Inhibitors and facilitators of corporate real estate dynamic alignment

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Abstract

Purpose – This paper aims to identify the importance of individual variables in the corporate real estate (CRE) decision-making process.

Design/methodology/approach – Nine experts received a posed scenario of a changed business strategy requiring a CRE reduction in individual interviews. Based on their suggested response, a decision network was modelled for each expert using the causal network elicitation technique, incorporating the utilities for decision variables and importance weights for attributes and benefits. The decision model offers a graphical representation of decision-benefit links for the decisions CRE managers make in such a period of decline.

Findings – Perceived facilitators of CRE dynamic alignment were identified by calculating lift ratios on their perceived importance of the attributes they mentioned during the interviews as nodes in the network that link decisions to benefits. Facilitators included CRE metrics and workplace strategy, while capital expenditure and landlords inhibit alignment processes. The research provides more granular insight into the variables used in CRE decision-making and the factors that facilitate or inhibit the dynamic alignment process.

Research limitations/implications – The research set a specific scenario for the experts to consider. That could be regarded as small but there was clear evidence of saturation of expert knowledge. Additional face-to-face interviews with the experts may have generated further details on the thought processes of the experts.

Practical implications – The research provides more granular insight into the variables used in CRE decision-making and the factors that facilitate or inhibit the dynamic alignment process. Thereby providing CRE decision-makers with key elements for a decision model.

Originality/value – The research technique, causal network elicitation technique, uses semi-structured interviews to create decision networks, which is a technique that has not been widely applied to CRE research. The research provides a granular view of what are important inhibitors or facilitators of dynamic alignment of CRE to business strategy.

Introduction

Over the past decade, turbulence, uncertainty, novelty and ambiguity have become hallmarks of the business environment (Ramirez and Wilkinson, 2016). Business theories have evolved from those that assume stability [e.g. *sustained competitive advantage* (Porter, 1985) and *Resource-based View (RBV)* (Barney, 1991)] to those that assume frequent change (e.g. *transient competitive advantage* (McGrath, 2013) and *blue ocean strategy* (Kim and Maugborgne, 2015). Fluid strategies require strategic flexibility to respond to change (Shimizu and Hitt, 2004) and an iterative strategy development process (Mintzberg *et al.*, 2009). Strategic alignment is the link between the overall goals of the firm and those of each business unit (Andolsen, 2007), it is a continuous process, not a one-off event (Luftman *et al.*, 1993). Dynamic resource capability provides the ability to reconfigure resources (Teece *et al.*, 1997) but investment decisions benefit from stability which can create rigidity (Doz and Kosonen, 2010). Consequently, a tension exists between flexibility and efficient investment decisions.

Corporate Real Estate (CRE), property occupied by an organisation for its own use, is a tangible resource providing the physical environment to house people and equipment whose primary value to the organisation is "the contribution to the business operations" (Kenley and Heywood, 2000: 157). It is both a significant on-going cost and an asset. In 2014 the mean rent commitment for an FTSE350 company was £544m while the book value totalled £797m and the mean profit was £475m (Cooke *et al.*, 2019a). From 2007 to 2014 profits fell by 4% but rents grew by 17%, book value by 22% and surplus leases by 145%. As profits fell, businesses, counter-intuitively, increased their CRE but simultaneously created a surplus portfolio to align their operational portfolio (Cooke *et al.*, 2019a).

Granular research on the alignment has been discussed conceptually in a number of papers (e.g. Shimizu and Hitt, 2004), but is more limited on alignment processes. The definition of alignment is evasive with terms such as "integrate" and "melding" used synonymously with it (Luftman and Brier, 1999) but denotes a strategic fit of the resource framework and capabilities (Brown and Blackmon, 2005). Research into alignment with business strategy includes the supply chain (Rodriquez-Escobar and Gonzalez-Benito, 2017) and IT (Luftman *et al.*, 1993). Research into IT alignment has considered variables that facilitate or inhibit alignment (Luftman and Brier, 1999). This identified that facilitators and inhibitors tend to be the converse of each other and consistency of terminology and studies on how firms undertake alignment is missing (Avison *et al.*, 2004), as with CRE research.

It has been suggested that firms have increasingly adopted a dynamic CRE portfolio (Joroff and Becker, 2017), but evidence suggests that implementation of a capability for *dynamic alignment* remains limited (Cooke *et al.*, 2019a). Papers on CRE alignment with business strategy have either proposed new models (Gibler and Lindholm, 2012) or reviewed previous models or literature (Heywood and Arkesteijn, 2017), but rarely define CRE alignment itself (Heywood and Arkesteijn, 2017). Decision-making literature is extensive and ranges from the individual to the organisational level (Kahneman, 2011). Two CRE decision-making research strands can be

identified, firstly the impact of CRE on a firm's market value (Nappi-Choulet *et al.*, 2009), secondly property acquisition (Greenhalgh, 2008) and the influence of individuals (Mazzoral and Choo, 2003). A model of Mental Representations (MR's) of the decision problem and identifying variables that facilitate or inhibit CRE *dynamic alignment* are missing. Previous work by the authors (Cooke *et al.*, 2021) examines the MR's in the context of a period of business decline and identifies situational, decision, attribute and benefit variables. This research is an extension of that study which used the Causal Network Elicitation Technique (CNET) (Arentze *et al.*, 2008; Dellaert *et al.*, 2008) whereby semi-structured interviews are undertaken to model MR's in a specific decision scenario.

The purpose of this study is twofold. Firstly, to create a decision model for the CRE realignment decision-making process and secondly, to evaluate variables as facilitators or inhibitors in the *dynamic alignment* process. Accordingly, questions are posed against the scenario that set off a decline in the business requiring a reduction in CRE. To model the decision-benefit relationships, the importance of each variable has to be ascertained. Hence the first objective involves two research questions:

RQ1. what are the importance weights of the benefits? and

RQ2. what are the utilities assigned to the decision variables?

The second objective requires an examination of the attributes and the following research question:

RQ3. what are the inhibitors and facilitators of CRE *dynamic alignment* and what is their significance?

The structure of the remainder of the paper is as follows. Firstly, this section is followed by a review of pertinent literature on alignment, decision-making and CRE. Next, the methodology is described followed by the results and a discussion. The paper concludes with a discussion of limitations and thoughts for further research, and the impact of the paper on practitioners.

Alignment decision-making

More fluid strategies have emerged from the turbulent business environment (Barreto, 2010) requiring frequent changes in the shape of the business. Consequently, managers actively avoid accumulating fixed resources. Organisational deftness has become a core capability (Chiva *et al.*, 2014) making adaptability an intangible resource (Teece *et al.*, 1997). Decision-making effectiveness impacts financial performance (Blenko *et al.*, 2010) but contains inherent weaknesses. These include bias (Hammond *et al.*, 1998), failing to regard it as an ongoing, iterative process (Lovello and Kahneman, 2003; Luftman and Brier, 1999), not recognising that decisions are made with incomplete knowledge (Argyris, 1976) and because "people consistently act inconsistently" (Argyris, 1991, p. 4).

Strategy encompasses both formulation and implementation plus decision-making (Chaffee, 1985). The successful execution of a strategy is 10% formulation and 90% implementation (Kotter cited in Beer *et al.*, 2005). As a firm's environment continues to change, alignment must be a dynamic process (Luftman and Brier, 1999), although most research regard alignment as seeking a fixed target (Avison *et al.*, 2004). Research examining alignment hurdles focusses at the organisation level and identified factors such as poor co-ordination (Beer *et al.*, 2005). At a granular level insight into what facilitates and inhibits alignment for the more technical parts of the business (including CRE) is missing. The goal of CRE alignment is to achieve a strategic fit with corporate strategy to achieve corporate goals (Appel-Meulenbroek and Haynes, 2014). Therefore, alignment timelines

have focussed on the long-term (Manning and Roulac, 2001). However, "CRE strategies must also be linked with short-term goals to ensure continuous adaption to the external environment" (Ntene *et al.*, 2020, p. 185).

Company performance rests on CRE meeting performance criteria as well (Van Ree, 2002). However, the business-CRE relationship has received only limited attention in research (Lizieri, 2003). Researchers have focussed on developing their own model (Heywood and Arkesteijn, 2018). The models proposed do not reflect new, more transient strategies as they pre-date the current turbulent environment. The tendency for CRE researchers to confine themselves to CRE literature (Lizieri, 2003) has previously hindered the development of more realistic models. Limited CRE coverage in business journals would appear to reflect that while CRE is a strategic resource "it rarely captures senior managements' attention" (Apgar, 2009, p. 100). Consequently, the relationship between business and CRE still requires a lot more research.

Certain commonalities exist across CRE alignment models that do not reflect what happens in practice. Firstly, the assumption that aligned CRE adds value (Gibler and Lindholm, 2012) does not recognise that misalignment can create a negative impact. This was seen in the recession with the growth in the surplus property provision (Cooke *et al.*, 2019a). The second is *maximising shareholder wealth* as the ultimate objective of alignment (Gibler and Lindholm, 2012). Criticisms of this theory include shareholders not being identical; having different objectives; holding shares for different time periods and having different perspectives (Stout, 2012). Additionally, company directors are not agents of shareholders and may have different objectives, as they are officers of the company with their own agenda(s) (MacIntosh and Maclean, 2015).

Inflexible CRE has been demonstrated to incur direct financial penalities. Cooke *et al.* (2019b) identified that between 2007–2014 FTSE350 companies increased surplus property provisions by an average of 145%, with a corresponding decrease in profits. Achieving *dynamic alignment* requires physical, functional, financial and legal flexibility (Cooke *et al.*, 2019a). The *core and periphery* classification (Gibson and Lizieri, 1999) propose that *core* buildings should be owned and the remainder, the *periphery*, should be leased with short-term requirements satisfied by service contracts. Flexible leases are more expensive as landlords seek compensation through higher rents and/or reduced incentives to reflect a perceived increase in risk. As "decisions regarding CRE have been driven by cost considerations only" (Stadlhofer, 2010: 97), improving the *dynamic alignment* capability through flexible leases creates an inherent conflict with cost minimisation. Senior managers are likely to focus on the current company performance, not what it might be in five years' time.

To make the CRE alignment models closer to the real world and in line with how this alignment operates, will require more data. Therefore, the purpose of this study is to model the relationship between decisions and benefits and to identify those attributes that facilitate or inhibit the *dynamic alignment* process, drawn from real-world experts' knowledge and experience.

Methodology
The research questions addressed in this study seek to gain in-depth insights into decision-making and the variables that experts consider important. Nine experts were interviewed in 2019, they were all senior CRE Managers and intentionally selected from different sectors to represent a wide range of backgrounds. The last three interviews saw a repetition of what had been found previously indicating saturation of information and convergence of insights. Convergence meant that no further expert opinions were required. In a previous paper (Cooke *et al.*, 2021), pertinent variables and the MR's of the same experts were revealed using CNET to create Causal Networks. This paper discusses additional data and data-analyses.

The CNET process seeks to elicit information from experts by getting them to think aloud in response to the scenario presented. The task of the interviewer is that of an interpreter and a classifier of both variables and comments, together with encouraging the experts to fully explain their thought process. The scenario posed to the experts was that they are tasked with the implementation and tactical decision-making of a new CRE strategy following a change to the business strategy:

> The business environment in which your company operates has changed leading to the adoption of a new business strategy. Along with the longer-term trend to use space more efficiently, there is a need to significantly reduce the CRE commitment, both square metres and annual cost, in the short term. Consequently, the leased part of the CRE portfolio needs to be realigned to meet these new requirements.

The experts were specifically instructed not to consider the scenario in the context of their current role. The rationale for this was to remove any inhibitions that their responses might reveal commercially sensitive material if it was firm-specific. Secondly, it would enhance the ability to capture all of their experience rather than be constrained by their current roles. The choice opportunities for the individual are the *decision* variables. The outcome of a decision may be either an *attribute*, a direct consequence of the decision (e.g. for subletting an increase in property management), or a benefit. A *benefit* is more abstract and is based on the individual's goals and needs, in effect it is the end value, which identifies the motivation of the individual (e.g. a benefit of subletting might be improved cash flow).

Post-interview the experts were asked by email to undertake two additional tasks. Firstly, they were asked to allocate 100 points to each of the decision and benefit variables according to the size of the influence the variables *within* the group – decisions or benefits – have in their decision-making process. Secondly, the email introduced the concept of *dynamic alignment* and asked each expert to designate each attribute as one that facilitated *dynamic alignment* (Facilitator), inhibited the process (Inhibitor), or made no discernible impact (Neutral).

The nine experts identified in total 39 situational, 75 decision, 472 attribute and 136 benefit variables The variables were categorised into groups, for example, *cost-saving* and *cost reduction* were categorised as *Cost* (Tables 1 and 4). Categorisation reduced the numbers to 4 decisions, 29 attributes and 19 benefit variables. Next the number of times a variable was mentioned and points allocated to it were identified. Due to the categorisation, a particular variable (e.g. an attribute) could occur multiple times in the MR of an expert. Both the total mentions of a variable and the net (a maximum of one mention per variable per expert) were determined. This process avoided the risk of skewing the broader picture by one expert's particular concern, while the total mentions would provide a sense of that. An indication of the central tendency in the whole group of experts was calculated by the arithmetic to mean per variable. An average was calculated based on the experts who mentioned it (M) and for the group (the total divided by nine, G).

Following the logic of a causal network, the utility of a decision option (i.e. a decision variable) is calculated as:

$$D_i = \sum_j w_{ij} \cdot A_j \tag{1}$$

where D_i is the utility of decision i, w_{ij} is the strength of the link between decision i and attribute j (the strength is zero if there is no link) and A_j is the utility of attribute j. The utility of an attribute is given by:

Decision variable	Decision options
Landlord deal	Surrender; regear and freehold purchase
Lease event	Lease expiry and lease break
Third-party deal	Assignment; subletting; new lease and portfolio disposal
Space utilisation	Single site; mothballing and backfilling space
Benefit variable	Examples of benefits
CRE profile	Disposability of space; short term solution; non-core operation and retention
CRE metric improvements	Improvement in flexibility and footfall
CRE future-proofing	Future-proofing: HQ retention; potential cre problems and consolidation
Property management	Management of CRE
Implementation benefits	Achievability; hitting deadlines: quick and immediacy
Proposed portfolio	Fit for purpose
Business metrics	Business metrics
CAPEX	Capital expenditure and write down
Cash	Cash and cash conservation
Cost reduction	Cost and cost savings
Profit and loss	Profitability and balance sheet
HR benefits	Work: life balance; commute times and people benefits
HR talent	Age profile of the workforce and attracting and retaining talent
Motivational drivers	Individual and team benefits, including bonuses
Business prospects	Disconnection of strategies and growth prospects
Stewardship	Accountability; stewardship; regulatory environment and accountability
Operational benefits	Reduced management time; simplified processes
Risk reduction	Risk dependence; risk of default: least risk option
Financial stakeholders	Earnings per share; city perception; dividend; raising finance

Table 1.
Categorisation of
benefit and decision
variables

$$A_j = \sum_k w_{jk} \cdot B_k \qquad (2)$$

where w_{jk} is the weight of the link between attribute j and benefit k (the strength is zero if there is no link) and B_k is the importance assigned to benefit k. Thus, the utility of a decision is determined by the utilities of outcomes on attributes and, in turn, the utilities of outcomes on attributes are determined by the outcomes on benefits. Hereby, the (back) propagation of utilities is moderated by the link strengths, w. The link strengths are determined as the proportion of times the link occurs in the MRs across the experts ($w = 1$ if it occurs in all MRs and $w = 0$ if it occurs in none of the MRs). The importance assigned to a benefit (B_k) is indicated by dividing the total number of points allocated to the benefit by the experts by the theoretic maximum of 900 points (all experts allocated all 100 points to the benefit).

All the variables were tabulated, together with the weights of the A-B and D-A links (see Appendix). A threshold was set for the importance value of attributes (≥ 0.01) and benefits (≥ 0.1) for discussion. From this a model is constructed graphically for the Decision – Benefit links to show the benefits the decision-makers seek for specific decisions.

The tabulation of the attributes as Facilitator (F), Inhibitor (I) and Neutral (N) was based on a similar method of categorisation. In this case, an expert might identify an attribute in multiple ways when the attribute after categorisation consists of various elements. For example, the category of HR Profile can facilitate alignment through flexible work but inhibit it with fixed locations in the employment contracts. Therefore, a ratio was produced per attribute per expert for each designation (F, I and N) based on the mentions per designation over the total F, I and N mention for the attribute. Thus if an attribute has five

specific attributes mentioned by an expert, say three of which are labelled as F's, two as I's and zero as N, the resultant ratios would be 0.6 (F), 0.4 (I) and 0 (N). The sum of the ratios for F, I and N across experts were calculated, together with the net figure (Facilitator minus Inhibitor).

From this table lift ratios (p) were calculated for each designation. The lift ratio of a designation ($p(F)$, $p(I)$ or $p(N)$) for an attribute A is defined as the probability that that designation is assigned to A divided by the (overall) probability that an attribute, in general, would be allocated to that designation. Thus, this measure considers the a priori probability of a designation as a baseline and expresses the actual probability relative to this baseline. A lift ratio of $p = 1$ means that there is no association, that is, the probability of associating it with that category is equal to the base probability that an attribute is associated with that label. The assessment of the attributes as Inhibitors or Facilitators of *dynamic alignment* allows us to consider the attributes' role as an intermediary step between decisions and benefits.

Results and discussion
The results are presented by firstly examining benefit and decision variables together with the weighting applied by the experts, which identifies the importance of those variables to them (research questions 1 and 2). This is followed by the classification of the attributes and whether they facilitate, inhibit or are neutral in the process of *dynamic alignment* (*RQ3*). The detailed results are shown in the Appendix.

Decision utilities and benefit importance weights
The individual categories of the benefit and decision variables are shown in Table 1.

Decision utilities
Decision variables are the possible solutions the decision-maker considers (Table 2), their mentions and means (M_i and G_i) together with their utilities (D_i) are shown in Table 3. The variables are ordered from high to low utility. Three decisions achieved a utility of $D_i \geq 1.0$ and were mentioned by all experts. Lease Event ($D_i = 1.62$) comprises lease break and lease expiry. Both options can provide certainty for the decision-maker without the involvement of a third party, such as the landlord or potential tenant. They can be relatively straight-forward solutions to implement, although in the UK lease breaks can be difficult to operate because of lease conditionality. Therefore, lease details are important for this decision option.

The category Third Party Deal ($D_i = 1.29$) includes lease assignment, subletting and portfolio disposal. The first two require the involvement of both a third party (a new tenant) and the landlord. A significant concern was that neither assignment nor subletting provides

| | | | Points | | | Utility weights |
Decision variables	Total mentions	Net mentions	Total	M_i	G_i	D_i
Lease event	18	9	350	38.9	38.9	1.62
Third party deal	26	9	232	25.8	25.8	1.39
Landlord deal	19	9	283	31.4	31.4	1.28
Space utilisation	5	3	35	11.7	3.9	0.37
Total	68	30	900	30.0	100	4.55

Table 2.
Decision variables across nine experts

Benefit variables	Total mentions	Net mentions	Total	Points M_k	G_k	Importance weights B_k
Financial stakeholders	22	8	81	10.1	9.0	0.82
Implementation benefits	16	8	155	19.4	17.2	0.44
Business metrics	5	4	62	15.5	6.9	0.22
Risk reduction	14	7	84	12.0	9.3	0.20
Motivational drivers	11	5	24	4.8	2.7	0.16
Cost reduction	7	5	67	13.4	7.4	0.12
Operational benefits	7	6	68	11.3	7.6	0.11
Stewardship	8	5	42	8.4	4.7	0.10
CRE future proofing	8	4	46	11.5	5.1	0.09
Profit and loss	4	3	30	10.0	3.3	0.09
CRE profile	8	6	65	10.8	7.2	0.06
HR benefits	7	5	47	9.4	5.2	0.05
Cash	2	2	30	15.0	3.3	0.00
Proposed portfolio	3	3	25	8.3	2.8	0.00
CRE metrics improvement	2	2	20	10.0	2.2	0.00
Prop Mgt	3	2	17	8.5	1.9	0.00
Business prospects	3	2	15	7.5	1.7	0.00
HR talent	4	3	15	5.0	1.7	0.00
CAPEX	2	2	7	3.5	0.8	0.00
Total	136	82	900	11.0	100	2.50

Table 3.
Benefit variables across nine experts

immediate certainty; liability and risk remain until head lease expiry. Portfolio Disposal is the disposal of a portfolio of surplus leases and was mentioned by all experts, bar one. Third-Party Deals provide solutions the experts regarded as not as good as Lease Events or a Landlord Deal because of greater risks to the firm due to a lack of immediate certainty.

For Landlord Deal (D_i = 1.28) three possible solutions were identified, namely surrender, freehold purchase and regear. Surrender was regarded as the best decision because it provided an all-encompassing exit from the property without any residual issues. Lease break and expiry both generally leave dilapidations to be resolved post-event. The freehold purchase serves one objective immediately, namely the removal of the lease liability, but does not immediately remove the space liability. It is an interim step until the subsequent sale of the freehold. Some experts separated the reduction of space from cost reduction, for example, a regear can reduce costs but not the space commitment.

Finally, Space Utilisation (D_i = 0.37) was mentioned by only three experts. This probably reflects the fact that specific decisions, such as Mothballing, seek to minimise costs rather than remove costs and space. In the context of the scenario here, Space Utilisation is only likely to be used when all other solutions fail.

Benefit weighting
Benefit variables are the considerations of the decision-maker relating to the outcomes, they are the end values of the options for realignment. The mentions and means (M_k and G_k) of the benefit variables plus their importance weights (B_k) are shown in Table 3. In the table, the benefits are ordered by B_k. Financial Stakeholders (B_k = 0.82) comprises financial institutions, banks and creditors, plus shareholders, with eight of the nine experts identifying it on average 2.75 times each, making them significantly important benefits

sought by decision-makers. Within alignment models (Gibler and Lindholm, 2012) shareholders are seen as the primary objectives of alignment, which was mirrored in the interviews (e.g. "you always want to keep the shareholders happy" (Expert 4)). However, the results indicate that a broader base of stakeholders is actually considered by decision-makers. Business Metrics ($B_k = 0.22$), such as cost versus income and Earnings Per Share, "are important because that is what the analysts look at" (Expert 7). An element of calculating Business Metrics is Cost Reduction ($B_k = 0.12$) as it is not "just the property costs, it is everything that goes with … having a physical footprint" (Expert 4), "ultimately the only way to reduce cost is to have a smaller footprint" (Expert 7). Both Business Metrics and Cost Reduction are items that stakeholders will examine in detail.

Implementation Benefits ($B_k = 0.44$) are general benefits of completing the action, in this case implementing the decision. As such it includes the achievability and speed of delivery of a decision. Operational Benefits ($B_k = 0.11$) are more specific including productivity and freeing management time. Risk Reduction ($B_k = 0.20$) comprises crystallising liability, the ongoing risk profile and risk dependency. Collectively, Implementation, Operational Benefits and Risk Reduction indicate seeking direct benefits of business certainty for least risk, as "you always look at your least risk scenario" (Expert 3).

Motivational Drivers ($B_k = 0.16$) are the individual and team benefits that may flow from successful attainment of the strategy, such as bonuses and self-esteem, for the C-Suite and CRE teams. Finally, Stewardship ($B_k = 0.10$) encompasses good governance and ensuring that protocols are followed. Failure to comply will have repercussions on the company and the individual.

Decision-benefit model

The analysis has identified what the experts regard as those decision and benefit variables of most value, which is the greatest utility. For the decisions, these are Lease Event, Third Party Deal and Landlord Deal. From this analysis we are able to graphically create a model with in the top layer the decisions and in the bottom layer benefits. The result is shown in Figure 1. What is not shown are the individual attributes that link the decisions and the benefits (see the Appendix for the complete set of D-A and A-B links). With the complexity
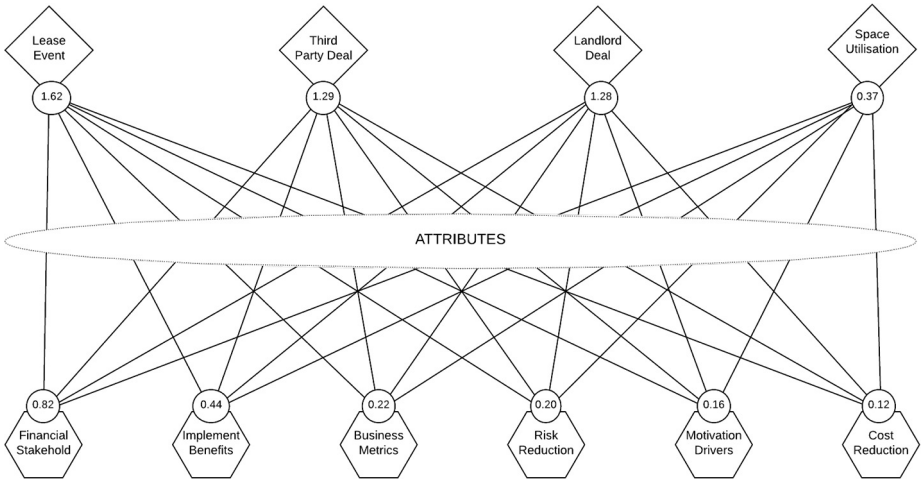

Figure 1.
Derived decision-benefit network model

of so many links in the Causal Network, a threshold of $B_k \geq 0.12$ was set for the inclusion of benefits. Given this threshold, the model includes only the most significant links. In Figure 1 the model is shown graphically with the decision utility weights and benefit importance weights shown.

The Decision-Benefit model (Figure1) identifies the decisions deemed important and benefits sought for each decision for the scenario of a contracting portfolio arising from a decline in the business. The model includes all four decisions (Lease Event ($D_i = 1.62$), Third Party Deal ($D_i = 1.39$), Landlord Deal ($D_i = 1.28$) and Space Utilisation ($D_i = 0.37$)), but only includes those benefits above the threshold of $B_k \geq 0.12$ thereby reducing the number in the model from 19 to 6. Different decisions generate different benefits with positive or negative effects on utility. For example, a surrender will create a cost increase at completion, but subsequent operational costs are reduced. Consequently, the assessment timing of the benefits is important. The link between decisions and benefits runs via attributes and the link from a specific decision to a specific benefit may be constituted by several attributes with different link strengths.

The model reflects the reasonings and considerations of CRE managers. Financial Stakeholders (B_k=0.82) include shareholders and banks and the benefits that arise may be direct (dividend payments) or indirect (reduced cost of borrowings). Implementation Benefits (B_k=0.44) are more inward-facing and look at speed and achievability of transactions. A lease break or expiry will have a greater benefit than an assignment because the lease event will be on a fixed date, whereas an assignment is dependent upon finding a suitable party, negotiating a deal and obtaining landlord consent.

All of the decisions will to a greater or lesser extent affect Business Metrics ($B_k = 0.22$). A surrender deal will increase costs from the surrender premium but operating costs are reduced. A subletting may result in the same reduction in operational space and indeed net ongoing costs, but the rent and other costs will still need to be paid by the firm before rents, etc., are recovered from the sub-tenant. The overall commitment has not actually changed, but the net costs have reduced. Cost Reduction ($B_k = 0.12$) can differ between organisations depending upon how they assess cost, for example, as total outgoings or net cost.

Risk Reduction ($B_k = 0.20$) encompasses the transaction itself and the longer-term assessment of the deal. Both a sub-letting and a surrender might reduce the risk equally, but the ongoing risk for the latter is zero whereas it remains an issue for the subletting. The inward-looking Motivational Drivers ($B_k = 0.16$) considers how a successful outcome or a failure of a decision impacts the individual decision-maker and the CRE Team: difficult to achieve decisions when they are successfully implemented bring substantially more credits for the individual.

Facilitators and inhibitors of dynamic alignment
This section considers the attributes, which are the consequences of decisions but not the end value (the benefits). The attributes connect the decisions to the benefits and potentially can inhibit *dynamic alignment*. The categories of the attributes that emerged from the interviews and what they comprise are set out in Table 4.

The highest occurrence frequency in the MRs are Risk and Cost ($n = 35$), IFRS16 and Lease Detail ($n = 32$), Proposed Portfolio ($n = 28$), External Stakeholders and Financial Analysis (both $n = 27$). Table 5 identifies for the attributes the lift ratios for Facilitator, Neutral and Inhibitor ($p(F)$, $p(N)$ or $p(I)$) of *dynamic alignment*. The table is ordered firstly by the facilitator score above 1.00, then inhibitors and finally neutral attributes. As explained, the lift ratio indicates the strength of the relationship between the probability of a specific

Attribute variable	Attributes comprised in category
CRE designation	Core sites; peripheral units and surplus space
CRE market risk	CRE market risk
CRE metrics	CRE metrics and space efficiency
CRE tactics	CRE tactics; short and long term cre needs and unit protection
Current portfolio	Adaptability; knowledge and limitations
Implementation	Constraints; implementation; options and timing
Landlord	Capital focus; income focus; income/capital focus
Lease detail	Specific lease provisions including break details
Prop management	On-going property management requirements
Proposed portfolio	Space required including location, configuration
Restructure	Reshaping lease; owing property and extracting value
Space utilisation	Space utilisation; meeting rooms; open plan space and configuration
Workplace strategy	Workplace strategy and new ways of working: home working
Business metrics	Business metrics and benchmarking
CAPEX	Capital expenditure
Cash	Cash and cash performance
Cost	Total cost; cost profile; funding
Financial analysis	Financial metrics; gap analysis; profit and loss per property
IFRS16	IFRS16; lease accounting and accounting treatment
HR practices	Staff well-being; team working and working groups
HR profile	Headcount; home location; office location and projected headcount
Motivation	Personal credibility and motivation
Business strategy	Business strategy and model
Corporate governance	Corporate governance; variation public and private companies and confidentiality
Decision-making	Decision-making; CEO and CFO decisions; priorities; etc
Operational issues	Operational issues and needs; flexibility requirements and brand impact
Risk	Risk; contingent liability and risk analysis
Stakeholders – external	Shareholders; potential investors; customers and interaction; stock market
Stakeholders – internal	CEO; CFO; c-suite and colleagues

Table 4.
Categorisation of
attribute variables

attribute designation against the probability of that designation overall. The individual attributes are discussed stating the lift ratios before providing the attribute utility (A_j).

Facilitators
HR Practices ($p(F) = 2.08$; $A_j = 0.004$) comprises staff well-being and agility together with the ability to implement new workplace strategies. These are change-orientated attributes indicating operational flexibility and three of the four experts who identified it designated it a Facilitator.

CRE Metrics ($p(F) = 1.99$; $A_j = 0.066$) refers to performance criteria of the CRE portfolio before, during and after the alignment process. This provides insights into the efficiency of units and hence the strategy per unit. A broader perspective is provided by Business Metrics ($p(F) = 1.47$; $p(I) = 1.04$; $A_j = 0.442$) which considers the effects of CRE change on business performance via cost-effectiveness, liquidity, etc. With $p(F)$ and $p(I)$ scores both over 1.0 this indicates that the experts view this attribute primarily as a facilitator, but it can also be an inhibitor to *dynamic* alignment. External Stakeholders ($p(F) = 1.29$; $p(N) = 0.93$; $A_j = 0.180$) also influences longer-term share value as shareholders and banks are very important as end values (benefits) but at the attribute level, the strength of the Facilitator relationship is not as important and is tending towards Neutral.

The Current Portfolio ($p(F) = 1.62$; $A_j = 0.014$) indicates how existing lease flexibility (lease expiry and breaks) can provide certainty from a proposed action or the property has the ability

Attributes	Mentions	Inhibitor	Neutral	Facilitator	Net	Lift ratio inhibitor p(I)	Lift ratio neutral p(N)	Lift ratio facilitator p(F)
HR practices	4	0.00	1.00	3.00	3.00	0.00	0.58	2.08
CRE metrics	6	0.00	1.70	4.30	4.30	0.00	0.66	1.99
Workplace strategy	7	0.00	2.50	4.50	4.50	0.00	0.83	1.78
Current portfolio	6	1.00	1.50	3.50	2.50	0.79	0.58	1.62
CRE designation	8	1.67	2.00	4.33	2.67	0.99	0.58	1.50
Business metrics	8	1.75	2.00	4.25	2.50	1.04	0.58	1.47
Motivation	2	0.00	1.00	1.00	1.00	0.00	1.17	1.39
Restructure	7	1.50	2.00	3.50	2.00	1.02	0.67	1.39
Space utilisation	8	1.07	3.14	3.79	2.71	0.64	0.92	1.31
Stakeholders – external	6	0.80	2.40	2.80	2.00	0.63	0.93	1.29
CRE tactics	8	1.68	2.88	3.43	1.75	1.00	0.84	1.19
CAPEX	6	4.00	1.00	1.00	−3.00	3.17	0.39	0.46
Landlord	4	2.67	1.33	0.00	−2.67	3.17	0.78	0.00
HR profile	6	3.33	1.83	0.83	−2.50	2.64	0.71	0.38
Implementation	6	2.40	1.83	1.77	−0.63	1.90	0.71	0.82
Lease detail	9	3.00	2.87	3.13	0.13	1.58	0.74	0.96
Cost	9	2.62	3.75	2.63	0.02	1.38	0.97	0.81
Operational issues	6	1.70	2.43	1.87	0.17	1.35	0.95	0.86
Risk	9	2.45	3.47	3.08	0.63	1.29	0.90	0.95
Proposed portfolio	8	1.92	3.43	2.65	0.73	1.14	1.00	0.92
CRE market risk	1	0.00	1.00	0.00	0.00	0.00	2.33	0.00
Prop Mgt	7	0.50	6.00	0.50	0.00	0.34	2.00	0.20
Corporate governance	6	1.00	5.00	0.00	−1.00	0.79	1.94	0.00
Cash	6	1.00	4.50	0.50	−0.50	0.79	1.75	0.23
Business strategy	5	0.00	3.50	1.50	1.50	0.00	1.63	0.83
Stakeholders – internal	5	1.00	3.00	1.00	0.00	0.95	1.40	0.55
Decision making	7	1.00	4.00	2.00	1.00	0.68	1.33	0.79
IFRS16	9	0.83	4.92	3.25	2.42	0.44	1.27	1.00
Financial analysis	8	0.50	4.15	3.35	2.85	0.30	1.21	1.16
Total	187	39.39	80.14	67.47	28.08			

to be reconfigured. "Knowledge is probably more valuable than anything" (Expert 7) and provides the framework for decision-making and decision implementation. CRE Designation ($p(F) = 1.50$; $p(I) = 0.99$; $A_j = 0.019$) denotes the status of the unit as the core, peripheral or surplus, which may facilitate *dynamic alignment*, but can also be a strong inhibitor. While Workplace Strategy ($p(F) = 1.78$; $A_j = 0.007$) encompasses new ways of working; flexible working can lead to reduced CRE needs and facilitate alignment (Ekstrand and Hansen, 2016). These three attributes are considering a similar aspect in that they define the nature of the properties, whether they are core or otherwise and how space can be used.

Inhibitors
Of the nine inhibitors of *dynamic alignment,* the strongest is CAPEX ($p(I)$ = 3.17; A_j = 0.131). This indicates that the specific capital cost can inhibit alignment. Surrenders require a significant payment to compensate for remaining rent liability and both assignments and subletting have capital costs of property improvement works and the payment of incentives. Down-sizing is frequently associated with the scarcity of capital and cash and, therefore, the capital shortage can prevent realignment from taking place. "Property is a huge cost and huge drain on the business" (Expert 4) and Cost ($p(I)$ = 1.38; $p(N)$ = 0.97; A_j = 0.624) is primarily regarded as an inhibitor, even though once alignment has been completed there should be a reduction in on-going costs, reflected in the $p(N)$ figure.

Most decisions of leased properties will require the involvement of the Landlord ($p(I)$ = 3.17; A_j = 0.025). This indicates the potential for the landlord to control any deal, either because it is direct with the landlord, a surrender or a regear, or because of their control on other transactions through the requirement to provide consent. A Third Party Deal (subletting or assignment) requires landlord approval and their attitude can impact the operation of a lease break. The lift ratio indicates the recognition of the degree of control landlords have in achieving *dynamic alignment* for a portfolio. It illustrates the pessimism CREM's have in successfully transacting with landlords because of, "the vagaries of the landlord" (Expert 6) and the inability to control them. Risk ($p(I)$ = 1.29; $p(N)$ = 0.90; $p(F)$ = 0.95; A_j = 0.869) is important because a firm will be reluctant to instigate a plan if there is uncertainty on the outcome. The strength of all three designations indicates how Risk influences alignment and decision-making and the experts took different perspectives on its influence on alignment.

HR Profile ($p(I)$ = 2.64; A_j = 0.028) comprises HR elements that can create rigidity and impede change, such as headcount, employment contracts and staff home locations. It operates through restricting the flexibility of location and working practices and contrasts with change-orientated HR Practices. The potential for success of the chosen decision (Implementation, ($p(I)$ = 1.90; A_j = 0.061)) and its assessment prior to commencement can inhibit alignment because CREM's recognise the challenges of achieving a realignment strategy. Specific strategies can be discounted before they start because the potential for success is deemed difficult. A lease is restrictive by nature and will impact what can be done, therefore Lease Detail ($p(I)$ = 1.58; $p(F)$ = 0.96; A_j = 0.472) includes clauses relating to the use of the premises and options for third party disposal. The high $p(F)$ score indicates that certain aspects can promote alignment, for example, lease breaks.

Neutral
Five Neutral attributes are above the threshold. CRE Market Risk ($p(N)$ = 2.33; A_j = 0.000) is mentioned by one expert as an attribute. Property Management ($p(N)$ = 2.00; A_j = 0.066) may change through an increase or decrease depending upon the decision, hence the neutral designation. Corporate Governance (Np = 1.94; A_j = 0.045) is an internal factual attribute, in this case, the protocols that need to be followed with any decision-making to ensure internal and statutory compliance. The Neutral designation of Cash ($p(N)$ = 1.75; A_j = 0.150) was not anticipated. Without change lease costs continue, achieving alignment involves cash expenditure while post-alignment costs will be reduced. Business Strategy ($p(N)$ = 1.63; A_j = 0.004) in this context is the transformation process that aligns with corporate strategy and Internal Stakeholders ($p(N)$ = 1.40; $p(I)$ = 0.95; A_j = 0.003) is ensuring that senior management supports the CRE realignment strategy. The high $p(I)$ may reflect the inertia in getting internal stakeholders to buy into CRE strategies of change.

Certain attributes have a high number of mentions but all of the lift ratios are $p < 1.4$. This includes IFRS16 ($p(N) = 1.27$; $p(F) = 1.00$; $A_j = 0.607$). IFRS16 was discussed in the interviews as a facilitator, in that post transaction it will reduce the IFRS16 figure. However, some decisions (e.g. assignment and subletting) leave the firm exposed to an IFRS16 increase if the assignee or sub-tenant fails and the liability reverts. There would appear to be an interdependency with Risk. Financial Analysis ($p(N) = 1.21$; $p(F) = 1.16$; $A_j = 0.330$) includes Profit and Loss, Gap Analysis, etc. It is a narrower definition than Business Metrics, although the latter attribute has a longer time perspective than the former which is more focussed on half and full-year results. Proposed Portfolio ($p(I) = 1.14$; $p(N) = 1.00$; $p(F) = 0.92$; $A_j = 0.086$) indicates a tendency of balance across the three options, suggesting neutrality in the broader sense.

Conclusion
The attributes that facilitate CRE *dynamic alignment* centre around the knowledge and designation of the existing portfolio, its measurement through metrics and potential opportunities. The very act of using metrics seems to encourage *dynamic alignment,* which suggests that a framework is created by using metrics linking to business performance (Van Ree, 2002). The importance of business metrics to CREM's does support the view that such relationships need to be more widely researched (Lizieri, 2003).

The inhibitors creating barriers are capital expenditure, costs, the landlord and HR profile. To achieve *dynamic alignment* many solutions require significant capital expenditure (e.g. surrender premiums; refurbishment costs; etc.). If a business is under pressure with a cost reduction programme, capital will be limited and, consequently, capital intensive decisions will be less attractive than those with limited expenditure (breaks and expiries). It could also indicate that the CREM's do not believe that sufficient change can come from lease events only because inherently the portfolio lacks a *dynamic alignment* capability. This reiterates that the cost focus of CRE remains an important consideration (Stadlhofer, 2010). The role of landlords as an inhibitor and how they can frustrate a transaction highlight how individuals, including those outside the firm, can influence decisions (Mazzoral and Choo, 2003). That reaffirms that the creation and implementation of strategy need to be iterative and emergent (Mintzberg *et al.*, 2009). Risk reflects the lack of control the external environment (Ramirez and Wilkinson, 2016) and internal politics (MacIntosh and Maclean, 2015) can bring to the decision-making process.

Corporate Governance and Business Strategy (Neutral) deal with potential disputes and their resolution (e.g. staff relocations) to smooth approval processes (MacIntosh and Maclean, 2015). By recognising that strategic development is iterative the decision-maker can be attuned to strategy changes (Mintzberg *et al.*, 2009) and react quickly. In the context of the decision-benefit model, the attributes, as the intermediate variables, are identified in their role as Facilitator or Inhibitor of *dynamic alignment* or as having no effect on the process.

Taking a broad perspective a number of the inhibitors (e.g. CAPEX) are not in the direct control of the CREM, whereas, a number of facilitators (e.g. Workplace Strategy) are. Some of the neutral attributes can be regarded as matters of fact (e.g. CRE Market Risk). This would suggest that CREM's do have a measure of control over a number of attributes that can facilitate *dynamic alignment* if they choose to recognise it.

Conclusions
The contribution of this research to theory is that it has demonstrated that CRE decision-making and alignment are affected by a multitude of internal and external variables that

reflect the complex and pluralistic nature of CRE (confirming Heywood and Arkesteijn, 2017). The research has confirmed that a single over-riding objective of *maximising shareholder wealth* is not correct (Stout, 2012). Shareholders are an important consideration, but a much wider range of benefits are sought when implementing alignment. Consequently, alignment models (Gibler and Lindholm, 2012) need to be redefined and consider the inclusion of the extensive list of benefits identified here.

The research has identified a decision-benefit model for CRE decision-making at a time of a declining business necessitating a reduction in the CRE portfolio. The number of variables overall indicates the complexity of the issue and that the ability to execute good decisions can be an intangible resource for the firm (Teece *et al.*, 1997) and add to the value of the firm (Blenko *et al.*, 2010). To achieve *dynamic alignment* requires flexibility which costs money and CAPEX is a significant inhibitor. Consequently, cost minimisation (Stadlhofer, 2010) remains important but this is contrary to the idea that CRE flexibility is increasing (Joroff and Becker, 2017).

The importance of the Landlord as an inhibitor reflects the ongoing lack of *dynamic alignment* capability in CRE, because if the portfolio had flexibility the importance of the landlord would be diminished. Therefore, creating a portfolio with *dynamic alignment* capability would remove the dependence on the landlord (Cooke *et al.*, 2019a). Inconsistency of landlords in their reaction to requests for assignments, sublettings, etc., was an issue for the experts (Argyris, 1991). Consequently, it would appear those landlord decisions are linked to behavioural attributes and benefits that they seek and, therefore, an understanding of these could assist in improving the operation of the market and landlord-tenant relationships. It would assist CREM's by reducing the incompleteness of their knowledge (Argyris, 1976).

The study illustrated that individual experts focus on specific issues that, while not important to others, were important or prominent in the thinking of the individual. An example was that one expert mentioned the supply chain twice as a situational variable but none of the other experts raised it suggesting that, possibly, for the one individual it has been an important issue recently and was at the forefront of his or her mind. Such an occurrence illustrates the possible existence of bias in decision-makers considerations (Hammond *et al.*, 1998) which ideally requires decision systems to compensate for such bias.

An important theoretical contribution of this research is that it is believed to be the first CRE research into the variables that facilitate and inhibit *dynamic alignment*. Secondly, the variables identified are substantially more granular than those identified in other work on alignment (e.g. Beer *et al.*, 2005). The attributes that inhibit the alignment process are not simply the converse of those that facilitate it. Instead, there is a clear difference between the two groups (unlike the work on IT alignment e.g. Luftman *et al.*, 1993). Additionally, the present study has identified that variables that are neutral are not necessarily the default position, but they are specifically chosen. The methodology adopted here offers an approach that other sectors of a firm can use to consider how they can improve alignment with the business strategy and provide a greater understanding of the process (Avison *et al.*, 2004). Further research into the facilitators and inhibitors of *dynamic alignment* could extend into the specific business units responsible for the area, such as HR, to seek to explain matters further.

While the paper does not provide a detailed model of the CRE decision-making process it does model the decision-benefit relationships, and, hence, what the major considerations in CREM decision-making are. This offers considerable insight into the overall decision-making process. The methodology used here offers a tool for developing more detailed

knowledge on the decision-making process (Arentze *et al.*, 2008), and has not been applied much in CRE research before. By extending research outside the confines of CRE literature (Lizieri, 2003) new insights into the relationship between business and CRE might be found. For example, IT alignment identified comparable issues to those that CRE face.

The importance of dynamic alignment for occupiers has been highlighted by the Covid-19 pandemic. The pandemic has affected different CRE sectors disproportionately. For example, the retail sector in certain countries has seen restrictions on openings for certain trade (e.g. clothing), whereas others (e.g. food) have traded throughout with all sectors seeing a switch to online sales. The office sector has been typified with a move to home-working. These actions have seen considerable debate within the CRE community as to what the consequences will be for physical space. This emphasises the importance of a portfolio capable of *dynamic alignment* and the benefits for those able to adjust to reflect what might become the new norm.

Limitations and recommendations

The interview sample size could be regarded as small and an initial concern was to get enough participants to elicit adequate expert knowledge. Getting nine experts to participate in the interviews and undertake follow-up work to provide the depth of knowledge they did was gratifying. The concern on the quantum of expert knowledge was dissipated after the fifth interview when clear evidence of saturation of elicited expert knowledge became apparent.

This research sets a specific scenario and ignored other decision contexts. Future research using the same technique (CNET) for different scenarios could provide further insights into the decision-making process for CRE. The indication from this work is that a small number of experts could provide more than adequate expert knowledge to provide these insights.

The methodology adopted in this research was an interview followed by an email request for the allocation of points and identification of facilitators or inhibitors of *dynamic alignment*. Additional information may have been gleaned if a further face-to-face session had been held for the point allocation and attribute classification, in particular, the thought processes of the experts in their designation of attributes as Facilitators or Inhibitors. Alternatively, research specifically focussed on the thought process behind Facilitators, Inhibitors and Neutral attributes could be undertaken.

What the research has not done is provide a comprehensive decision-making model for CREM's. Rather the findings indicate a range of variables and links between them that are considered during CRE decision-making. For the less experienced CREM, they can provide a list of variables and reasoning chains to include in their decision-making thought process. A comprehensive decision-making model would require other scenarios to be researched. In particular, it highlights the importance of the landlord and therefore CREM's should seek to minimise that influence by creating a portfolio with a *dynamic alignment* capability.

The research approach requested the experts to apply all their knowledge and not approach it in the context of their present role. Future research could be sector-specific and seek to understand how for example retailers differ from office users in set scenarios. An area of additional research could be examining CRE strategies in literature and linking the variables identified by the experts to those strategies which could provide an understanding as to how some of the variables came about.

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Appendix

Space utilisation	Decisions				D-A ranking	Attributes	A-B ranking	A-B total	Benefits	
	Landlord deal	Third-party deal	Lease event	D-A total					Financial stakeholders	Implementation benefits
0.12	0.26	0.23	0.26	0.869	1	Risk	1	0.261	0.07	0.06
0.05	0.19	0.19	0.21	0.624	2	Cost	3	0.208	0.07	0.04
0.06	0.18	0.18	0.18	0.607	3	IFRS16	4	0.182	0.08	0.00
0.06	0.11	0.08	0.22	0.472	4	Lease detail	2	0.250	0.07	0.06
0.02	0.14	0.12	0.16	0.442	5	Business metrics	5	0.159	0.06	0.02
0.02	0.09	0.11	0.11	0.330	6	Financial analysis	9	0.106	0.03	0.02
0.00	0.06	0.07	0.06	0.180	7	Stakeholders – external	12	0.085	0.05	0.00
0.00	0.04	0.05	0.06	0.150	8	Cash	7	0.112	0.05	0.02
0.01	0.04	0.03	0.07	0.147	9	CRE tactics	6	0.120	0.02	0.04
0.01	0.04	0.04	0.04	0.131	10	CAPEX	15	0.079	0.03	0.02
0.00	0.03	0.04	0.03	0.097	11	Decision making	11	0.088	0.03	0.02
0.00	0.01	0.02	0.05	0.086	12	Proposed portfolio	8	0.110	0.03	0.04
0.00	0.00	0.05	0.01	0.066	13	Prop Mgt	9	0.106	0.02	0.00
0.01	0.01	0.02	0.03	0.066	13	CRE metrics	16	0.074	0.02	0.02
0.00	0.01	0.02	0.03	0.061	15	Implementation	17	0.050	0.00	0.04
0.01	0.02	0.02	0.01	0.045	16	Corporate governance	18	0.045	0.03	0.00
0.00	0.02	0.01	0.02	0.045	16	Space utilisation	14	0.080	0.02	0.02
0.00	0.01	0.00	0.02	0.028	18	HR profile	13	0.083	0.03	0.02
0.00	0.01	0.00	0.01	0.025	19	Landlord	20	0.037	0.01	0.02
0.00	0.00	0.00	0.00	0.019	20	CRE designation	19	0.043	0.00	0.00
0.00	0.00	0.00	0.01	0.016	21	Operational issues	21	0.035	0.01	0.00
0.00	0.00	0.00	0.01	0.014	22	Current portfolio	22	0.024	0.01	0.00
0.37	1.28	1.29	1.62	4.549		Total		2.497	0.82	0.44

(continued)

Table A1.
Utilities of decisions and importance weights of attributes and benefits

| | | | | Benefits | | | | | |
Business metrics	Risk reduction	Motivation drivers	Cost reduction	Operational benefits	Stewardship	Profit and loss	CRE future-proofing	CRE profile	HR benefits
0.03	0.05	0.02	0.01	0.01	0.01	0.01	0.00	0.00	0.00
0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.00
0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
0.02	0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00
0.02	0.00	0.01	0.01	0.02	0.00	0.00	0.01	0.01	0.01
0.00	0.00	0.00	0.01	0.02	0.01	0.00	0.00	0.00	0.00
0.01	0.00	0.01	0.01	0.00	0.01	0.01	0.01	0.00	0.01
0.02	0.01	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.01	0.00	0.00	0.01	0.00	0.01	0.01	0.01	0.00	0.00
0.01	0.00	0.01	0.00	0.02	0.01	0.00	0.01	0.00	0.00
0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.01	0.02	0.00
0.02	0.02	0.01	0.01	0.01	0.01	0.00	0.01	0.00	0.00
0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
0.22	0.20	0.16	0.12	0.11	0.10	0.09	0.09	0.06	0.05

Table A1.

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