related research fund, a similar finding to Gibson and Lizieri (2001). The most common new initiatives are e-business strategy, e-procurement and teleworking, all technology-related initiatives. Those in the corporate real estate field in the U.K. have undertaken more innovative workplace policies such as desk sharing. Companies in the U.K. are also more likely to have a clear desk policy that ensures that documents are easily retrieved after an explosion.

Only the Americans are emphasizing the organization's need for physical and work practice flexibility, as is shown in Exhibit 3. Thus, few are responding to

Exhibit 4 | Perceived Role and Characteristics of Corporate Real Estate in My Organization

Role / Characteristic	Total Mean*	Australia Mean	Hong Kong Mean	U.K. Mean	U.S. Mean	χ^2
Real estate is only part of the working environment organizations require	4.10 (157)	4.12 (33)	3.57 (14)	3.67 (36)	4.39 (74)	20.1**
Primary aim of real estate in organizations is to provide appropriate working environments for the least overall cost	4.08 (155)	3.94 (32)	4.14 (14)	3.94 (36)	4.19 (73)	3.1
Real estate information is regularly reported to corporate executives	3.56 (156)	3.12 (33)	3.50 (14)	3.51 (35)	3.80 (74)	6.8
Real estate is an important capital asset the return on which organizations seek to maximize	3.46 (156)	3.42 (33)	3.50 (14)	3.49 (35)	3.46 (74)	0.0
Real estate executives are regularly briefed about corporate goals and strategies	3.41 (155)	3.09 (33)	3.36 (14)	3.60 (35)	3.48 (73)	3.6
Real estate is recognized as a key corporate asset in organizations	3.38 (156)	3.00 (33)	3.57 (14)	3.54 (35)	3.43 (74)	4.5
Real estate executives generally have a responsibility for enhancing workforce productivity	3.28 (154)	3.39 (33)	3.29 (14)	3.14 (35)	3.29 (72)	1.0
CREOs have sufficient information to clearly evaluate the performance of real estate	3.17 (154)	3.12 (33)	3.36 (14)	3.03 (35)	3.22 (72)	1.3
Real estate executives generally take the lead in integrating all aspects of workplace delivery	3.05 (155)	3.24 (33)	3.36 (14)	2.89 (35)	2.99 (73)	2.4
Corporate executives recognize that every organization that occupies space is in real estate business	2.84 (157)	2.79 (33)	3.00 (14)	2.75 (36)	2.88 (74)	0.9
Real estate financial returns are the same or higher than overall returns	2.78 (153)	2.79 (33)	2.92 (13)	2.49 (35)	2.90 (72)	4.1

Notes: Values of n appear in parentheses.
*Mean responses on a scale of 1 to 5 with 1 representing "strongly disagree" and 5 representing "strongly agree."
**Means are significantly different at the .05 level.

Exhibit 5 | Perceived Role and Characteristics of Corporate Real Estate in Other Organizations

	Total	Australia	Hong Kong	U.K.	U.S.	
Role / Characteristic	Mean*	Mean	Mean	Mean	Mean	χ^2
Primary aim of real estate in organizations is to provide appropriate working environments for the least overall cost	3.94 (147)	3.76 (29)	4.00 (13)	3.97 (35)	3.99 (70)	1.8
Real estate is only part of the working environment organizations require	3.81 (147)	3.80 (30)	3.69 (13)	3.50 (34)	3.99 (70)	5.7
Real estate is an important capital asset the return on which organizations seek to maximize	3.39 (145)	3.43 (30)	3.69 (13)	3.18 (33)	3.42 (69)	4.6
Real estate information is regularly reported to corporate executives	3.20 (145)	2.93 (29)	3.38 (13)	2.88 (33)	3.43 (70)	12.8**
Real estate is recognized as a key corporate asset in organizations	3.12 (144)	3.10 (30)	3.31 (13)	2.88 (32)	3.20 (69)	3.9
CREOs have sufficient information to clearly evaluate the performance of real estate	3.07 (144)	2.93 (30)	3.38 (13)	2.85 (33)	3.18 (68)	5.9
Real estate executives are regularly briefed about corporate goals and strategies	3.02 (145)	2.97 (30)	3.38 (13)	2.91 (33)	3.03 (69)	4.3
Real estate executives generally have a responsibility for enhancing workforce productivity	2.90 (144)	2.90 (30)	3.38 (13)	2.61 (33)	2.96 (68)	7.5
Corporate executives recognize that every organization that occupies space is in real estate business	2.88 (145)	2.93 (30)	2.85 (13)	2.53 (32)	3.01 (70)	4.5
Real estate financial returns are the same or higher than overall returns	2.75 (142)	2.73 (30)	3.42 (12)	2.47 (32)	2.78 (68)	12.4
Real estate executives generally take the lead in integrating all aspects of workplace delivery	2.70 (145)	2.70 (30)	2.92 (13)	2.55 (33)	2.74 (69)	1.7

Notes: Values of n appear in parentheses.
*Mean responses on a scale of 1 to 5 with 1 representing "strongly disagree" and 5 representing "strongly agree."
**Means are significantly different at the .05 level.

Exhibit 6 | Status of Corporate Real Estate Policies, Functions and Activities

	Total				Australia				Hong Kong				U.K.				U.S.				
	BaU	NI	No	Total	BaU	NI	No	Total	BaU	NI	No	Total	BaU	NI	No	Total	BaU	NI	No	Total	
Policy, Function or Activity	%	%	%	*n*	%	%	%	*n*	%	%	%	*n*	%	%	%	*n*	%	%	%	*n*	χ^2
E-mail	87.0	9.9	3.1	161	87.9	9.1	3.0	33	86.7	0.0	13.3	15	82.9	17.1	0.0	35	88.5	9.0	2.6	78	9.7
In-house purchasing function	75.5	7.7	16.8	155	74.2	3.2	22.6	31	73.3	20.0	6.7	15	71.4	11.4	17.1	35	78.4	5.4	16.2	74	6.6
In-house facilities-management function	68.6	8.3	23.1	156	59.4	3.1	37.5	32	66.7	20.0	13.3	15	61.8	14.7	23.5	34	76.0	5.3	18.7	75	11.3
Organizational intranets / networks	67.7	22.4	9.9	161	75.8	15.2	9.1	33	66.7	26.7	6.7	15	58.3	27.8	13.9	36	68.8	22.1	9.1	77	3.0
In-house move planning / management function	64.7	7.7	27.6	156	56.3	3.1	40.6	32	73.3	13.3	13.3	15	60.0	11.4	28.6	35	68.9	6.8	24.3	74	6.4
Property by property accounting system	61.3	10.3	28.4	155	69.7	9.1	21.2	33	50.0	14.3	35.7	14	64.7	14.7	20.6	34	58.1	8.1	33.8	74	4.5
Computer-based property inventory system	60.4	20.8	18.9	159	66.7	9.1	24.2	33	26.7	60.0	13.3	15	54.3	20.0	25.7	35	67.1	18.4	14.5	76	19.7**
Procurement policy	60.0	21.9	18.1	155	63.6	15.2	21.2	33	60.0	33.3	6.7	15	51.4	25.7	22.9	35	62.5	20.8	16.7	72	4.2
In-house maintenance-management function	60.0	7.0	31.0	155	65.6	6.3	28.1	32	66.7	20.0	13.3	15	58.8	11.8	29.4	34	56.8	6.8	36.5	74	5.7
Disaster recovery plan(s)	58.0	13.4	28.7	157	57.6	6.1	36.4	33	60.0	26.7	13.3	15	51.4	11.4	37.1	35	60.8	14.9	24.3	74	7.2
Property management information system	54.8	28.7	16.6	157	54.5	18.2	27.3	33	42.9	35.7	21.4	14	54.3	34.3	11.4	35	57.3	29.3	13.3	75	5.9
Separate evaluation of real estate	53.8	15.4	30.8	156	62.5	15.6	21.9	32	46.7	33.3	20.0	15	45.7	14.3	40.0	35	55.4	12.2	32.4	74	7.1

Exhibit 6 | (continued)

Status of Corporate Real Estate Policies, Functions and Activities

	Total				Australia				Hong Kong				U.K.				U.S.				
	BaU	NI	No	Total	BaU	NI	No	Total	BaU	NI	No	Total	BaU	NI	No	Total	BaU	NI	No	Total	
Policy, Function or Activity	%	%	%	*n*	%	%	%	*n*	%	%	%	*n*	%	%	%	*n*	%	%	%	*n*	χ^2
In-house construction-management function	53.8	7.1	39.1	156	46.9	0.0	53.1	32	53.3	20.0	26.7	15	32.4	17.6	50.0	34	66.7	2.7	30.7	75	23.4**
Intranet / internet service portal / site	51.6	28.7	19.7	157	57.6	24.2	18.2	33	46.7	20.0	33.3	15	44.4	36.1	19.4	36	53.4	28.8	17.8	73	3.6
Property strategic plan(s)	51.6	24.5	23.9	159	60.6	18.2	21.2	33	46.7	26.7	26.7	15	51.4	28.6	20.0	35	48.7	25.0	26.3	76	2.1
Policy on the use of consultants	51.0	11.6	37.4	155	62.5	9.4	28.1	32	53.3	33.3	13.3	15	48.6	11.4	40.0	35	46.6	8.2	45.2	73	12.4
Formal workplace space standards	50.3	23.3	26.4	159	48.5	9.1	42.4	33	40.0	33.3	26.7	15	41.2	32.4	26.5	34	57.1	23.4	19.5	77	10.3
Internal rents / recharging	48.4	11.9	39.6	159	57.6	12.1	30.3	33	40.0	26.7	33.3	15	47.1	5.9	47.1	34	46.8	11.7	41.6	77	6.0
Ongoing property performance measure	46.8	19.2	34.0	156	54.5	12.1	33.3	33	42.9	35.7	21.4	14	44.1	17.6	38.2	34	45.3	20.0	34.7	75	44.3
In-house design-management function	45.5	9.0	45.5	156	37.5	3.1	59.4	32	46.7	33.3	20.0	15	26.5	17.6	55.9	34	57.3	2.7	40.0	74	27.6**
Property performance benchmarking study(s)	39.6	23.9	36.5	159	42.4	18.2	39.4	33	40.0	26.7	33.3	15	31.4	28.6	40.0	35	42.1	23.7	34.2	76	1.9
Property services help-desk	38.1	18.7	43.2	155	33.3	12.1	54.5	33	46.7	40.0	13.3	15	31.4	28.6	40.0	35	41.7	12.5	45.8	72	13.1
Supplier alliance creation and management	36.5	27.6	35.9	156	37.5	25.0	37.5	32	40.0	40.0	20.0	15	22.9	22.9	54.3	35	41.9	28.4	29.7	74	8.8

Exhibit 6 | (continued)

Status of Corporate Real Estate Policies, Functions and Activities

	Total				Australia				Hong Kong				U.K.				U.S.				
	BaU	NI	No	Total	BaU	NI	No	Total	BaU	NI	No	Total	BaU	NI	No	Total	BaU	NI	No	Total	
Policy, Function or Activity	%	%	%	*n*	%	%	%	*n*	%	%	%	*n*	%	%	%	*n*	%	%	%	*n*	χ^2
In-house research and development function	35.7	10.2	54.1	157	43.8	9.4	46.9	32	26.7	33.3	40.0	15	31.4	8.6	60.0	35	36.0	6.7	57.3	75	11.2
Teleworking	33.8	33.1	33.1	160	27.3	39.4	33.3	33	20.0	13.3	66.7	15	38.9	30.6	60.6	36	36.8	35.5	27.6	76	10.0
Serviced offices	28.0	11.2	60.8	143	22.6	9.7	67.7	31	26.7	26.7	46.7	15	18.2	6.1	75.8	33	35.9	10.9	53.1	64	9.5
Clear desk policy	25.3	10.8	63.9	158	24.2	3.0	72.7	33	26.7	13.3	60.0	15	40.0	20.0	40.0	35	18.7	9.3	72.0	75	13.5**
E business strategy	21.3	45.0	38.8	160	18.8	46.9	34.4	32	13.3	26.7	60.0	15	22.9	45.7	31.4	35	23.4	47.4	29.5	78	5.5
E-procurement	15.9	40.1	43.9	157	18.8	34.4	46.9	32	13.3	26.7	60.0	15	2.9	37.1	60.0	35	21.3	46.7	32.0	75	12.6
Hotelling facilities	12.2	26.3	61.5	156	9.7	22.6	67.7	31	6.7	26.7	66.7	15	20.0	22.9	57.1	35	10.7	29.3	60.0	75	3.4
Desk sharing	11.4	24.1	64.6	158	12.5	21.9	65.6	32	0.0	26.7	73.3	15	27.8	22.2	50.0	36	5.3	25.3	69.3	75	14.5**
Property-related research fund	10.2	5.7	84.1	157	12.1	9.1	78.8	33	20.0	13.3	66.7	15	5.7	2.9	91.4	35	9.5	4.1	86.5	74	6.2

Notes:

*BaU = Business as Usual; NI = New Initiative; No = Not Done at All.

**Proportion responding business as usual, new initiative or not done at all significantly different at the .05 level.

the need for flexibility identified by Veale (1989) and Carn, Black and Rabianski (1999).

American and Australian corporate real estate officials place more emphasis on technological advances despite Gibson and Lizieri's (2001) findings that corporate real estate executives in the U.K. believe the increasing use of information technology and new work practices to be the most important issues their organizations face in the future. Those in the U.K. and Hong Kong are less likely to be involved in e-procurement. However, Hong Kong companies are working on establishing computer-based property inventory systems that many from the other countries already have in place.

The respondents appear unsure what impact the Internet is having on corporate real estate and the property industry, as is shown in Exhibit 7. The strongest positive opinion is that Internet-based information systems will make the management of global portfolios easier. Service providers in the U.K., however, are least likely to believe that (1) Internet-based information systems will enable better business decisions concerning real estate; and (2) Internet-based information systems will speed the management integration of all corporate infrastructure resources. Those in the U.K. and Australia are also less likely to think the Internet is causing revolutionary change to the structure and practices of the property industry.

Cooperation with Other Business Units

As is shown in Exhibit 3, most corporate real estate officers are not integrating their activities with other organizational functional areas. Thus, coordination has not improved much since the Arthur Andersen & Co. (1993) and IDRC (Lambert, Poteete and Waltch, 1995) studies.

The Skills Real Estate Managers Need to Be Effective

The respondents' ratings (shown in Exhibit 8) indicate their opinion that strategic planning, real estate portfolio management, the organization's business, and negotiation and deal making are the most crucial knowledge and skills for corporate real estate managers in the future. They believe foreign language, international finance/economics and tax management are least important. Thus, real estate managers believe the future success of corporate real estate depends on strategic and management skills rather than narrow technical or financial skills. These results are consistent with the Arthur Andersen & Co. (1993) study that indicated understanding the company's business, negotiating and deal-making, and strategic planning skills are crucial to corporate real estate success. However, this is somewhat in conflict with Carn, Black and Rabianski's (1999) findings that corporate real estate officers of the future need business, engineering and technical abilities.

Exhibit 7 | Internet's Perceived Impact on Corporate Real Estate Management

	Total	Australia	Hong Kong	U.K.	U.S.	
	Mean*	Mean*	Mean*	Mean*	Mean*	χ^2
Internet-based information systems will make the management and servicing of global portfolios easier	3.88 (164)	3.85 (34)	4.27 (15)	3.46 (35)	4.00 (80)	14.2**
Internet based information systems will enable better decisions	3.66 (163)	3.56 (34)	3.93 (15)	3.29 (35)	3.82 (79)	12.0**
Causing revolutionary change to the structure and practices of the property industry	3.52 (164)	3.26 (34)	3.60 (15)	3.23 (35)	3.74 (80)	8.8**
Internet based information systems will speed the management integration of all corporate infrastructure resources	3.49 (160)	3.63 (32)	3.93 (15)	3.09 (34)	3.52 (79)	9.6**
Business-to-business internet technologies, by reducing transaction costs, make it easier to change suppliers	3.33 (162)	3.42 (33)	3.40 (15)	3.29 (35)	3.29 (79)	0.7
The biggest threat to existing service providers is not from competition within the industry, but from others currently outside the property industry	3.25 (160)	3.22 (32)	3.53 (15)	3.21 (34)	3.23 (79)	1.7
E-business will streamline organization processes, reduce headcount and thereby reduce space demand	3.12 (163)	3.15 (34)	3.53 (15)	2.94 (35)	3.11 (79)	4.0
Within 12 months most real estate processes will use or will be based on internet technologies	3.10 (136)	2.97 (34)	2.91 (11)	2.89 (27)	3.30 (64)	3.8
Enabling existing practices to be improved significantly, but will not lead to radical change	2.97 (163)	2.79 (34)	3.40 (15)	2.97 (35)	2.96 (79)	3.0
E-procurement is only useful for buying commodity products and services and not for anything customized	2.75 (164)	3.00 (34)	2.87 (15)	2.86 (35)	2.58 (80)	5.7

Notes: Values of *n* are in parentheses.
*Mean responses on a scale of 1 to 5 with 1 representing "least important" and 5 representing "most important."
**Means are significantly different at the .05 level.

Exhibit 8 | Knowledge and Skills Perceived as Crucial to Corporate Real Estate Management in the Future

	Total	Australia	Hong Kong	U.K.	U.S.	χ^2
Knowledge / Skill	Mean*	Mean*	Mean*	Mean*	Mean*	
Strategic planning	4.21 (160)	4.24 (33)	4.40 (15)	4.06 (35)	4.23 (77)	1.8
Real estate portfolio management	4.19 (161)	4.24 (34)	4.40 (15)	3.86 (35)	4.27 (77)	9.4**
Organization's business or activity	4.11 (160)	4.00 (33)	3.87 (15)	4.20 (35)	4.17 (77)	3.4
Negotiation and deal making	4.09 (159)	4.03 (34)	4.13 (15)	3.69 (35)	4.29 (75)	11.1**
Customer relations	3.99 (160)	3.85 (33)	4.27 (15)	3.77 (35)	4.10 (77)	5.9
Performance measurement	3.88 (160)	3.85 (33)	3.80 (15)	3.77 (35)	3.96 (77)	2.0
Information technology generally	3.77 (160)	3.73 (33)	3.60 (15)	3.77 (35)	(77.00) (77)	0.8
Project management	3.73 (161)	3.82 (34)	3.73 (15)	3.40 (35)	3.83 (77)	6.2
Information management	3.73 (160)	3.61 (33)	3.87 (15)	3.77 (35)	3.73 (77)	1.7
Risk management	3.72 (160)	4.00 (33)	3.87 (15)	3.63 (35)	3.61 (77)	5.0
Value management	3.70 (159)	3.55 (33)	3.87 (15)	3.31 (35)	3.84 (76)	8.2**
Workplace design	3.64 (159)	3.39 (33)	3.47 (15)	3.63 (35)	3.78 (76)	4.5
Performance benchmarking	3.64 (160)	3.64 (33)	4.00 (15)	3.46 (35)	3.66 (77)	3.3
E-business	3.59 (160)	3.00 (33)	3.60 (15)	3.49 (35)	3.75 (77)	5.2
Environmental management	3.58 (160)	3.79 (33)	3.67 (15)	3.49 (35)	3.52 (77)	3.2
Facilities management	3.57 (160)	3.48 (33)	4.20 (15)	3.40 (35)	3.56 (77)	8.6**
General business administration	3.56 (160)	3.55 (33)	3.13 (15)	3.54 (35)	3.65 (77)	5.5
Personnel management	3.56 (160)	3.67 (33)	3.67 (15)	3.46 (35)	3.53 (77)	1.4
Total quality management	3.53 (159)	3.36 (33)	3.67 (15)	3.29 (35)	3.70 (76)	6.7
Corporate finance	3.51 (160)	3.42 (33)	3.53 (15)	3.26 (35)	3.65 (77)	3.5

Exhibit 8 | (continued)

Knowledge and Skills Perceived as Crucial to Corporate Real Estate Management in the Future

	Total	Australia	Hong Kong	U.K.	U.S.	χ^2
Knowledge / Skill	Mean*	Mean*	Mean*	Mean*	Mean*	
Scenario planning	3.50 (160)	3.42 (33)	3.67 (15)	3.37 (35)	3.56 (77)	1.7
Corporate infrastructure resource management	3.47 (158)	3.44 (32)	3.47 (15)	3.15 (34)	3.62 (77)	6.3
Alliance management	3.47 (157)	3.21 (33)	3.36 (15)	3.06 (33)	3.78 (77)	16.4**
Security and safety management	3.39 (160)	3.58 (33)	3.67 (15)	3.34 (35)	3.29 (77)	3.9
Investment appraisal	3.36 (160)	3.73 (33)	3.73 (15)	3.37 (35)	3.12 (77)	13.5**
Real estate development	3.35 (159)	3.21 (33)	3.73 (15)	3.43 (35)	3.30 (76)	2.9
Governmental regulation	3.34 (160)	3.61 (33)	3.87 (15)	3.06 (35)	3.25 (77)	11.1**
Community relations	3.31 (160)	3.52 (33)	3.53 (15)	3.03 (35)	3.31 (77)	7.5
Construction management	3.30 (160)	3.30 (33)	3.47 (15)	2.80 (35)	3.49 (77)	12.4**
Contract management and law	3.24 (159)	3.59 (32)	3.53 (15)	2.83 (35)	3.22 (77)	12.2**
Process re-engineering	3.23 (159)	3.15 (33)	3.27 (15)	2.83 (35)	3.45 (76)	8.0
Globalize services	3.21 (160)	2.85 (33)	3.33 (15)	3.03 (35)	3.42 (77)	6.7
Design management	3.19 (159)	2.97 (32)	3.33 (15)	2.89 (35)	3.40 (77)	10.5**
Management accounting	3.18 (161)	3.29 (34)	3.20 (15)	3.06 (35)	3.18 (77)	1.4
Marketing	3.16 (160)	3.24 (33)	3.33 (15)	3.14 (35)	3.09 (77)	1.7
International finance / economics	2.99 (158)	2.66 (32)	3.53 (15)	2.86 (35)	3.09 (76)	7.8
Tax management	2.89 (160)	2.91 (33)	2.87 (15)	2.77 (35)	2.95 (7)	1.0
Foreign languages	2.30 (160)	1.97 (33)	3.07 (15)	2.26 (35)	2.31 (77)	12.9**

Notes: Values of *n* are in parentheses.

*Mean responses on a scale of 1 to 5 with 1 representing "least important" and 5 representing "most important."

**Means are significantly different at the .05 level.

Exhibit 9 | Knowledge / Skill Factors

Factor Names and Items	Factor Loading	α Coefficient
Strategic management skills		0.83
Scenario planning	0.758	
Alliance management	0.686	
Process re-engineering	0.682	
Corporate infrastructure resource mgmt	0.674	
Strategic planning	0.567	
Value management	0.519	
Performance measurement	0.515	
Physical property skills		0.76
Construction management	0.808	
Design management	0.771	
Facilities management	0.676	
Workplace design	0.578	
Project management	0.554	
Security and safety management	0.518	
Knowledge to protect against external threats		0.80
Government regulation	0.765	
Environmental management	0.716	
Risk management	0.596	
Contract management and law	0.572	
Total quality management	0.543	
Globalization		0.75
International finance / economics	0.737	
Globalized services	0.679	
Foreign languages	0.615	
Financial measurement skills		0.73
Investment appraisal	0.752	
Performance benchmarking	0.742	
Technology skills		0.66
Information management	0.682	
Information technology	0.642	
E-business	0.608	
Traditional business functional areas		0.65
Management accounting	0.690	
Corporate finance	0.579	
Marketing	0.511	
Tax management	0.504	
Interpersonal skills		0.63
Personnel management	0.725	
General business administration	0.587	
Community relations	0.528	

Several differences exist among the countries examined. Service providers in the U.K. believe that knowledge and skills in several areas are less important, including real estate portfolio management, negotiation and deal making, process re-engineering, contract management and law, design management and construction management. This may reflect the service provider's perspective that many of the tasks requiring these skills can be outsourced. American respondents believe alliance management to be more important than those in other countries. Meanwhile, those in Hong Kong and Australia place greater importance on the knowledge of government regulation and investment appraisal. Those in Hong Kong also place greater importance on facilities management and foreign languages.

The factor analysis of the skills and knowledge items produced the scales and corresponding items presented in Exhibit 9. The first factor consists of strategic management skills—scenario planning, alliance management, process re-engineering, corporate infrastructure resource management, value management, strategic planning and performance measurement. The second factor is comprised of physical property skills—construction management, design management,

Exhibit 10 | Knowledge / Skill Factor Importance

	Total	Australia	Hong Kong	U.K.	U.S.	
Factor Name	Mean	Mean	Mean	Mean	Mean	χ^2
Strategic management skills	0.02 (149)	−0.02 (29)	−0.21 (14)	−0.39 (32)	0.25 (74)	10.0*
Physical property skills	−0.00 (149)	−0.25 (29)	0.21 (14)	−0.27 (32)	0.17 (74)	7.0
Knowledge to protect against external threats	−0.02 (149)	0.23 (29)	0.31 (14)	−0.14 (32)	−0.13 (74)	4.1
Globalization	0.00 (149)	−0.35 (29)	0.52 (14)	−0.07 (32)	0.08 (74)	8.6*
Financial measurement skills	0.02 (149)	0.37 (29)	0.45 (14)	−0.05 (32)	−0.17 (74)	10.3*
Technology skills	0.04 (149)	−0.33 (29)	−0.24 (14)	0.20 (32)	0.17 (74)	9.0*
Traditional business functional areas	0.00 (149)	0.04 (29)	−0.16 (14)	0.01 (32)	0.01 (74)	0.2
Interpersonal skills	0.00 (149)	0.26 (29)	−0.18 (14)	−0.02 (32)	−0.06 (74)	3.7

Notes: Values of *n* are in parentheses.
*Means are significantly different at the .05 level.

facilities management, workplace design, project management, and security and safety management. Knowledge to protect against external threats appears to comprise the third factor—government regulation, environmental management, risk management and total quality management. The fourth factor represents globalization. The fifth factor consists of financial measurement skills. Technology-related skills make up the sixth factor. The traditional business function areas of accounting, finance and marketing make up factor seven. The last factor is comprised of the interpersonal skills of administration, personnel management and community relations. Respondents' scores on these eight factors are used to explore differences in opinions among real estate professionals in Australia, Hong Kong, the U.K. and the U.S., as presented in Exhibit 10. While the results are similar to the individual item comparisons, general trends become apparent.

American corporate real estate professionals believe strategic management knowledge to be more important to success in corporate real estate than service providers in the U.K. do. This may reflect the difference in focus of an internal versus external service provider with those inside the corporation recognizing the importance of being involved in overall corporate strategy. Australian respondents place less importance on global business skills than those in the U.S. and Hong Kong. Meanwhile, those in Australia and Hong Kong place greater emphasis on financial performance measures. Technology skills are valued more by those in the U.K. and U.S. than Australia.

Conclusion

Many corporate real estate managers continue to follow a traditional transactional approach to their role within the organization. The results of this survey indicate that most real estate managers still perceive their main role to be procuring space at the lowest possible cost focusing on the short-run. Although most recognize the need for corporate real estate officers to develop strategic planning and management skills, few have made integrating their property decision making into the overall corporate strategy a major priority. Corporate real estate officers in Hong Kong and the U.S., however, appear to be leading the way in communicating with executives and integrating real property strategy into the general corporate strategy.

Most real estate managers appear uncertain about the role technology will play in their future despite the growing use of technology in all aspects of their business. Companies are pursuing new initiatives in e-procurement, e-business and teleworking, yet real estate professionals disagree as to the importance of technical knowledge and skills for future corporate real estate managers. Even if real estate managers do not want to become technical experts themselves, they must understand technology if they are to decide how best to use it to achieve strategic goals.

Most corporate real estate managers do not recognize the real estate potential of growing management interest in flexible workforce and workplace design. Service providers in the U.K. appear to be leading the way in such areas as hotelling and desk sharing while corporate real estate managers in other countries are not exploring how real estate decisions can support business needs for flexibility in an ever more competitive business environment.

Most real estate divisions continue to operate in isolation from other business functional areas despite the need for integration to provide companies with a competitive advantage. Real property's potential role in improving productivity and worker satisfaction by working in concert with personnel and other functional areas remains largely unexplored.

While conditions vary by countries, corporate real estate managers do not appear to have evolved very far since the 1980s. Although they recognize the importance of strategic planning, few real estate managers are actively involved in long-range planning and coordination with other business units. Communication between corporate real estate managers and senior executives still needs improvement. As has often been reported, corporate real estate professionals need to develop general management knowledge and skills that will enable them to effectively contribute to the company's productivity and profitability. Until then, it appears that corporate real estate managers will continue to be order takers rather than decision makers.

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