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Alignment theory For CRE and workplace

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9

ALIGNMENT THEORY

For CRE and workplace

Monique Arkesteijn and Chris Heywood*

1 Background alignment theory

Alignment, generally, brings into harmony things that differ or could differ by making them consistent or in agreement with each other (based on *Shorter Oxford Dictionary* definitions). Andolsen (2007, p. 35) refers to it as strategic alignment, defining it as “the link between an organisation’s overall goals and the goals of each of the units that contribute to the success of those overall goals”. Indeed, alignment theory has become a thread of strategic management thinking; for example, Alagaraja et al. (2015, p. 20) “highlight the importance of organizational alignment – or fit – between internal and external organizational factors as a common theme and distinctive focus in the management literature.” They state (p. 25) that “there is a significant lack of agreement on a discrete definition of alignment” and conclude that alignment can be seen from the following three dominant perspectives that rest on a different set of agreements about how organisations learn and perform: *process*, *relational* and *strategic*. Furthermore, they distinguish five types of organisational alignment: *horizontal alignment*, *vertical alignment*, *structural alignment*, *cultural alignment*, and *environment alignment* (Alagaraja et al., 2015). In corporate real estate and workplace, *alignment* theory originates in strategic management (Mintzberg et al., 1998; Porter, 1996) and in strategic alignment theory (Kaplan & Norton, 1996; Kaplan & Norton, 2006) and organisational performance assessment. Corporate real estate and workplace, along with other organisational infrastructure functions like human resources and information technology, have all independently grappled with questions of their relationship with organisational strategy and performance (Nientker, 2017); for example, human resources (Sender, 1997) and information technology (Henderson & Venkatraman, 1999). The interrelationship between these infrastructure functions is considered in Corporate Infrastructure Resources/Integrated Resource Infrastructure Solutions (CIR/IRIS) (Ellzey et al., 2004; Materna & Parker, 1998). Common to all are questions of future organisational intentions and performance (strategy) and their role in enabling that as infrastructure or support functions. For corporate real estate and workplace, these questions relate to the organisation’s physical environments and their management.

Within strategic management, in Strategy Safari, Mintzberg et al. (1998) identify multiple schools or conceptions of what strategy is and their methods. Two schools commonly

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represented in corporate real estate and workplace alignment are the Design and Positioning Schools that 'prescribe' strategy and its methods. Kaplan and Norton, and Porter, are part of these so-called prescriptive strategies. Porter is the key example of the Positioning School, and Kaplan and Norton, although not mentioned in *Strategy Safari*, can be added to the Design School. These *prescribing* strategies focus on the ideal processes and contents for strategies, where the strategy is the outcome of the strategy design process. Prahalad and Hamel's (1994) organisational core competencies work belongs to the Learning School as part of the *descriptive* schools of strategy. Descriptive schools consider the process of strategy formation and *describe* how a strategy is created in practice. They emphasise the continuing nature of strategy design and reject the idea that strategy is a completed and distinct product, waiting to be implemented. In this chapter, the prescribing Design and Positioning Schools are discussed.

1.1 Design School and alignment

This school originated with Selznick in 1957 with the case study teachers at Harvard as its champions (Mintzberg et al., 1998). 'SWOTed by strategy', as Mintzberg et al. (2005b) call it, aims at achieving a fit between internal Strengths (S) and Weaknesses (W) and external Opportunities (O) and Threats (T) (see also Chapter 8 on decision-making theories). This view's advantages are that it is straightforward and simple, requires little preparation, and is a way of structuring ideas; but, according to Mintzberg et al., has become a much-used but also abused ritual. The authors state that while the intended message of this school is 'fit', the realised message is 'think'. The school's keywords are congruence, distinctive competence, competitive advantage, SWOT, formulation, and implementation. The processes in this school are ordered, the leadership is dominant and judgmental, and the environment expedient. The contextual dimension in this school is delineable (into economic dimensions, technical dimensions, social dimensions, etc.) and stable. Organisational form is characterised as 'machine-like' which indicates a more centralised and somewhat formalised approach to strategy (Mintzberg et al., 1998).

The Design School also has disadvantages. There is no agreement on SWOTs, as there is no such thing as a 'general' SWOT; for example, will existing strengths and weaknesses be strengths and weaknesses for other and future activities? SWOTs overstate strengths and opportunities reinforcing the status quo. It uses different criteria in defining strengths and weaknesses, is driven by anecdote, and breaks through corporate culture, and it is difficult to verify the claims. Often the strengths are well known but the weaknesses are hidden, boundaries between organisations and environments are unclear, and the weaknesses and threats confused. Strengths and weaknesses are not connected to opportunities and threats. It is possible to improve SWOTs when seen as a general aid, when measures and criteria are made explicit, when SWOTs are prioritised, outside consultants are used, and SWOTs are specified and substantiated (Mintzberg et al., 2005a, 2005b).

Kaplan and Norton's Balanced Scorecard (BSC) (1996, 2006) is part of the Design School because it similarly emphasises evaluating external and internal situations. The BSC is based on the premise that pure financial performance measures are insufficient for effective management decisions and are backward looking. The balanced score is a set of performance targets and results with four dimensions of performance – financial, customer, internal process, and innovation. It looks at these dimensions because organisations have responsibility towards different stakeholder groups, such as employees, suppliers, customers, community, and shareholders. The dimensions are both forward and backward looking. The BSC is the managerial equivalent of stakeholder theory, with roots in strategic management as well as sociology amongst others in organisational behaviour.

In the Design School, ‘alignment’ takes place between strengths and weaknesses and the opportunities and treats, or between the four dimensions: financial, customer, internal process, and innovation.

1.2 Positioning School and alignment

The Positioning School treats strategy formation as an analytical problem which, therefore, requires (large amounts of) data. Porter’s work, which represents this school, originated in economics’ industrial organisation theory and how industries behave. By extension, for the individual firm, the question is ‘How to operate, or position oneself, within that industry?’ The analysis required has two aspects:

- External to the organisation and expressed as five industry forces which affect firms’ activities (Porter, 1980) – buyers, suppliers, new entrants (to the industry), substitutes (which produce comparable effects to the firm’s products), and rivalry between industry firms; and
- Internal to the firm in terms of value-adding activities of a firm’s internal organisational functions, like logistics, marketing, and firm infrastructure (Porter, 1985).

The analyses produce three ‘generic’ strategies (or positions) relative to other firms in the industry that are ‘defendable’. These generic strategies are: *cost* (lowest cost producer which means that goods and services can be profitably priced below competitors’); *differentiation* (brand and other intangibles offer value to customers); and *focus* (the scale of the targeted market – large or particular). These strategies produce (Sustainable) Competitive Advantage (Porter, 1980). The Positioning School assumes that strategy is senior management’s task (analysing the industry and determining the generic strategy) which is then implemented at lower levels of business units and organisational functions, like CRE or workplace management. Alignment is therefore a top-down activity.

Mintzberg et al. (1998) state that while this school’s intended message is ‘analyse’, the realised message is ‘calculate’. This school’s keywords are generic strategy, strategic group, competitive analysis, portfolio, and experience curve. The school’s processes are analytical, systematic, and deliberate, and the leadership is responsive to the analysis. The contextual dimension here is simple, stable, and mature. While the organisational form is characterised as a large machine, preferably in commodity or mass production, this indicates a more centralised and formalised approach to strategy (Mintzberg et al., 1998).

2 Applicability to workplace studies

Alignment theory has strong relevance in workplace studies as its purpose is to, upfront at workplace project inception, produce CRE objects that work (better is assumed), i.e. are aligned with their occupying organisations, and do so for longer by being strategically robust.

Workplace alignment can be seen as part of CRE alignment because alignment occurs on different organisational levels and is nested. Alignment and nesting can also be identified when looking at ‘employee-job’ and ‘employee-organisation’ fit (Alagaraja et al., 2015), albeit done there at a micro level. The workplace and CRE portfolio can be positioned in a conceptual framework (see Figure 9.1) that started with four S’s (Duffy et al., 1998) – Shell, Services, Scenery, and Settings – that disengages the long-term demands of the building shell from its services, fit out, and space management. Over time, three further S’s were inserted: Site, Skin, and Systems (Worthington, 2016; see also Chapter 5 on socio-technical transitions theory). The academy as well as practitioners even state that “to perform workplace alignment well it needs to be part of Enterprise alignment” as Sargent (personal communication, April 24, 2020)

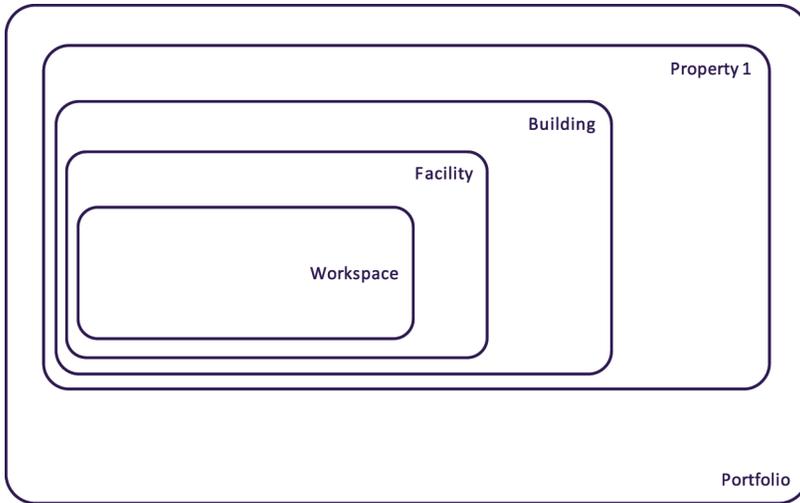


Figure 9.1 Nested portfolios, real estate, and workplace for alignment (after Duffy et al., 1998)

said. In this section, therefore, firstly an example of CRE alignment is given, followed by two examples of workplace alignment.

2.1 Corporate Real Estate alignment: a more complete picture

During the last thirty years, at least fourteen models of CRE alignment have been made. In a Corporate Real Estate alignment metastudy, Heywood and Arkesteijn (2017, 2018) systematically mapped the individual models. CRE alignment turned out to be complex and pluralistic, being several things simultaneously, and it was not possible to show CRE alignment as a singular, definitive ‘thing’. Heywood and Arkesteijn (2017) studied what the models’ authors meant by ‘alignment’, and Heywood and Arkesteijn’s (2018) metatheory reconciled the CRE alignment models’ observed variability to represent CRE alignment more completely as having four Building Blocks containing twelve components and feedback loops between them, with underlying alignment aspects.

Alignment was not a singular definitive ‘thing’ because very few authors of models specifically defined it. Some referred to the strategic alignment ‘school’ they belong to, but generally the authors did not brand their model as ‘alignment’, though it was obvious that this was meant. Without definitions three things happen: (1) reliance on dictionary definitions (as per the Background section), (2) reliance is placed on general understanding of what is meant in the field, and (3) ‘alignment synonyms’ are used to denote the relationship between CRE and organisational strategies. Giving a concise definition would omit something of the now-clearer understanding now available; therefore, Heywood and Arkesteijn (2017), based on the general understanding in the field, distilled it to four distinct aspects (Table 9.1).

Firstly, CRE alignment occurs between *multiple cognitive-objects* (Figure 9.2), with three on the business side (business strategies and their context, business performance, and business needs) and three on the CRE side (CRE strategies, CRE, and CRE management). Strategy-level objects (corporate and CRE) were pre-eminent primary alignment objects with other objects all needing alignment, but consequentially.

Table 9.1 Checklist of four aspects of alignment in the models

Multiple objects (need to be aligned)	Multi-valent relationship between the objects	Multi-directionality (needed to achieve alignment)	(resulting in) Multiple forms of alignment
Business objects Business (corporate) strategy Business performance Business needs	A relationship between these objects An awareness-based relationship A derivation-based relationship A consistency-based relationship A integration-based relationship A movement-based relationship A assessment-based relationship A usefulness-based relationship A strengthening-based relationship	Internal Vertical - top-down - bottom-up (corporate strategy informed by CRE) <i>Horizontal</i> - together with other infrastructure support functions (HR, IT etc) - across the business units for coherent portfolio approach External	Artefact (plan) Process State Behaviour

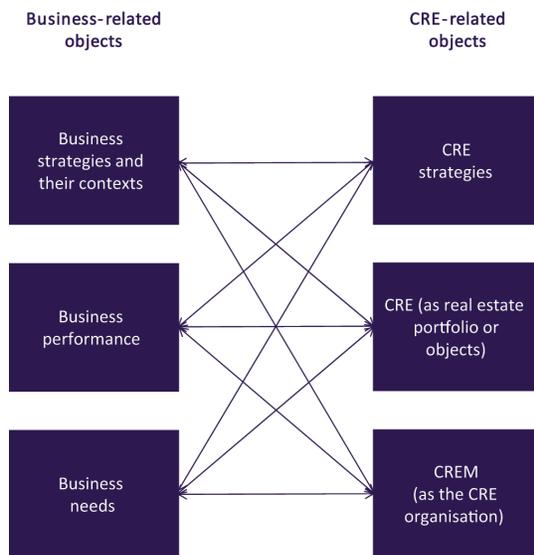


Figure 9.2 Business and CRE objects (Arkesteijn, 2019, p. 62)

Secondly, when studying the alignment synonyms, Heywood and Arkesteijn (2017) found many words used that described the relationship between these objects captured different values. This revealed a *multi-valent relationship* (that is, multi-valued or strength) with a hierarchy of significance within the relationship, suggesting that higher-value words towards the base of that column in Table 9.1 are more important in theorising and describing alignment.

Thirdly, alignment is multi-directional; that is, alignment needs to be done vertically between the organisational and functional levels, horizontally across the business units and the corporate infrastructure functions, and also between demand and supply. This supply may be available internally from the existing portfolio or sourced externally from the real estate market.

Lastly, four forms of alignment were found with three forms from the business alignment literature: (1) a state of being; (2) a strategy or plan (two noun forms); and (3) a set of actions that make up a process (a verb) (Kaplan & Norton, 2006; Labovitz & Rosansky, 1997). ‘Behaviour’, which is having a strategic mind-set (Joroff et al., 1993; O’Mara, 1999), was added as a fourth form. Within these four forms, two distinct combinations were present – process-based and behaviour-based.

Alignment is not just one of these four aspects; it is many or all of them, meaning that a good alignment model should conceptualise its phenomenon by:

- Using words of higher semantic value for describing the relationship,
- Being a process (most usually), but also finding behaviour in strategic mind-sets – both producing more aligned states sometimes reported in a plan,
- Aligning strategies (corporate and CRE) with other aligned cognitive objects consequential to these, and
- Including all directions.

All four aspects with their parts can be found in Table 9.1, which can be used as a checklist when working on CRE and workplace alignment.

Next to the four aspects of alignment in the models, Heywood and Arkesteijn (2018) showed a CRE alignment metatheory where twelve components modelling CRE alignment are categorised into four Building Blocks: (1) understanding corporate strategy; (2) understanding real estate performance; (3) making real estate strategy; and (4) implementing real estate strategy (see Figure 9.3). One might state that this is an overview of the process that CRE managers and their organisations go through. In this section, each Building Block and its components are briefly discussed, followed by the various feedback mechanisms which were also evident between the components.

2.1.1 Building Block 1

This block is about understanding the corporate strategy, the factors that give rise to strategies, and the strategising itself. Here, alignment is more than just knowing ‘What is the business and its strategy(-ies)?’ or the business ‘needs’; it also requires understanding its strategic basis and its dynamics, and the organisational strategy creating process. This is very important in CREM especially because real estate buildings’ service lives exceed business cycles. The components in this block are:

- *External business drivers and forces* identifies the organisation’s external impacts requiring strategic responses. As the underlying external operants that affect the business, they create something like a business’s operating ‘force-field’.

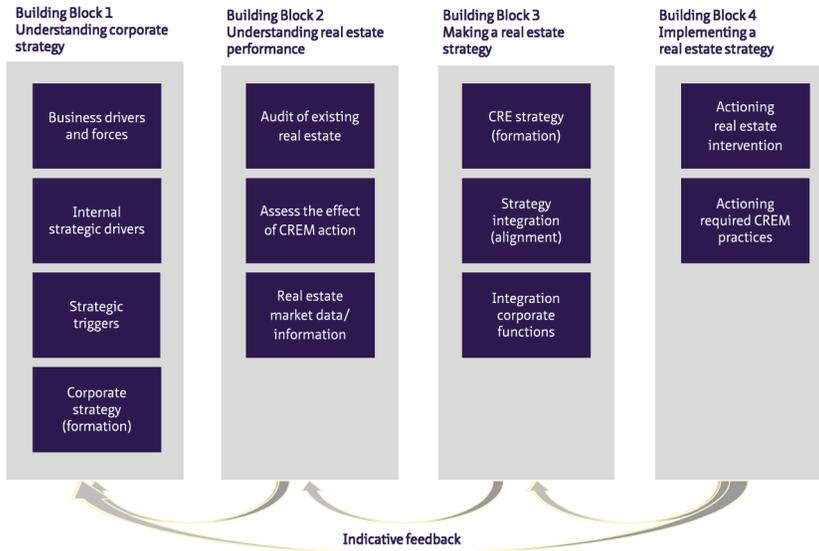


Figure 9.3 CRE alignment building blocks and components (after Heywood & Arkesteijn, 2017, p. 17)

- *Internal strategic drivers and forces* is considered in two ways. One relates to those generated through internal support functions. Second, understanding internal drivers and forces is the so-called ‘soft’ or ‘social’ management dimensions, for example, leadership styles and methods, culture, and organisational structures.
- *Strategic triggers* understands what in the organisation’s operating context creates organisational change. The underlying frequency with which strategic triggers emerge matters, as does specific change in the drivers and forces – changes in magnitude and timing.
- *Corporate strategy (formation)* includes identifying the corporate strategies and how the organisation forms strategy as more than ‘just’ knowing what the strategy is.

2.1.2 Building Block 2

This block is about understanding the real estate objects’ alignment performance. The components in the following list reference the state of the portfolio and its individual real estate objects, knowing how CREM actions change alignment states, and grounding CRE alignment decisions within real estate markets. Performance and its measurement are longstanding in CREM. The components in this block are:

- *Audit of existing real estate* assesses the portfolios’ and individual properties’ current state prior to alignment, benchmarking future assessments.
- *Assess the effect of CREM actions* evaluates the effect of possible CREM alignment actions. Usually post-alignment but pre-knowing the CREM actions’ effects helps decide Building Block 3’s CRE strategies and Building Block 4’s used interventions.
- *Real estate market data/information* captures information required to evaluate a portfolio and its real estate objects. It provides a foundation for creating ‘commercially viable’ CRE strategies and shows real estate products’ potential availability in locations and at satisfactory prices. It also locates specific real estate objects in the real estate market (aggregable to the whole portfolio).

2.1.3 Building Block 3

This block's three components represent CRE strategy making as the strategy itself and its formation. It is where the corporate and CRE strategies are actually aligned (ahead of implementation), including relationships with other corporate functions (this is also referred to as enterprise alignment). The components in this block are:

- *CRE strategy (formation)* has two related dimensions to CRE strategy: (a) listing or documenting various strategies (the models contain CRE strategies), and (b) ways of creating CRE strategy without necessarily predefining them.
- *Strategy integration* recognises that CRE and corporate strategies need bringing to an actual alignment state. Either the corporate or the CRE strategies move.
- *Integration with other corporate functions* recognises that CRE strategy is rarely enacted alone, often requiring other corporate functions, like HR and Finance, to achieve desired strategic outcomes.

2.1.4 Building Block 4

This block makes the actual changes to reach alignment in two components – the operating real estate and management decisions that are core CREM practice. The components in this block are:

- *Actioning the real estate intervention* involves changing the portfolio's individual real estate objects to actualise alignment. Decisions are required about applicable real estate interventions which are, essentially, transaction-based decisions about 'acquiring, controlling, managing, and disposing of real property interests' (Nourse & Roulac, 1993, p. 486). It is assumed that portfolio alignment states improve through more aligned real estate objects. Business dynamics raises questions whether achieving perfect alignment is possible as context and requirements change. At best, portfolio alignment might be partial, though more complete for any one object.
- *Actioning the required CREM practices* recognises that CREM practices are also required to reach alignment. These are extensive, with at least 162 being identified (Heywood & Kenley, 2008).

Feedback was another important aspect of graphically representing CRE alignment. Most models explicitly included some feedback with various approaches evident broadly categorisable as occurring between components in one Building Block and another.

Before turning to workplace alignment models, it can be concluded that all underlying fourteen models focus on a portfolio level, and most models do not explicitly mention the workplace. However, some authors like Haynes (2008) mention work environment as part of the place sphere, Scheffer et al. (2006) use work environment and workplace innovation, and Weatherhead (1997) uses flexible working as an element in her model. Others mention work environments as operational decision-making strategy, or as an example (Lindholm & Levainen, 2006; Osgood Jr, 2004). While some explicitly state that their models are usable at different levels, these models focus on portfolio level and zoom in on the workplace level (De Jonge et al., 2009; Osgood Jr, 2004).

CRE alignment (models) is based on several models that have direct connections to the Positioning or Design Schools, and so in this overarching metatheory, both schools are represented.

In the models, O'Mara (2000) specifically uses the Positioning School, while others like De Jonge et al. (2009), Den Heijer (2011), or Nourse and Roulac (1993) take a Design School approach.

2.2 Workplace alignment models

As of now, to the authors' knowledge, there is no comparative study of workplace alignment models. However, several models were developed and used by design and consultancy firms, with DEGW as a main player since 1973. DEGW has been passionate about architecture and integrated building and organisational design, using the emerging tools of space budgeting, post occupancy evaluation (POE), and participatory briefing (Worthington, 2016). Their combined design and research work developed the so-called DEGW Den model (Figure 9.4) as an early workplace alignment model. Organisations were defined by the nature of work, the predominant processes undertaken, and the physical settings required (ibid, p. 55). Duffy explained in *The New Office* (Duffy & Powell, 1997) that organisational work patterns were fundamentally altering from key trends in information technology, and flattened hierarchies – with emphasis on teamwork and cross-functional interaction, and service-led economies. This changed the logic of office layouts. Beforehand, the layout was based mainly on organisational structure and hierarchy. The focus on work processes produced two key variables that determined any organisation's work: interaction and autonomy. Combining these variables produced four basic work patterns: Hives, Cells, Dens, and Clubs.

This model belongs to the Positioning School approach because it is about 'analysing' how the work processes lead to work patterns, which in their turn change the office layout. The four basic work patterns can be seen as the equivalent of the School's *generic strategies*.

A more recent practice-developed workplace alignment model is the Human Experience Model (HX) (JLL, 2017). This research states that 'decoding', i.e. understanding, human experience for real estate is a key differentiator for how people engage with an organisation. Similar to customer experience, employee experience involves how an individual interacts with their environment (physical, virtual, and even spiritual) and their peers. This model has three

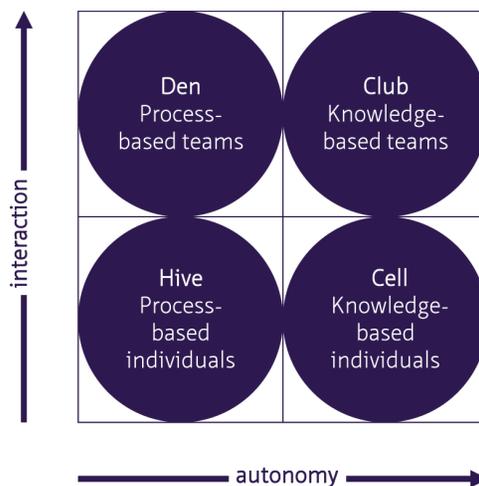


Figure 9.4 DEGW's Den model; organisational demands reflect the processes undertaken and the physical settings required (Duffy et al., 1993, colours adapted)

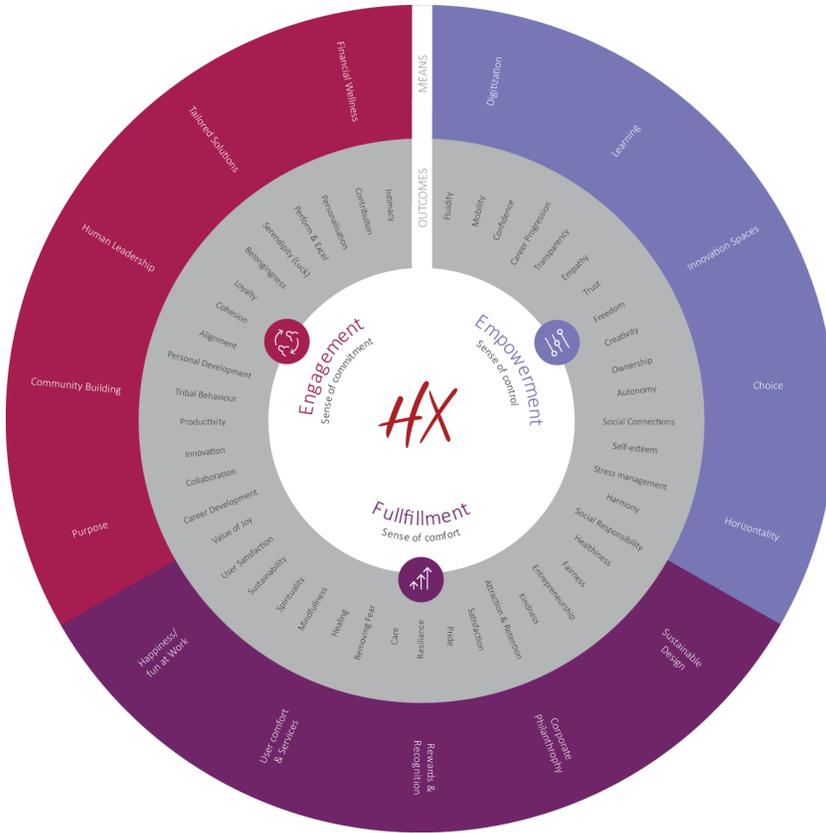


Figure 9.5 Human Experience model (JLL, 2017, p. 18)

experience pillars, also referred to as priorities: engagement, empowerment, and fulfilment (see Figure 9.5). Engagement relates to fostering a sense of commitment, which drives employees’ performance and effectiveness. Empowerment gives people a sense of control in their working environment, and this can drive performance. Fulfillment makes sure work feels comfortable beyond the surface level of happiness. Each of these pillars is related to different outcomes and means (JLL, 2017).

This model belongs to the Design School, where the ‘decoding’ of human experience can be seen as ‘analysing’ human experience and then linking it back to workplace elements.

With these examples, some differences become apparent. Whereas DEGW’s model focuses on different work patterns which relates to the physical environment through the chosen metaphors, the HX model focuses on means and outcomes to be taken into account when making the physical environment. These models help practitioners focus on aspects that they need to consider when aligning workplaces.

Where organisational performance is central in the CRE alignment models, not all fourteen models have the same underlying approach. Some models take a shareholder approach and focus mainly on financial value; others take a stakeholder approach and focus on different perspectives, i.e. types of values. Over the years, the focus has shifted (not necessarily specifically in this order) from efficiency, effectiveness, productivity, innovativeness, green, smart, health and

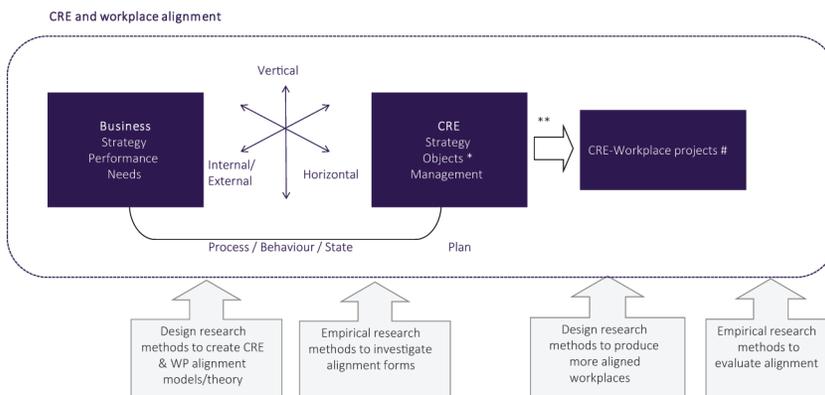
well-being, happiness to experience (De Vries et al., 2004; Den Heijer, 2011; Riratanaphong & van Der Voordt, 2012). For workplaces, the focus has shifted from productivity to engagement, and now to experience.

3 Methodology/research approach

In workplace alignment theory, there are several methodological considerations. First are the methodologies used to create CRE-Workplace alignment theory. Second are the methods to scientifically investigate alignment's forms as artefacts, processes, states, and behaviours (empirical research). Third are the methodologies to produce more aligned workplaces that are more applicable to practitioners or would show up in empirical studies of processes and behaviours (design research). Methodologies in the two latter aspects seemed to be related more to certain strategy schools identified in Section 1. It also needs to be borne in mind whether the investigation is at a less tangible level, that of Business and CRE strategy, or more tangibly, CRE objects in aligning workplaces, or in aligning workplace management practices (Figure 9.6).

3.1 Design or empirical research methods to create CRE and workplace alignment models/theory

Design research is more focused on creating solutions or in changing situations. It applies to the academy in proposing and testing methods intended for use by practitioners. Van Aken (2004, 2005) outlines design research in Management Sciences, and Hevner (Hevner, 2007; Hevner et al., 2004) does the same for Information Systems research. Hevner's (2007) framework distinguishes three elements: (1) the *environment* that accounts for the relevance cycle; (2) the *knowledge base* that accounts for the rigor cycle, which is linked by the design cycle in (3) the *design science research*, where the new models are built and evaluated. Most CRE alignment research accounts for the relevance and rigor cycles but do not justify their design cycle; instead, they use empirical research for justification. More recently this is done by Arkesteijn (2019) who



* Workplace is a CRE object

** Projects originate in assessments of misalignment

Transmission of alignment through project processes (assumption)

Figure 9.6 Methodologies and alignment

uses Ackoff and Sasini (1968) and Binnekamp et al. (2006) for her Preference-based Accommodation Strategy design decision method.

When using empirical research methods to create CRE alignment models/theory, several qualitative methodologies can be and have been used. These included reflections on practice, empirical research, normative statements, and validation studies (Heywood & Arkesteijn, 2017).

3.2 Empirical research methods to investigate alignment forms

Empirical research is about testing pre-existing theory. In alignment theory, this would test the theory itself, which was not always done in CRE alignment modelling or in revealing practitioner theory-in-use, given they quite readily can say whether they are aligned or not (Heywood & Arkesteijn, 2017, 2018). In investigating alignment forms, arguably, different methods may be useful for the different forms.

- Case studies would most likely be the unit of analysis, and/or multi-case studies.
- Given the absence of theory in practice, grounded theory would be most applicable to empirically investigate practitioner self-theory in what they consider to be aligned (state/plan) and how they align (process/behaviour). Heywood's unpublished 2009 study used grounded theory with a hypothetical situation but found that practitioner participants tended to theorise their own experience rather than informing him of how they would address the hypothetical in a way that revealed their theory in use.
- Action research could be used empirically in live alignment exercises (also very applicable in design research methods). Processes and behaviours would most likely be evident in the results. Also, information would likely emerge about decision and judgement methods regarding states and plans created (Design School) and relationship to others in the industry (Positioning School) via cross-case comparisons of the action research site and other cases.

3.3 Design research methods to produce more aligned workplaces

Design research, as explained earlier, is focused more on creating solutions or in changing situations. It applies not only to academics but also to practitioners, seeking more aligned workplaces. Various soft systems methods could be used; for example, those from construction project initiation activities are analogous to this chapter's alignment concerns. Examples of these include Strategic Needs Analysis (Smith, 2005) or problem structuring (Winter, 2006). Some of these presume that the strategic decisions have already been taken (Winter, 2006); others are more useful in teasing out and clarifying those decisions as a prelude to a decision to build (Smith, 2005).

3.4 Empirical research methods to evaluate (new) workplaces

Post-Occupancy Evaluation (POE) using quantitative statistical methods to empirically investigate satisfaction in workplace projects (post-completion) and extant workplaces are very common in the field. For projects, evaluations should use the originating business and CRE strategies as their evaluation baseline rather than the brief which was originally proposed for POEs (Preiser, 1995, 2002). This is important because of assumptions that the 'brief appropriately translates strategy into the brief' may not necessarily be the case due to discontinuities between project phases. For extant workplaces, it is important to understand (dis)satisfaction with them, but it should be borne in mind that the evaluated workplace may be misaligned.

Next to POEs, a range of evaluation methods are available; for example, Guba and Lincoln (1989), which is a constructivist, naturalistic methodology. Also, established workplace evaluations like POEs are available to evaluate alignment states. These were also seen as a ‘feed-forward’ learning methodology that would be applicable to the Learning School of strategy. A challenge in evaluating workplace (projects) is that strategic shifts can occur during projects and over their useful lives. These strategic shifts in both business and CRE strategies are almost inevitable in dynamic business environments.

3.5 Research gaps

The methods used to create CRE alignment theory can also be used to create workplace alignment theory. Many models exist that are used to do workplace alignment; however, a systematic and robust metastudy into these models is presently lacking. There is also an absence of empirical and design research studies, and where they do exist, they do not include a strategic alignment dimension using, instead, lower-level cognitive objects in their conceptualisation.

4 Limitations

Alignment theory is not without limitations. First, there are methodological issues within strategic management’s Design and Positioning Schools with techniques, like SWOTs (Design School), analysis possibilities, and assumptions about business contexts like sustainability of competitive advantage, influential forces, and generic strategies (Positioning School). Second, within the Design School, a limitation of the stakeholder theory and thus also the BSC is that the approach states that organisations’ managers need to define what is better and what is worse as the basis of making decisions (Jensen, 2010). Therefore, he argues that a single-valued objective function is required, which the stakeholder approach lacks. The stakeholder approach, like Kaplan and Norton’s BSC, is a management tool to understand what creates value. The system therefore is best described not as a scorecard, but as a *dashboard* or instrument panel (Jensen, 2010).

Third, Porter’s work, and by extension the Positioning School, is criticised on several fronts:

- The sustainability of competitive advantage only occurs in stable industries and conditions (McGrath, 2013). In dynamic conditions more like contemporary business, alternative approaches are required; for instance, transient advantage (McGrath, 2013) or innovation needs adding to ensure sustainability of generic advantages (Heywood & Kenley, 2008).
- The five forces represent a pre-digital approach, and that in a digital economy additional forces need inclusion – globalisation, deregulation, and killer apps (Downes & Mui, 1998).
- Data availability biases the application towards big firms with data availability and analytical resources (Mintzberg et al., 2009).
- Analysis can produce paralysis rather than decisive insights to go forward (Mintzberg et al., 2009).
- Strategy is not generic but instead is individual to any given firm.

Fourth, there are limitations in the level of alignment application and whether this is at the portfolio, property, workplace, or enterprise level. It is assumed that theory and methods are universally applicable to all or any level, but this is untested. Similarly, limitations exist in the selection of illustrative examples which have differing approaches to workplace and its performance. Fifth, though connectivity between alignment in infrastructure functions like CRE and human resources was noted in Section 1, there does not appear to be much cross-fertilisation

between alignment theory in each of these functions. This is a limitation in advancing theory, though there is some emerging evidence that this may not be so marked in practice.

Sixth, methodological limitations apply to researching workplace alignment including whether different methods apply to different alignment forms. Case studies as a prevalent method have limitations about generalisability which can be counteracted with careful argument about cases' representativeness and informativeness. Further methodological limitations apply to POEs where the original conception was to evaluate built outcomes against briefs (Preiser, 1995, 2002). It has been observed in current practice that, not infrequently, the evaluation is of current perceptions of requirements which may well have evolved from originally stated requirements (the brief). This shift and its consequences appear unrecognised in these evaluations.

Finally, limitations exist in the current form of alignment metatheory (Heywood & Arkesteijn, 2018) in that it assumes that model completeness equates to alignment effectiveness which is, at present, just that – an assumption. Also, potential overlaps exist between the underlying phenomenon and the metatheory's components, which require further research.

5 Theory relevance to practice

Alignment theory has strong practice relevance as its purpose is, upfront at workplace project inception, to produce CRE objects that work (better is assumed) for their occupying organisations and do so for longer by being strategically robust.

Corporate Real Estate and workplace alignment theory emerged from practitioners grappling with the task of providing CRE objects that worked for their organisations' businesses. In seeking to: (1) explain to themselves what they did or had done; and (2) help and advise fellow practitioners similarly placed, they created alignment models published, initially, most often in professional-focused magazines and books. This practitioner theorisation has since been joined by the academy (Heywood & Arkesteijn, 2017). As such, alignment theory can already be said to be deeply embedded in practice and theory. Indicative of its continuing practice relevance, Enterprise Alignment is one of four core subjects in CoreNet Global's Master of Corporate Real Estate program.

However, two things can be observed about alignment theory. One, practitioners are not familiar with the models (Arkesteijn & Heywood, 2013) despite consistently saying whether they are aligned or not (Bon, 1997). Second, alignment theory became characterised by a proliferation of theoretical models. This, in turn, suggests several things. First, that practitioners (continue to) self-theorise their efforts in attempting to provide strategically robust CRE objects which work better for their organisations. Second, that practitioners exposed to CoreNet Global's education offerings may term what they do Enterprise Alignment, as Sargent (personal communication, April 24, 2020) said. Third, that alignment theory may be rationalised and consolidated as a more robust basis for practice.

The latter commenced in Heywood and Arkesteijn (2018), building on Heywood and Arkesteijn (2017), which has been reported in part in this chapter. The four Building Blocks and the twelve components provide, in the first instance, a form of checklist for practitioners to ensure that all alignment elements (components) have been attended to in their alignment efforts. In the second instance, the Building Blocks and components provide a frame on which to locate specific tools and techniques (hereafter called techniques) that operationalise each component and in aggregate within each Building Block, the Blocks themselves. The authors' consolidation work has not yet progressed to examining the techniques, though Arkesteijn (2019) examines specific design and decision techniques. Nonetheless, it is evident that some

models contain techniques which further research would consolidate as a suite of techniques for practice. It is also likely that practitioners have a suite of techniques which they currently use when aligning without necessarily applying them as formalised theory. Where the consolidated Building Blocks and components identify gaps in those techniques, practitioners could refer to pre-existing theoretical and practical techniques or, failing that, innovate to fill these gaps.

6 Further reading

- Heywood, C., & Arkesteijn, M. (2018). Analysing fourteen graphical representations of corporate real estate alignment models. *Journal of Corporate Real Estate*, 20(1), 16–40. doi:10.1108/JCRE-02-2017-0005
- Kaplan, R., & Norton, D. (2006). *Alignment: Using the Balanced Scorecard to Create Corporate Synergies*. Boston, MA: Harvard Business School Press.
- Mintzberg, H., Ahlstrand, B., & Lampel, J. (2009). *Strategy Safari* (2nd ed.). Harlow, UK: Prentice Hall Financial Times.
- Porter, M. (1985) *Competitive advantage*. New York, NY: Free Press.

7 References

- Ackoff, R. L., & Sasinieni, M. W. (1968). *Fundamentals of Operations Research*. Oxford, UK: Wiley.
- Alagaraja, M., Rose, K., Shuck, B., & Bergman, M. (2015). Unpacking organizational alignment: The view from theory and practice. *Journal of Organizational Learning and Leadership*, 13(1), 18–31. <https://ir.library.louisville.edu/cgi/viewcontent.cgi?article=1141&context=faculty>
- Andolsen, A. A. (2007). Does your RIM program need a strategic alignment? *Information Management Journal*, 41(4), 35–36, 38–40. https://go.gale.com/ps/retrieve.do?tabID=T002&resultListType=RESULT_LIST&searchResultsType=SingleTab&hitCount=27&searchType=AdvancedSearchForm¤tPosition=22&docId=GALE%7CA183550958&docType=Article&sort=Relevance&contentSegment=ZONE-MOD1&prodId=AONE&pageNum=2&contentSet=GALE%7CA183550958&searchId=R1&userGroupName=unimelb&inPS=true
- Arkesteijn, M. (2019). *Corporate Real Estate Alignment: A Preference-Based Design and Decision Approach* (Doctoral dissertation). Delft University of Technology. doi:10.7480/abe.2019.12
- Arkesteijn, M. H., & Heywood, C. (2013). *Enhancing Alignment Processed Between CRE & Organisational Strategy*. Unpublished Presentation at the CoreNet Global EMEA Summit, Amsterdam.
- Binnekamp, R., Van Gunsteren, L. A., & Van Loon, P. P. (2006). *Open Design: A Stakeholder-oriented Approach in Architecture, Urban Planning, and Project Management; Collecting the Following Works: Open Design, a Collaborative Approach to Architecture, Open Design and Construct Management,[and] Open Design, Cases and Exercises* (Vol. 1). Amsterdam: IOS Press.
- Bon, R. (1997). Corporate real estate management practices in Europe and North America: 1993–1996. *Facilities*, 15(5/6), 118–124. doi:10.1108/02632779710162106
- De Jonge, H., Arkesteijn, M. H., Den Heijer, A. C., Vande Putte, H. J. M., De Vries, J. C., & van der Zwart, J. (2009). *Corporate Real Estate Management. Designing an Accommodation Strategy (DAS Frame)*. Delft, NL: Delft University of Technology.
- Den Heijer, A. (2011). *Managing the University Campus – Information to Support Real Estate Decisions*. Delft, NL: Eburon Academic Publishers.
- De Vries, J. C., van der Voordt, D. J. M., & Arkesteijn, M. H. (2004). Afstemming organisatie en vastgoed [Alignment organisation and real estate]. In D. J. M. van der Voordt & A. C. Den Heijer (Eds.), *Inleiding vastgoedmanagement [Introduction Real Estate Management]* (pp. 164–183). Delft, NL: Delft University of Technology.
- Downes, L., & Mui, C. (1998). The end of strategy. *Strategy & Leadership*, 26(5), 4–9. doi:10.1108/eb054618
- Duffy, F., Jaunzens, D., Laing, A., & Willis, S. (1998). *New Environments for Working*. London: Taylor & Francis. doi:10.4324/9780203223109
- Duffy, F., Laing, A., & Crisp, V. (1993). *The Responsible Workplace: The Redesign of Work and Offices*. London: Butterworth-Heinemann.
- Duffy, F., & Powell, K. (1997). *The New Office*. London: Conran Octopus.

- Ellzey, K., Valenziano, S. F., Materna, R., Dunn, D., Kurtz, T., & Zimmerman, C. (2004). *Corporate Real Estate 2010 Integrated Resource & Infrastructure Solutions*. Atlanta, GA: CoreNet Global Inc.
- Guba, E. G., & Lincoln, Y. S. (1989). *Fourth Generation Evaluation*. Thousand Oaks, CA: Sage.
- Haynes, B. P. (2008). Impact of workplace connectivity on office productivity. *Journal of Corporate Real Estate*, 10(4), 286–302. doi:10.1108/14630010810925145
- Henderson, J. C., & Venkatraman, H. (1999). Strategic alignment: Leveraging information technology for transforming organizations. *IBM Systems Journal*, 38(2.3), 472–484. doi:10.1147/SJ.1999.5387096
- Hevner, A. R. (2007). A three cycle view of design science research. *Scandinavian Journal of Information Systems*, 19(2), Article 4. <https://aisel.aisnet.org/sjis/vol19/iss2/4>
- Hevner, A. R., Martch, S. T., Park, J., & Ram, S. (2004). Design science in information systems research. *MIS Quarterly: Management Information Systems*, 28(1), 75–105. doi:10.2307/25148625
- Heywood, C., & Arkesteijn, M. (2017). Alignment and theory in corporate real estate alignment models. *International Journal of Strategic Property Management*, 21(2), 144–158. doi:10.3846/1648715X.2016.1255274
- Heywood, C., & Arkesteijn, M. (2018). Analysing fourteen graphical representations of corporate real estate alignment models. *Journal of Corporate Real Estate*, 20(1), 16–40. doi:10.1108/JCRE-02-2017-0005
- Heywood, C., & Kenley, R. (2008). The sustainable competitive advantage model for corporate real estate. *Journal of Corporate Real Estate*, 10(2), 85–109. doi:10.1108/14630010810905606
- Jensen, M. C. (2010). Value maximization, stakeholder theory, and the corporate objective function. *Journal of Applied Corporate Finance*, 22(1), 32–42. doi:10.1111/j.1745-6622.2010.00259.x
- JLL. (2017). *Workplace Powered by Human Experience, a Global Perspective*. http://humanexperience.jll/wp-content/uploads/2018/02/7686-JLL-HUMAN-EXPERIENCE_GLOBAL-REPORT_SPS_A4_V5.pdf
- Joroff, M., Louargand, M., & Lambert, S. (1993). *Strategic Management of the Fifth Resource: Corporate Real Estate*. Report 49. Atlanta, GA: Industrial Development Research Foundation (IDRF).
- Kaplan, R. S., & Norton, D. P. (1996). *The Balanced Scorecard: Translating Strategy into Action*. Boston, MA: Harvard Business School Press.
- Kaplan, R. S., & Norton, D. P. (2006). *Alignment: Using the Balanced Scorecard to Create Corporate Synergies*. Boston, MA: Harvard Business Press.
- Labovitz, G., & Rosansky, V. (1997). *The Power of Alignment: How Great Companies Stay Centred and Accomplish Extraordinary Things*. New York, NY: John Wiley & Sons.
- Lindholm, A.-L., & Levainen, K. I. (2006). A framework for identifying and measuring value added by corporate real estate. *Journal of Corporate Real Estate*, 8(1), 38–46. doi:10.1108/14630010610664796
- Materna, R., & Parker, J. R. (1998). *Corporate Infrastructure Resource Management: An Emerging Source of Competitive Advantage*. Atlanta, GA: Industrial Development Research Foundation.
- McGrath, R. G. (2013). *The End of Competitive Advantage: How to Keep Your Strategy Moving as Fast as Your Business*. Boston, MA: Harvard Business School Publishing.
- Mintzberg, H., Ahlstrand, B., & Lampel, J. (1998). *Strategy Safari: A Guided Tour Through the Wilds of Strategic Management*. London: Prentice Hall Europe.
- Mintzberg, H., Ahlstrand, B., & Lampel, J. (2005a). *Strategy Bites Back: It is a Lot More, and Less, than You Ever Imagined*. London: Pearson Education.
- Mintzberg, H., Ahlstrand, B., & Lampel, J. (2005b). *Strategy Biting Back in the Classroom*. Glasgow, UK: Pearson Education Limited.
- Mintzberg, H., Ahlstrand, B., & Lampel, J. (2009). *Strategy Safari* (2nd ed.). Harlow, UK: Prentice Hall.
- Nientker, J. A. (2017). *Corporate Real Estate Alignment in Practice: A Study on How Corporate Real Estate is Aligned by Multinational Corporations in Different Industries in Practice and Its Relation to Theory* (Master's thesis). Delft, NL: Delft University of Technology. <https://repository.tudelft.nl/islandora/object/uuid:8799c992-b1be-4e0f-9a33-a7dfc2bcbe3e?collection=education>
- Nourse, H. O., & Roulac, S. E. (1993). Linking real estate decisions to corporate strategy. *Journal of Real Estate Research*, 8, 475–495. doi:10.1080/10835547.1993.12090723
- O'Mara, M. A. (1999). *Strategy and Place: Managing Corporate Real Estate and Facilities for Competitive Advantage*. New York, NY: The Free Press.
- O'Mara, M. A. (2000). Strategies for demand forecasting in corporate real estate portfolio management. *Journal of Corporate Real Estate*, 2(2), 123–137. doi:10.1108/14630010010811248
- Osgood Jr, R. T. (2004). Translating organisational strategy into real estate action: The strategy alignment model. *Journal of Corporate Real Estate*, 6(2), 106–117. doi:10.1108/14630010410812289

- Porter, M. (1996, November–December). What is strategy? *Harvard Business Review*. Harvard Business Publishing. <https://hbr.org/1996/11/what-is-strategy>
- Porter, M. E. (1980). *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. New York, NY: Free Press.
- Porter, M. E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. New York, NY: Free Press.
- Prahalad, C. K., & Hamel, G. (1994). *Competing for the Future* (Vol. 25). Boston, MA: Harvard Business School Press Boston.
- Preiser, W. F. (1995). Post-occupancy evaluation: How to make buildings work better. *Facilities*, 13(11), 19–28. doi:10.1108/02632779510097787
- Preiser, W. F. (2002). Continuous quality improvement through post-occupancy evaluation feedback. *Journal of Corporate Real Estate*, 5(1), 42–56. doi:10.1108/14630010310811993
- Riratanaphong, C., & van Der Voordt, D. (2012). Performance measurement of workplace change: A comparative analysis of data from Thailand, the Netherlands and Finland. In *The Added Value of Facilities Management: Concepts, Findings and Perspectives*. Lyngby, DK: Polyteknisk Forlag.
- Scheffer, J. J. L., Singer, B. P., & Van Meerwijk, M. C. C. (2006). Enhancing the contribution of corporate real estate to corporate strategy. *Journal of Corporate Real Estate*, 8(4), 188–197. doi:10.1108/14630010610714862
- Sender, S. W. (1997). Systematic agreement: A theory of organizational alignment. *Human Resource Development Quarterly*, 8(1), 23–40. doi:10.1002/hrdq.3920080105
- Smith, J. (2005). An approach to developing a performance brief at the project inception stage. *Architectural Engineering and Design Management*, 1(1), 3–20. doi:10.1080/17452007.2005.9684580
- Van Aken, J. E. (2004). Management research based on the paradigm of the design sciences: The quest for field-tested and grounded technological rules. *Journal of Management Studies*, 41(2), 219–246. doi:10.1111/j.1467-6486.2004.00430.x
- Van Aken, J. E. (2005). Management research as a design science: Articulating the research products of mode 2 knowledge production in management. *British Journal of Management*, 16(2005), 19–36. doi:10.1111/j.1467-8551.2005.00437.x
- Weatherhead, M. (1997). *Real Estate in Corporate Strategy*. Basingstoke, UK: Palgrave.
- Winter, M. (2006). Problem structuring in project management: An application of soft systems methodology (SSM). *Journal of the Operational Research Society*, 57(7), 802–812. doi:10.1057/palgrave.jors.2602050
- Worthington, J. (2016). Bridging the gap “learning through practice in a paradoxical world. In M. Arkesteijn, T. van der Voordt, H. Remoy & Y. Chen (Eds.), *Dear is Durable: Liber Amicorum for Hans de Jonge* (pp. 48–61). Delft, NL: TU Delft Open.