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Examining the building selection decision making process within corporate relocations: to design and evaluate a client focused tool to support objective decision making.

Nick Nunnington and Barry P Haynes

Sheffield Hallam University, United Kingdom

b.p.haynes@shu.ac.uk

Abstract

Purpose: The aim of this paper is to consider the complex decision making process involved in corporate relocation and the validity of a tool designed to improve the objectivity and strategic management of this process and to change the focus of the decision upon the strategic management objectives rather than the real estate deal.

Design/methodology/approach: The authors identify the progression of the decision making process; disaggregate components of that process; and evaluate a tool designed to improve the decision making process.

Findings: The size of the organisation can have a significant impact on the building evaluation and decision making process, smaller firms with less resources are more likely to make the relocation decision based on “gut feeling” rather than detailed evaluation. However, with increased transparency, accountability and corporate social responsibility, decisions based on more rigorous and objective approaches are being demanded. The evaluated tool facilitates a more objective approach and shifts the focus from a real estate to a business decision.

Practical Implications: Corporate real estate managers can use the information to evaluate their own decision making processes against the framework of the tool and decide if it may be applicable to their context.

Originality//Value: The paper fills a void by examining the decision making process from a fresh perspective, updates the thinking by providing a contemporary tool which has been beta tested with students and is about to be piloted with corporate clients.

Key Words: Corporate Relocation; Inward Investment, Objective Decision making, Criteria based approaches

Paper Type: General View

Introduction

The authors have been involved for over 15 years with projects which require students to undertake a structured approach to selecting a building in a given city using an objective criteria based approach. Driven by the need for inexperienced students to be able to separate and evaluate the many factors that make up a relocation decision, this has led to an evaluation of how the process is undertaken in practice. We have been working for many years with the Dutch designed system the Real Estate Norm (REN) originally developed by DTZ Zadelhoff and Jones Lang Wootton (now Jones Lang LaSalle) and G&P Starke Diekstra. It has never really been adopted fully in the industry, probably due to, in our opinion, its over complexity; attention to detail, lack of objectivity in parts and a Dutch orientation. However, we believe that its methodology in identifying a comprehensive list of occupier demand factors, translating this into a specification and allowing users to score available buildings remains a very useful and valid approach.

Research undertaken over the past 10 years directly by the author and through MSc. dissertations indicates a huge variation in the approaches taken to the relocation decision making process, and what was regarded as an urban myth; "*we relocated where the Chairman's wife wanted to shop*" was actually one of the many stories we encountered and is a reality for organisations of different sizes. The power of individuals and their associated ego's within the decision making process will always be a factor in this process: but we would argue that it is increasingly difficult to defend such decisions.

With increased transparency, accountability and corporate social responsibility, decisions based on more rigorous and objective approaches are starting to be demanded. The authors believe that this can only increase as international accounting standards evolve and greater interest in the credibility and objectivity of decision making takes place. It is proposed from our research that the Corporate Real Estate Asset Management (CREAM) professional now has a responsibility to undertake a much more objective, criteria based approach.

Establishing clear quantifiable building assessment criteria and a framework for evaluation are essential if the relocation decision is to be made in a purely objective manner. The methodology most likely to be adopted would be one which compares the specifications for building demand with the specifications for building supply, often through the use of checklists and tick box exercises. However, the relocation evaluation process should include more than just the evaluation of a buildings specification and should consider factors which may impact upon productivity and the recruitment and retention of staff.

A decision making framework

The basic methodology of matching organisational space demand with the possible accommodation and workspace solutions provides organisations with a meaningful way of evaluating their buildings to determine their relative capacity to accommodate and support the organisation and its business plan.

A useful model that clearly illustrates the relationship between supply and demand is incorporated in the publication entitled "*Working Beyond Walls - the government workplace as an agent of change*" by DEGW and Office of Government Commerce (OGC) (Hardy, et al., 2008). The model illustrates the inputs which are required from the organisation and the building supply, the processes that are undertaken and the outputs

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that are achieved from the matching process (Hardy, et al., 2008). Of course the model has to be applied to an imperfect market place, where limited and imperfect supply and at times rapid change of supply may impact upon the timing and rigour of the process.

Adopting the organisational demand and building supply model enables a structured approach to the decision making process. This simple methodology means that the organisation demand for space is established before any buildings are considered. This includes buildings that may already be in the organisation's property portfolio. However, again our research shows that organisations frequently do not follow this structured approach and either:

- **do it the wrong way around: by selecting a building first and then forcing the demand aspects to fit the building, in our experience this is unlikely to lead to a satisfactory long term solution; and/or**
- **allow the property "deal" a good rent free or other incentive to drive the decision making process; again often leading to an expensive mistake.**

The process is likely to be an iterative one; it is unusual for clients to have a fully formed view of exactly what they want; where they want it and why at the inception and tools such as the one introduced here can help to frame this iterative process and in our opinion improve the chances of an objective and successful outcome.

This paper is focused on the Building Supply decision however research and consultancy application of this approach demonstrates how important the demand process is; the need to undertake it first and in a comprehensive and often challenging way that makes the client re-evaluate demands, often in the light of changing working practices, customer and staff expectations and modern business practices and cultures.

It is clear that some businesses are still making costly mistakes of getting it wrong. As far back as 1990 Franklyn Becker defined, in the seminal book *The Total Workplace: Facilities Management and Elastic Organisation*, the High Costs of Mistakes as a fundamental driver of change in the industry. The question that this research would ask is, just how far have we come, and are we still making expensive mistakes?

Building and Workplace Supply

Once the organisational demand has been defined, it is the CREAM manager's responsibility to identify the most appropriate building and workplace provision. The choice of building and workplace supply is of significant strategic importance to an organisation and can have a direct impact on the future performance of the business.

It is at this point in the relocation process that the CREAM manager translates organisational demand for space into criteria that can be used to assess building supply. It is essential that the CREAM manager removes any subjectivity from the decision-making process if any potential mismatch between organisational demand and building supply are to be avoided.

The size of the organisation can have a significant impact on the building evaluation and decision making process (Greenhalgh, 2008). Research undertaken by Wrigglesworth and Nunnington (2004) suggests that larger firms are more likely to pursue a sophisticated measurement and modelling process. In addition, smaller firms with less resources were more likely to make the relocation decision based on "gut feeling" rather

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than detailed evaluation (Wrigglesworth & Nunnington, 2004). The research also confirmed that some decisions were made in a few cases based on personal preferences of the Chairman or Chief Executive. However, we believe that with increased transparency, accountability and corporate social responsibility, decisions based on more rigorous and objective approaches will be demanded. Establishing clear quantifiable building assessment criteria and a framework for evaluation are essential if the relocation decision is to be made in a purely objective manner. The methodology most likely to be adopted would be one which compares the specifications for building demand with the specifications for building supply.

However, Wigglesworth and Nunnington (2004) propose that the relocation evaluation process should include more than just the evaluation of the building specification.

The creation of checklists and tick box exercises is common. For companies with a wider brief, another set of factors such as demographics and quality of life are likely to play a greater role (Wrigglesworth & Nunnington, 2004, p. 2).

Exploring the key stages in the building evaluation decision making process demonstrates how the organisational demand for space can be translated into a building supply profile which can be subsequently used to evaluate building supply possibilities.

The supply profile breaks down into a number of main components:

- the macro location (country) where an international search is being made;
- the macro location (city) where a national search is being made
- the micro location (options within selected city);
- the micro location (characteristics of selected location);
- the building specification;
- the building configuration; and
- specific operational requirements and pre-requisites.

Where organisations are examining a range of potential locations, the decisions tend to focus on the MACRO factors. According to Cushman & Wakefield European Cities Monitor (2010) the most significant factors were (ranked in order of priority):

- Easy access to markets, customers or clients
- Availability of qualified staff
- The quality of telecommunications
- Transport links with other cities and internationally
- Value for money of office space
- Cost of staff
- Availability of office space
- The climate governments create for business
- through tax policies or financial incentives
- Languages spoken
- Ease of travelling around within the city
- The quality of life for employees
- Freedom from pollution

Of course each organisation will have its own ranking of priorities dictated by the nature of its business; organisational goals and aims of the relocation. This in turn will dictate the final selection of Country and City location.

At the more MICRO level, factors to be considered will include:

- accessibility to motorway;
- traffic flow - congestion;
- access to main railway station, bus and tram services;
- public security - lighting etc.;
- proximity to hotel accommodation;
- proximity to shops/ services - e.g cash dispenser/ dry cleaning;
- proximity to restaurants/ coffee shops / cafes;
- parking standards - on-site;
- distance to public parking;
- security; and
- infrastructure - gas / electricity / alternative energy sources/

At the building level, factors to be considered may include:

- BREEAM rating;
- EPC rating ;
- lighting specification;
- controllability of air handling;
- lift capacity - average wait time at peak periods;
- reception facilities;
- access control and security;
- toilet capacity - number of cubicles per employees per floor;
- solar shading;
- fire safety system;
- access of daylight: distance from furthest work area to an elevation;
- horizontal flexibility - structural planning grid;
- vertical flexibility - floor to ceiling height;
- building reflects desired company image;
- 24/7 operational availability;
- broadband; fibre optic and wireless connectivity - communications Infrastructure;
- ease of maintenance and cleaning of building; and
- showers (for cyclists) etc.
- ability to brand and signage policy

Again the weighting placed on each element will be individual to the organisation. What we find is that extracting the preferences and ranking them in an objective way is difficult for companies and they need time, support and a simple framework to assist them in their prioritisation of supply priorities.

The authors have been working with CreativeSheffield, the Sheffield based urban regeneration company to extend, refine and adapt the REN approach into a working tool to support the organisation demand and supply analysis, inherent in relocation projects.

The tool is spreadsheet based and requires occupiers to rank 54 business factors in terms of High, Medium, Low priority or Not Applicable. Each of these factors have been examined in detail and a building specification developed on a five point scale.

For example the factor:

Access to Main Railway Station is defined on a five point scale as:

1	(Highest)	<5 minutes walk
2		<10 minutes walk
3		< 15 minutes walk
4		15-30 minutes walk
5	(Lowest)	> 30 minutes walk

This allows the organisation and/or its consultants to consider each factor in terms of both demand (business priority) and specification. So for example, if an organisation is wishing to be sustainable and maximise its employees access to public transport and it believes it may draw staff regionally that it may make access to a main railway station a high priority and score the factor with a 1, that is, it requires a main railway station within 5 minutes walk of its facility.

The Creativesheffield model starts with the assumption that Sheffield has been selected as the, or one of the, cities for relocation. It then divides the criteria into five sections:

- macro location within Sheffield;
- micro location – the immediate surrounding area of the building;
- building specification;
- building configuration; and
- operational and other requirements.

Client Demand Profile	Business Priority				Requirement / Specification				
	High	Medium	Low	N/A	1	2	3	4	5
Section 1 MACRO LOCATION within SHEFFIELD									
1 Location					Central CBD	Secondary Central	Edge of City Centre	Suburban	Rural
2 Type of Surrounding Environment					Central CBD	Suburban	Industrial	Residential	Peripheral
3 Accessibility to Motorway					<5 minutes drive	<15 minutes drive	<30 minutes drive	30-45 minutes drive	>45 minutes drive
4 Traffic Flow - congestion					100% Clear	Limited at Peak times	Constant at Peak times	During Office Hours	Constant
5 Access to Main Railway Station					<5 minutes walk	<10 minutes walk	<15 minutes walk	15-30 minutes walk	>30 minutes walk
6 Public security - lighting etc.					Fully lit and CCTV	Fully Lit	Partially Lit	Poorly Lit	None
7 Proximity to Hotel Accommodation - at least 2 within					<5 minutes walk	<10 minutes walk	<15 minutes walk	15-30 minutes walk	>30 minutes walk
8 Land Tenure					Freehold - unrestricted	Long LH >99 years	Long LH <99 years	Occ. LH <25 years	Licence

Figure 1: illustration of one section of the Creativesheffield tool (Macro Location)

When a client has worked through the spreadsheet confirming the business priorities and desired specifications for each component the tool can then be used to score a short list of potential buildings by assessing what they actually provide on the 1-5 scale.

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So returning to our main railway station criteria we may find some buildings which meet the clients requirements of less than 5 minutes (scoring a 1) and others that do not.

The system can then be used in the same way as REN to create a matching profile, or deviation chart showing how the short listed buildings meet the client's requirements. This can be done in a number of ways, for example using a weighted score with the high priority elements being weighted highest to derive an overall matching score for each building.

However, we prefer a chart based approach which acts as a kind of fingerprint for each building and clearly demonstrates which building is most suitable against the client's priorities.

As an illustration, considering just 5 of the 54 criteria in the Creativesheffield tool a chart can be created as shown in Figure 2 which looks at how well a short listed building matches the clients' priorities. The chart shows the clients required specification (1-5) in the central column of the deviation chart. Considering each macro location factor:

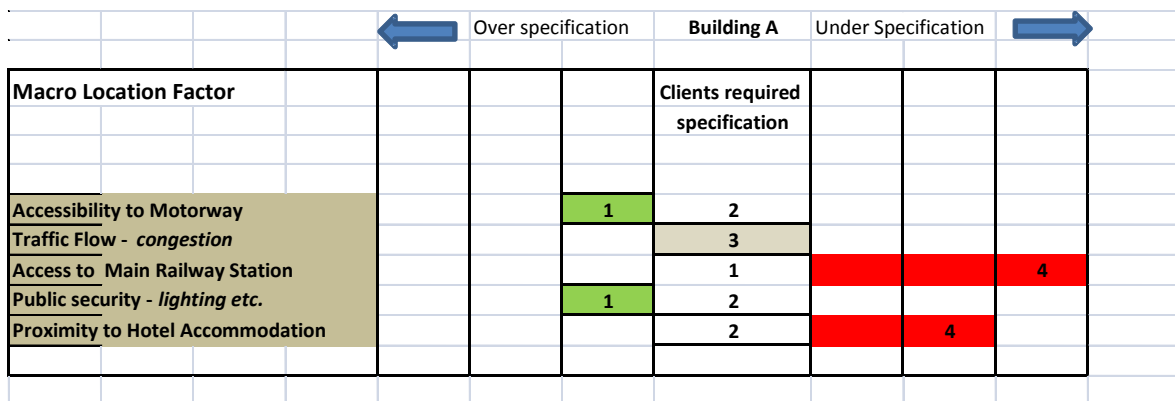


Figure 2 Illustrative example of a deviation chart for a single building of the Creativesheffield business criteria to real estate matching tool, developed by the authors.

Macro location factor	Deviation score and explanation
access to main railway station (Client Demands = 1)	Building A supplies a 4 score in its specification and therefore as the requirement was for 1 a negative deviation of 3 is shown as three bars to the right.
accessibility to motorway; and public security (Client Demand = 2)	Building A supplies a 1 (highest) score in its specification and therefore as the requirement was for 2 a positive deviation of 1 is shown as one bar to the left.
proximity to hotel accommodation (Client Demand = 2)	Building A supplies a 4 score in its specification and therefore as the requirement was for 2 a negative deviation of 2 is shown as two bars to the right.
traffic flow (congestion) (Client Demand = 3)	Building A supplies a 3 score and therefore the demand and supply are equal so there is no deviation.

Figure 3: Demand to supply deviation scoring explanations.

A negative score where the building has an under specification is always seen as more of a problem than an over specification and will be highlighted in red on the actual charts

created by the system. This is because it is usually much more difficult to deal with an under specification. For example, if a client requires full air conditioning it may be impossible to retrofit this into certain buildings.

Whereas, if the client requires comfort cooling but looks at a building with full air conditioning there may be a financial penalty but no major technical barriers.

This building is unlikely to meet the needs of the company, especially if these factors are ranked as a high priority.

What this tool facilitates is an objective, robust matching tool that allows easy comparison of buildings and their ability to deliver against the clients key business requirements. The tool does of course examine all of the 54 criteria appropriate to a particular client to give a comprehensive, objective but manageable analysis of available building supply.

Optimum Alignment

A corporate relocation is an opportune time to ensure that the building and workplace supply match the organisational demand. If the optimal alignment of organisational demand and CREAM provision is not achieved then this can ultimately lead to a potential mismatch of the building and workplace provision (McGregor & Then, 1999). Achieving optimal alignment of CREAM requires detailed evaluation and consideration to be given, as set out below.

- **Building location.** The choice of the location of building will be determined by macro criteria such as:
 - close to customers/clients; and
 - located near appropriate labour pool.
- **Space provision.** The Net Usable Area (NUA) should match the NUA demand of the organisation.
- **Building specification.** The building services in the building should be of sufficient specification to avoid retrofitting at a later date.
- **Floor plate of building.** The floor plate of the building should allow optimum layout for the different types of workspaces.
- **Space layout.** The design and the location of the work spaces should match the demands of the organisation. The space layouts created should support inter department interaction whilst also supporting intra department work processes.

An essential component that is integral to the optimum alignment approach is the management of the change process.

Post Occupancy Evaluation

Of course the building selection is only one component of the corporate relocation process and the success of the use of a tool such as this can only truly be evaluated when the organisation has “bedded down” into its new location. Post Occupancy Evaluation (POE) should be used to test the building against criteria to see if it is delivering what was expected. This process should be on-going and should be used to manage the problem of transference; as original decision makers move on new ideas and policies may change the way in which the building is used and managed, using

POE should be able to track not only if the aspirations of the relocation have been met but how the solution is evolving and performing as things change.

Conclusions

The authors have not yet completed the evaluation of the new tool with corporate clients due to delays in its design, testing and deployment. In fact one of the problems has been a resistance from local agents to providing comprehensive data in order that ALL buildings currently available in Sheffield can be rated in terms of the systems specification criteria and loaded onto the system.

This illustrates a strategic weakness in the industry which has been discussed in previous work. That is that corporate clients may not always access all suitable buildings in an area if some agents “*push*” their own stock in preference to an open choice of all buildings available in a given location. The larger consultancies are now offering “client solutions” or “tenants representation” which transcends this parochial and transactional based boundary but some of the resistance to the tool in Sheffield was identified as an on-going concern.

However, the system has been beta tested with a variety of undergraduate and postgraduate students under controlled conditions. The most significant feedback is from part-time postgraduates who are working in the industry, some in office agency.

The feedback has been very positive in terms of:

- **ease of use;**
- **ability to define without subjectivity the measurement of all criteria;**
- **ability to focus and weight against clients most significant factors**
- **the tool promotes highly beneficial dialogue with the client which is likely to support a more robust and informed decision and lead to the avoidance of "expensive mistakes"**

Use of the tool with Dutch students indicates that compared to the Real Estate Norm, the system:

- **is easier to use;**
- **has removed some of the subjective elements of the REN;**
- **its methodology promotes a working dialogue between client and consultant;**
- **criteria are easily measurable either through inspection or by obtaining the building specification - the REN often required detailed technical information or testing - e.g. acoustic performance.**

However, the most significant feedback suggests that the new tool has significantly shifted the focus of the methodology from building supply to occupier demand. Due to the simplification and renewed focus on critical, measurable supply characteristics and their evaluation for all building supply in Sheffield; and pre-loading into the CreativeSheffield database the process switches to concentrating on client requirements.

Future Development

We believe that the tool; when used and evaluated by clients in the next 12 months will confirm that it will shift the focus to a comprehensive and strategic evaluation of their needs; thereby concentrating on more business/organisation issues and links with office productivity.

The process will hopefully finally begin to shift the industry focus in the Sheffield area from transactional deals to a true consultancy relationship, generating strategic business improvements for inward investors; that can be enabled through the catalyst of relocation to a new location and building.

The authors would like to work with organisations to further refine the tool and incorporate other metrics including key performance indicators relating to the use and cost of space – an additional section on the efficiency of space using specific, industry standard KPI's and possible benchmarking these against IPD or other industry standards would be useful.

The authors are also looking at deploying the tool as part of additional research being undertaken to investigate the attractiveness of cities (the Macro factors within the tool) through the eyes of different generations. The authors have been discussing the creation of a worldwide index; measured by generation Y students to create an evaluation of the attractiveness of cities to graduates as a side bar to the use of this tool.

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Appendix 1

The CreativeSheffield / Sheffield Hallam University Office Benchmarking Tool

Creative Sheffield Matching Tool.xls [Compatibility Mode] - Microsoft Excel

Creativesheffield		Sheffield Hallam University SHARPENS YOUR THINKING				
Sheffield Office Benchmarking Tool		Client Business Priorities				Requirement
Client requirements		High	Medium	Low	N/A	
Section A MACRO LOCATION within SHEFFIELD		Criteria				
1 Location	A1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Central CBD
2 Type of Surrounding Environment	A2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Central CBD
3 Accessibility to Motorway	A3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. < 5 minutes drive
4 Traffic Flow - congestion	A4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. 100% Clear
5 Access to Main Railway Station	A5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. < 5 minutes walk
6 Public security - lighting etc.	A6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Fully lit and CCTV
7 Proximity to Hotel Accommodation - at least 2 within	A7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. < 5 minutes walk
8 Land Tenure	A8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Freehold - unrestricted
Section B MICRO Location - Immediate surrounding area						
1 Access to Bus / Tram	B1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. < 5 minutes walk
2 Proximity to Shops/ Services - e.g cash dispenser/ dry cleaning	B2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. < 5 minutes walk
3 Proximity to Restaurants/ Coffee shops / Cafes	B3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. < 5 minutes walk
4 Parking Standards - on-site	B4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. < 150m ² (1:540 R2)
5 Distance to public parking	B5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. < 5 minutes walk
6 Prevention of unauthorised parking	B6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Automatic
7 Distance between site entry and building entrance	B7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. < 5m
8 Security	B8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Full Access Control
9 Prestige of surrounding area	B9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Escalator
10 Landscaping - % of planted area of site	B10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. 75%
11 Infrastructure - Gas / Electricity / Alternative Energy sources	B11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Alternative Energy
Section C BUILDING Specification						
1 Multi Occupancy	C1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Whole Building
2 BREEM Rating	C2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Detracting
3 EPC Rating	C3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. A
4 Lighting Specification	C4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. LG2
5 Controllability of Lighting	C5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Workstation
6 Cabling Category	C6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Fibre Optic
7 Mechanical Air Handling	C7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Alternative System
8 Controllability of Air Handling	C8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Workstation
9 Lift configuration	C9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Dedicated Multiple High Speed
10 Lift capacity - average wait time at peak periods	C10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. 20 seconds
11 Reception	C11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Dedicated High Spec
12 Access Control	C12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Personalised Card (24hr)
13 Toilet capacity - number of cubicles per employee per floor	C13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. 15
14 Solar Shading	C14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Solar Glass plus shading
15 Fire Safety System	C15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Oxygen depletion system
16 Access of Daylight - distance from furthest work area to an elevation	C16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. < 5m
17 Type of Vehicle Parking	C17	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Underground
18 Type of Cycle Parking	C18	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Underground
Section D BUILDING Configuration						
1 Horizontal Flexibility - structural planning grid	D1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. 900-1350mm
2 Vertical Flexibility - floor to ceiling height	D2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. 3800-4000mm
3 Large Unrestricted Floor Plate	D3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. > 3,000 m ²
4 Divisibility of Floor Plate to Self Contained Units	D4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. 5
5 Labyrinth Factor - number of direction changes from lift to furthest work area	D5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. 0
Section E Operational and Other Requirements						
1 Building reflects desired Company Image	E1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. High Tech
2 24/7 Operational Availability	E2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Secure TOTAL 24/7 Access
3 Broadband - Communications Infrastructure	E3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. > 20Mbps
4 Ease of maintenance and cleaning of building	E4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Escalator
5 Showers (for cyclists) etc.	E5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Multiple Dedicated
6 Catering	E6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Central Cafeteria
7 Uninterrupted Power Supply	E7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. Onsite generator and UPS
8 Gross to Net Efficiency Factor	E8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. > 80%

This paper is partly based upon Chapter 7 of the recently published text book: Corporate Real Estate Asset Management: Strategy and Implementation by Barry.P.Haynes and Nick Nunnington, Elsevier, 2010, Oxford ISBN 978-0-7282-0573-4

Appendix 2

Deviation charts produced automatically by the tool; the most suitable buildings (using a weighting system) are scored and the best match shifted to the left. In this instance the building, 1 New York Street, is the most suitable for this simulated clients profile of needs.

