

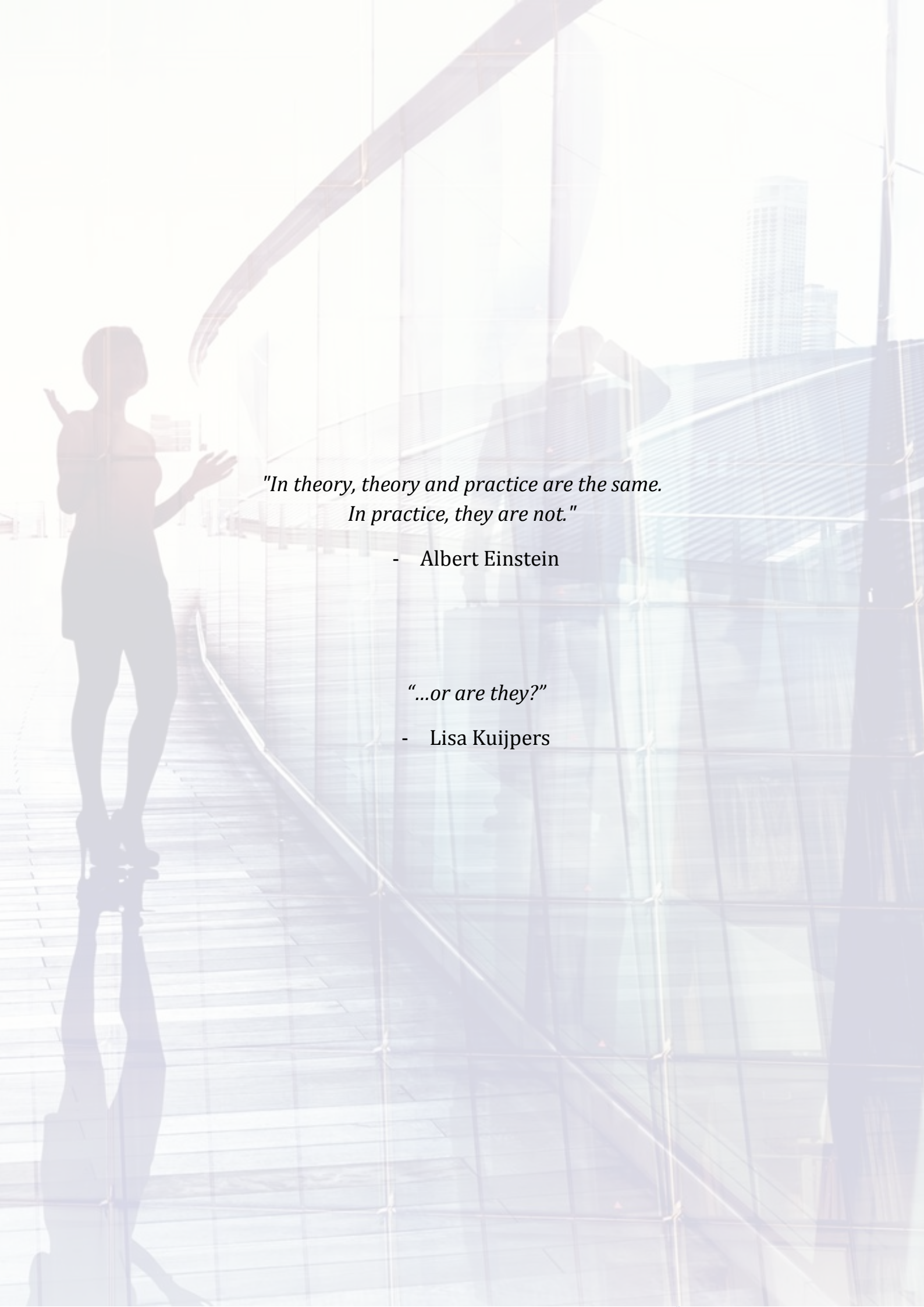
**CORPORATE REAL ESTATE MANAGEMENT
GRADUATION THESIS**

Corporate real estate alignment in practice

*Strategy alignment at multinationals in the
technology and financial services industries,
and it's relation to literature*

**Lisa Kuijpers
27-10-2016**

TU DELFT | MSC MANAGEMENT IN THE BUILT ENVIRONMENT



*"In theory, theory and practice are the same.
In practice, they are not."*

- Albert Einstein

"...or are they?"

- Lisa Kuijpers

Colophon

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First mentor: Monique Arkesteijn
Monique Arkesteijn is assistant professor and head of the department Real Estate Management and Development at the Delft Technical University. She teaches and researches corporate real estate strategies and guides students in their master thesis projects. Monique's main research topic are corporate real estate strategies and the alignment with business strategies.



Second mentor: Ilir Nase
Ilir Nase is assistant professor and lecturer at the department Real Estate Management at the Delft Technical University. He teaches several MSc courses and researches topics such as the valuation of corporate real estate and measuring the added value of CREM. Since one year, Ilir guides students in their master thesis projects.



Preface

Dear reader,

With great pleasure I present you my final graduation thesis, which is written for the graduation lab Real Estate Management. This is the last step to complete the master track Management in the Built Environment at the faculty of Architecture and the Built Environment at the Delft University of Technology, where I have studied for the past six years. After having completed my Bachelors degree in Architecture, Urbanism and Building Sciences here, this Masters degree has provided me valuable theoretical knowledge and practical skills to apply in the wide range of fields the world of real estate consists of. Especially the analytical skills to prioritize information and derive logical conclusions from a large amount of data, as well as scenario and strategic thinking, used in the field of corporate real estate management sparked my interest and made me decide to focus on this subject in my graduation research. Combined with what I learned about corporations and business models from the entrepreneurship courses I followed at the faculty of Technology, Policy and Management, the scope of my research became the alignment of business and real estate strategies.

Before you lies the result of 14 months of research, which I have put my heart and soul into. Having said that, it is important to consider that this thesis is not just the result of many hours of hard work, but also emanates from the support of the people that have been involved, both directly and indirectly. First of all, I would like to thank my graduation mentors, Monique Arkesteijn and Ilir Nase, for their critical feedback, guidance and structure throughout the entire graduation process, and especially Monique for helping me set up the case study interviews. I would also like to thank the five interviewees, who have provided me the opportunity to interview them twice, taking a closer look into their business and CREM practices. Further, I am grateful for the endless support I received from my parents and sisters during my university career, as well as my fellow BOSS Board members (Joost, Nick, Sander, Sarah, Sanne, Mira and Cas) and Study Trip committee members (Tine, Liesbeth, Hans and Wouter). They enabled me to combine my BOSS Board and Study Trip tasks with my graduation research and always stuck by my side. I would like to thank my close friends Linda, Luuk and Bob for spending many hours studying together in the library and last but not least, I want to thank my boyfriend Sybren for encouraging me to stay ambitious and to get the most out of this graduation experience, as well as reminding me to take some time to relax when needed.

The result that lies before you is a report that I am genuinely proud of. I hope you enjoy reading this graduation thesis as much as I have enjoyed putting all the pieces of the puzzle together.

Lisa Kuijpers

Delft, October 27th, 2016

Executive summary

Introduction

Due to globalization and increased interconnectedness of markets, it has become easier and more commonplace for corporations to scale up their business worldwide, offering them a wider range of customers, larger talent pool of employees and more favourable locations to perform their activities. It is expected that over the coming years, corporations will increasingly decide to move or expand across the globe (Karaköse & Demir, 2011), being further stimulated by technological developments and growing digitalization, enabling them international communication and operations (Baltzan, 2014). However, these developments have also led to an increased pace of business and higher expectations from both customers and employees. Therefore, corporations worldwide are driven to continuously re-evaluate their processes and redesign their strategies, in order to obtain and retain competitive advantage over others (Baltzan, 2014)(Hill, 2014).

Especially multinational corporations, who operate on a global, regional and local level, are highly impacted due to their widespread presence. These multinationals play a key role within a globalizing world. While constituting just a small percentage of all companies worldwide, they are responsible for half of the global turnover (Gooderham & Nordhaug, 2003). Similar to other firms, multinationals aim to operate as efficiently and effectively as possible, seizing the opportunities they recognize, while avoiding risks. Their global presence provides them a larger variety in opportunities, but also brings them into fierce competition (Ludviga, 2012). Multinationals are therefore in a constant search for new sources of competitive advantage, with which they tailor their corporate business strategy. Corporate business strategies define the processes, customers and employees of the firm. To support these, large firms such as multinationals, often have support service departments for their HR, IT, Finance, Legal and Corporate Real Estate Management (CREM). The CRE department designs the real estate strategy for the firm, defining the environment that houses and supports the business.

In order for corporations to successfully achieve their business objectives, it's essential to align their CRE strategy with the business strategy, so they complement and reinforce each other (Dewulf *et al.*, 2000). Successful alignment enhances the efficiency, profitability and competitive advantage of the firm (Roulac, 2001). Oppositely, improper alignment may have negative impacts reaching to various parts of the firm, such as unnecessary costs, loss of productivity, ineffective use of space, decreased employee satisfaction, less satisfied customers and shortcomings on business goals (Silen, 2012). However, when reviewing the body of knowledge on alignment within businesses, it covers mainly the other corporate support functions, such as HR and IT, but not CREM (Heywood, 2011).

Since CRE alignment has become the main objective of CRE managers (Dewulf *et al.*, 2000)(Osgood Jr., 2009), CREM literature does address alignment with the business and also attempts to address the arisen imbalance to empower the CRE function. The CREM body of knowledge suggest a large variety of approaches and models for CRE alignment in practice. However, these differ widely in completeness and content, possibly due to the fact that there has not been much uptake of these models in other literature sources. Their uptake in practice also remains disputable, because even though in several surveys CREM professionals indicate they are positive about the CRE alignment at their firms and most models are either made by practitioners or validated in practice, there is not much empirical evidence that the models are being used by practitioners after conception (Heywood, 2011)(Appel-Meulenbroek & Haynes, 2014).

Until now, it remains unclear how CRE alignment is approached and performed in practice and whether or how this relates to the models suggested by CREM literature. Since CREM is a multi-dimensional and complex field (Heywood & Arkesteijn, in press), a more detailed understanding of CRE alignment would be significant to further develop both CREM practice and academia. This graduation research therefore focuses on mapping and comparing the current state of CRE alignment in both literature and in practice, according to the following research question: *“How do multinational corporations in the technology and financial services industries align their corporate real estate and corporate business strategy in practice and how does this relate to the main findings from CRE alignment literature?”*

Within this research scope, it is expected there is a difference between CRE alignment in practice and in literature. However, it is not clear what the differences are, how they may be explained and what their significance is. In order to find out, first of all, CREM literature is examined to construct the main theoretical underpinnings that summarize the current state of academia. Then, the current state of practice is examined through five case studies of multinationals in the technology and financial services industries and a cross-case analysis. With these findings, the differences between practice and academia are determined and explained. This way, their relationship can be understood and new insights can be provided from which both CREM academia and practice can learn and be further developed.

Theoretical underpinnings

In order to construct the theoretical basis of this research, summarizing the current state of CREM academia, articles comparing several CRE alignment theories and models written by other authors are examined and critically reviewed. These articles have been retrieved from the Scopus database and received from Monique Arkesteijn, who is the leading researcher of the larger research project ‘CRE alignment in practice’ currently being performed at the TU Delft, which this graduation research is a part of. Due to the involvement in this larger research project, access could be obtained to the article ‘Alignment and theory in Corporate Real Estate alignment models’ by Heywood & Arkesteijn that is still in press and will be published in the International Journal of Strategic Property Management in the beginning of 2017. The further literature search and selection is explained in detail in Chapter 5 and Appendix 1.

An examination of the selected articles showed that the researchers who compare CRE alignment models can be largely divided into three groups. The first group mainly describes and compares the process(es) of CRE alignment, the second group is more focused on the products (inputs and outputs) in CRE alignment models and the final group described both processes and products within CRE alignment models. For this graduation research, the third group of articles has been selected to compose the main theoretical underpinnings and conceptual frameworks, because these were most complete, with broader and more encompassing view. These articles are Heywood (2011), Arkesteijn & Heywood (2013) and Heywood & Arkesteijn (in press). However, to ensure this research was not solely based on the point of view of Heywood and Arkesteijn, the theoretical underpinnings have been enhanced further with findings from the process-focused article by Beckers & van der Voordt and the product-focused article by Appel-Meulenbroek *et al.*, in order to examine and expose the full scope of CRE alignment according to CREM literature. Also, the original articles about the models and theories that Heywood and Arkesteijn compare have been examined to ensure these are understood correctly and important aspects are not overlooked.

CRE alignment phenomenon

Within their latest article, Heywood & Arkesteijn (in press) conduct an analysis of 20 existing CRE alignment models through a qualitative hermeneutic research methodology, in order to “*better understand what these models say about CRE alignment as a phenomenon and how it is theorised*”. Since the main goal of the article is developing a deeper understanding of CRE alignment, Heywood & Arkesteijn do not propose a specific definition or model for it. Rather, through the comparison of models, they find that CRE alignment is more complex and pluralistic than the individual models may assume. Heywood & Arkesteijn (in press, p. 2) summarize the variety of views, approaches and understandings of CRE alignment, and thus the main characteristics, by four main dimensions, as shown in Figure 2, being the multi-valent relationship between the CRE and corporate business strategy, the multiple forms of alignment, multiple cognitive objects being aligned and multi-directionality in the firm. All four dimensions are interrelated and can be recognized simultaneously.

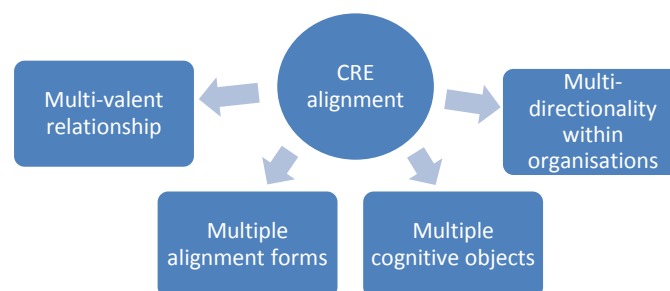


Figure 2. Main dimensions CRE alignment, Heywood & Arkesteijn (in press), visualized

Heywood & Arkesteijn explain that the multi-valent relationship between the corporate strategy and the CRE strategy can differ from ‘just’ a relationship to being more closely related, as seen in Figure 4, ranging from no relationship, undefined, awareness and derivation, to consistency, integration, movement, usefulness and strengthening relationships. The assessment based relationship measures how closely related the alignment is (Heywood & Arkesteijn, in press, p. 3).

Secondly, Heywood & Arkesteijn (in press, p. 4) state CRE alignment can occur in one or multiple forms at once, being an artefact, behaviour, process or state. An artefact is a plan or record of steps showing how alignment are achieved. Behaviour is something that mainly exists in the mind of the CRE manager and it’s team, meaning the strategic mindset needed for alignment and acting towards that mindset. A process may or may not be documented, consisting of steps to achieve greater alignment. The state is a performance outcome, which is measured by examining the performance of the strategy, whether the previously set objectives are achieved, and/or assessing the performance of the CRE portfolio, potentially in comparison to the previous state.

The third dimension, cognitive objects of alignment, shows which entities are being aligned to each other, being three business cognitive objects and three CRE cognitive objects. According to Heywood & Arkesteijn, within strategic management literature the corporate strategy and CRE strategy are the starting point of the business-related and real estate related entities. The corporate strategy is formed in reaction to business drivers and forces, internal and external strategic triggers. This subsequently produces a certain business performance, which leads to specific business needs. The CRE strategy similarly produces the CRE portfolio of real estate objects, which requires certain CREM practices in order to organize and manage everything correctly. To ensure full alignment, all six entities should be aligned to each other, which requires nine alignment actions or at least alignment checks, ensuring they are brought into agreement (Heywood & Arkesteijn, in press, p. 5).

Finally, Heywood & Arkesteijn (in press) show that the directionality of alignment can be internal and/or external. Internally, four different directions are recognized, two being horizontal and two vertical. Horizontally, it could mean aligning the CRE across support functions, such as HR, IT, R&D and Finance, or aligning across business units, leading to a balance in requirements and a consistent portfolio across the firm. It depends on the type of company how many different business units they employ. Vertically, CRE alignment can be done through top-down or bottom-up decision-making, in which the latter would be the case when corporate strategy decisions are made being informed by the corporate real estate effects, opportunities and risks. External alignment happens when the firm aligns business needs with the internal portfolio and the relevant market (De Jonge *et al.*, 2009).

Within the CRE alignment literature studied by Heywood & Arkesteijn, the concept of CRE alignment is thus viewed and approached in many different ways and only 2 out of 20 models examined by these authors include a specific definition for CRE alignment. Because in practice this may also be the case, when the view and approach to CRE alignment depends on the individual CRE manager, the first conceptual framework is set up, as seen in Figure 4, showing all alignment dimensions according to literature and enabling further analysis of the case study results. Using this conceptual framework, the results from practice can be compared to literature to examine whether these CRE alignment dimensions also appear in practice, in order to find out the similarities and differences between academia and practice and to improve our understanding of CRE alignment in practice.

Main building blocks and components

Since corporate strategies may be very diverse, depending on the business objectives of that specific firm as well as the external trends, developments, drivers and forces they deal with, the alignment of CRE strategies with the business is closely related to the organizational context (Osgood, 2003). However, in their CoreNet Global presentation, Arkesteijn & Heywood (2013) provide several main building blocks and components that could be used in CRE alignment across different industries, when made specific to the firm by the CRE manager. The four main building blocks of CRE alignment have also been related to the four main processes derived from the DAS-frame by Arkesteijn (2013), as seen in Figure 3. The DAS-frame is further explained in Chapter 3, Section 3.6 (page 25).

The main objective and challenge of CRE managers is to attain a CRE portfolio that is able to support the current business processes and objectives, while remaining flexible to also meet future needs (Appel-Meulenbroek & Haynes, 2014). Arkesteijn & Heywood (2013) explain that the first two building blocks encompass the process for the CRE manager to fully understand the corporate strategy, how it is changing through or reacting to internal and external influences, and secondly, to understand the current real estate performance, by examining the CRE portfolio and CREM practices, to establish the context in which decisions are made and to be able to compare it to the needs coming from the business. With a complete overview and understanding of both the business and the CRE, including all relevant processes, inputs and outputs, the CRE manager is able to make predictions or forecasts of the future requirements. These are essential in the third building block, in which a new real estate strategy is designed, considering different scenario's and alternatives, and the strategies are aligned. The fourth building block is focused on implementing the CRE strategy, by actioning the required CRE projects and CREM practices. Although there may seem to be an order in these processes, Arkesteijn & Heywood (2013) underscore that the four main building blocks are not in any specific sequence and can occur simultaneously or separate from each other.

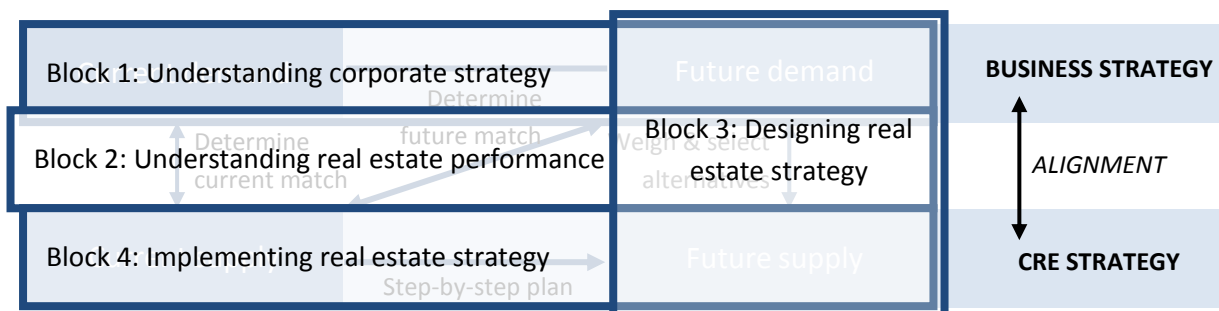


Figure 3. Main building blocks of CRE alignment, Arkesteijn (2013)

None of the models studied by Heywood and Arkesteijn is ideal, each model has its own strengths and weaknesses. Within his earlier analysis of the CRE alignment models, Heywood (2011) derived a list of 15 components. No model includes all 15 components and sometimes the components are more indirectly implied or external to the model. Heywood (2011) subdivides his analysis of the CRE alignment models into real estate centric and cross-linked alignment models, in which there is either a uni-directional or bi-directional relationship between CRE and corporate strategy. In most cases, the directionality is seen as a one-way street in which the CRE strategy supports and contributes to the corporate strategy. Beckers & van der Voordt (2013) also state that most literature on CRE alignment assumes aligning, and thus removing inconsistencies, means making changes in the CRE strategy to make it fit to the corporate strategy. However, Heywood (2011) suggests it may also be desirable to have the corporate strategy adjust to the CRE strategy on some aspects.

Together, these 15 components sum up the main inputs, outputs and processes that are used in CRE alignment models. Within their later work, Arkesteijn & Heywood (2013), summarize the list to a total of 12 components, in order to make the list unambiguous and not overlapping with the first conceptual framework. The second conceptual framework, as shown in Figure 5, summarizes these main building blocks and components for CRE alignment. Most models studied by Heywood (2011) and Arkesteijn & Heywood (2013) include feedback loops, resulting in an iterative process or 'strategic momentum' as it is called in (Swayne, Duncan & Ginter, 2006). Since it is assumed to be an essential aspect to CRE alignment, but only mentioned in text and not directly in the framework of main building blocks and components by Arkesteijn & Heywood (2013), within this research the component 'strategic momentum' is added, evaluating the strategic decisions and managerial actions before, during and after implementation, which leads to learning and initiates a new process of strategic thinking and decision-making, making the entire process truly iterative.

The conceptual frameworks, as shown in Figure 4 and 5, summarize the main findings from the selected literature comparing a variety of CRE alignment models by Heywood (2011), Arkesteijn & Heywood (2013), Heywood & Arkesteijn (in press), enhanced by Appel-Meulenbroek & Haynes (2014). These frameworks thus show the current state of CRE alignment according to literature, since they are based on articles comparing a broad range of other articles, as well as focusing on both product and process within the comparison. To find out the current state of practice, case studies are conducted of five multinationals, by analyzing interview transcripts and (shared or public) documents about their CRE alignment practices. The mentioned concepts in the conceptual frameworks in Figure 4 and 5 are used as the themes and codes in analyzing the interview transcripts in Atlas.ti, to find out whether these aspects that are important according to the main theoretical underpinnings are actually used or applied by the five studied multinationals in practice. This way, the current state of practice can be determined and compared to the current state of literature.

Conceptual framework 1: the CRE alignment phenomenon

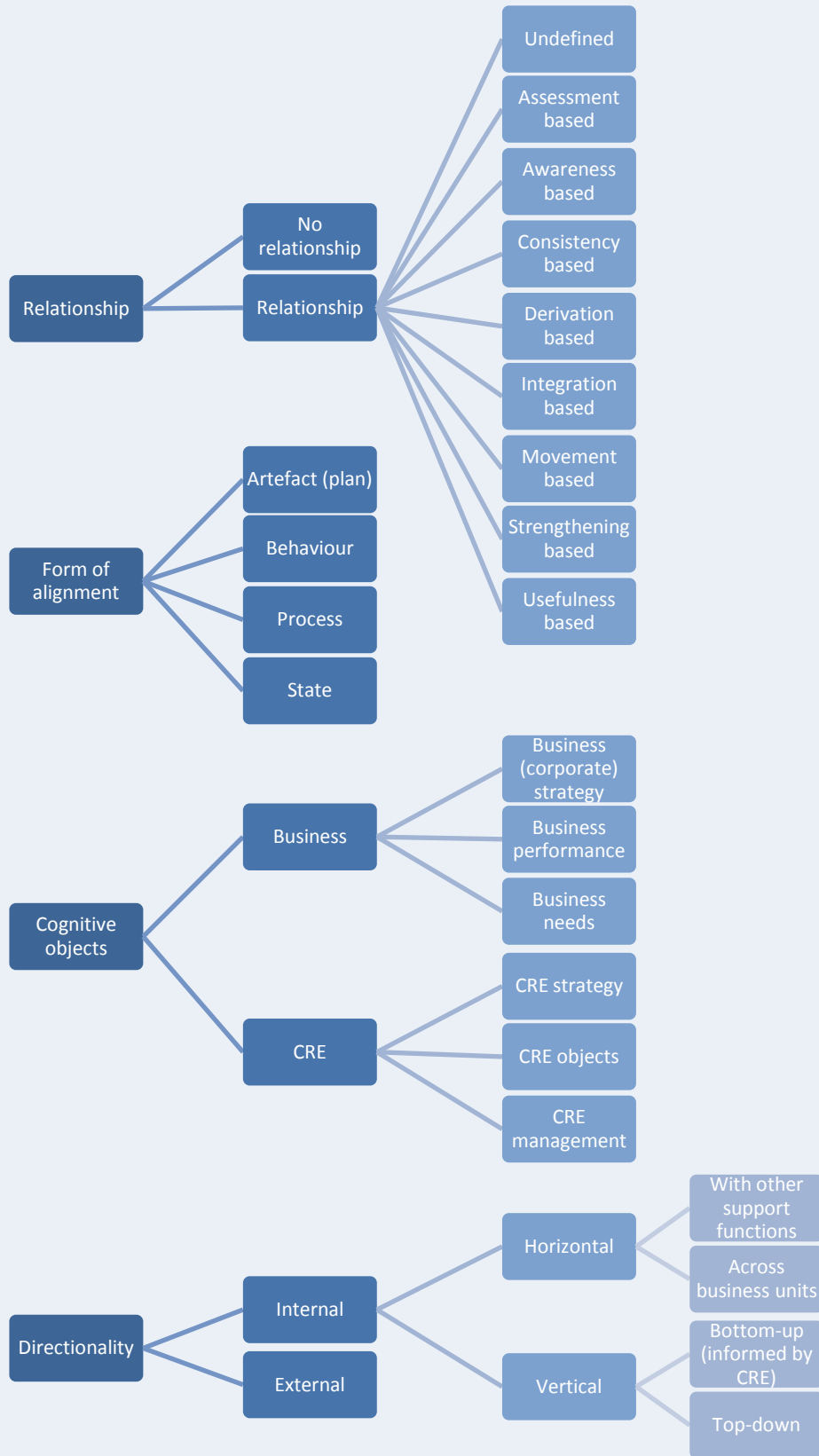


Figure 4. Conceptual framework 1: the CRE alignment phenomenon, Heywood & Arkesteijn (in press)

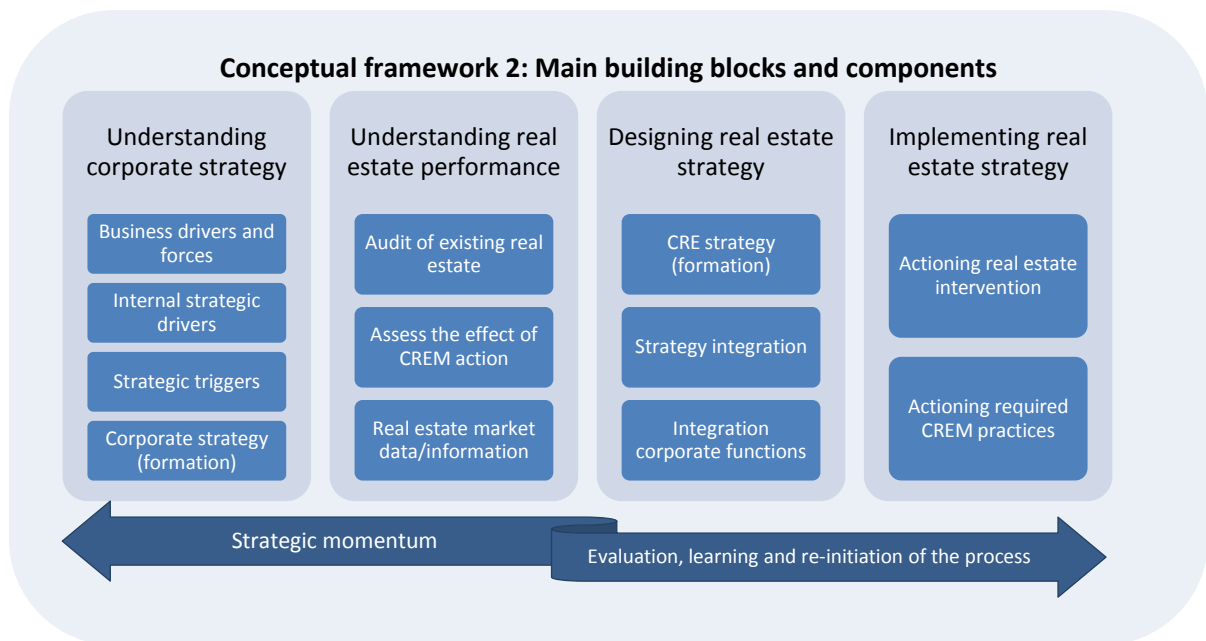


Figure 5. Conceptual framework 2: main building blocks and components of CRE alignment, Heywood (2011) and Arkesteijn & Heywood (2013), the arrow below containing ‘strategic momentum’ is added by the author, after Appel-Meulenbroek & Haynes (2014)

Methodology

This research is performed according to the case study research methodology, which is generally used to research (a set of) events, aiming to describe and explain a subject of interest (Bryman, 2012). This strategy is preferred when research questions are posed as ‘how’ and ‘why’. The data that is used in case studies mostly comes from documentation, records, direct observations and interviews (Yin, 1994). After establishing the subject of study and the theoretical underpinnings, summarized in the conceptual frameworks, five case studies have been conducted to analyze CRE alignment practices and obtain in-dept understanding of how multinationals view and approach it.

Because this graduation research is part of a larger research project on ‘CRE alignment in practice’, currently being executed at the department of Management in the Built Environment at the Delft University of Technology by Monique Arkesteijn, the cases selected for this research are used for multiple projects within the larger research. The five multinationals that are studied are active in the technology and financial services industries and selected by the leading researcher through the CoreNet Global network, which is a network of multinationals. This was done by asking several CRE managers from different parts of the world which companies (other than their own) they thought are successful in aligning their CRE or are using innovative methods to do this. This ensured that all of the cases performed CRE alignment. Also, by studying best practices, or at least cases that experienced CRE professionals found interesting and informative, most is learned.

The selected cases are all for-profit multinationals, of which RE is a support function (not their core business) and that have an in-house CRE department and are active in the two different industries. This way, comparisons can be made not just between singular cases, but also within and across different industries. The technology and financial services industries have specifically been selected as subjects of study, because both industries have been impacted by the economic crisis and are currently being impacted by the earlier recognized trends of technological developments and increased digitalization, but also changing requirements from their customer and employees, causing

them to continuously re-evaluate and re-design their strategies. Financial services firms are at the basis of our financial activities and economy, while technology firms are becoming more and more important and are likely to have a large impact on what future businesses, markets and the economy will look like. Interestingly enough, both industries are competing for the same talent, since they are often looking for the same educational levels and skill-sets when hiring new employees. Therefore, besides having large differences in core business activities and customers, it is possible that there may also be an interrelation recognized.

Data analysis

The retrieved data is analyzed by qualitative content analysis, as further explained in Figure 6. This method is used for the subjective interpretation of text data by systematically classifying this content through coding and identifying themes or patterns (Hsieh & Shannon, 2005, p.1278), to reduce the large amount of qualitative data and make sense of the content (Patton, 2002, p.453). Qualitative content analysis examines (a range of) themes, patterns and meanings that may be latent or manifest in pieces of text, rather than statistical significance or occurrence of the concepts. This way, the various perspectives of the interviewees can be better understood (Berg, 2001).



Figure 6. Data analysis process, own illustration

Figure 7. summarizes the research process, inputs and outputs across the several research phases.

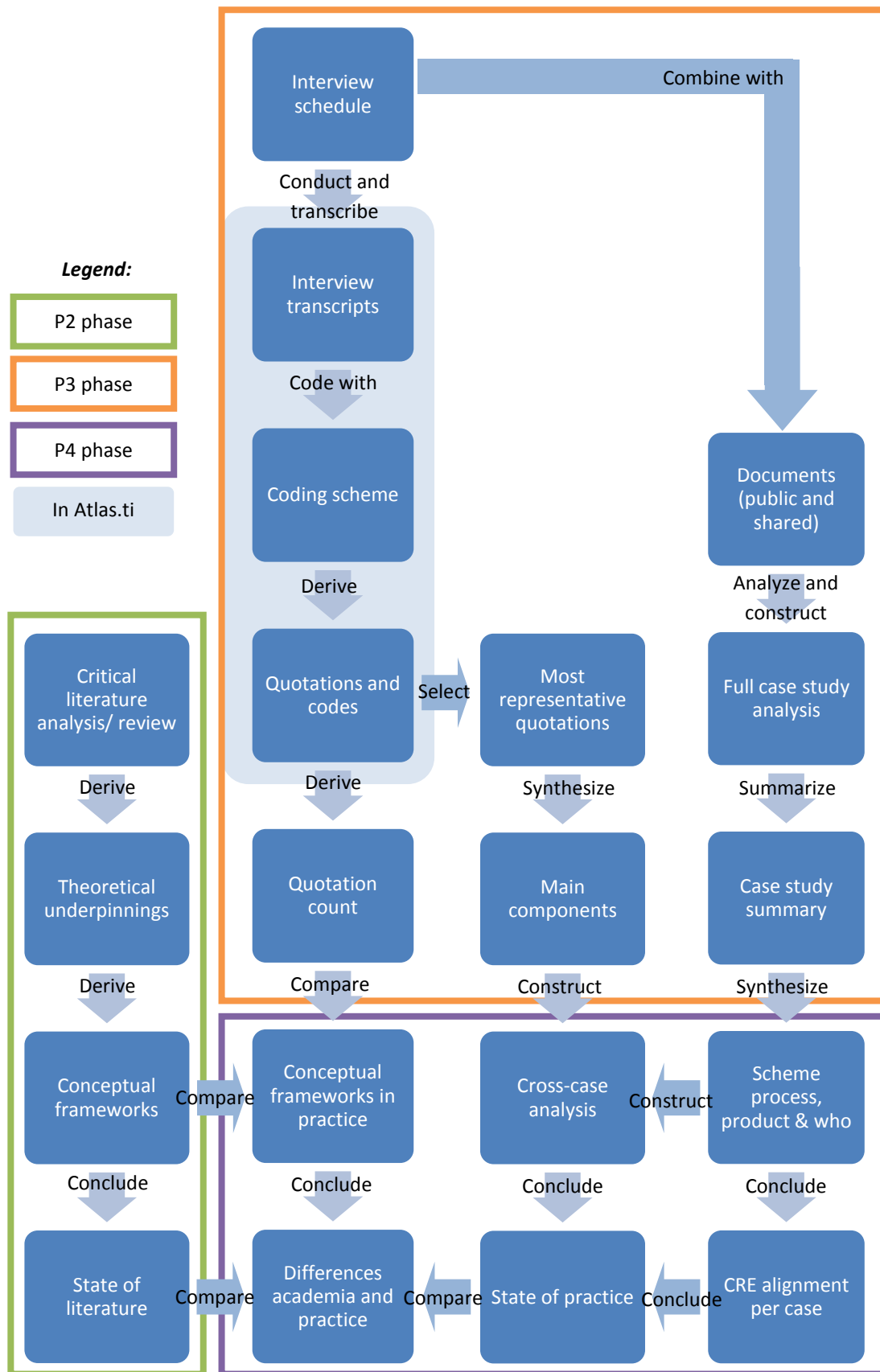


Figure 7. Research phases, inputs and outputs and processes, own illustration

CRE alignment in practice

From the case studies performed in this research, it appeared that at these five multinationals, the CRE strategy is derived from or based on the corporate strategy. This confirms the statement by Beckers & Van der Voordt (2013) that CRE alignment, and thus removing inconsistencies between the corporate and CRE strategy, means adapting the CRE strategy, as discussed in Chapter 3, Section 3.6. Although Heywood (2011) states that in some cases adapting the corporate strategy to the CRE may also be desirable to provide the firm enterprise-wide value, as seen in Figure 8, this does not seem to be the case (yet) in practice, let alone the corporate strategy adapting to the CRE strategy. Although it is important for the business to be informed of the CRE in their decision-making and understand the consequences of their decisions on the CRE, for these multinationals CRE and it’s management is and will remain a support function and not the core business. CRE will therefore not be the leading factor in their decision-making, nor very influential in the corporate strategy. However, as also explained in Chapter 3, Section 3.2, it is understandable that since CRE is often seen as a cost or burden by the business (Teece, 2010) and because CREM or CRE alignment is not covered in business literature on alignment, CREM researchers are aiming to empower the CRE function in both literature and practice through these statements.

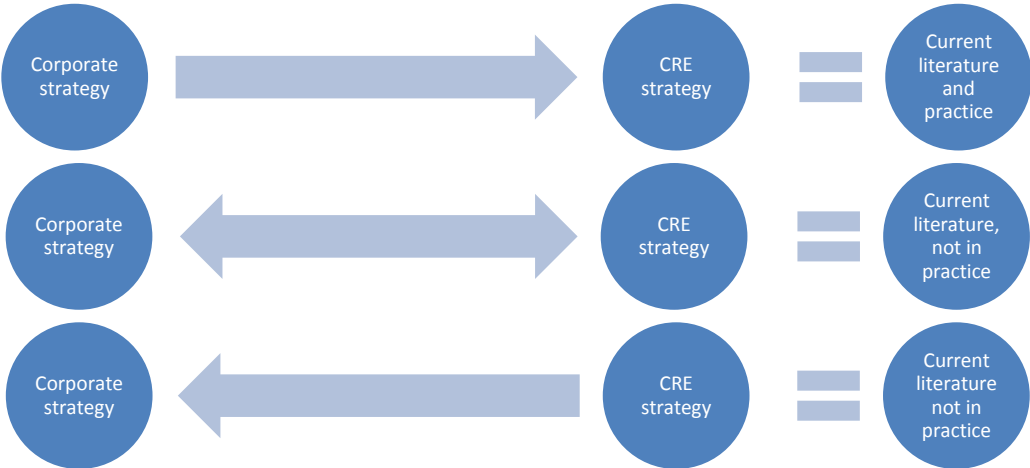


Figure 8. Relationship CRE and corporate strategy, own illustration

Amongst the five multinationals, the CRE strategies differ in scope and level of concreteness, due to the variety in corporate strategies. These are based on the size and growth stage of the firms, as well as their core business activities, markets and customers. However, the influences of the business environment of these firms on their CRE strategies stretch much further. As explained in Chapter 3, Section 3.1, multinationals deal with many location-related impacts: the political, economical, legal, social, environmental and technological context. Even though the studied multinationals are active globally (technology firms), while some focus on a specific region (financial services firms), they emanate from one country and culture, which shapes the business throughout it’s lifetime. T1 and T2 originate from the USA, F1 from Australia and both T3 and F2 from the Netherlands. Each firm thus has it’s own history, corporate culture and management style.

Still, some similarities can be found, as seen in Figure 9. As also explained in Chapter 3, Section 3.2, firms in the same industry are dealing with equal business environments and are impacted by similar trends. These firms thus have the most comparable corporate and CRE strategies, as well as the way they approach alignment. The technology firms are dealing with rapid (disruptive) innovations and developments, causing them to aim for agility and regularly re-evaluate and re-design their corporate

strategies, up to twice every year, which also triggers the design of new CRE strategies or plans. At the financial services firms this occurs less often, about every 3-5 years, because their business environments are changing less quickly, mainly impacted by digitalization. The financial services firms are therefore more able to make long-term plans than the technology firms.

The rapid innovations and developments in the technology industry also provide many opportunities. The studied technology firms, T1, T2 and T3, all have a corporate strategic aim to invest in R&D and innovation, in order to enhance their current range in products and services and develop new ones. T1 and T2 are still growing and expanding across the globe, acquiring, merging or partnering with other technology companies every month. The financial services firms F1 and F2 are more consolidated and mature. Still, these four multinationals all have growth as one of their corporate strategic aims. T3 is the only firm not focused on growth, since they were badly impacted by the changing business environment. T3 needed to completely transform and restructure to become two separate firms, in order to ascertain a sustainable future. Their corporate strategy mainly aims for improving the internal processes and performance, investing in innovation and finding new partners. The growth phase of multinationals is thus very influential in shaping their strategies.



| Technology firms | Financial services firms |
|--|--|
|  |  |
| Growth stage: T1 and T2 are growing, T3 is shrinking and re-focusing, with the aim to grow again | Growth stage: F1 and F2 are both mature businesses |
| Globally active, no focus on specific region | Global focus on region (F1 Asia-Pacific, F2 Europe) |
| In rapidly changing business environment, business focus on agility, R&D and innovation, mainly short-term strategies and plans (yearly) | In more stable business environment, mainly impacted by digitalization, able to make long-term strategies and plans (3-5 years) |
| All dealing with higher expectations and changing demands coming from the customers and employees, on top of that: fishing in the same talent pool, looking for employees with similar education and skill-set | |
| More flat business organization: emphasis on the horizontal alignment across various divisions and with cross-functional partners | More hierarchical business organization: emphasis on the vertical alignment across various levels of the firm, both top-down and bottom-up |

Figure 9. Similarities per industry, own illustration

The similarities per industry are mainly on the business side. When looking at the CRE and CREM in general, all five studies multinationals have a comparable CREM process in place. The Real Estate teams continuously monitor the CRE portfolio and individual sites and measure the performance on standard KPI's (costs, space, people and combinations between these three). From these outcomes, new RE plans are initiated, which the RE teams construct by performing several analyses (financial, real estate characteristics, internal and external alternatives). After constructing the RE plans, the recommendations are presented and discussed with the business. When the RE teams receive approval from the business, implementation can commence, which is performed by local teams and often outsourced partially or completely. Besides these similarities, when examining CRE alignment in detail, mainly differences are found in the specific practices (processes and products) at the five studied multinationals. For each firm, the five most recognizable practices are shown in Figure 10.






| | | | | | |
|---|---|--|--|---|---|
|  | Most centralized operations | Partner-like relationship with the business, also performing business analyses | RE team focused on informing and supporting decision-making by the business | Inputs planned actions to see consequences on CRE portfolio up to 3 years out | Benchmark against themselves |
|  | Mainly operating at regional level | Discuss progress of all projects/plans in quarterly review: overview across the firm | RE team focused on informing and supporting decision-making by the business | Label each site in CRE portfolio on importance | CRE strategy made up of measurables, benchmark against the industry |
|  | Centralized operations, re-organizing due to split and re-focus of the firm | Implementation of RE plans controlled and guided by steering committee | RE team engages with corporate functions and business leaders for alignment | CRE strategy provides extensive guidelines for RE plans on all levels | Performance measurement/benchmarking own metrics: business fit and market fit |
|  | Most centralized operations | Implementation of RE plans controlled and guided by steering committee | RE team focused on learning from past CREM actions, understanding their impact | CRE strategy literally translated to RE plans on all levels | Benchmark against themselves |
|  | Recently centralized CRE from local FM departments | Implementation of RE plans controlled and guided by steering committee | RE team focused on informing and supporting decision-making by the business | Label each site in CRE portfolio on importance | CRE strategy made up of measurables, benchmark against themselves |

Figure 10. Most recognizable practices per firm, own illustration

T1 and F1 are most centralized of all five firms, which is also recognized in their corporate strategy and more abstract CRE strategy, while T2 operates mainly on the regional level. Therefore, obtaining approvals for RE plans at T2 may take much longer than at the other, more centralized, multinationals. CREM at F2 is only recently centralized, historically being in local FM departments. F2's RE team is therefore still in the process of constructing a global CRE and workplace strategy. Both T3, F1 and F2 have a steering committee in place, to which larger RE plans are presented and if approved, this committee will remain in control of the implementation of the plan.

CREM at T1, T2 and F2 is focused on informing the business and supporting their decision-making. T1 does this by performing analyses for the business and using the planned business or RE actions as input to see what the future consequences are on the CRE portfolio, up to three years out. They then send this out to the responsible regional teams, after which they decide which actions to take and are responsible for implementation. Only T1's RE team therefore has a partner-like relationship with the business. T2 and F2 inform and support the business by having close engagement (meetings) with the business and T3 is working on an engagement model since their reorganization. In Chapter 3, Section 3.5, Silen (2012) suggests regular meetings with the C-suite and involvement in their process is essential to construct a pro-active CRE strategy, while Beckers & Van der Voordt (2013) stated CRE strategies may be mainly re-active, reacting to current issues. This would mainly be the case at F1.

F1 is the only firm specifically focusing on learning from past CREM actions, understanding the influences and obtaining trust from the business. However, this is something the CRE manager at F2 stated to want to move towards the coming years. Both T2 and F2 have a CRE strategy that is made up of measurables that they use in monitoring, assessing and benchmarking the CRE portfolio. These two firms are also the only ones labelling their individual buildings on importance. In performance measurement, T3 has added two of their own metrics: business fit, which is similar to the fit-for-purpose at F2, and market fit, measuring the supply versus demand internally and externally. Only T2 and T3 benchmark against the industry, T1, F1 and F2 benchmark against themselves.

Relation to literature

In this research, two conceptual frameworks have been used to compare the findings from practice to literature. The first conceptual framework from Heywood & Arkesteijn (in press), shows that according to literature the CRE alignment phenomenon is multi-dimensional, since it can be viewed or approached in many different ways. In the coding exercise in Atlas.ti, with codes based on the first conceptual model, all but four of the codes were retrieved. These four codes sit within the relationship dimension. The two relationship types 'no relationship' and 'undefined' were most likely not found in the coding exercise because these dimensions are only possible in literature or at firms that don't align their CRE. In this research, since the CRE managers were interviewed about the way they approach CRE alignment, they always defined the relationship, either explicitly or implicitly. The other two relationship dimensions that were not retrieved from the coding exercise were 'derivation' and 'integration'. From the CRE alignment schemes it becomes clear that 'derivation' is actually apparent at all of the multinationals, but most likely, the CRE managers deem this to be logical and therefore don't mention it. 'Integration' on the other hand, is most likely not apparent within the five studied multinationals, because within this research it has been interpreted as the corporate and CRE strategy becoming one, which was not the case.

All of the other codes, based on the alignment forms, cognitive objects and directionality in CRE alignment have been retrieved from the coding exercise. This means that in a comparison of the findings from practice to the first conceptual framework, mainly similarities are found, which would thus confirm the theories from Heywood & Arkesteijn (in press) that the phenomenon of alignment is multi-dimensional: it has multi-valent relationships, multiple forms, multiple cognitive objects and multi-directional. Based on the five case studies performed in this research it can be stated that both in literature and practice, the CRE alignment phenomenon is viewed and approached in many different ways and doesn't have to be defined in order to research or practice it.

Within the second conceptual framework several main building blocks and components are provided for CRE alignment, from Heywood (2011) and Arkesteijn & Heywood (2013) and slightly adapted by the author with 'strategic momentum' after Appel-Meulenbroek & Haynes (2014). In most cases, all but 1-3 components have been found in the coding exercise in Atlas.ti. Within the first building block in four out of five cases 'business drivers and forces' was not retrieved, this code was only mentioned by T1. In one out of five cases 'strategic triggers' was not mentioned, which was the F2 case. This may be explained by the fact that the corporate strategy always, both directly and indirectly, takes its shape through the business drivers and forces and strategic triggers and these inputs may therefore not be mentioned by the CRE managers. It could also be the case that some CRE managers assume it is not their task to understand or know these components, because it already belongs to the business leaders constructing the corporate strategy. However, obtaining an understanding of

these components is essential for CRE managers to obtain a full overview of the business and corporate strategy (Heywood, 2011). Within the third building block, the component 'strategy intergration' is not found. The explanation of this may be similar to the first conceptual framework, that within this research 'integration' was interpreted as the corporate and CRE strategy being integrated and becoming one, which was not the case at any of the studied multinationals.

Because corporate strategies are very diverse, the alignment of CRE strategies with the business is closely related to the organizational context (Osgood, 2003) and CRE alignment may therefore differ greatly between firms. However, based on the results from the five case studies undertaken in this research, it appears that Heywood and Arkesteijn have provided a framework with main building blocks and components that shows in general which entities are used in CRE alignment and can be used by practitioners as guidance in approaching and performing CRE alignment across different industries, when made specific to the firm's characteristics. Still, there may be possibilities to further improve the framework, mainly concerning it's visualization, as explained in Chapter 11, Section 11.2. The current visualization seems to provide a sequence in the components and a division across the main building blocks, although Arkesteijn & Heywood (2013) underscore that the building blocks and components are not in any specific order and can be used simultaneously or across each other. Further empirical analysis should show whether the provided recommendations for improved visualization of the framework and designation of specific components are indeed correct.

CRE alignment scheme

In performing and describing the case study analyses and answering the main research question, the need for visualizing how these five firms perform CRE alignment arose. When asking the interviewees after the interviews if they currently have a visualization of their CRE alignment, they all stated that they don't. Only T3 used to have a visualization, but since the firm was split into two entities and is still in the process of reorganizing, they have yet to make a new visualization. Also, the interviewees stated they don't use a model from their own firm or from literature on which they base their CRE alignment approach. This confirms the statement of Appel-Meulenbroek & Haynes (2014) in Chapter 1, that the uptake of current CRE alignment models from literature in practice is disputable, even though CREM professionals do indicate they are currently aligned and, similar to the statement by Heywood (2011), that they are positive about their CRE alignment practices.

In order to visualize these CRE alignment practices, for each of the individual cases a scheme is made showing the sequence of the processes, products (inputs and outputs) and stakeholders involved, across the three scale levels within these multinational firms (global, regional, local). This scheme was made to visualize not just the 'what', which was captured by the two conceptual frameworks, but also the 'where, who, when and how'. The main set-up of the CRE alignment schemes was made after a further analysis of the individual models studied by Heywood & Arkesteijn (in press), in order to find out if these could potentially be used or combined to use in order to visualize each multinational's CRE alignment in it's entirety. However, as explained fully in Chapter 5, it appeared that these models also did not provide visualization of the scale level within the firm, the involved stakeholders and the sequence of the processes and products. Therefore, a new method of visualization is constructed, which is used in the full report to show for each of the multinationals how they approach and perform CRE alignment, as well as the general scheme in the cross-case analysis. This is thus not a model or framework for guiding CRE managers how to do CRE alignment, but a more complete way to visualize what is already happening at these firms. The visualization

method is not company-specific and could be used by firms from different sizes and scopes, as long as they fill in their processes, products, sequence and involved stakeholders across the different scale levels. The main elements are shown in Figure 11.

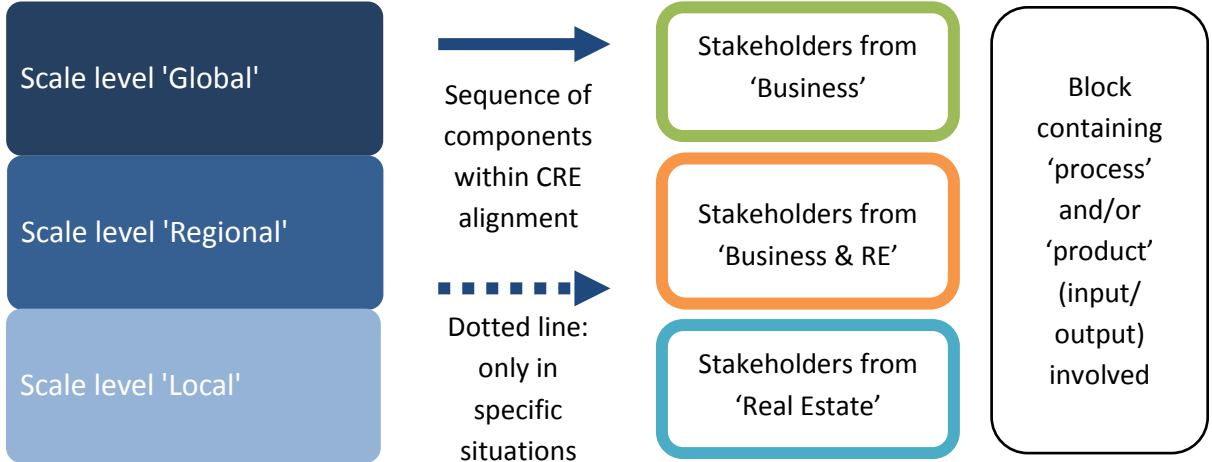


Figure 11. Main elements visualization method, own illustration

Conclusion

When reviewing articles from CREM literature that compare CRE alignment theories and models by other authors, it was found that alignment of the CRE with the business is seen as the core objective of CRE management. However, although CREM literature proposes a wide variety of approaches and models for it, either based on or validated in practice, there is not much empirical evidence of their uptake or use in practice after conception. Also, on the one hand, CRE professionals indicate to be positive about the alignment at their firms, but on the other hand they see it as a difficult task and would like to receive more guidance. The question thus arose how CRE professionals approach and perform CRE alignment in practice and whether this relates to literature. The main hypothesis of this research, as well as the opening statement of this thesis, was therefore the following:

"In theory, theory and practice are the same. In practice, they are not."
- Albert Einstein

From the start, it was expected that there currently is a difference between literature and practice, and at the same time implied that this may be a problem. With this in mind, the research focused on mapping and comparing the current state of CRE alignment in both literature and in practice, studying the CRE alignment practices of five multinationals in the technology and financial services industries. However, as explained in the previous section, in the comparison between practice and literature, with the help of the conceptual frameworks set up for this research, not many differences are found. In general, the difference between practice and literature may thus not be that large and may also not be a problem. Based on the results of the comparison, several recommendations were made that could possibly improve the conceptual frameworks, mainly concerning its visualization and the designation of certain components, but further empirical research is needed to validate these. In general, Heywood & Arkesteijn have provided two frameworks, one that shows the multi-dimensionality of CRE alignment as a phenomenon and another that could provide practitioners guidance in approaching and performing CRE alignment, by providing them with the main building blocks and components, which they can then translate to their own context.

The main findings from practice are thus closely related to the main findings from literature in this research. This is not surprising, since most CREM and CRE alignment literature is based on or validated in practice and often written by practitioners, sometimes in cooperation with researchers. Also, because the main theoretical underpinnings and conceptual frameworks of this research come from articles comparing and summarizing a wide range of CRE alignment models and theories by other authors, these provide a more general overview of CRE alignment as a phenomenon and the processes and products involved, which have then been confirmed by the findings from practice. When the theoretical underpinnings would have been based on CRE alignment literature describing specific processes and products used in CRE alignment, it is likely that the differences between the main findings from practice and literature would be larger. When looking past the similarities between the main findings from practice and literature and going into more detail, the following statement may be more fitting to this thesis:

"In theory, practice is simple. But, is it simple to practice theory?"

- Trygve Reenskaug (University of Oslo)

This statement captures why one would expect to find a difference between literature and practice: it depends on the perspective. In literature, practice seems simple, because it is simplified in order to be relevant across industries and scopes. Scientific literature provides an abstract overview and general guidance or explanation of specific concepts. However, in practice, practicing literature is not simple. In order to apply the theories, practitioners have to translate them to their own context and fill in the details, which is normal in applying literature by practice, as also stated by Dainton & Zelle (2005). It is not surprising that CRE professionals still view CRE alignment as a difficult task, because, as this research confirms, CRE alignment is complex, multi-dimensional and has to take into account the full range of facets of a company. On top of that, CRE managers need to be able to react to sudden internal or external occurrences, which is something that can't be described or prescribed by academia, because there is not one solution and most importantly not one problem that is similar. To each issue, a solution needs to be tailor-made, which is a challenge time after time.

There is thus not one correct way to approach or perform CRE alignment. Corporate strategies can be very diverse, because they depend on the core business, organization, drivers and competitors of that individual firm. Therefore, the alignment of CRE strategies with the business is closely related to the organizational context. Across firms, CRE alignment processes, products and the stakeholders involved may differ greatly and literature is not, and should not be, able to prescribe these, due to its interrelation with the organizational context, which is constantly changing. As Heywood (2011, p.12) also stated: *"Organisations are imperfect, human constructs that never operate precisely as theory suggests they may"*. All of the studied multinationals appeared to have their own CRE alignment practices, as well as their own terminology for it. However, when translating them back to a higher level of abstraction, they start to look more alike and similar to literature. It appears that in this case, Albert Einstein was proven wrong.

Reader's guide

This thesis is structured according to six subsequent parts, named A-F. In part A, the problem that this research aims to solve is analyzed and stated. Further, an introduction is given to the subject under study, as well as the research objectives. This subject is explained further in part B, first of all the main theoretical underpinnings, establishing the theoretical basis of the research, as well as two conceptual frameworks summarizing these. Then, the subjects under study are explained further, as have been derived from a wide range of literature sources. Chapter three and four explain the subjects 'multinationals', 'technology and financial services firms', 'business strategies, CRE strategies and CRE alignment' and 'differences between practice and literature'. In part C, the research methodology is shown, explaining in detail the several steps that have been taken to come to an answer to the main research question. In part D for each of the five cases that have been studied a summary is shown, to explain how these multinationals view and approach CRE alignment. These chapters are all summaries of the full case study descriptions in Appendix 6-10 and conclude in CRE alignment schemes for each multinational encompassing the processes, products and involved stakeholders in CRE alignment. In part E, the synthesis, each individual case study is compared to literature, according to the conceptual frameworks as have been made summarizing the relevant literature. This leads to the differences between literature and practice, that are extended with a cross-case analysis of the five cases and a comparison of the cross-case to literature. In the final part, part F, the findings on CRE alignment in practice are discussed, as well as the similarities and differences between practice and academia. This leads to the main conclusions, extended with information on the limitations of this research and further recommendations. At the end of the report, the appendices are found, showing all needed information to take a deeper dive into the information found in the main body.

Happy reading!



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A woman in a black dress stands on a wooden walkway next to a glass railing, looking out at a city skyline. The scene is captured in a high-angle, slightly blurred perspective, with the woman's silhouette and the railing's reflection visible on the wooden surface. The background shows a modern cityscape with a prominent skyscraper. The overall mood is contemplative and urban.

A) INTRODUCTION

1. Introduction

1.1 Problem analysis

Due to globalization and increased interconnectedness of markets, it has become easier and more commonplace for corporations to scale up their business worldwide, offering them a wider range of customers, larger talent pool of employees and more favourable locations to perform their activities. It is expected that over the coming years, corporations will increasingly decide to move or expand (further) across the globe (Karaköse & Demir, 2011). The internationalization of markets is mainly caused by growing digitalization and technological developments, enabling firms international communication and operations (Baltzan, 2014). However, these developments have also led to an increase in the pace of business, as a result of shorter lines between people and processes, as well as higher expectations from both customers and employees.

These evolutions and trends in the market, combined with changing demands coming from employees and customers, are driving corporations worldwide to continuously re-evaluate their processes and trigger the redesign of their strategies, in order to obtain and retain competitive advantage over other companies (Baltzan, 2014)(Hill, 2014). Especially multinational corporations, who operate across different scale levels, are highly impacted due to their widespread presence. These multinationals play a key role within a globalizing world. While constituting just a small percentage of all companies worldwide, they are responsible for half of the global turnover (Gooderham & Nordhaug, 2003). Similar to other firms, multinationals aim to operate as efficiently and effectively as possible, avoiding risks and threats, while seizing opportunities they recognize. Their global presence however, provides them a much larger variety in situations to take advantage of, but also brings them into fierce competition (Ludviga, 2012), on a global, regional and local level.

Multinationals are therefore in a constant search for new market solutions, distinctive values and sources of competitive advantage, with which they tailor their corporate business strategy. Business strategies define companies' processes, customers and employees. To support the business, larger firms such as multinationals, often have support service departments for their human resources, legal, IT and corporate real estate management (CREM). The CRE department designs a real estate strategy for the corporation, which defines the environment that houses and supports the business activities. In order for corporations to successfully achieve their business objectives, it's essential to align their CRE strategy with the business strategy, so they complement and reinforce each other (Dewulf *et al.*, 2000). When corporations are successful in aligning both strategies, this increases their efficiency, profitability and competitive advantage (Roulac, 2001). Oppositely, when the CRE and business strategy are improperly aligned, this may lead to negative impacts reaching across the corporation, such as unnecessary costs, loss of productivity, ineffective use of space, decreased employee satisfaction, less satisfied customers and shortcomings on business goals (Silen, 2012).

1.2 Problem definition

Dewulf *et al.* (2000) view alignment of corporate real estate (CRE) with the business as the main objective of CREM. However, when reviewing the current body of knowledge on alignment within businesses, it covers mainly the other corporate support functions, such as HR and IT, but not CRE (Heywood, 2011). Since CRE alignment has become a key task for CRE managers (Osgood Jr., 2009), CREM literature does address alignment with the business and also attempts to address the arisen imbalance, aiming to empower the CRE function. The CREM body of knowledge suggests a large

variety of approaches and models on CRE alignment and in several surveys CREM professionals indicate they are positive about the CRE alignment at their corporations (Heywood, 2011). However, the models in CREM literature differ widely in completeness and content, which may be due to the fact that there has not been much uptake of these models within other literature sources. Their actual uptake in practice also remains disputable, because even though most models are made by practitioners or validated in practice, there is not much empirical evidence that the models are being used by practitioners after conception (Heywood, 2011)(Appel-Meulenbroek & Haynes, 2014). The fact that the models differ widely and there is not one encompassing ‘core technology’, might explain why it would be difficult to use them in practice (Heywood & Arkesteijn, in press). It is possible that the current models do not provide the needed guidance for CRE managers in approaching and performing alignment, which could mean there is a need for a different approach from academia, but until now, it remained unclear how CRE alignment is actually done in practice and whether or how this relates to the models suggested by literature. This graduation research therefore focuses on mapping and comparing the current state of CRE alignment in both literature and in practice.

1.3 Research question

Since CREM is a multi-dimensional and complex field (Heywood & Arkesteijn, in press), a more detailed understanding of CRE alignment would be significant for both CREM practice and academia. This research is performed to answer the following research question:

“How do multinational corporations in the technology and financial services industries align their corporate real estate and corporate business strategy in practice and how does this relate to the main findings from CRE alignment literature?”

The main idea behind this graduation research is thus to find out how CRE alignment is approached and performed in practice and how this relates to literature. Within this research scope, it is expected there is a difference between CRE alignment in academia and in practice, as seen in Figure 1.1. However, until now it is not clear what these differences are exactly, how they may be explained and what their significance is. Examining and explaining differences between practice and academia, could increase the mutual understanding between researchers and practitioners and help them to learn from each other, as well as providing new insights, with which CREM literature and practices can be further developed.

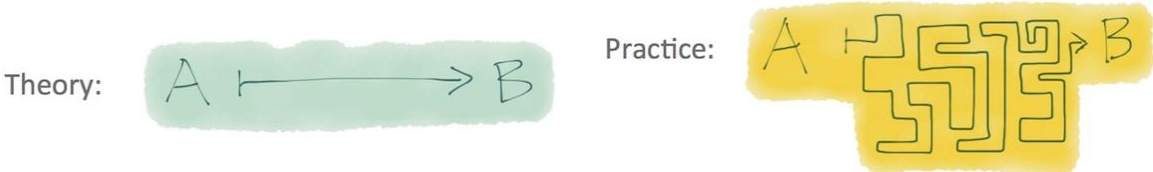


Figure 1.1 Conceptual illustration of hypothesis about academia and practice

1.4 Research objective

Corporations are increasingly becoming aware of the added value of corporate real estate (CRE) and its strategic management. However, CRE alignment is still seen as a difficult activity by practitioners, even though academia has been writing about it for the past 20 years and a wide variety of models for alignment are available (Heywood, 2011). The aim of this research is to find out how CRE alignment is approached and performed in practice, in order to get insight in the use of the theories and models from academia, as well as to map the processes, products and stakeholders involved in

CRE alignment in practice. This research project will therefore be exploratory, analytical and explanatory. Before examining CRE alignment in practice, the main theoretical underpinnings and conceptual frameworks as derived from literature are discussed, as well as the current state of the mentioned concepts, such as corporate business strategies, CRE strategies and alignment models, according to literature. Having established the theoretical basis, practice is studied to find out what processes, products and stakeholders are involved in CRE alignment at five different multinationals and how these practices resemble models or components of models as have been found in literature. The CRE alignment of the five multinationals is compared to each other in a cross-case analysis, which concludes in the current state of practice. The state of literature and state of practice are finally compared to each other, to find similarities and differences. The gap that is found between academia and practice and why it exists is then explained, as well as its significance. By explaining the gap between academia and practice, this research is helpful for both practitioners in order to understand and apply literature better and for researchers in order to be able to understand and support practice better. Increasing the mutual understanding, both academia and practice are able to move forward and develop the field of CRE alignment further.

1.5 Relevance

Scientific relevance and originality

This graduation research is part of a larger research project on CRE alignment in practice, currently being conducted at the Delft University of Technology by Monique Arkesteijn, who is also head of the chair of Real Estate Management (REM) at the department of Management in the Built Environment (MBE). This chair focuses on corporate real estate (CRE) portfolio's, such as the portfolio's of large (multinational) corporations, educational institutions or the government. Corporate Real Estate Management (CREM) aims at integrating the different points of view of the involved stakeholders when attuning the supply and demand, on portfolio-, building- and workplace level. By designing CRE strategies, the CRE manager aspires to align the CRE to the business aims and objectives, in order to maximize the performance and added value of the CRE to the business, which may comprise of and be measured by aspects such as profitability, productivity, competitive advantage and sustainability.

Utilisation potential

The outcomes of this research may be useful for practitioners, education and academia. First of all, the findings from the case studies and cross-case analysis provide an overview of the CRE alignment process, products and involved stakeholders at five multinationals. Learning from their peers could lead to new insights and re-design or evaluation of strategies across firms. Also, since this thesis summarizes the main findings from CRE alignment literature, and explains how and why these are (not) used in practice, this may provide practitioners with a deeper understanding of both academia and practice. The research can be useful to researchers too, because the summary of the current body of knowledge, as well as the comparison to practice, helps academia understand practice better and build further on the topic of CRE alignment, possibly helping theories and models being brought into the world obtain a higher uptake and use. Finally, it may be interesting for students or educators to show the current state of literature, how it relates to practice and how differences may be explained.

A woman in silhouette stands on a wooden balcony with a glass railing, looking out over a city skyline. The scene is bathed in a warm, golden light, suggesting sunrise or sunset. The glass railing reflects the woman and the city buildings. The text "B) THEORETICAL UNDERPINNINGS" is overlaid in the center of the image.

**B) THEORETICAL
UNDERPINNINGS**

2. Theoretical underpinnings

2.1 Main literature

To construct the main theoretical underpinnings of this research, literature comparing a variety of CRE alignment theories and models is examined and critically reviewed. These articles have been found in the Scopus database and received from Monique Arkesteijn, who is the leading researcher of the larger research project 'CRE alignment in practice' at the TU Delft, which this graduation research is a part of. Besides leading this research project, Arkesteijn is assistant professor and head of the division Real Estate Management and Development at the department of Management in the Built Environment. Due to my involvement in the larger research project, I was able to obtain access to the article 'Alignment and theory in Corporate Real Estate alignment models' by Heywood & Arkesteijn that is currently in press and will be published in the International Journal of Strategic Property Management in the beginning of 2017. The further literature search in Scopus and the subsequent selection of relevant articles is explained in detail in Chapter 5 and Appendix 1. When taking a closer look at the selected articles, it appeared that most articles on CRE alignment come from the Netherlands (9), the USA (5) and Finland (3), written by a small community of academics, who build on each other's research. The main authors of articles on CRE alignment methods, models or comparisons of other research on CRE alignment are: Beckers, van der Voordt, Dewulf, Haynes, Lindholm, Gibler, Leväinen, Appel-Meulenbroek, Arkesteijn and Heywood.

An examination of these authors and articles showed that the researchers who have written articles to compare CRE alignment models made by other authors can be divided into three groups. There were articles mainly describing and comparing the process(es) of CRE alignment, articles focused on the products (inputs and outputs) in CRE alignment models and articles describing both processes and products within CRE alignment models. Within this graduation research, the articles comparing CRE models and theories of Heywood (2011), Arkesteijn & Heywood (2013) and Heywood & Arkesteijn (in press) have been used as the main theoretical underpinnings and basis for the conceptual frameworks. Of all articles comparing CRE alignment models and theories, these articles were most complete, having a broader and more encompassing view, describing and comparing both process and products within existing CRE alignment models and theories. However, in order to ensure this research was not solely based on the point of view of Heywood and Arkesteijn, the theoretical basis has been enhanced further with findings from the process-focused comparison article written by Beckers & van der Voordt and the product-focused comparison article written by Appel-Meulenbroek *et al.*, in order to examine and expose the full scope of CRE alignment according to CREM literature. Besides that, the original articles about the models and theories that Heywood and Arkesteijn are comparing, as all mentioned before, have been examined to make sure these are understood correctly and important aspects will not be overlooked.

2.2 CRE alignment phenomenon

Within their article, Heywood & Arkesteijn (in press) conduct an analysis of 20 existing CRE alignment models through a qualitative hermeneutic research methodology, in order to "*better understand what these models say about CRE alignment as a phenomenon and how it is theorised*". The literature containing theories and models on CRE alignment that they selected to be examined in-depth, were articles containing one or more of these terms: CRE strategy, alignment and business/corporate strategy. This literature search led to a selection of meaning-full objects, after which the articles with a real-estate based diagrammatic model including explanatory text in an article were

selected for further analysis. This meant exclusion of models aligning CREM and improving the performance of CREM internally, Facility Management (FM) focused models and articles aligning single CRE or CREM factors (Heywood & Arkesteijn, in press, p. 2).

Since the main goal of the article by Heywood & Arkesteijn (in press) is developing a deeper understanding of CRE alignment, they do not propose a specific definition or model for it. Rather, through their model comparison Heywood & Arkesteijn find that CRE alignment is more complex and pluralistic than the individual models may assume. They summarize the characteristics of CRE alignment by four main dimensions, as shown in Figure 2.1, being the multi-valent relationship between the CRE and corporate business strategy, the multiple forms of alignment, multiple cognitive objects being aligned to each other and multi-directionality within the organization. With these dimensions, Heywood & Arkesteijn (in press, p. 2) summarize the variety of views, approaches and understandings of alignment between the CRE strategy and corporate business strategy. All four of the dimensions are interrelated and can be recognized simultaneously.

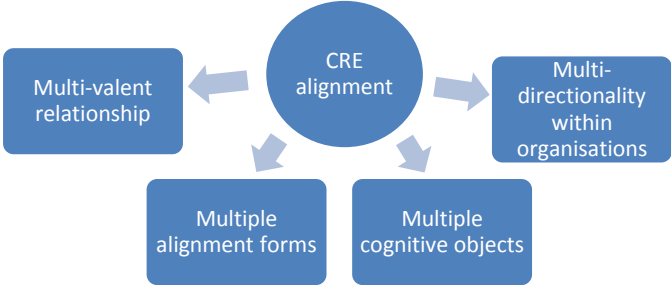


Figure 2.1 Main dimensions CRE alignment, Heywood & Arkesteijn (in press), visualized

Heywood & Arkesteijn explain that the multi-valent relationship between the corporate strategy and the CRE strategy can differ from ‘just’ a relationship, but that the link is undefined or that there is no relationship at all, or derivation relationships, where the CRE strategy is informed by the corporate strategy are awareness or derivation based. Others relationships are more closely related, being based on consistency, integration and/or movement, or even very close, which are utility relationships are based on usefulness and strengthening. The assessment based relationship actually measures how closely related the alignment between both strategies is (Heywood & Arkesteijn, in press, p. 3). Figure 2.4 summarizes the variety of dimensions and their typologies.

Secondly, Heywood & Arkesteijn (in press, p. 4) state that a further way to understand the phenomenon of CRE alignment is through it’s forms. It can occur in one or multiple forms at once. It’s form can be an artefact, which is a plan or record of steps showing how alignment are achieved. Behaviour on the other hand, is something that mainly exists in the mind of the CRE manager and it’s team, meaning the strategic mindset needed for alignment and acting towards that mindset. The form can also be a process, which may or may not be documented, consisting of steps to achieve greater alignment. Finally, the form of alignment could be a state, which is a performance outcome. This outcome is measured by examining the performance of the strategy, whether the previously set objectives are achieved, and/or assessing the performance of the CRE portfolio, potentially in comparison to the previous state. A combination of the different forms of alignment suggests two approaches to it: the plan-based and the behaviour-based type (Heywood & Arkesteijn, in press, p. 4). Often, an alignment plan consists of a process which leads to a change in state. According to Heywood & Arkesteijn, this plan-based form of alignment can be a useful communication tool, but may also limits the capability to react flexibly to changes in circumstances, since the approach is

relatively rigid, especially in rapidly changing business environments. A more dynamic approach would be the behaviour-based form, which mainly relates to the management of the CRE and the strategic mindset in assessing opportunities or strategic potential and making operational or tactical decisions. *“Ideally a model would include both plans and behaviour but none of the models interrogated here showed that. Given the differences noted previously – rigidity versus fluidity – this synthesis may be impossible”* (Heywood & Arkesteijn, in press, p. 5). Also important to consider is that Appel-Meulenbroek *et al.* (2010) showed that CRE managers and external advisors can come to different conclusions when it comes to alignment states within a firm.

The third dimension, cognitive objects of alignment, shows which entities are actually being aligned to each other, being three business cognitive objects and three CRE cognitive objects, as shown in Figure 2.1. According to Heywood & Arkesteijn, within strategic management literature the corporate strategy and CRE strategy are the starting point of the business-related and real estate related entities. The corporate strategy is formed in reaction to business drivers and forces, internal and external strategic triggers. This subsequently produces a certain business performance, which leads to specific business needs. The CRE strategy similarly produces the CRE portfolio of real estate objects, which requires certain CREM practices in order to organize and manage everything correctly. To ensure full alignment, all six entities should be aligned to each other, which requires nine alignment actions or at least alignment checks, ensuring they are brought into agreement (Heywood & Arkesteijn, in press, p. 5).

Finally, Heywood & Arkesteijn (in press) show that the directionality of alignment can be internal and/or external. Internally, four different directions are recognized, two being horizontal and two vertical. Horizontally, it could mean aligning the CRE across support functions, such as HR, IT, R&D and Finance, or aligning across business units, leading to a balance in requirements and a consistent portfolio across the firm. It depends on the type of company how many different business units they employ. Vertically, CRE alignment can be done through top-down or bottom-up decision-making, in which the latter would be the case when corporate strategy decisions are made being informed by the corporate real estate effects, opportunities and risks. External alignment happens when the firm aligns business needs with the internal portfolio and the relevant market (De Jonge *et al.*, 2009).

Within the CRE alignment literature studied by Heywood & Arkesteijn, the concept of CRE alignment is thus viewed and approached in many different ways and only 2 out of 20 models examined by these authors include a specific definition for CRE alignment. Because in practice this may also be the case, when the view and approach to CRE alignment depends on the individual CRE manager, the first conceptual framework is set up, as seen in Figure 2.4, showing all alignment dimensions according to literature and enabling further analysis of the case study results. Using this conceptual framework, the results from practice can be compared to literature to examine whether these CRE alignment dimensions also appear in practice, in order to find out the similarities and differences between academia and practice and to improve our understanding of CRE alignment in practice.

2.3 Main building blocks and components

Since corporate strategies may be very diverse, depending on the business objectives of that specific firm as well as the external trends, developments, drivers and forces they deal with, the alignment of CRE strategies with the business is closely related to the organizational context (Osgood, 2003). However, in their CoreNet Global presentation, Arkesteijn & Heywood (2013) provide several main

building blocks and components that could be used in CRE alignment across different industries, when made specific to the firm by the CRE manager. The four main building blocks of CRE alignment have also been related to the four main processes derived from the DAS-frame by Arkesteijn (2013), as seen in Figure 2.2. The DAS-frame is further explained in Chapter 3, Section 3.5 and Figure 3.4.

The main objective and challenge of CRE managers is to attain a CRE portfolio that is able to support the current business processes and objectives, while remaining flexible to also meet future needs (Appel-Meulenbroek & Haynes, 2014). Arkesteijn & Heywood (2013) explain that the first two building blocks encompass the process for the CRE manager to fully understand the corporate strategy, how it is changing through or reacting to internal and external influences, and secondly, to understand the current real estate performance, by examining the CRE portfolio and CREM practices, to establish the context in which decisions are made and to be able to compare it to the needs coming from the business. With a complete overview and understanding of both the business and the CRE, including all relevant processes, inputs and outputs, the CRE manager is able to make predictions or forecasts of the future requirements. These are essential in the third building block, in which a new real estate strategy is designed, considering different scenario's and alternatives, and the strategies are aligned. The fourth building block is focused on implementing the CRE strategy, by actioning the required CRE projects and CREM practices. Although there may seem to be an order in these processes, Arkesteijn & Heywood (2013) underscore that the four main building blocks are not in any specific sequence and can occur simultaneously or separate from each other.

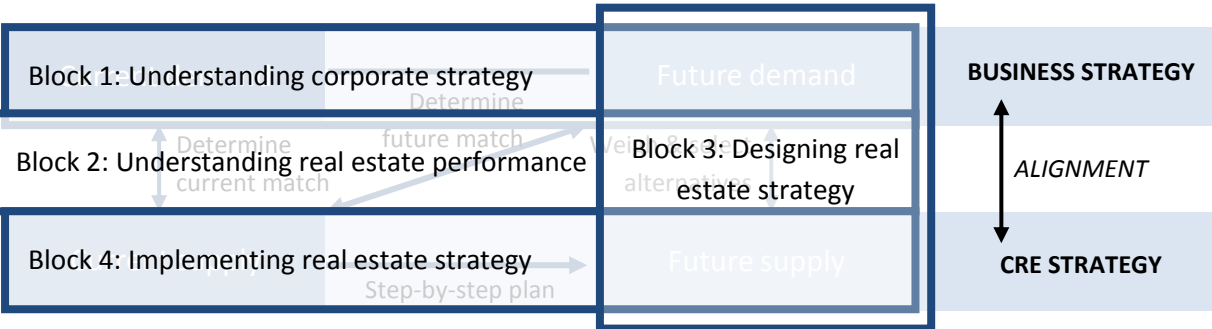


Figure 2.2 Main building blocks of CRE alignment, Arkesteijn (2013)

None of the models studied by Heywood and Arkesteijn is ideal, each model has it's own strengths and weaknesses. Within his earlier analysis of the set of CRE alignment models, Heywood (2011) derived a list of 15 different components, as seen in Figure 2.3. No model includes all 15 components and sometimes the components are more indirectly implied or external to the model. The article by Appel-Meulenbroek & Haynes (2014) also makes a link to these 15 components, using them in their own comparison and assessment of CRE alignment theories and models (with a product-focus) such as the strategic thinking map of Swayne, Duncan and Ginter (2006). Heywood (2011) subdivides his analysis of the CRE alignment models into real estate centric models and cross-linked alignment models, in which there is either a uni-directional or bi-directional relationship between CRE and corporate strategy. In most cases, the directionality is seen as a one-way street in which the CRE strategy supports and contributes to the corporate strategy. Beckers & van der Voordt (2013) also state that most literature on CRE alignment assumes that aligning, and thus removing inconsistencies, means making changes in the CRE strategy to make it fit to the corporate strategy. However, Heywood (2011) suggests that it may also be desirable to have the corporate strategy adjust to the CRE strategy on some aspects.

| Real estate centric alignment models | Cross-linked alignment models |
|--|--|
| <ul style="list-style-type: none"> • Strategic triggers • Corporate strategy formation/ planning • Business market data • External business factors • Strategic drivers with CRE consequences • Other strategic drivers (i.e. marketing) | <ul style="list-style-type: none"> • Audit of existing real estate • Performance evaluation • Real estate market data/ information • CRE strategy formation • Strategy integration • Intregation with other corporate functions • Real estate operating decisions • Directionality • Feedback |

Figure 2.3 15 components of CRE alignment, Heywood (2011, p. 3-5)

Together, these 15 components sum up the main inputs, outputs and processes that are used in CRE alignment models. Within their later work, Arkesteijn & Heywood (2013), summarize the list to a total of 12 components. Business market data and external business factors have been summarized to ‘business drivers and forces’. Strategic drivers with CRE consequences and other strategic drivers have been summarized to ‘internal strategic drivers’. Performance evaluation has been renamed to ‘assess the effect of CREM action’. Real estate operating decisions has been split up in two components: ‘actioning real estate intervention’ and ‘actioning required CREM practices’. The directionality component is left out, because it is already covered in the first conceptual framework. The second conceptual framework, as shown in Figure 2.5, summarizes the main building blocks and components for CRE alignment, that can be compared to the results from practice. Most models studied by Heywood (2011) and Arkesteijn & Heywood (2013) include feedback loops, resulting in an iterative process or ‘strategic momentum’ as it is called in (Swayne, Duncan & Ginter, 2006). Since it is assumed to be an essential aspect to CRE alignment, but only mentioned in text and not directly in the framework of main building blocks and components by Arkesteijn & Heywood (2013), within this research the component ‘strategic momentum’ is added, evaluating the strategic decisions and managerial actions before, during and after implementation, which leads to learning and initiates a new process of strategic thinking and decision-making, making the entire process truly iterative. This also captures the 15th and final component ‘feedback’, as stated by Heywood (2011).

2.4 Conceptual frameworks

The conceptual frameworks, as shown in Figure 2.4 and 2.5, summarize the main findings from the selected literature comparing a variety of CRE alignment models by Heywood (2011), Arkesteijn & Heywood (2013), Heywood & Arkesteijn (in press), enhanced by Appel-Meulenbroek & Haynes (2014). These frameworks therefore show the current state of CRE alignment according to literature, since it is based on articles comparing a broad range of other articles, as well as focusing on both product and process within the model comparison. To find out the current state of practice, case studies are conducted of five multinationals, by analyzing the interview transcripts and (shared or public) documents about their CRE alignment practices. All of the aspects of the CRE alignment phenomenon, main building blocks and components from the first and second conceptual framework in Figure 2.4 and 2.5 are used as the themes and codes in analyzing the interview transcripts in Atlas.ti, to find out whether these aspects that are important according to the main theoretical underpinnings are actually used or applied by the five studied multinationals in practice. This way, the current state of practice can be determined and compared to the current state of literature.

1. The CRE alignment phenomenon

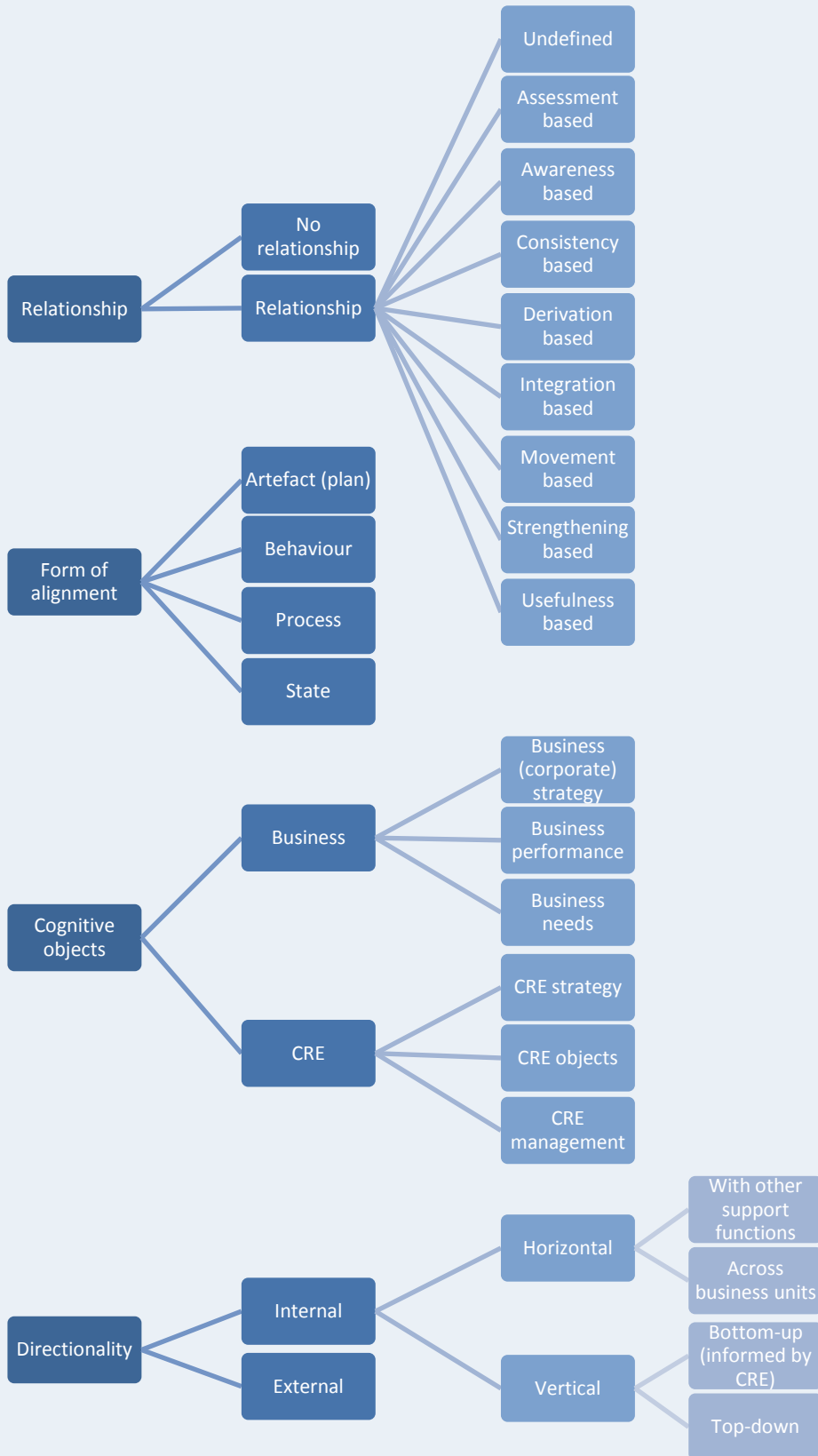


Figure 2.4 CRE alignment context, Heywood & Arkesteijn (in press)

2. Main building blocks and components

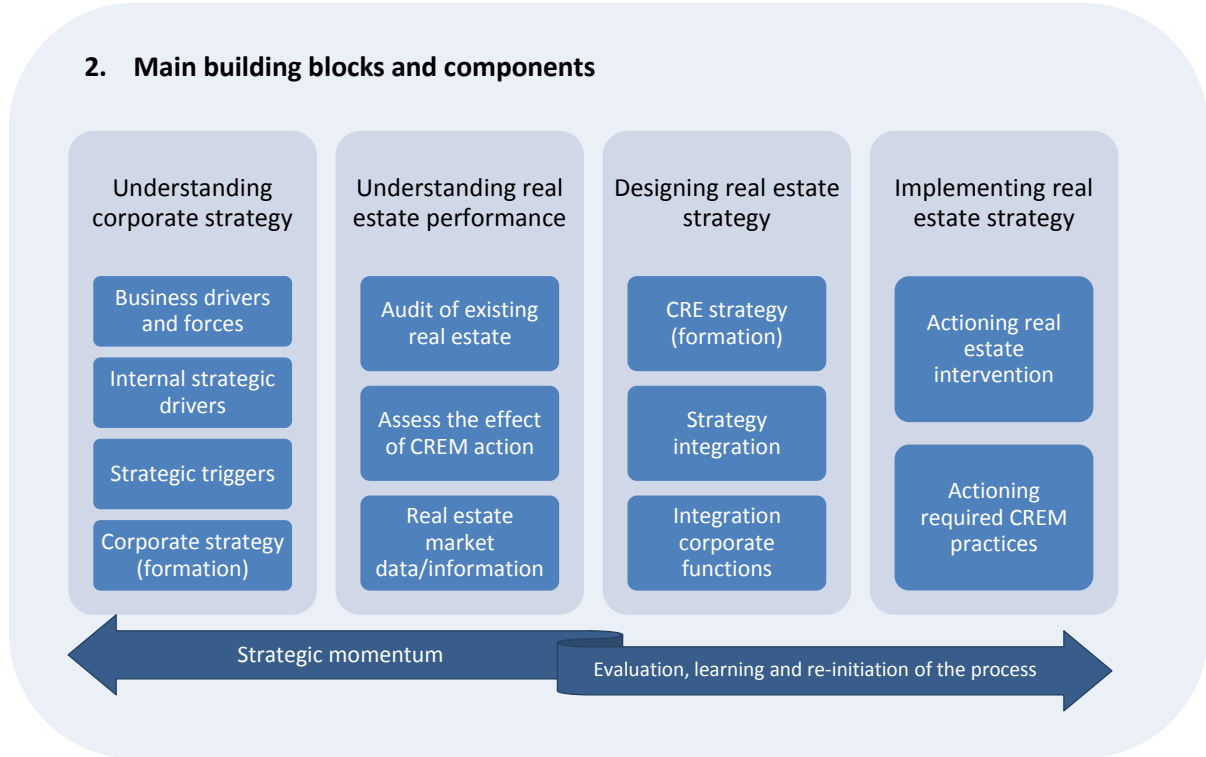


Figure 2.5 Main building blocks and components of CRE alignment, Heywood (2011) and Arkesteijn & Heywood (2013), arrow with strategic momentum added by author, after Appel-Meulenbroek & Haynes (2014)

3. Explanation of concepts

In order to fully understand the subjects that are studied within this research, the concepts of multinational corporations, financial services and technology firms, corporate business strategies, corporate real estate, CRE strategies, models for strategy design and strategy alignment are further examined and explained in this chapter. This is particularly important because these individual subjects have within this research and a full and correct understanding of them is essential in conducting the research, synthesizing the information, coming to conclusions and eventually adding to the current body of knowledge. Examining these subjects ensures that relevant theories from literature are not missed and at the same time this chapter provides a solid theoretical basis in addition the main theoretical underpinnings and conceptual frameworks of Chapter 2, needed for further empirical research to the topic of CRE alignment in practice.

3.1 Multinational corporations

Due to increasing globalization of both markets and corporations, in order to be competitive in one market or country, companies nowadays have no choice but to become intertwined within a network of other markets and corporations: the global marketplace. Due to attractive contextual characteristics, such as less land regulations or lower taxation, many companies are now investing in expanding their business abroad (Too *et al.*, 2010). The multinational corporation is born. A multinational is a firm whose business processes are located in multiple countries. This type of company thus possesses a different organizational form than a company that operates in just one nation, because it deals with a variety of economic, regulatory and social systems across the world. Amongst multinationals there may be differences in scale and extent of their activities, for instance in the number of locations they are active, number of clients or number of employees.

Worldwide, multinationals generate approximately half of the total industrial output and are responsible for two-thirds of global trade, half of which is trade amongst multinationals (Gooderham & Nordhaug, 2003). Within the Netherlands, multinationals represent only two percent of the total amount of companies, but they provide 2 million jobs, which is 40% of the total amount. They are also responsible for two thirds of the Dutch industry turnover and more than 80% of the international trade in products. Half of the multinationals in the Netherlands are of Dutch origin. Since the economic crisis in 2008, less jobs have been terminated at multinationals than local companies. This fairly small amount of companies thus is of great importance to the Dutch economy. Dutch multinationals also play an important role abroad, employing 2,3 million people, of which two thirds within Europe and one third outside of Europe, mainly in the USA, Brazil and Asia (CBS, 2015).

Advantages and disadvantages

Multinational corporations are recognized by their (previous or current) growth and expansion of the business across the globe. Growing, and increasing the size of a firm, can mean increased efficiency, profitability and diversification, but may have the opposite effect when not managed correctly. Several factors drive the growth of firms. Diversification of the business enhances the revenue mix and helps mitigate risks, since revenues come from various unrelated sources. This means that when a specific region, market, customer group, product or service does not do well, revenues are still made in other areas. Growing the firm also helps in obtaining economies of scale, for instance in the investments made in IT infrastructure, manufacturing or R&D, but also in overhead costs, such as accounting, legal affairs and risk management (Gooderham & Nordhaug, 2003).

Being present in multiple locations and contexts also enables multinationals to make use of opportunities wherever the location and exposes them to more innovative ideas sooner, which may give the firm competitive advantage over others. Its size provides the multinational with bargaining power with local governments, which may provide them with opportunities not accessible to others (Gooderham & Nordhaug, 2003). However, the multinational is not always successful. With its increasing size, some disadvantages such as inflexibility, slowness to respond to opportunities and bureaucracy can be recognized (Birkenshaw, 2000). National corporations, that stick to one country, have the advantage of dealing with just one economy, regulatory system, culture and language.

Since most multinationals do emanate from a single country, they export their own organizational culture and social context to these other contexts. The multinational is therefore one of the most powerful mechanisms to transfer knowledge between countries, which is especially indispensable when the firm provides services (Gooderham & Nordhaug, 2003). The main feature of multinationals is thus transferring and creating new forms of knowledge on organizing and coordinating employees across business units, which helps the firm to obtain higher quality levels, bring products to the market quicker or achieve lower costs (Kogut, 1992). However, the fact that each national context has different economic, legislative, political, technological, environmental and social or cultural systems may complicate the knowledge transfer and lead to internal and external inconsistencies.

In order to be successful in their worldwide business, multinationals have to organize and manage their foreign activities well. A corporate culture that stimulates communication, enhances an entrepreneurial mindset and increases employee commitment is essential. But most importantly, the organizational structure and strategic plans must fit the corporate objectives. Especially when it comes to global expansion through acquisitions of other companies abroad, which often comes with an (inefficient or inflexible) CRE portfolio that needs to be merged with the firm's own portfolio, making the right CRE strategic decisions is essential. This way, most multinationals accumulate large CRE portfolios over the years, of which on average 50% is located in their home country and 50% across the globe (Gooderham & Nordhaug, 2003). Consistency within the entire CRE portfolio and its strategies is needed to be able to add value to the business processes throughout the firm.

3.2 Financial services and technology industry

Financial services firms offer banking and other financial services to individuals or other companies. Due to innovations, such as marketplace lending or block-chain, technological developments and increased digitalization, but also because of changes in regulations and the (negative) impacts of the economic crisis, the banking industry has changed a lot over the past decade and is expected to change even further the coming years. While seen as a relatively traditional and conservative industry, many financial services firms are now forced to become more pro-active and completely redesign their business models in order to have a sustainable future (Deloitte, 2016a).

Besides being the driver of business transformations across industries, technology is changing how technology firms themselves operate, plan and sell their products and services. The past decades, technological developments have caused digitalization of businesses across the globe and both the pace and level of disruption keeps increasing. Technology firms are gaining importance, but have to keep up with the quick rate of innovation to have a sustainable future. If they do, they will most likely impact what future businesses, markets and the economy will look like, as well as influence the ways value is created (Deloitte, 2016b). It is thus important they go about this strategically.

Competition for talent

The economic crisis in 2007 has had large impacts on both financial services and technology firms. According to Aaron Smith, senior economist at Moody Analytic's, especially the financial sector was hit hard. While employing 8.4 million in 2006, they had to let go 720.000 since then and have now recovered a third of those jobs. Technology firms on the other hand, peaked at employing 6.4 million, lost 300.000 jobs since the economic crisis, but has recovered much more than that by now. Job trend analytics suggest that there may be more options in the technology industry the coming decade. In 2015, technology firms were expected to hire 450.000 new employees, as to 230.000 employees in the financial services industry (Moody's Analytics, 2016). Since the economic crisis, financial services firms are dealing with many new regulations restricting the types of risks they can take, as well as pressure from shareholders to limit compensation packages, which has had a negative impact on their profits and thus growth opportunities (Marketwatch, 2016).

Besides the number of jobs, the economic crisis also caused a more negative sentiment towards the financial services sector, viewing it as the cause of the economic failure, while increasingly positive towards technology sector, seeing it as a way to help others with great innovations (CNBC, 2014). While before the economic crisis, the brightest and most skilled students would pursue work in consulting or finance after graduation, as shown by 47% of Harvard students, now this number has dropped to 31%. In 2013, 13% stated they were going to work in engineering and technology firms (Marketwatch, 2016). Still, financial services firms employ more people and the average salary is higher than at technology firms. Financial services and technology firms both need business educated people, but are also both increasingly looking for and relying on computer scientists, programmers and IT skills, especially now that the economy is getting out of the crisis (Bloomberg, 2016). Since birth rates in the US decreased with 9% during the nineties, fewer students graduated after 2012. On top of that, the number of students in computer science decreased by 39% since 2001, due to the dot.com bust and fears of outsourcing (Marketwatch, 2016). This means that the competition for talented employees between financial services and technology firms is increasing, because they are not only competing with their peers in the industry, but also with each other for skilled graduates.

Corporate real estate

Looking at their corporate real estate portfolio, the (front) offices of financial services and technology firms often differ, especially on the workplace level. While financial services firms offer their employees more traditional and conservative workplaces in the city centre, technology firms mainly occupy offices on the edges of the city, offering more space, more innovative and flexible workplaces (and -hours) with secondary benefits such as a gym or cafés with free food and drinks (Marketwatch, 2016). Since they are now also competing against each other for talented employees, it may be expected that financial services firms are looking into or moving towards offering a similar type of more flexible and innovative workplaces, in order to outcompete the technology firms. Besides both occupying (front and back) offices, technology firms often have large amounts of space allocated for R&D and innovation, while financial firms allocate a large part of their CRE portfolio to sales offices.

3.3 Corporate strategies

Companies put a significant amount of time and effort in matching their vision and corporate strategies to meet their business targets and grow further, while accomplishing this with high quality performance (Silen, 2012). Most corporations construct several strategies, the main strategy being the corporate business strategy, which is then extended by the strategies of the different business

divisions (if these are not already included) and the strategies of support functions such as HR, IT, Finance, R&D and CREM. Corporate business strategies address aspects of a company's core business, such as its processes, customers and employees, mostly by means of a business model. These three aspects are under large influence of the environment in which the corporation does its business, since this environment supports the processes, interacts with the customers and houses the employees (Roulac, 2001). The interactions of business related aspects with their environment are subsequently aspects of the corporate real estate strategy. Real estate is a crucial resource to enhance the business priorities of a corporation and therefore, corporate real estate strategy is integral to the corporate business strategy, as seen in Figure 3.1. Alignment of these strategies can also help in minimizing business risks, decreasing disruption, enhancing the work environment, improving efficiency and obtaining higher returns on spent capital (Silen, 2012).

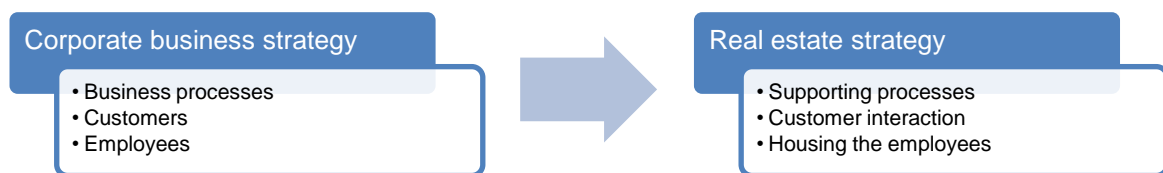


Figure 3.1 Business strategy in relation to real estate strategy, Roulac (2001), visualized

3.4 Business strategy

The business strategy of a company is the long-term business planning through which the company aims to achieve the set objectives. A business strategy mostly covers a period of 3 to 5 years, sometimes longer, this differs per company and the market it operates in. Right before this period of time comes to an end, the strategy are reviewed and redesigned for the next few years. The strategy is mostly set within a business model, which is designed and executed within a certain environment. Understanding this context helps a firm to develop a stronger and more competitive business model. The business strategy is influenced by four contextual aspects: core trends, market forces, branch forces and macro-economic forces, seen in Figure 3.2 (Osterwalder & Pigneur, 2009).

The core trends that influence the business strategy are technological, regulatory, societal/cultural and socio-economic trends. These can differ greatly between locations and nations. The market forces that are taken into account are market segments, demands and needs, market issues, switching costs and income attractiveness. These can be analyzed on a local level, but also on a more global level. Branch forces are aspects such as suppliers/supply chain actors, stakeholders, both existent and new competitors and substitute products and services. These can be recognized locally and globally, depending on the business. Finally, the macro-economic factors that are mainly recognized on a global level, are global market conditions, capital markets, economic infrastructure and commodities/other resources (Osterwalder & Pigneur, 2009, p. 33). In order to construct a future proof business strategy and business model, thorough analysis of all these trends and forces is needed on both global and local scale. To be able to cope with changes in the above mentioned trends and forces, some flexibility is needed within the business model to remain competitive. One way to construct this, is using the business model canvas of Osterwalder & Pigneur. The business model of a firm entails strategic decisions about customer segments, value propositions, channels of communication, distribution and sales, customer relations, revenue, key resources, key activities, key partners and cost structure (Osterwalder & Pigneur, 2009, p. 33). These core trends, market forces, branch forces and macro-economic forces have also been summarized in the main building block

'understanding corporate strategy' in Chapter 2, Figure 2.5. In addition to the BM canvas there are many other models that firms deploy, most entailing similar aspects.

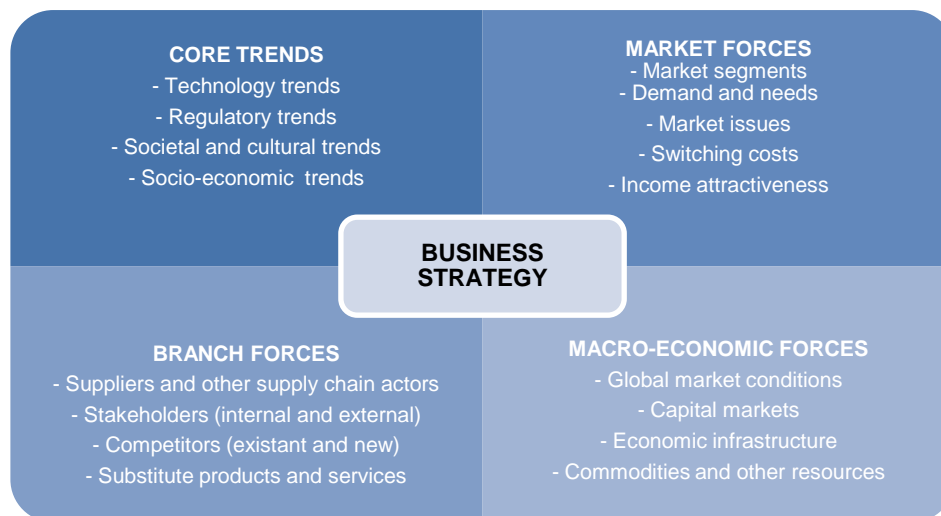


Figure 3.2 External factors influencing the business strategy, Osterwalder & Pigneur (2009, p. 201)

Real estate is often seen by business managers as a cost or burden within the business model (Teece, 2010), but it's capabilities to add value to the business must not be overlooked. CRE can add exchange value, which is mainly measured by financial value and efficiency, or use value, which lies in improving the effectiveness. Exchange value is not just achieved by reducing the costs of the CRE, but also by increasing the value of the assets and increasing their flexibility. Use value can be added by the CRE through enhancing innovation, improving employee satisfaction, increasing productivity and enabling marketing or sales (Appel-Meulenbroek & Haynes, 2014).

3.5 Corporate real estate strategy

Corporate Real Estate (CRE) has been defined first by Zeckhauser and Silverman (1983), as being the land and buildings owned by a firm whose core business is not real estate. From then, the definition has been extended by mentioning that the main objective of CRE is to support the core business activities and processes of the organization. Currently, the definition of Roulac and Manning (1999) is used most: *"CRE is industrial, office and/or retail space (such as land, buildings, improvements, etc.) in use by corporations, where not just site selection, but also decisions on facility design and space utilization impact the corporation's business operations and future cash flow in numerous ways, beyond any investment return received from the ownership of the real estate."*

In this definition, CRE is mainly described as a factor of production, providing space to produce and deliver products and services. Where CRE was previously considered as a place of production and above all, a financial burden for corporations (Appel-Meulenbroek & Haynes, 2014), it is increasingly being recognized as a fifth strategic resource and important support function next to HR, IT, Finance and R&D, to improve the firm's profitability and performance (Van der Zwart *et al.*, 2009). Because CRE encompasses all space housing the business, it's management is focused on both managerial and administrative functions (Manning & Roulac, 2001). CRE management (CREM) includes a wide range of tasks, such as portfolio management, facility management, outfit and workplace design.

CRE decision-making can be seen as strategic decision-making, because it's decisions are non-recurring, long lasting, involve special attributes and require specialized knowledge of both the

business and the CRE (Grant, 2010)(Roulac & Manning, 1999). Globalization of markets and businesses does not only affect business strategies of corporations, but also impacts the CRE strategy. The globalization of CRE is driven by three interrelated trends: economic factors, political factors and technological factors. Ideally, the CRE manager should thus obtain knowledge about a wide range of areas of expertise, such as facility management, workplace psychology, sustainability and logistics, but also within the fields of the other support functions. They need to be able to do things like business analysis or asset procurement, in order to fully support the scope and activities of the corporation (Appel-Meulenbroek & Haynes, 2014). The extensive skill-set needed to construct a CRE strategy may explain why CRE managers could find this a difficult task.

Real estate strategies apply on both tangible and intangible aspects on three different scale levels: portfolio level, building level and workplace level, as seen in Figure 3.3 (De Jonge *et al.*, 2009). The strategy entails a roadmap to ensure the future real estate supply complies to the future demand. The future demand of a corporation is not just influenced by its organizational goals, but also by demographic, economic, technical, ecological and social-cultural developments in its surroundings. On portfolio level, the real estate strategy mostly entails financial goals, such as the decision for leasing or buying the buildings, and strategic goals, such as whether the buildings are supposed to fulfil marketing goals and show the corporate image. On building level it mostly entails physical goals, such as the amount of square meters needed. On workplace level the strategy entails mostly functional goals, such as increasing employee satisfaction and amount of office flexibility.

Figure 3.3 shows some examples of real estate strategies. On the portfolio level the main strategies are an incremental, value-based or standardization strategy (De Jonge, *et al.*, 2009). The incremental strategy is mostly used in high risk and uncertain environments and delays or avoids major commitments on the use and procurement of space, until there is more information available about the direction the corporation will take. The value-based strategic approach aims to use the real estate to express the goals and organizational culture of a company. Through the building's quality, lay-out and workplace setting this strategy aims to improve employee behaviour and customer attraction and retention. Also, it enhances the corporate image through the physical characteristics of the buildings (Too *et al.*, 2010). A strategy of standardization is a very cost and control focused approach. Within corporations, this means that standard real estate operations are applied across the entire real estate portfolio, leading to a standard space lay-out, workplace and facility design. However, these are just examples of the three most well-known real estate strategies, the possibilities are endless (Van der Zwart *et al.*, 2009). On the building level, seven different real estate strategies are recognized, depending on what the portfolio strategy and business strategy are, can be chosen from: consolidation, refurbishment, redeployment, conversion, extension, disposal and demolition (Vijverberg, 2002). In order to make this decision, the operating prospects and technical condition of the buildings are assessed, which leads to workplace strategies. Within this report will only be looked at the portfolio and building level, both managed by the CRE manager. Workplace strategies are part of Facility Management, which is outside of the scope of this research.

On the portfolio and building level, CRE managers have to cope with the contradiction of the long-term decision-making and strategic thinking that comes with the real estate portfolio on the one hand, and the short-term need for flexibility to deal with the dynamics that come with the business environment (Beckers & van der Voordt, 2013). This is especially the case when new buildings are constructed, extensive building mutations are done or long-term lease contracts are signed.

Moreover, CRE managers often deal with a large corporate portfolio that can be an inheritance from past corporate decision-making or merger and acquisition activities. Within CREM literature a variety of models has been developed, both to get to the best match between current and future demand and supply on individual building level and for the entire portfolio, and to align the CRE strategy with the business strategy (De Jonge *et al.*, 2009). Aligning corporate real estate and business strategies is increasingly seen as the key task of the CRE manager (Osgood Jr., 2009). It has been proved to promote many business objectives, such as increasing productivity, innovation, profitability, business growth, competitive advantage and enhancing human resources. Also, CRE strategies can contribute to the attraction and retaining of customers, contribute to effective business processes and promote the corporations values and (corporate) culture (Roulac, 2001).

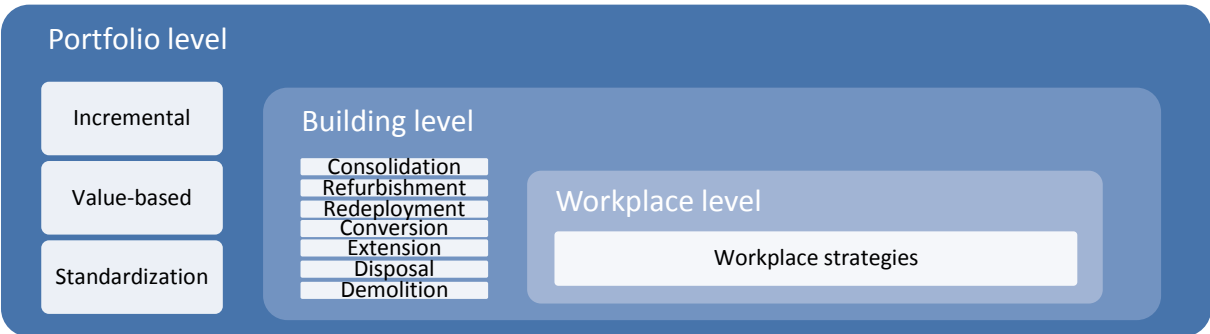


Figure 3.3 Three scale levels of real estate strategies, De Jonge *et al.* (2009) and Vijverberg (2002), visualized

3.6 Designing CRE strategies

Since real estate is an immobile resource and often encompasses commitments for longer time spans, getting the CRE to support the business most adequately can be a difficult task for CRE managers (Appel-Meulenbroek & Haynes, 2014). According to CREM literature, accommodation strategies can be designed in order to make the static real estate supply fit the continuously changing demands (Beckers & van der Voordt, 2013). A CRE strategy has two aims: to meet the current and future needs of the business and to be flexible enough to cope with changes in the business environment (Silen, 2012). CREM literature suggests many different models for designing CRE strategies, one of them being the DAS-frame. This framework is chosen for further examination due to it being the basis for the main components as summarized by Arkesteijn & Heywood (2013) in the second conceptual model, as seen in Chapter 2, Section 2.5. The DAS-frame encompasses an iterative process with four main inputs: current demand, future demand, current supply and future supply. These four inputs are used within the four process steps. The first step is to determine the current mismatch, secondly the future mismatch is determined. Thirdly, alternative solutions are indicated, evaluated and the best solution is chosen. The fourth step is to construct an implementation plan to reach the chosen alternative, and then it starts over again (De Jonge *et al.*, 2009). Thus, the DAS-frame is a method to align the business strategy and CRE strategy, as seen in Figure 3.4.

Because CRE is often the largest cost for corporations after their employees (Pole & Mackay, 2009), CRE management is often put within the financial department of firms (Jones Lang LaSalle, 2015). However, for the CRE manager to best support the business and add value across the firm, rather than just reduce costs, the CRE manager needs to have a separate department and a seat at the strategic table (Appel-Meulenbroek & Haynes, 2014). Steve Silen (2012), director Advisory Services at KPMG, agrees that in order for the CRE manager to determine the current and future mismatch, they should be involved in the C-suite’s process and have regular meetings with the different business unit

leaders. This is needed to obtain all needed information to fully understand the business aims and objectives, as well as future plans or changes within the different business units, including the corresponding risks and constraints. This way, a pro-active CRE strategy can be designed, in which the CRE manager anticipates on the business developments and future needs, in order to be able to accommodate those and prevent the occurrence of issues. A re-active CRE strategy is mainly reacting to demands and issues that are currently on the radar, which means that the proposed actions may come too late, the amount of alternatives is limited and the CRE is continuously lagging behind the actual facts (Beckers & van der Voordt, 2013), making the CRE strategy outdated before it is even implemented. Because companies can have a wide range of corporate business strategies, reaching alignment mainly comes down to choosing the right CRE strategy to support the corporate objectives. Since CRE delivers both direct and indirect value, of which the latter mainly through use value, CRE should not be seen separately from the other support functions such as HR, IT and R&D (Appel-Meulenbroek & Haynes, 2014). When the CRE is aligned with the other corporate cost reducing and value creating activities, value can be created across the company.

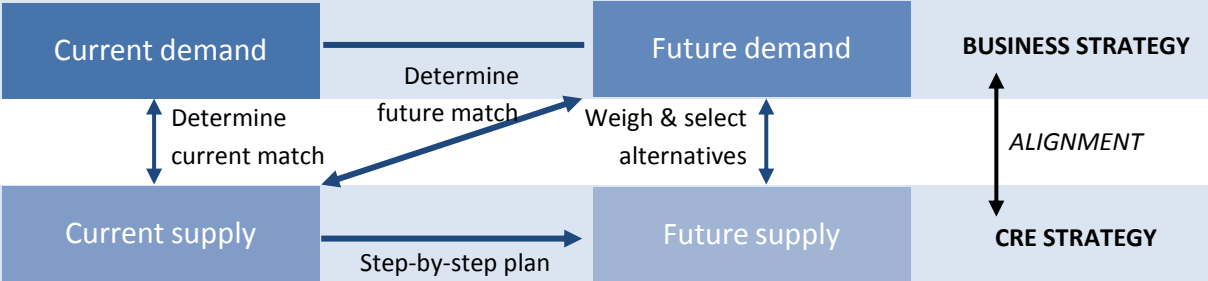


Figure 3.4 DAS-framework process, derived from De Jonge *et al.* (2009)

3.7 Strategy alignment

Alignment of corporate business and CRE strategies can be defined as bringing the aspects into line that differ between both strategies, by making them in agreement with each other and removing the inconsistencies, either adapting the CRE strategy or the corporate strategy (Heywood, 2011). Current literature on alignment mostly assumes that removing inconsistencies means making changes in the CRE strategy, to make it fit to the corporate strategy (Beckers & van der Voordt, 2013). However, Heywood (2011) suggests that it may also be desirable to have the corporate strategy adjust to the CRE strategy on some aspects. When plans are prepared or approved without first aligning them to the other strategies, decisions may be made without a complete understanding of the overarching strategy or without extensive identification of the needs and requirements. This could eventually result in the inability to implement the designed strategy, both on CRE and business level (Silen, 2012). A mutual alignment process that goes both ways may prevent the (sudden or unexpected) occurrence of these issues. However, because in most cases, CRE is not the core business of the firms and the CRE department is a support function, it is likely, if not logical, that the CRE will mainly be adjusting to the business, not the other way around. As long as the business is informed by the CRE and understands the influences their decisions have, this is a preferred relationship going both ways.

Since alignment has become the core activity of corporate real estate managers (Osgood Jr., 2009), CREM literature proposes various approaches for alignment. CRE decision-making used to be mainly in the moment and without coordination or collaboration with the other corporate support functions or business units (Gibler, Black & Moon, 2002). But since more and more literature appeared on CRE alignment, it was assumed the alignment would be reached more often in practice too (Appel-

Meulenbroek & Haynes, 2014). However, in a survey in 2009 still 80% of the CRE managers stated that CRE decisions were most of the time made considering the current business needs, instead of any future plans or directions (McDonagh & Nichols, 2009). To construct a fitting CRE strategy, communication with other support functions and business units is important, in order to prioritize stakeholders and their objectives. Because this is not yet common practice, CRE alignment remains a difficult task for CRE managers. This may be explained by the fact that the solutions for alignment that are given by literature on how to do alignment are wide-ranged and have different content.

Heywood (2011) examines and summarizes several CRE alignment theories and 8 different CRE alignment models, as derived from literature and shown in Figure 3.6. These CRE approaches include alignment on single CRE factors or using alignment models. Aligning the CRE according to one factor, does not seem realistic in practice, since CREM is a multidimensional field (Heywood & Arkesteijn, in press). The alignment models on the other hand differ in completeness and content, probably because there has not been much uptake of these models within other literature sources. Until now, researchers have mainly developed their own theories or models without using the existing ones, which has led to the wide range that is currently found. Furthermore, there is not much empirical evidence that these models are being used by practitioners (Heywood, 2011). The fact that the models differ so much, might explain why it would be difficult to use them in practice.

“Alignment theorisation had positive and negative aspects. Positive in that good science was evident and had improved over time. Negative in that model theorisation had occurred mostly in isolation and was constrained by simplifications required to make modelling tractable. The research (Heywood & Arkesteijn’s in press, red.) provides a more complete theorisation of CRE alignment addressing a disordered sense to prior theory thereby representing a major conceptual improvement. New alignment methods are not proposed, rather a basis is provided to examine how alignment is done which prevails in the models.” Heywood & Arkesteijn (in press)

As Heywood (2011) also mentioned, it may not be as important to get the CRE alignment models as well as the CRE alignment practices exactly right, because things will change, evolve and grow within a firm and CRE managers need to react flexibly to these occurrences. Strategic management of not just CRE, but businesses in general, is an iterative process in which processes and products are used and re-used continuously (Appel-Meulenbroek & Haynes, 2014). Within CRE alignment, demand and supply needs to be matched continuously and there are many different starting points or triggers possible (de Jonge *et al.*, 2009). A more flexible framework such as the main building blocks and components proposed by Arkesteijn & Heywood (2013) in the conceptual framework in Chapter 2, Section 2.5, may provide a better guidance to CRE managers in adopting a strategic mind-set.

| Alignment on single CRE factors | Model for alignment process |
|--|---|
| <ul style="list-style-type: none"> • Location (Bouri <i>et al.</i>, 2008; Roulac, 2001; Spee & Douw, 2003) • Workplace (Haynes, 2008; Prasow & Sargent, 2009; Roulac, 2001) • CREM management form (Acoba & Foster, 2003; Englert, 2001) • Property tenure (Crosby <i>et al.</i>, 2006; Gibson and Lizieri, 2001) • Capital finance (Pfner <i>et al.</i>, 2004) | <ul style="list-style-type: none"> • O'Mara model (1999) • Osgood Jr. model (2004 & 2009) • Edwards and Ellison model (2003) • Then model (2005) • Then and Tan model (2010) • White model (1998) • Wills model (2005) • Weatherhead model (1997) |

Figure 3.6 Studied approaches for alignment, Heywood (2011, p. 2-3)

4 Practice and academia

Besides explaining the subject and individual concepts within this research further, it is important to take a closer look at the comparison that are made between practice and academia, in order to find the differences and similarities, so that the mutual understanding can be increased, both can learn from each other and eventually be developed further. This chapter takes a closer look at the gap between practice and academia and what a potential solution to this gap may be.

4.1 CREM practice and academia

As explained in the previous chapter, within CREM and CRE alignment literature a variety of models to achieve this alignment is found, taking into account different processes and products (inputs and outputs). This fairly disordered theory makes it more difficult for academia to assist CRE managers in approaching and performing CRE alignment in practice. However, in several surveys amongst practitioners, large percentages of these CRE professionals state they can tell whether their CRE is aligned, even though it remains unclear if they use one or more of the different CRE alignment models for this (Arkesteijn & Heywood, 2013). The potential lack of usable models in CREM literature for practice may be derived to the fact that there are not many dedicated CREM researchers worldwide and most CREM theories have been developed by CREM practitioners looking for ways to explain their work (Heywood, 2011). Academic knowledge about CREM is therefore mostly professionally derived, which means there definitely is an interconnection between academia and practice in this case. The theoretical discourse that now exists could be traced back to the variety of experiences and individual perspectives that these CREM professionals have, which leads to the generation of many different models (Heywood & Arkesteijn, in press).

Theories and models provided by literature are mainly general explanations of a subject or activity and a guidance framework to practice. When practitioners wish to use and apply it, they have to fill in the details specific to their own organization, taking into account the particular circumstances they wish to apply it to, as is normal when using literature in practice (Dainton and Zelle, 2005). However, when there is a large variety of literature available, with varying theories and models, it becomes more difficult, since the practitioners have to figure out which is or are most useful to their specific organisation, working field and application purpose. Also, different opinions may exist on how to apply them in practice, leading to various practices coming from the same theoretical basis. Since CREM is still an upcoming area of study, in the middle of defining its core processes and theoretical basis, it will probably continue with having these different perspectives for some time, until a broad consensus is formed in both academia and practice. Because of the emergent nature of CREM, it is also probable that not much practitioners have been extensively educated in the earlier mentioned alignment theories and models (Heywood, 2011). However, in order to be able to develop CREM practice and academia further, this research aims to find out whether and how the actual CRE alignment practices relate to the current representation of CRE alignment in literature. This should shed some light on the current situation, as well as providing recommendations.

4.2 Gap between practice and academia

An increasing concern about a growing gap between academia and practice is not just recognized in the field of CREM, as Van de Ven & Johnson (2006) explain, it can be derived from different academic journals on management in general, such as the Academy of Management Journal, Academy of Management Executive, Administrative Science Quarterly and British Journal of Management. Within these journals several critical notes are made, first of which is that theoretical research is not useful

enough as a solution to problems that are encountered by practitioners. Practitioners are criticized that the findings from academia and consulting studies are not used, and for not being aware of the available body of knowledge, as well as not adding to it. Academic researchers on their turn are criticized by professionals for not putting their findings into action (Van de Ven & Johnson, 2006).

From both sides valuable lessons can be learned, enabling corporations to keep learning and handle fast changing trends, and for academia to test their theories and bring useful research out there. According to Van de Ven & Johnson (2006), the gap between academia and practice could be traced back to three different issues. First, the problem may be the knowledge transfer from academia to practice through translation and diffusion. Secondly, it is argued that both practice and academia represent different, distinct kinds of knowledge with purposes that complement each other, which makes it not necessary to close the gap. Practical knowledge is about dealing with specific issues encountered in practice, while scientific knowledge is more general, about understanding how or why the approach works. As Heywood (2011, p. 12) also states, *“organisations are imperfect, human constructs that never operate precisely as theory suggests they may”*. Thirdly, it is argued that the gap between practice and academia is a strategy of arbitrage and that the gap is thus a knowledge production problem. In this case the arbitrage would be that practitioners don't feel the need to write down or explain their professional experiences and approaches to CREM and CRE alignment, because they feel like it provides them competitive advantage over others. Therefore, they may be unwilling to share their knowledge, making it more difficult for both academia and practice to move forward in the field, especially when positioned within the social sciences.

“There is growing recognition that the gap between theory and practice may be a knowledge production problem. ... Huff (2000) and Starkey and Madan (2001), among others, ... have proposed alternative modes of knowledge production. Common to these assessments is the view that a key defining characteristic of management research is its applied nature. For example, Tranfield and Starkey (1998) have suggested that the central concern of management scholarship should be the general problem of design. They argue that the development of practice-based scientific knowledge represents a distinctive role for management researchers. Producing this kind of knowledge locates the field in the nexus between practice and contributing disciplines, hence positioning management research within the social sciences.” (Van de Ven & Johnson, 2006, p. 808)

4.3 Coproducing knowledge

Van de Ven & Johnson (2006) argue that the knowledge production problem could be solved by using a method of engaged scholarship, in which knowledge is coproduced by academia and professionals in order to advance both academia and practice on a certain topic. By having a collaboration effort between researchers and practitioners, different skills, perspectives and insights are combined, by which complex problems may be understood and solved easier. Nowadays, scientific knowledge is mostly created and tested by researchers, taught to students through education, adopted and spread by consultants and put into practice by professionals (Van de Ven & Johnson, 2006). Knowledge can also be created by professionals and consultants gaining new insights from their work in practice and write it down in so-called 'grey literature', or it can also be created by teachers or students. However, this knowledge is different from academia in that it is one-sided and depends on intent and context.

Van de Ven & Johnson (2006) explain that during a collaborative research process such as engaged scholarship, four affiliated activities are performed. First of all, the issues and questions that the

research aims to solve are grounded in clearly observable situations in practice that show its occurrence and multidimensional character. Secondly, the concepts and models that are developed should represent the main characteristics of the observed situations, to provide a solid base for the theories that are developed to address the research questions. Then, the research design and used methods to obtain empirical evidence should be appropriate to examine the questions and proposed phenomenon. Finally, the outcomes should be analyzed and summarized from different perspectives (academia and practice), in order to get valid conclusions for both. This way, different experiences, views, skills and sometimes even disciplines may be combined to address and solve complex issues.

However, the solution is not as easy as it sounds. In order to apply the method of engaged scholarship, some hurdles have to be overtaken. When problems are researched collaboratively, these articles may have difficulties in meeting the validity requirements of scientific papers. Involving practitioners in research may mean compromising objectivity and independence of the research, making it less valuable to academia. Also, when corporations are involved in research, they may view the findings as their property, which they could use for competitive advantage, which means they are not willing to share it in the public domain. Further, because more stakeholders are involved in the engaged scholarship method, the organization and management of the research project may be more difficult than a regular research project (Van de Ven & Johnson, 2006). Even though these are valid concerns and risks, Van de Ven & Poole (2002), state that these are issues that are occurred in any collaborative research project. As long as the project and the roles or engagement of the stakeholders are designed and negotiated correctly from the start, they can be overcome.

4.4 Coproducing CREM knowledge

As also shown in Chapter 2, Section 2.1, there are not many dedicated CREM researchers worldwide. CREM literature is mainly coming from the USA, Finland and the Netherlands. Also, Heywood (2011) showed that most CREM theories are developed by CREM practitioners trying to explain their work or validated in practice. Within the models studied by Arkesteijn & Heywood (2013), a fifth of the models is made by practitioners and another fifth is made through a collaborative effort from academia and practitioners. Because academic knowledge about CREM and especially CRE alignment is both rare and mainly professionally derived, this would mean the gap between CREM practice and academia is indeed the third problem as was mentioned by Van de Ven & Johnson (2006, p. 808): the knowledge production problem. They then argue that the development of practice-based scientific knowledge plays a large role in social sciences and management research, because of its applied nature, and propose the solution of engaged scholarship through collaborative research.

CREM and CRE alignment are topics that possess this applied nature and as it appears, the current CREM body of knowledge is already mainly practice-based. The proposed method of collaborative research could further combine the different experiences, skills and views from both academia and practice, unlike the individual development that occurs now, to better address and solve complex issues occurred on either side, developing both fields of expertise further. However, the gap between CREM practice and academia, if existing, may not be bridged further and may not even be significant of a problem. Due to time constraints within this graduation research project and the need for engagement of many different stakeholders from both academia and practice, using collaborative research methods such as engaged scholarship, i.e. by organizing meetings with academics and practitioners to discuss and possibly explain the findings from this research unfortunately was not possible. This may however be interesting to examine further and apply in follow-up research.

A woman in silhouette stands on a wooden balcony with a glass railing, looking out over a city skyline. The scene is bathed in a warm, golden light, suggesting sunrise or sunset. The glass railing reflects the woman and the city buildings. The text 'C) METHODOLOGY' is overlaid in the center of the image.

C) METHODOLOGY

5. Research plan and methodology

5.1 Research plan

This research project took place in four subsequent phases. At the end of each phase a presentation of the progress, results and next steps was held, to receive a GO or NO GO to continue the research as such. The content of each phase is seen in Figure 5.4. During the first phase (P1), the scope of the research was defined. Critical literature review helped decide what subjects would (not) be included in the research, in order to make it feasible within the set timeframe. During this stage also the continuous process of defining and redefining the research question started. In the second phase (P2) further, in-dept theoretical research was done, as further explained in Appendix 1, in order to construct sound theoretical underpinnings describing the current state of relevant literature. From the theoretical underpinnings, two conceptual frameworks have been made, as seen in Figure 5.1, to which the findings from practice (P3) could be compared (P4). Although most theoretical research was done during the first six months of the research (P1 and P2), the theoretical research continued during the last two phases (P3 and P4), in order to continuously update and improve the theoretical underpinnings. The third phase (P3) consists of five case study analyses, as seen in Figure 5.2, through interviews and document analysis, as well as a cross-case analysis of CRE alignment in practice. The third phase was extended from 3 to 6 months. In the final phase (P4), the individual cases were compared to the conceptual frameworks, as well as comparing the cross-case analysis to literature, to find the differences between academia and practice, as shown in Figure 5.3, which lead to the main conclusions and recommendations. A more detailed planning is found in Appendix 13.

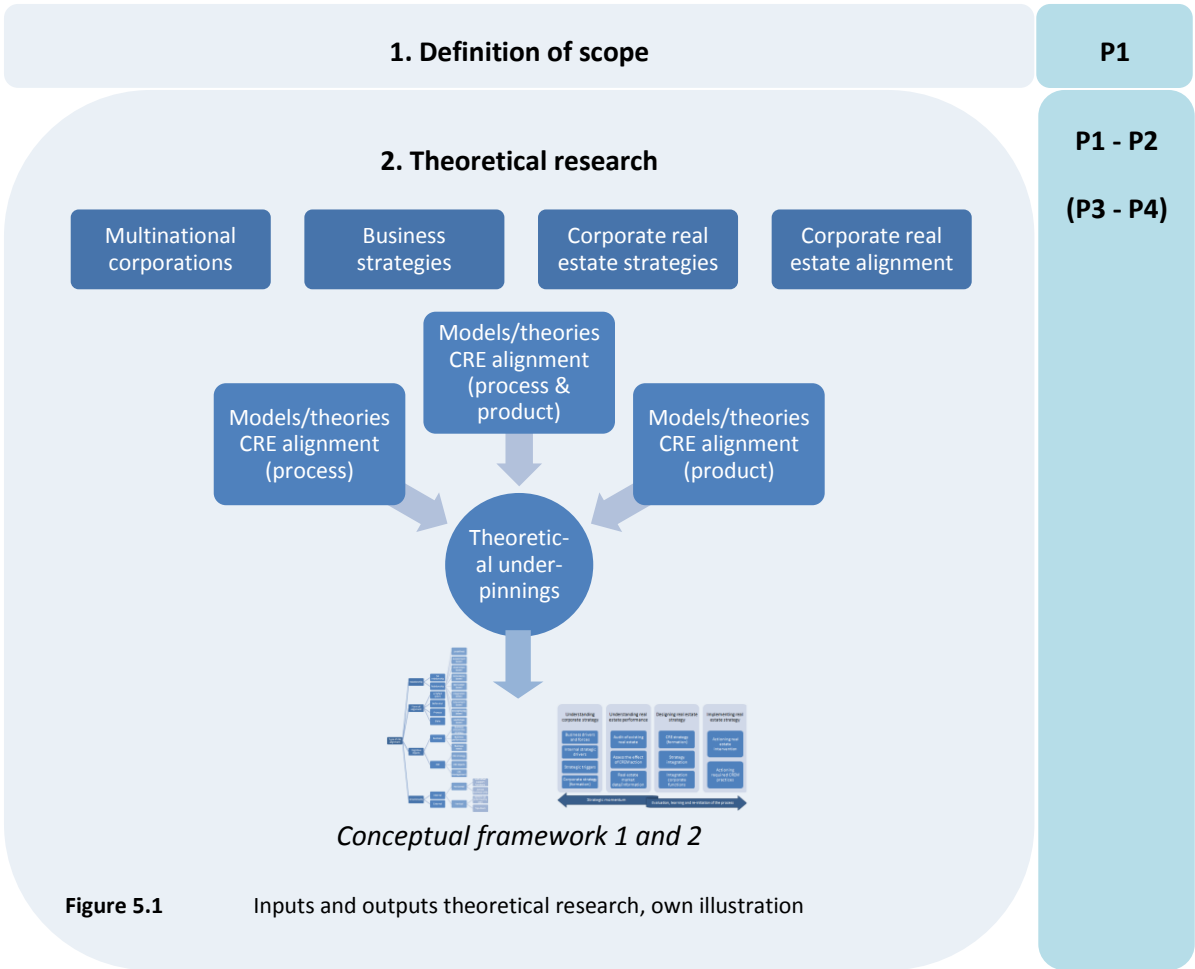
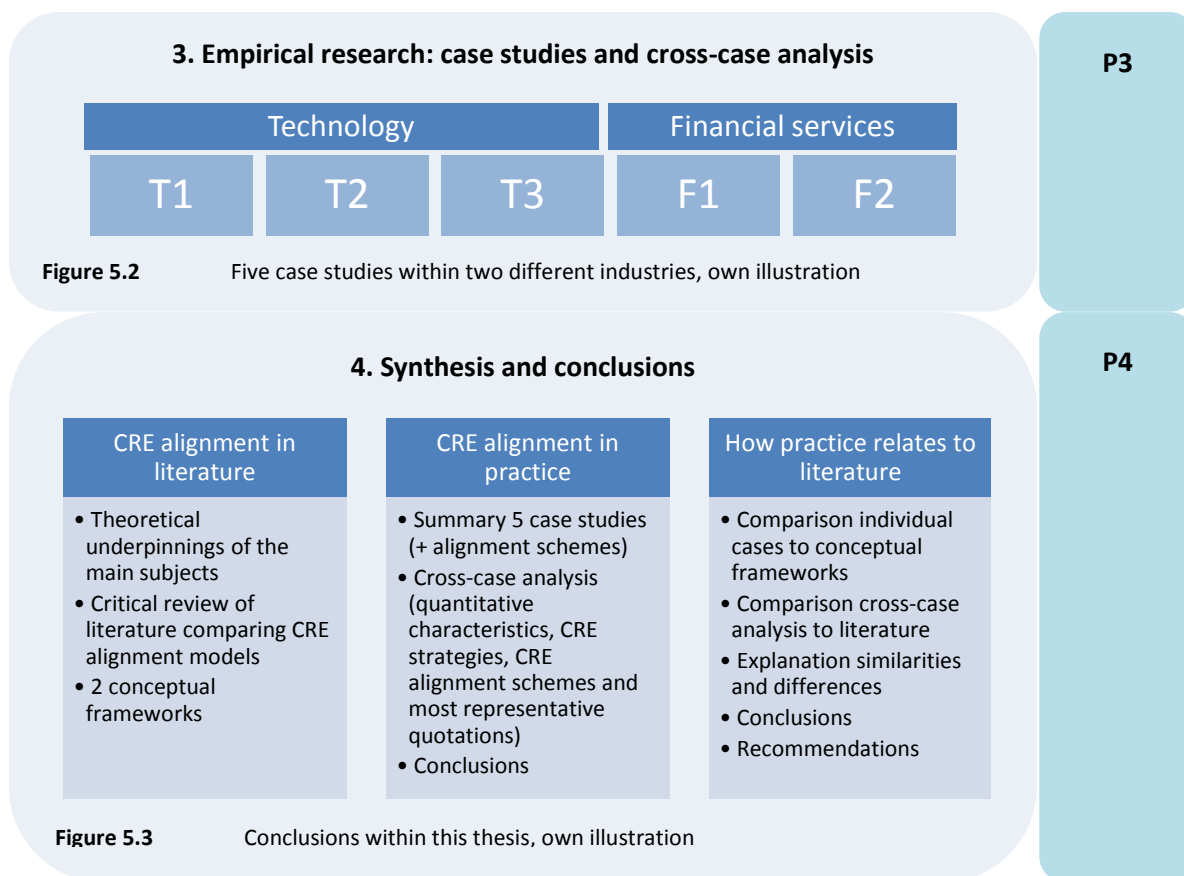


Figure 5.1 Inputs and outputs theoretical research, own illustration



5.2 Research methodology

In order to answer the research question, several types of research have been done. Since part of the question focuses on comparing practice to literature, first of all, the current state of literature has been examined. In the previous chapters, the theoretical underpinnings and current state regarding CRE alignment models in academia, including several different theories and models is discussed. Subsequently, the current state of CRE alignment at multinationals in practice is explored through interviews and document analysis. This is a qualitative approach, because the main aim is to understand the phenomenon of CRE alignment, which may be subjective, hard to measure or mostly circumscribed. Finally, combining the first two parts of the research, the complete research question is answered and the relation between academia and practice is explained. This section explains in further detail the research methodology of this graduation research.

Case study research

Case studies are a research methodology to research (a set of) events, aiming to describe and explain a subject of interest (Bryman, 2012). This strategy is preferred when research questions are posed as 'how' and 'why'. The unit of analysis within case studies may vary, but in this graduation research they are multinational corporations. The data that is used in case studies mostly comes from documentation, records, direct observations and interviews (Yin, 1994). After establishing the problem statement and theoretical underpinnings concluding in the conceptual frameworks for this research, as shown previously in Figure 5.1, five case studies have thus been conducted in order to analyze CRE alignment practices and obtain in-dept understanding of how multinationals view and approach it, as shown in Figure 5.2. To prepare for the case studies, a framework for studying them is

made according to an analysis of 2 case studies, a further explanation of which can be found in Appendix 1. Due to the time set for each graduation project, it was decided that five cases would be the maximum amount of research feasible. Further, it was assumed to be a proper amount of cases to gather information about the current state of CRE alignment in practice, since firms from two industries are examined and compared cross-case, making the results somewhat more generalizable.

Case selection

This graduation research is part of a bigger research project on 'CRE alignment in practice', currently being executed at the department of Management in the Built Environment at the Delft University of Technology by Monique Arkesteijn. The cases selected for this graduation research are therefore used for multiple projects within the larger research project. The five multinationals that have been studied are active in the technology and financial services industries, as shown in Figure 5.2. These cases have been selected by leading researcher through the CoreNet Global network, which is a wide network of multinationals, by asking several CRE managers from different parts of the world which companies (other than their own) they thought are successful in aligning their CRE or are using innovative or interesting methods to do this. This ensured that none of the researched cases would afterwards appear to not have any CRE alignment processes in place. It was important to be certain about the multinationals having CRE alignment processes in place, because the case studies had to be completed within a limited amount of time. This would make the best use of the time and resources at hand. Also, by studying these best practices, or at least cases that other experienced CRE professionals stated to find interesting and informative, most can be learned. Finally, it was important to ask CRE managers or consultants for case recommendations other than their own firm, because the managers would most likely all state that their own firm aligned it's CRE successfully.

The selected cases are all for-profit multinationals, of which RE is a support function (not their core business) and that have an in-house CRE department. Because the interviews can be done through Skype, it is not necessary that they are located in the Netherlands. However, it is easier when their CRE department is in the Netherlands, because in that case the interviews can be done in person, which is more personal and may provide extra indirect information. As seen in Figure 5.2, the 5 studied cases are active in the technology and financial services industries. This way, comparisons can be made not just between singular cases, but also within and across different industries, in order to find out whether the derived conclusions are universal, common within a certain industry or not generable at all. The technology and financial services industries have specifically been selected as subjects of study, because these industries are currently undergoing changes, making their strategies both important and interesting research subjects. Both technology and financial services firms have been impacted by the economic crisis and are still being impacted by the currently recognized trends of disruptive innovations, technological developments and increased digitalization, but also changing requirements from their customer and employees, causing them to continuously re-evaluate and re-design their strategies, as also explained in the first two sections of Chapter 1 and Chapter 3. Financial services firms are at the basis of our financial activities and economy, while technology firms are becoming more and more important and are likely to have a large impact on what future businesses, markets and the economy will look like. Interestingly enough, both industries are competing for the same talent, since they are often looking for the same educational levels and skillsets when hiring new employees. Therefore, besides having large differences in core business activities and customers, it is possible that there may also be an interrelation recognized.

Qualitative content analysis

The data retrieved from the case studies is analyzed through qualitative content analysis. This is a research method that is used for the subjective interpretation of text data by systematically classifying this content through coding and identifying themes or patterns (Hsieh & Shannon, 2005, p.1278). This approach is a way of reducing a large amount of qualitative data and making sense of the content by identifying meanings (Patton, 2002, p.453). Qualitative content analysis thus goes further than just counting words or extracting objective content from texts, because by using descriptive values for the coding, it examines (a range of) themes, patterns and meanings that may be latent or manifest in pieces of text, rather than statistical significance or occurrence of the concepts. This way, the various perspectives of the interviewees can be better understood (Berg, 2001). It allows researchers to understand phenomenon's in a subjective but scientific manner.

5.3 Data collection

Literature selection

In the previous chapters, the current body of knowledge on the research subject of this thesis have been explored and critically reviewed. These theoretical underpinnings form the scientific base from which further research on the topic is done in the following chapters. The data and results that are found during the entire graduation research, especially if they are generable, can subsequently add to this existing field of research (Bryman, 2012). Since this research focuses on different concepts, a variety of literature sources has been explored on those concepts and their interrelationships. The scientific articles and book(chapters) that were used in constructing the theoretical underpinnings have mainly been found in the Scopus database. When they were not available through Scopus, they have been found in the ScienceDirect, ERES, CoreNet and TU Delft repository databases.

Appendix 1 explains in detail the literature search in the Scopus database and the subsequent selection of articles. When taking a closer look at the selected articles, it appeared that most articles on CRE alignment come from the Netherlands (9), the USA (5) and Finland (3), written by a small community of academics and building on each other's research. The main authors of articles on CRE alignment methods, models or comparisons of other research on CRE alignment coming from this literature search and selection exercise were: R. Beckers, T. van der Voordt, G. Dewulf, B. Haynes, A.-L. Lindholm, K.M. Gibler, K.I. Leväinen, L. Appel-Meulenbroek, M.H. Arkesteijn and C. Heywood. A further examination of these authors and their articles showed that the researchers who have written articles to compare CRE alignment models made by other authors can be divided into three groups:

- Literature focused on process of CRE alignment models;
- Literature focused on product of CRE alignment models;
- Literature focused on both process and product of CRE alignment models.

Literature focused on comparing CRE alignment processes and models is mainly written by Beckers, van der Voordt and Dewulf. In Beckers and van der Voordt (2014), models are compared from different disciplines such as CREM, facilities management and literature about briefing. They are compared and combined into six management approaches, mainly providing guidance for CRE managers in their activities and behaviour, but not providing a clear guideline for CRE alignment in it's whole, since it mentions little about the relevant products (inputs or outputs). This literature has therefore been used for the theoretical explanation of the various concepts in chapter 3, but not in the main theoretical underpinnings and conceptual frameworks.

Literature focused on comparing CRE alignment products and models for this was mainly written by Appel-Meulenbroek, Brown, Ramakers and Haynes. Appel-Meulenbroek, Brown and Ramakers (2010) compare 8 different theories and models, mainly focusing on the components of corporate strategy and CRE strategy (formation). Together with Haynes, Appel-Meulenbroek compared another set of 8 models in 2014, amongst which referring to previous articles of both authors and other well-known researchers in the field of CREM and CRE alignment: Haynes (2012), Haynes and Nunnington (2010), Nourse and Roulac (1993), Ramakers (2008), Lindholm (2008) and Appel-Meulenbroek and Feijts (2007). These articles have also been read and used for the theoretical explanation of the various concepts in chapter 3, but have not been used to construct the main theoretical underpinnings and conceptual frameworks, because they mainly state a selection of products (inputs and outputs), but little about the encompassing process connecting these and putting them to use.

Literature focused on comparing CRE alignment models on both process and product was mainly written by Heywood, Arkesteijn, de Jonge, van der Zwart and van der Voordt. Van der Zwart, Arkesteijn and van der Voordt (2009) compared 6 different theories and models, which they positioned within the DAS-framework of de Jonge *et al.* (2008). Amongst these were also some well-known articles in the field of CREM, such as O'Mara (1999), Nourse and Roulac (1993), Roulac (2001), Vijverberg (2002), Dewulf *et al.* (1999), Fritzsche *et al.* (2004) and Osgood (2004). Heywood (2011) compared 20 different theories and models, of which 3 were the same as Appel-Meulenbroek, Brown and Ramakers (2010). Heywood and Arkesteijn (in press) worked further on this, again comparing about 20 models. Amongst these were many before mentioned CREM/CRE alignment researchers. Most of the models compared in these articles are constructed in the 2000's, when the field of CREM was established and CRE alignment was just receiving attention in academia. The main models being quoted are: Nourse and Roulac (1993), who determined several CRE strategies. Several years later De Jonge (1996) also published a list of CRE strategies, often cited in other articles, such as Scheffer, Singer and Van Meerwijk (2006). Lindholm, Gibler and Leväinen (2006) have then combined and extended these two separate lists to 7 main CRE strategies, since they encompassed many overlapping goals. All of these CRE strategies assume that the main objective of CRE is to decrease costs, but also show that there are direct and indirect benefits to these costs, as also stated by Jensen (2009), De Vries, De Jonge and Van der Voordt (2008).

Within this graduation research, the articles comparing CRE models and theories of Heywood (2011), Arkesteijn & Heywood (2013) and Heywood & Arkesteijn (in press) have been used as the main theoretical underpinnings and basis for the conceptual frameworks. Of all articles comparing CRE alignment models and theories, these articles were most complete, having a broader and more encompassing view of both process and products within existing CRE alignment models and theories. However, in order to ensure this research was not just based on the point of view of these two researchers, the theoretical basis has been enhanced further with information from the process-focused comparison article by Beckers & van der Voordt and the product-focused article by Appel-Meulenbroek & Haynes, in order to examine and expose the full scope of CRE alignment according to literature. Besides that, the articles about the main models and theories that Heywood and Arkesteijn are comparing, as all mentioned before, have been read to make sure all information is understood correctly and nothing is missing.

Interview protocol

The interviews that have been conducted with the CRE managers of the five multinationals were semi-structured, in order to have the concepts and theories emerge from the data (Bryman, 2012). The conceptual framework in Chapter 2, Section 2.5 and Figure 2.6 shows what these concepts and theories could be according to academia. The interviews and document analysis then show how CRE alignment is seen and applied in practice. Since CRE alignment may be interpreted differently amongst CRE managers, semi-structured interviews provide flexibility to explain what CRE alignment looks like at their firm and how it is done. Appendix 2 shows and explains the interview protocol used for the first interviews, including the introduction and the main questions that were asked. If the respondent was very brief, answered about something else or didn't understand the question, the follow-up questions were asked to obtain all needed information. The information that is aimed to be gathered with each question is shown in the third column, as a guideline for the interviewer (the author of this thesis). Appendix 2 also shows an overview of the interviews with dates and times, the functions of the interviewees and whether the interview was held individually or with guidance from Monique Arkesteijn. All of the interviews have been arranged by Monique Arkesteijn, because the involved interviewees were also interviewed for her PhD dissertation, which is the main research within the CRE alignment in practice research project at the TU Delft.

Terminology

Something that was already recognized in literature, and encountered quickly in practice, is the large difference in terminology used by both practitioners and researchers. Within the interviews, many different terms were used for exactly the same thing, which meant another analysis was needed to find out what the CRE managers were actually talking about. Sometimes they meant the same thing, but sometimes they meant something else. Table 5.1 summarizes the terms used mentioning the exact same thing. Table 5.2 summarizes the terms used in this thesis from global-regional-local, in order to make it understandable for the reader.

| Real estate object(s) | Department | Direction | Business actors |
|-----------------------|-------------------|-----------|--------------------|
| CRE | Business division | Strategy | C-suite |
| Real estate | Business group | Plan | Executives |
| Property | Business unit | Programme | (Business) leaders |
| Buildings | Business line | Project | Management board |
| Sites | Business section | | Leadership team |
| Objects | Department | | Steering board |
| Portfolio | | | Board |

Table 5.1 Differences in terminology, own illustration

| Level | Real estate object(s) | Department | Direction | Business actors |
|-----------------|-----------------------|-------------------|-----------|------------------|
| Global | CRE portfolio | Business division | Strategy | Board |
| Regional | | | Programme | Regional leaders |
| Local | Building(s) | Business line | Plan | Business leaders |

Table 5.2 Terminology used in this thesis, own illustration

5.4 Data analysis

Qualitative content analysis encompasses a process that condenses the raw data into themes and categories, which is based on deduction and interpretation through deductive reasoning. This means that the themes and categories have emerged from the previously studied literature (Berg, 2001) through careful examination and comparison (Patton, 2002), thus generating the concepts and variables used in the analysis of the text. In this research, Atlas.ti software was used to support the coding process, which allows coding the data, retrieving text based on certain keywords and merge or change existing codes without intervening in the rest of the codes. Atlas.ti automatically maintains a log of changes in coding, which enables the researcher to track the evolution of the analysis. The entire analysis process was based on the following steps, as stated by Zhang & Wildemuth (2005):

In order to analyze the gathered data, the interviews have been recorded and transcribed completely, after which they have been analyzed in Atlas.ti, which is a computer software programme that helps conducting a thematic analysis. This means that the text is examined with the use of several codes to extract core themes within and between transcripts and documents. These codes help breaking down the transcript into several components, which are the given labels (Bryman, 2012). When different codes often occur together within a text or the same code is recognized multiple times, this is shown by the Atlas.ti software. The use of this programme therefore makes the transcript more manageable and helps making sense of and interpreting the data, both in one case and across cases. The full process is explained below.

Data analysis process

Step 1: Preparing the data. Qualitative content analysis is used to analyze interview transcripts in order to reveal information related to the CRE manager's behaviours and thoughts concerning CRE alignment, as well as the actual process, products and involved stakeholders. With each CRE manager 2 interviews were held, which were audio taped and transcribed fully. The transcripts subsequently served as primary units of data for the content analysis in Atlas.ti.

Step 2: Defining the unit of analysis. Because the purpose of this study is to identify and describe CRE alignment at various multinationals, a coding unit was defined as a word or group of words that could be coded within one category. The text can be of any size, as long as it represents one code.

Step 3: Develop a coding scheme. In order to structure the analysis, several themes, codes and variables were defined in a coding scheme, as seen in Appendix 3. The themes and main codes have been derived from the conceptual frameworks that were constructed according to the theoretical underpinnings. The variables with which the codes have been selected from the raw data were deducted from previously studied literature encompassing related studies and theories.

An initial list of themes, codes and variables had been generated from the conceptual frameworks as shown in chapter 3, Figure 3.12, and main underpinnings. The first column of the coding scheme in Appendix 3 shows the overarching themes and in the second column several codes are given that belong to this main theme. For each of the codes is explained what this code means, according to the literature sources as they are interpreted by the researcher (author). The third column shows a list of values that may describe the code directly or indirectly. According to these values, the codes are found in Atlas.ti. With these codes is subsequently compared how the studied multinationals do CRE alignment, what type of CRE alignment applies, as shown in conceptual framework 1, and what

processes and components are used within this CRE alignment, as shown in conceptual framework 2, as compared to literature.

Step 4: Test the coding scheme. After composing the first coding scheme, a pilot analysis was done on an interview transcript in order to further improve the coding scheme and have more variables emerge inductively (Miles & Huberman, 1994). This made the process iterative, because several new variables were added emerging from the first coding pilot study in Atlas.ti, as well as derived from a search for synonyms and coming from further literature analysis, further explanation of how this evolved is given in Appendix 3. This led to a revised and highly detailed coding scheme with a wide range of variables leading to the different codes. The codes are not mutually exclusive and multiple codes can be assigned to the same unit of text (Tesch, 1990). To ensure the analysis to be as consistent as possible, for each of the codes an explanation is added to guide the researcher.

Step 5: Code all the text. After having achieved sufficient consistency, the coding scheme has been applied to the entire selection of text, being the interview transcripts of all the interviews.

Step 6: Assess coding consistency. During and after the coding process, the consistency of the coding was checked regularly, by scrolling through the list of quotations of each of the interview transcripts and comparing the quotations derived from the different cases to each other and to the coding schemes in Appendix 3. This was done to prevent deviation from the meaning and explanation of the different codes (Schilling, 2006). Because coding is done manually, mistakes can be made, due to human factors such as fatigue or changes in understanding of the codes (Miles & Huberman, 1994). Several irregularities have been removed due to these checks, resulting in another iterative process.

Because this research is done by a qualitative content analysis and the main goal is describing how something is experienced and done by a particular person in a profession (CRE manager at a multinational) to get a deeper understanding of the topic, the coding count is not important, because this only shows how often the interviewees have mentioned something. All of the codes, however often found in Atlas.ti, count equally in explaining if a component (process or product) is taken into account in CRE alignment at the five multinationals. The quotation count may however show an emphasis or focus towards certain codes, which is explained in the comparison to literature.

Step 7: Draw conclusions from the coded data. For each case, according to the interview transcript and the received documents, a case study description was made, as is further explained in Appendix 1. The full case study analyses are found in Appendix 6-10, their summaries, well as a summary scheme of the process, products and stakeholders involved in CRE alignment at each of the multinationals, are put into the full report. Furthermore, at this stage the identified themes, codes and their characteristics were made sense of, by comparing the findings from practice to the conceptual frameworks based on the theoretical underpinnings, through the quotation count as was derived from Atlas.ti.

Also, from Atlas.ti a list of most representative quotations was derived, that was used in the cross-case analysis, as is further explained in Appendix 1. The cross-case analysis compared quantitative data on the multinationals, their CRE strategies, the summary schemes as derived from the case study descriptions and the most representative quotations, leading to a full cross-case analysis and the state of practice. After that, the similarities and differences between the findings from literature and practice are explained.

Step 8: Report the methods and findings. In order for the research to be replicable, the analytical processes and procedures, as well as decisions and practices involved in the coding process, have been monitored and reported as clear, complete and truthful as possible (Patton, 2002). The critical review of the articles that have been read as a scoping exercise or have been selected after the scope was set, and all other articles that were analyzed during the first two research phases, has been summarized in an Excel file, including the author, date, source, title, own summary and whether it was used in the theoretical underpinnings of this research. This file can be shared upon request. Some of the critical literature reviews have eventually not been used, because they were out of scope, which was assessed and re-assessed around the P1 and P2 deadlines.

Furthermore, to describe the findings derived from the data and/or illustrate situational contexts, quotations excerpted from the interview transcripts were used. When presenting the qualitative content analysis results, a balance is made between description and interpretation of the information. The descriptions provide the readers with background and context, while the interpretations provide synthesis and conclusions. Because qualitative research is based on interpretation, it represents both my personal and theoretical understanding of CRE alignment.

CRE alignment scheme per case

In performing and describing the case study analyses and answering the main research question on how these multinationals view and approach CRE alignment, the need for visualizing how they do their CRE alignment arose. When asking the CRE managers of these five firms after the interviews if they currently have a visualization of their CRE alignment, they all stated that they don't. Only T3 stated they used to have a visualization of it, but since the firm was split into two separate entities and because they are still in the process of reorganizing, they still need to make a new visualization. All five studied multinationals also don't use a model from either their own firm or from literature that they base their CRE alignment practices on. Therefore, it was decided to find another, already existing, way to visualize the CRE alignment practices for each of the firms. However, when trying to visualize it through the conceptual frameworks, especially the second conceptual framework, one could only see which main building blocks and components were or were not used (the what). Three important aspects that came forward in the case study analyses were missing in this visualization: the scale level within the firm (the where), the involved stakeholders (the who) and the sequence of processes and products that were used (the how and when). Therefore, besides using the conceptual frameworks from Chapter 2, Section 2.5, to compare the findings from practice to the findings from literature, for each of the individual cases a scheme is made to visualize the sequence of processes, products (inputs and outputs) and stakeholders involved in CRE alignment, across the different scale levels within the multinational firms (global, regional, local), as seen in Figure 5.5. This is thus done to visualize not just the what, but also the where, who, when and how questions one may have about CRE alignment in practice.

The main set-up of these CRE alignment schemes was made after a further analysis of the individual models studied by Heywood & Arkesteijn (in press), in order to find out if these could potentially be used or be combined to use in order to visualize each of the multinational's CRE alignment in its entirety. Especially the models that contain the most components from the second conceptual framework by Heywood (2011) and Arkesteijn & Heywood (2013), as seen in Chapter 2, Figure 2.5, were expected to provide the best visualization opportunities. These were Weatherhead (1997), who provides a very extensive model with detailed guidelines on the processes and products involved in

CRE alignment and the sequence of these, and Osgood Jr. (2004), providing a very abstract model with a set of products that are getting aligned. Weatherhead (1997) and Osgood Jr. (2004) contain respectively 12 and 11 of the components that have been recognized by Arkesteijn & Heywood (2013). However, when analyzing these models further, it appeared that they also did not provide visualization of respectively two and three of the earlier mentioned aspects: the scale level within the firm, the involved stakeholders and the sequence of the processes and products. These models have therefore also not been selected to visualize the CRE alignment of the multinationals.

Since it was also discussed in an earlier chapter, compared to the second conceptual framework by Arkesteijn (2013) and well-known to the author itself due to the involvement of the DAS-frame in the REM educational module at the TU Delft, as a final possibility this model was analyzed for potential utilization in the visualization of CRE alignment per case. The DAS-frame came much closer to the earlier set requirements, as shown in Figure 5.5. It does offer a direct visualization of the sequence of processes and products and also implies which stakeholders are involved, more indirectly in the model as was shown in Chapter 3, but more directly in later versions of the model. Especially within the extended version of the DAS-frame and further explanations in text about the various parts the model consists of, explaining the various processes and products for CRE alignment, the sequence, the stakeholders involved and their perspectives. Although in this extensive explanation, almost everything that was required for visualization is included, still, the DAS-frame did not provide a framework for visualization of all of the intended aspects within one model or scheme. On top of that, the scale levels were still missing. Taking all of this into account, I have therefore constructed my own method of visualization, which is used to show for each of the multinationals how they approach and perform CRE alignment, as well as a general scheme of CRE alignment in practice, based on the cross-case analysis of the individual schemes. This is thus not a model for guiding a CRE manager how to do CRE alignment, but a more complete way to visualize what is already happening at these firms. This visualization method is not company-specific and could be used by firms from different sizes and scopes, as long as they fill in their own processes, products, sequence and involved stakeholders across the different scale levels.

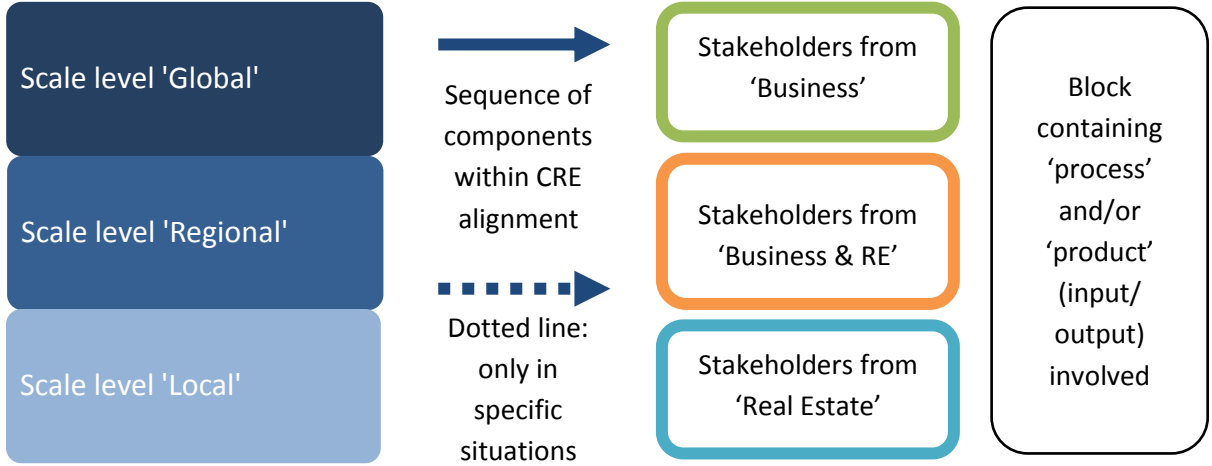


Figure 5.5 Visualization of CRE alignment in a scheme, own illustration

The scheme in Figure 5.6 shows the various inputs and outputs of this graduation research in boxes, the processes performed by the author in text and the various phases in colour.

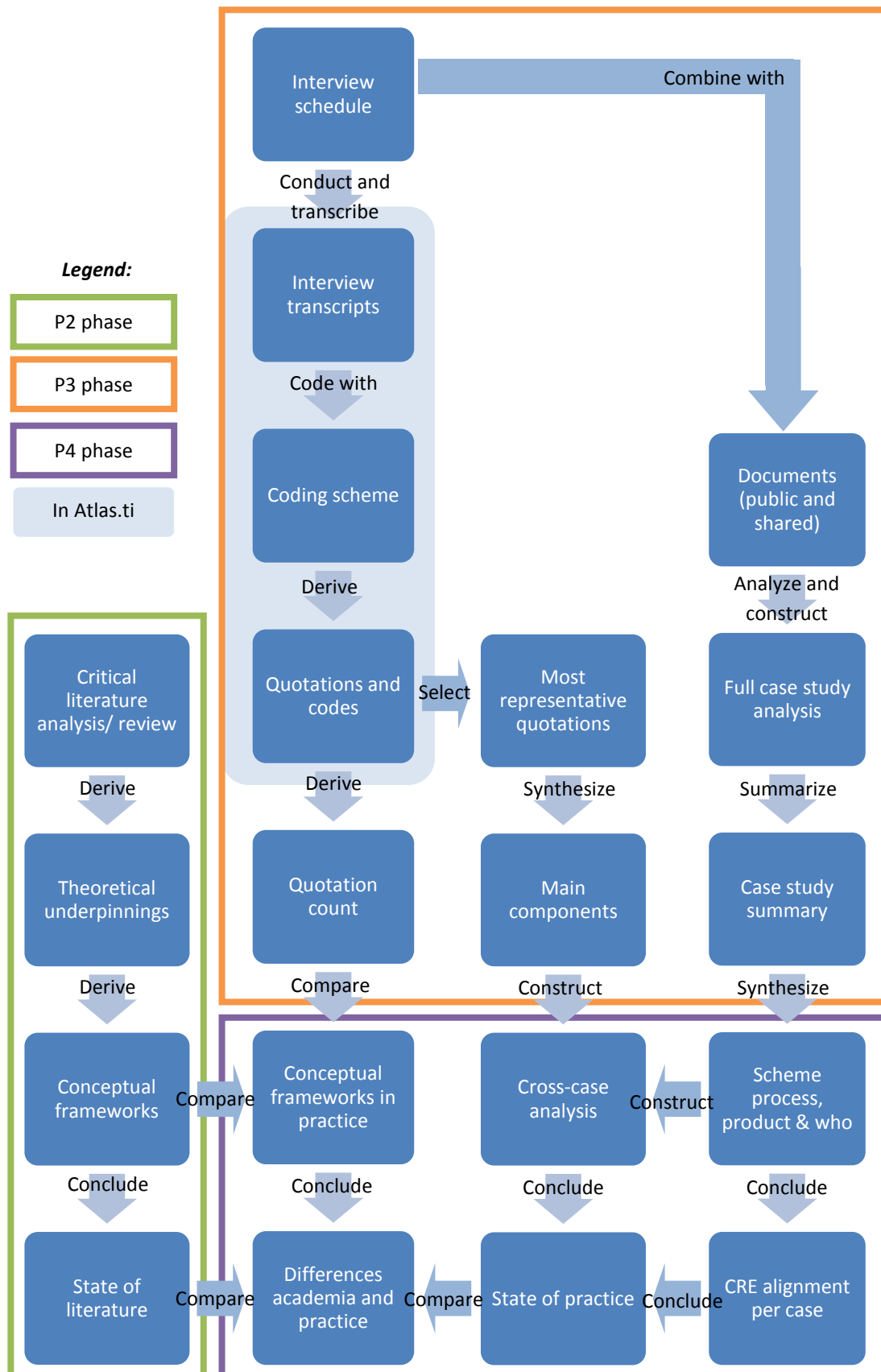


Figure 5.6 Research phases, inputs and outputs and processes, own illustration

A woman in a red dress stands on a wooden walkway next to a glass railing, looking out at a modern glass skyscraper in a city. The scene is captured in a high-angle, slightly blurred perspective, with the woman's shadow cast on the wooden floor. The glass railing and the building's facade create a complex pattern of reflections and lines. The text "D) CASE STUDIES" is overlaid in the center of the image.

D) CASE STUDIES

6. Case study 1: T1

The full case study description of T1 can be found in Appendix 6. Below a summary is given.

Summary

T1 is a global information technology firm, founded in 1977, whose stock is publicly traded on the New York Stock Exchange (NYSE). T1 has half a million customers in 145 countries worldwide and offers them a large variety of products and services that address the full range of IT environments of corporations, from software applications and online platforms to hardware and IT infrastructure. These products and services are available through local implementation or online via the cloud (T1, 2015a, p. 3). T1’s mission statement is threefold:

- Simplify, standardize and automate business processes of corporations, through speed information delivery with integrated systems and a single database;
- Reduce cost and maintenance cycles with open, easily available components;
- Improve operational efficiency with technology and best practices.

The corporate business strategy consists of two international growth strategies, as shown in Figure 6.1. T1 aims to grow through R&D and innovation, both to improve the products and services they currently offer, but also to expand their range with new offerings. Their second strategic focus is also used to enhance their range of products and services, and deal with competition at the same time, through the M&A of (smaller) companies involved in IT.

T1’s main value proposition is to continuously enhance and innovate their range of integral IT products and services, in which the popular cloud offerings are supported by the hardware and services divisions. They also have a small sustainability organization, which consists of three pillar groups, one for energy, one for water and one for waste management. For each of the pillar groups, a sustainability team is made with people coming from different departments across the regions. Once a year the sustainability team comes together to share their best practices, projects that have been successful and how they drive the achievement of T1’s corporate goals.



Figure 6.1 Business summary, own illustration based on (T1, 2015a)

Business organization

T1 organizes their firm according to four global regions: the America’s, Europe, Asia Pacific and the Middle-East and Africa. The products and services that T1 offers worldwide are then divided in three main business divisions, as seen in Figure 6.2. These business divisions are further subdivided according to the individual operating segments that encompass hundreds of separate business lines.

These business divisions and business lines all share services through global shared service centres, amongst which one is Real Estate & Facilities.

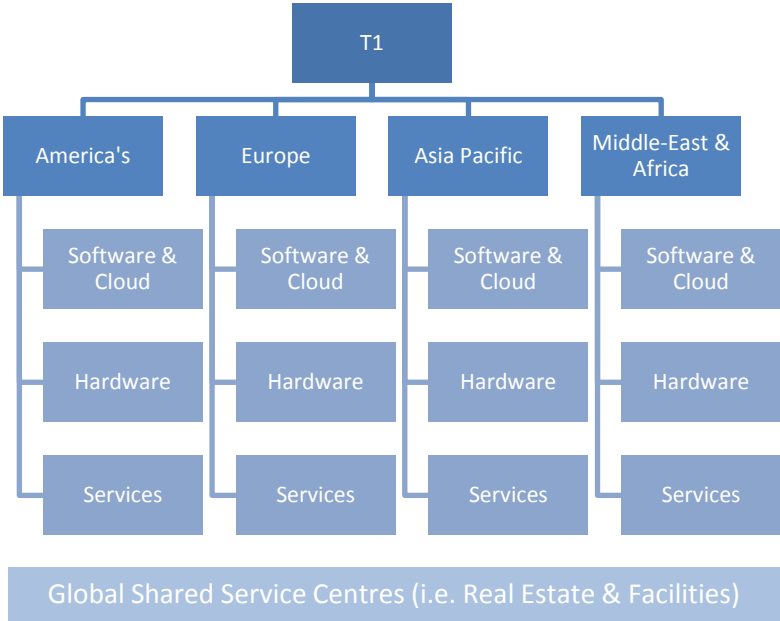


Figure 6.2 Business organization, own illustration based on (T1, 2015b)

Real Estate & Facilities is also organized in four global regions, within the RE&F team there are four VP’s who run these regions and do the execution and transactional activities. The further Real Estate & Facilities organization is divided in four different Shared Service Groups, that support the global regions. These shared services are Operations, Advanced Planning, Process Controls and Data Centre Design, as seen in Figure 6.3.

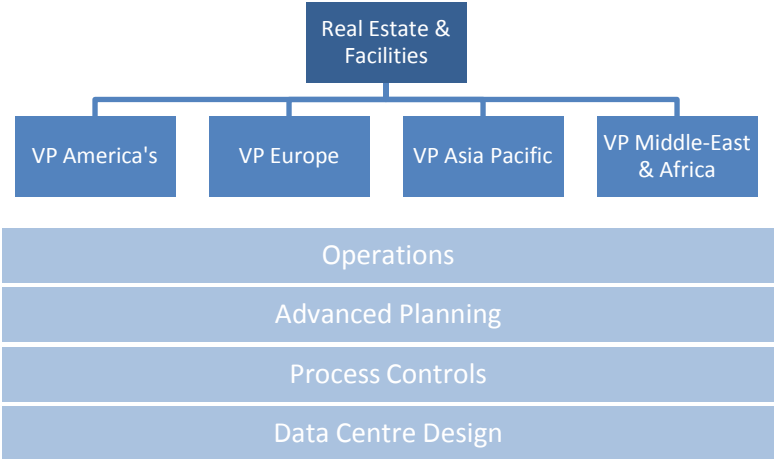


Figure 6.3 Organization Real Estate & Facilities department, own illustration based on (T1, 2016)

CRE needs

T1’s real estate portfolio needs to support three main functions: the corporate offices (and headquarters), manufacturing sites and R&D sites. Of the entire real estate portfolio, encompassing 28 million square feet, the sites are mainly leased. T1’s involvement in M&A’s of other companies, has a large impact on their CRE portfolio. Each month many new sites are added to the portfolio, which are often in locations or buildings they don’t need, don’t want or they already have similar

space in their portfolio. Therefore, RE&F is continuously involved in the optimization of the CRE portfolio through disposition or sublease of real estate they obtained through M&A. T1's first growth strategy, which focuses on investing in and growing their R&D groups, has a less big influence on the CRE portfolio. This strategy mainly depends on the analyses provided by the Advanced Planning team within RE&F, as shown in Figure 6.5, to accommodate the growth in R&D and find locations where talented people can be found at a low labour cost.

CRE strategy

T1's RE&F main mission statement is to deliver high quality services, both internally and externally, for their customers and high quality workplaces for their employees, as seen in Figure 6.4. Their aims are to achieve high performance, best in class practices, innovation and proactive strategic plans. The objectives to achieve these CRE aims are adopting successful business practices, enhancing employee and customer experience, improving collaboration, increasing sustainability and achieve high standards of compliance, integrity and reliability (T1 Real Estate & Facilities, 2015c). Based on the available information, one may conclude that the CRE mission statement, aims and objectives are mainly a way of shaping the behaviour of the RE&F team, because they are not literally translated to RE plans. They do however have it's influences through the team's behaviour.



Figure 6.4 CRE mission, vision and objectives, based on (T1 Real Estate & Facilities, 2015c)

CRE management

To be able to all work in a similar manner, RE&F applies a Policy of Excellence, which consists of 9 main operating principles: customer focus, reliability, integrity, compliance, accuracy, collaboration, sustainability, agility and cost effectiveness. Having this Policy of Excellence helps making sure the entire RE&F team works with the same cultural ideas and attributes when moving forward at the quick pace T1 is currently moving at (T1, 2015b). When comparing the 9 Policy of Excellence principles to the CRE mission, vision and objectives, a lot of overlap can be found.

Real estate plans

In order to make plans, the highest level corporate strategy of T1 is translated by the individual lines of business to lower level business strategies, which enables them to make a comparison between their current and future situation and determine what is needed to achieve their aims. Twice a year meetings are planned between RE&F and the lines of business (LOB). When from this meetings becomes apparent that a new or improved location strategy is needed, RE&F will engage with the required partners in order to perform the needed location analyses for making a new or improved location strategy. Subsequently interviews are held with the LOB and partners in order to collect the needed data. This data is then analyzed and leads to recommendations from RE&F to the LOB. Finally, the study is presented to the LOB for approval. If approved, communicated to the involved

stakeholders. The strategy may be checked and enhanced by one or more of the following studies fit for the purpose of that location: a low cost study, metro study, real estate market study, labour market dynamics study or line of business (profile) study, as seen in Figure 6.5. After that, the strategy can be implemented (T1 Real Estate & Facilities, 2014).

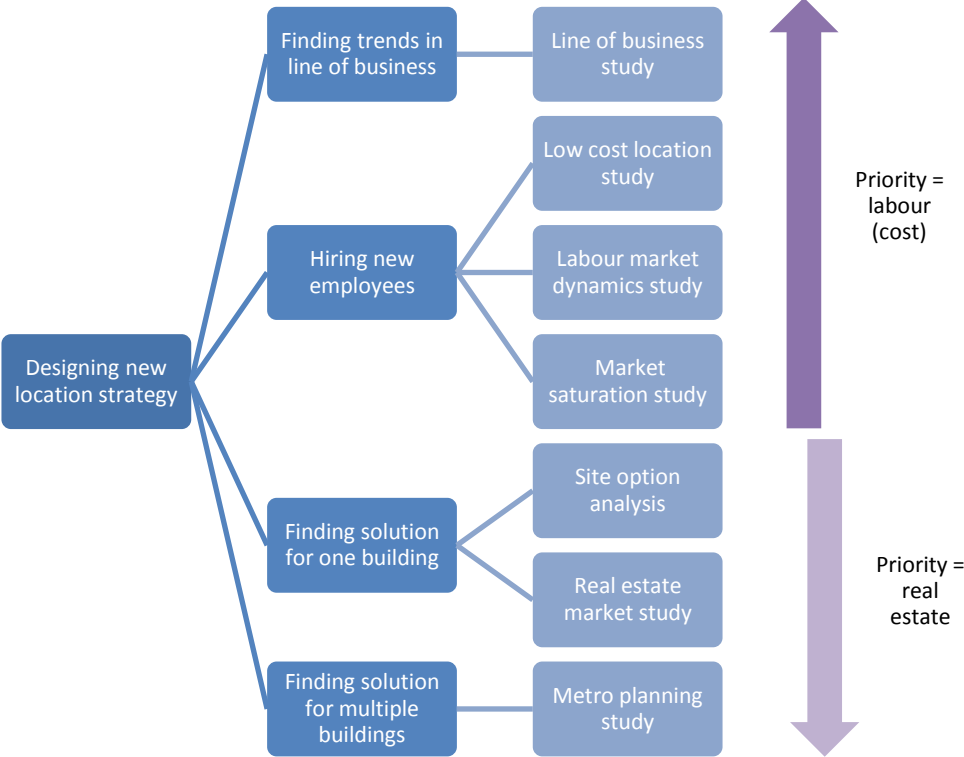


Figure 6.5 Studies prior to designing a location strategy, own illustration based on (T1, 2016)

Implementation

After performing and discussing the location analyses and strategy, the senior executive for the line of business makes the final decision in which location they want to hire and gets permission from the CEO that they can be placed in that location. Especially large decisions get elevated up to the CEO for approval before the plans can be implemented. When RE&F does site option analyses, in which several locations are compared and one are recommended, this information is mainly taken to the impacted line of business to check if they are on board with it, this decision doesn't go to the CEO. This decision-making structure is similar for almost each project (T1, 2016).

Evaluation and re-initiation

The efficient and effective usage of the different sites in the real estate portfolio is measured in a so-called Facility Usage Summary (FUS), which is the starting point of evaluations and (re-)initiations, since the performance on each of the criteria provides valuable insights. T1 used to benchmark the FUS with other companies, but soon encountered that it's very difficult to normalize the data. Thus, they decided to benchmark against themselves, across the different locations. T1 does take some nuances into account, in terms of lines of businesses and each of the global region's expectations. They also take into account whether it's a location where one of the shared service centres is located and whether it employs people who come into the office every day. Each year a 3-day meeting is held with all of the global directors of the groups, where the goals for the next year are established. This is also the moment where for instance RE&F comes together with IT, to share both of their

initiatives and projects they can partner on. The heads of the lines of business are also present, to share their needs with the different support functions.

One of the things that goes along with RE&F's monthly report, is that T1 RE&F expands on that report quarterly with a Plan of Records, in which each location is taken and the planned actions are input, like a lease renewal, expansion or retraction from that location. Within the Plan of Records projections are made according to this information to see what is happening in the portfolio up to three years out, in terms of changes in square footage and workstations, to see what the influence are and when (T1, 2015b). The Plan of Records is also seen as a Portfolio Opportunity Report (POR), the initial data of the FUS is not just used for projections for the upcoming years to see what will happen to the portfolio in that time frame, but also to see what the opportunities are. The Advanced Planning Team is currently also working on a tool that's called Portfolio Redemption Opportunities. The PRO tool takes the FUS and the POR, as well as the other seven studies performed by RE&F, and filters on some of the aspects of the real estate portfolio, to see where the outliers and opportunities are. This information will then be send out to all of the regions, to see if they can take action on these sites.

Conclusions

T1 has a very clear organizational chart, that divides the firm in four global regions and three main business lines: software & cloud, hardware and services, of which the first provides the most revenues, but to do this, is interconnected with the other two, enabling T1 to offer their customers the full range of IT solutions. Their global regions are supported by centralized Global Shared Service Centres, of which Real Estate & Facilities (RE&F) is one. RE&F is subsequently also divided in the same four global regions and has four centralized Shared Service Groups, to service these regions with an Operations, Advanced Planning, Process Controls and Data Centre Design group. Because T1 is constantly developing new or improved products and services, as well as being involved in mergers and acquisitions of other companies, having a very clear and consistent organizational chart, combined with centralized service departments, helps them to assimilate these new developments or M&A's into their current firm, as well as scaling their firm globally, while remaining a clear and consistent business.

RE&F has a written CRE mission statement, aims and objectives. These are of quite an high level of abstraction and not literally translated down to lower level real estate strategies or plans. It is most likely more a way of shaping the behaviour of the RE&F team, than a means for translation to actual plans. This also becomes apparent when comparing the CRE mission, aims and objectives with the triangle of operating principles: there is a clear correlation between the two. The operating principles are derived from the main CRE aims and objectives, these are thus more focused towards the behaviour of the RE&F team than projects initiatives and implementation.

T1 RE&F thus does not literally translate their CRE mission, aims and objectives to the portfolio or building level. However, they have several ways to optimize the portfolio, mainly in reaction to the two different corporate growth strategies. The lower level real estate strategies and plans are thus not driven by the CRE strategy, but by the (impacts of the) corporate strategies and the needs of the individual business divisions. T1 RE&F does 7 different types of studies for the business: a low cost location study, labour market dynamics study, market saturation study, line of business (profile) study, metro study, real estate market study and a site option analysis. As seen in Figure 6.5, the first

four studies are prioritized on labour, especially on low cost labour, while real estate and equipment play only a small part in these. The latter three studies are real estate prioritized and only two of them are done in-house, the metro planning study is outsourced. It is therefore striking to see that all of the seven studies are performed by RE&F, and especially the top four are thus not performed by HR. HR is consulted within these studies, but since the end goal is finding a suitable location, RE&F is leading. Figure 6.6 shows the influence of CRE in the business (strategies).

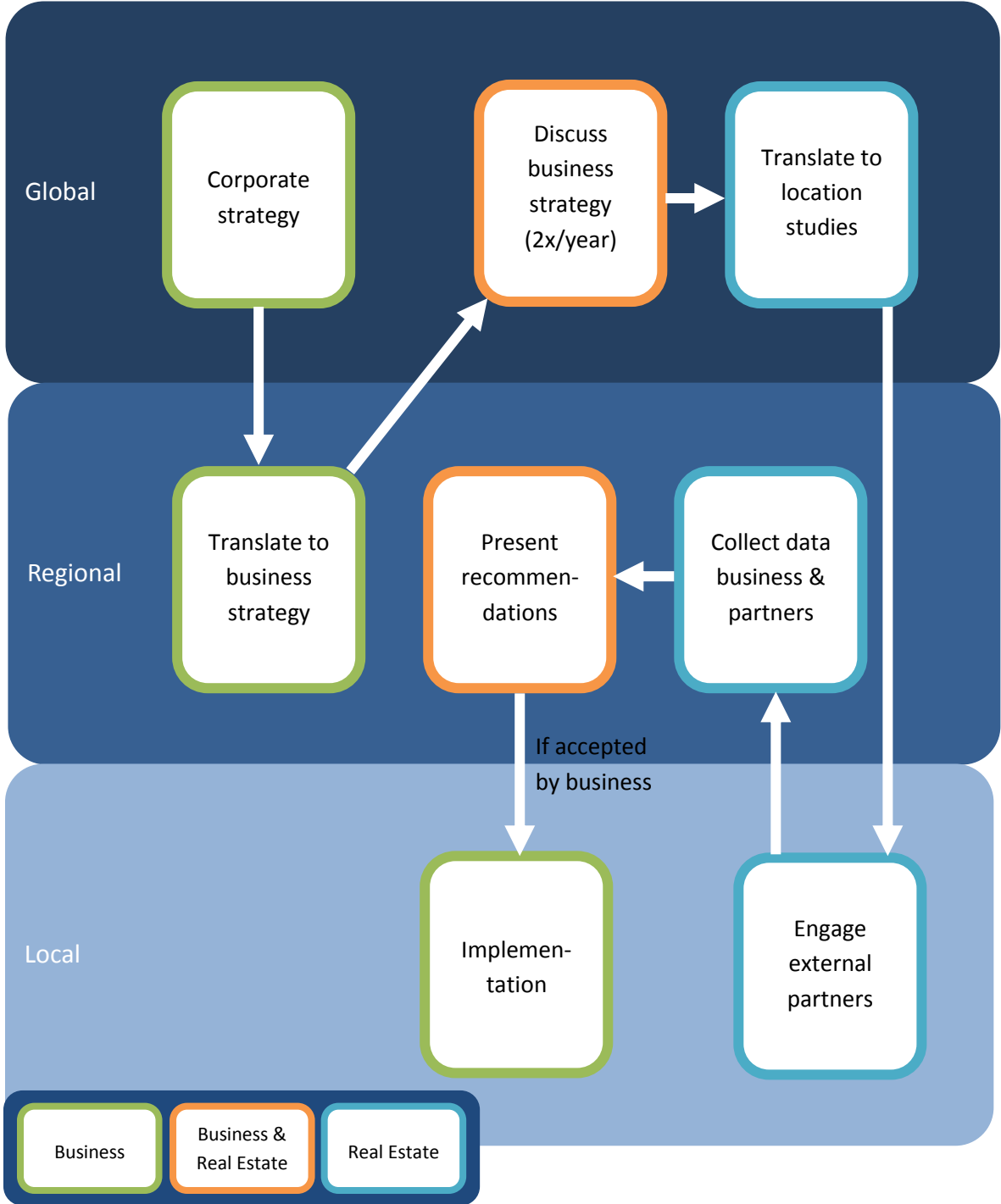


Figure 6.6 CRE involved in business strategy, own illustration

Through the Facility Usage Summary and Plan of Records, the regional RE&F teams keep an eye on the portfolio. Since T1 is involved in a high number of M&A's, the portfolio is often impacted by the addition of sites. Combined with quick changes in strategic directions and growth of the lines of businesses, optimization of the RE portfolio to support the business, is a constant challenge. T1's CRE alignment is mainly quantitatively defined: the FUS should show performance to the efficiency ratio's and compliance to the required square footage and amount of employees, within the budgets. RE plans are based on the results of the location studies, which are mainly quantitative. This may mean that more qualitative business or workforce requirements get less attention, but also provides clear, quantifiable targets for the CRE portfolio. Figure 6.7 shows T1's CRE alignment process.

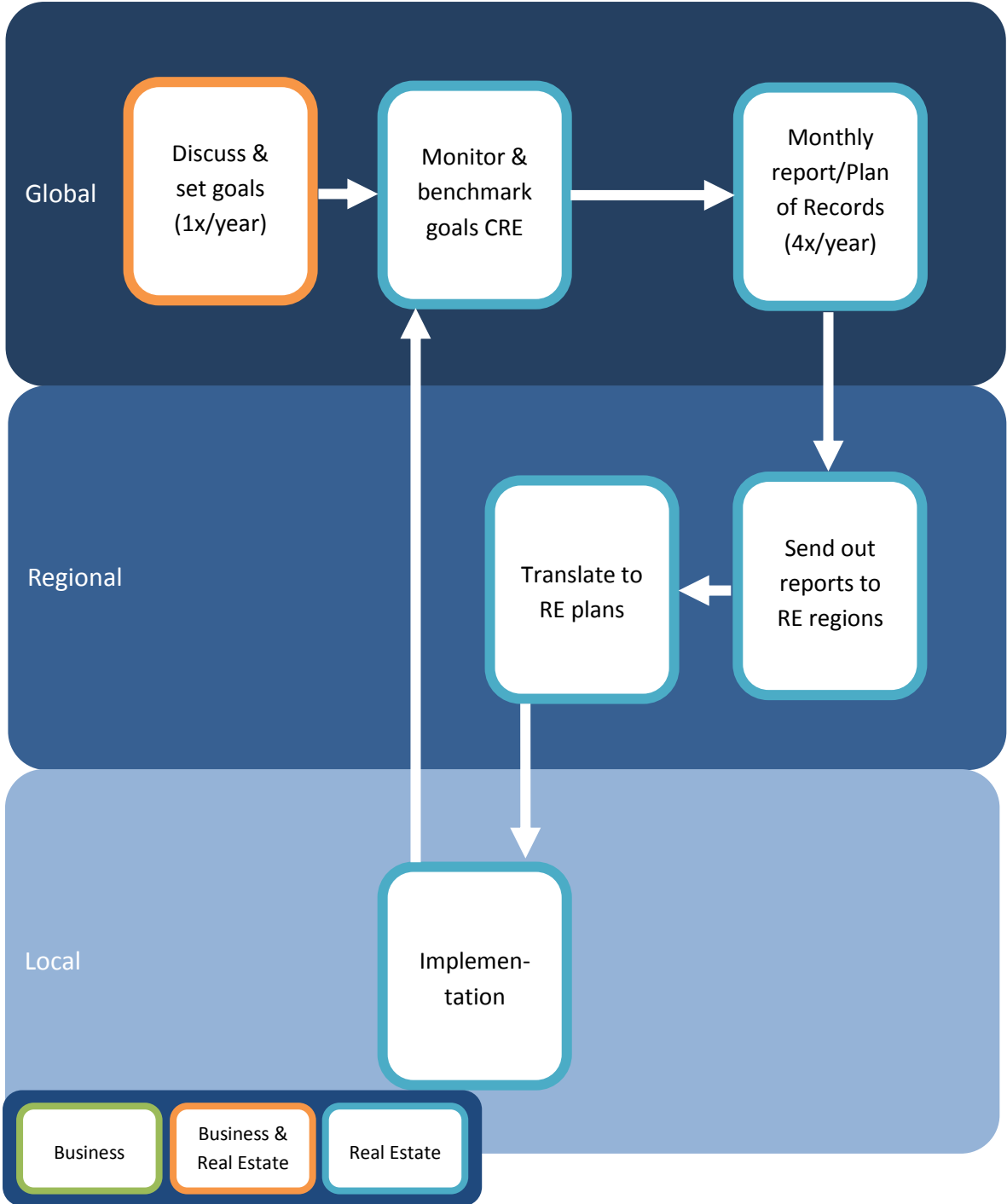


Figure 6.7 CRE alignment, own illustration

7. Case study 2: F1

The full case study description of F1 can be found in Appendix 7. Below a summary is given.

Summary

F1 is a multinational corporation active in the Financial Services industry. The firm offers financial and banking products and services to retail, corporate, commercial and institutional customers in 33 different countries, mainly within the Asia Pacific region. Their stock is publicly traded on the ASX. F1’s vision is to become the best connected and most respected bank in the Asia Pacific region. To achieve this, their corporate business strategy consists of three main elements, as seen in Figure 7.1. First of all, F1 pursues a centralized and organization-wide approach and the various divisions share common operations, technologies, products and services on a global scale. The centralization should help remain a coherent business for their customers and employees, while expanding globally (F1, 2014a, p. 1, 12-13). Secondly, F1 aims to further strengthen their position in the domestic markets, through increasing productivity, gains in market shares and penetration of new offerings (F1, 2014a, p. 1). Further, F1 aims to make use of the profitability of the growing Asian markets to expand their business on an international scale. This also helps them diversify across products and geographies, making their business more resilient to changes in markets or customer needs. Eventually, these three main strategic objectives should lead to increased revenue and earnings, which is needed to increase shareholder returns.

Besides diversifying across markets and offerings, another important value proposition of F1 is their corporate social responsibility and sustainability agenda for which several goals are set and published, along with the results. All of this is publicly accessible, to show their customers and employees their commitment towards these targets. F1 currently has three different priorities when it comes to sustainability: enhancing financial inclusion and capability, improving diversity and inclusion and stimulating sustainable development. By being involved in social and environmental sustainability, F1 hopes to gain competitive advantage over other firms.



Figure 7.1 Business summary, own illustration based on (F1, 2014a)

Business organization

F1 is divided in five divisions that represent the different geographies and markets, as well as the variety of customers that the firm offers their products and services to: the domestic retail markets Australia and New Zealand, the international retail markets, the international Institutional Banking (IIB) markets and the Global Wealth markets, as seen in Figure 7.2 (F1, 2014a, p. 12). The five divisions are coordinated on a global level by centralized shared service departments, amongst which

Group Property is a separate entity within the GTSO department. The centralized Group Property thus does the real estate management of the entire firm from a global to local level.

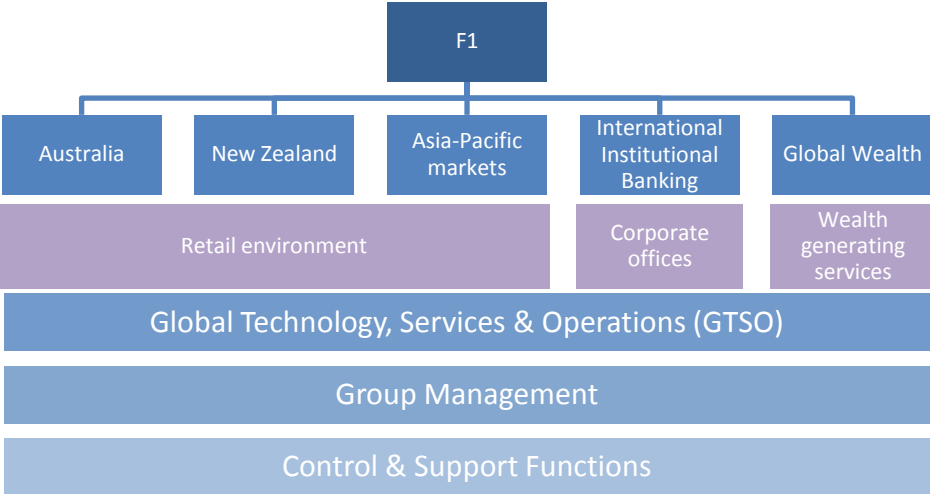


Figure 7.2 Business organization, based on (F1, 2014a, p. 12)(F1, 2016)

CRE needs

From a real estate perspective, the five divisions are summarized into three different functions in terms of their physical manifestation. Three of the divisions need a banking retail environment. IIB makes use of F1’s corporate offices, so the corporate offices do not just house the employees but also need customer facing space where meetings can be held with the Institutional Banking partners. The Global Wealth group, which provides wealth generating services and financial advisory, has a high quality look, feel and footprint, different from the banking retail environment and corporate offices, as seen in purple in Figure 7.2 (F1, 2016).

CRE strategy

Being one of the business support functions, Group Property aspires to create environments that best enable the business. The CRE mission consists of 3 aspects: a commercial focus by enhancing productivity across the firm, being consistent on a global scale by further centralizing the operating model and delighting the customer by improving their real estate quality, as seen in Figure 7.3.



Figure 7.3 CRE mission, vision and objectives, own illustration based on (F1 Global Group Property, 2015b)

Group Property recently refreshed the strategy in response to the revised corporate business strategy, which was driven by the impacts of the digital age and increased pace of business on the bank. This also had it’s effects on the CRE portfolio (F1 Global Group Property, 2015a). Furthermore,

Group Property noticed that the way they operate had changed. Over the previous five years they had gotten closer collaboration with the business, which caused increased levels of trust and transparency. This, combined with the external drivers of the digital age and high business pace, drove them to strive for more flexibility and agility in the RE portfolio.

CRE management

Before making the actual decisions, the real estate leaders report directly to the COO of the bank, who is responsible for the operations side of F1, which is about half of the bank. The COO then ensures the CRE strategy or strategic directions it should take are aligned to the business strategy and agrees on the budgets. The real estate leaders are also part of an executive leader team with 170 people. Every year, the executive leader team is invited to discuss the corporate strategies and present their own strategic directions and ideas. In order to further drive alignment between Real Estate and the five global divisions, there’s a relationship management team in which each manager works specifically with one of the divisions. They make sure that the CRE strategy and projects for the real estate portfolio are aligned with each division’s directions (F1, 2015b).

F1’s real estate managers mainly put the focus is on their people’s core business: there is a small internal team in place to translate the business goals to real estate objectives, but besides that the team outsources tasks to their external partners. The service propositions of Group Property to support the business and implement the CRE strategy: people, processes and partnerships (F1 Global Group Property, 2015b).

CRE plans

In order to make sure the new CRE strategy gets translated and implemented all the way down to the building and workplace level, as well as to maximize the effectiveness of the portfolio, real estate plans are made. To get approval for every major real estate plan and the needed actions a management board paper is constructed that goes to the management board for endorsement, as seen in Figure 7.4. The management board comprises all the senior leaders of the bank: the C-suite and the managing directors. Whenever the expense is very large or change something significant to the bank, like building the global headquarters, that paper also goes to the external board. Within Group Property projects can be approved up to a value of 20 million Australian dollars (F1, 2016).



Figure 7.4 Management board paper, based on (F1 Global Group Property, 2010, 2012 & 2013)

The management board paper explains the plans for a certain building, area or region step by step in the form of a recommendation to the board. Different analyses are done prior to constructing the management board paper, from assessments of the markets, employment opportunities, customer demographics, business benefits and adjacencies, to building fit-outs, financials and technological

infrastructure. These analyses are done in close cooperation with the business, in order to understand their particular ways of working, processes, products and market capture (F1, 2016).

Evaluation and re-initiation

F1 usually makes one to three year forecasts and strategies for the business. However, because the management and delivery of real estate has a longer timeframe, Group Property works with five year strategies, which means there is a time lag between strategic directions and decisions of the business and the real estate strategy. At least once a year, meetings are held with the business leadership team, consisting of the 170 business leaders from all parts of F1, in which the corporate strategy and all of the individual lower level business strategies are shared. Here, mutual influences are discussed to co-create the next years projects and plans. As a result of these meetings, the CRE strategy can be adapted a bit, if it appears to be lagging behind, as seen in Figure 7.5, or the decision can be made to refresh or re-design the entire CRE strategy.



Figure 7.5 Conceptual image of strategy time lag, own illustration

The RE portfolio of F1 is monitored according to several Key Performance Indicators (KPI's). Internally, the high level view across the portfolio is taken and especially the key finances are monitored by the internal team, such as operating costs, strategic depreciation and lease deal cycles. More detailed information about the various markets and buildings is provided by external service providers, such as leasing profiles for the next five or ten years (F1, 2016). Although F1's Group Property does work with specific performance obligations, which are mainly financial targets around the operating costs of the real estate portfolio, they don't benchmark these values to other companies in the same industry anymore. Whenever a new real estate plan is made and partners are searched for the implementation, F1 always tenders these projects to the market. They view this as a natural benchmarking, because within each tender they will instantly see the market prices and performance levels for that price.

Alignment with the business

F1's CRE strategy is derived from it's corporate strategy, through 5 main themes, as seen in Figure 7.6. In order to remain competitive advantage and to cope with changing business environments and needs, F1's corporate strategy aspires to achieve a mix in the products and services they offer, this mix is also expressed in their real estate portfolio. The performance of the portfolio is maximized through a mix of ownership and lease, as well as a variety in buildings and workplaces. The same rapid change is managed by designing more flexible workplace solutions, which makes the workplaces more cost-effective and improves the relationships and cooperation between F1's employees and customers. Within the more agile real estate portfolio the impact of technology and support systems to the business is recognized, therefore the needed infrastructure is available in all of their locations. The super-regional business growth strategy is supported by a real estate portfolio that provides to the needs of an international workforce, for which risk analysis and reduction, as well as the right business capabilities are essential. Finally, the real estate provides for variable workflows, with 'high and low tides' and the application of new technologies (F1 Global Group Property, 2015a).



Figure 7.6 Connection CRE and corporate business strategy, as derived from (F1 Global Group Property, 2015a)

Conclusions

F1's corporate strategy of internal centralization not just enables them to grow internationally, but also enables support functions such as Group Property to cooperate and communicate easily with the other support functions, as well as with the various business divisions. This way, they can fully understand their needs and strategic directions and make sure the real estate portfolio provides and supports those. The CRE portfolio of F1 needs to provide three different environments for their five divisions. The overarching and higher scale level CRE strategy is the same for the entire portfolio, but plays out differently in each of the three physical environments on the lower scale.

Since F1 noticed the past few years that their business environment, as well as their customer and employee requirements were changing quickly, Group Property set one of their strategic objectives to obtain more flexibility within the CRE portfolio. Doing this however, a balance needs to be found with the earlier mentioned centralization and coherency. In order to remain consistent on a global scale, the methods Group Property uses to provide flexibility in their CRE portfolio are similar within each of the three environments on a global scale. Providing this agile portfolio to the business, Group Property has also been able to reduce RE costs, complexity and risks, as well as increasing efficiency and productivity. This subsequently increased the levels of trust existing between RE and both the board and business divisions, providing them with vaguer targets.

Not just the impacts of technological innovations (the digital age), but also moving further into the Asia Pacific region has had its influences on F1's CRE strategy and may have been another trigger to change the strategic rationale towards agility. Whereas Australia and New Zealand are very mature markets with traditional real estate practices, in the Asian markets the pace of business is much higher, which comes with different practices and structures, such as shorter leases, more agility to adapt the real estate portfolio and increased outsourcing to service providers. The higher pace of business in Asia has subsequently influenced the practices and structures in the domestic markets, in order to again get more consistent in what is offered to the customers and employees in products, services and environments across the entire portfolio irrespective of geography.

Besides the change in CRE strategic directions, the role of the CRE manager has also evolved during the past five years. Where previously, the CRE manager would make a lot of decisions without consideration or communication with the business divisions, they have gotten a different position in the company now. The CRE manager has more meetings with the business, to understand their needs and aspirations for the coming years, so the CRE can support the business better.

Within F1 there's still a hierarchical decision-making structure, although it's slowly progressing towards a more flat structure. Currently, the C-suite business leaders decide on the main strategic directions of the different parts of the business and then communicate this downwards. The lower levels in the business then make plans according to these directions and ask for approval from the board, before implementation. By having this clear communication structure and good working relationships with the C-suite and the different divisions, as well as yearly meeting with the executive

leadership team, Group Property is always up to date on the strategic directions of the business and their decisions, and can thus ensure the CRE alignment horizontally and vertically. A summary of F1's CRE alignment process, products and the stakeholders involved is shown in Figure 7.7. Because F1 is mainly focused on the Asia-Pacific region, their global level is actually mainly within this region. There is no separate regional level organization between the global centralized functions and the local, country level operations.

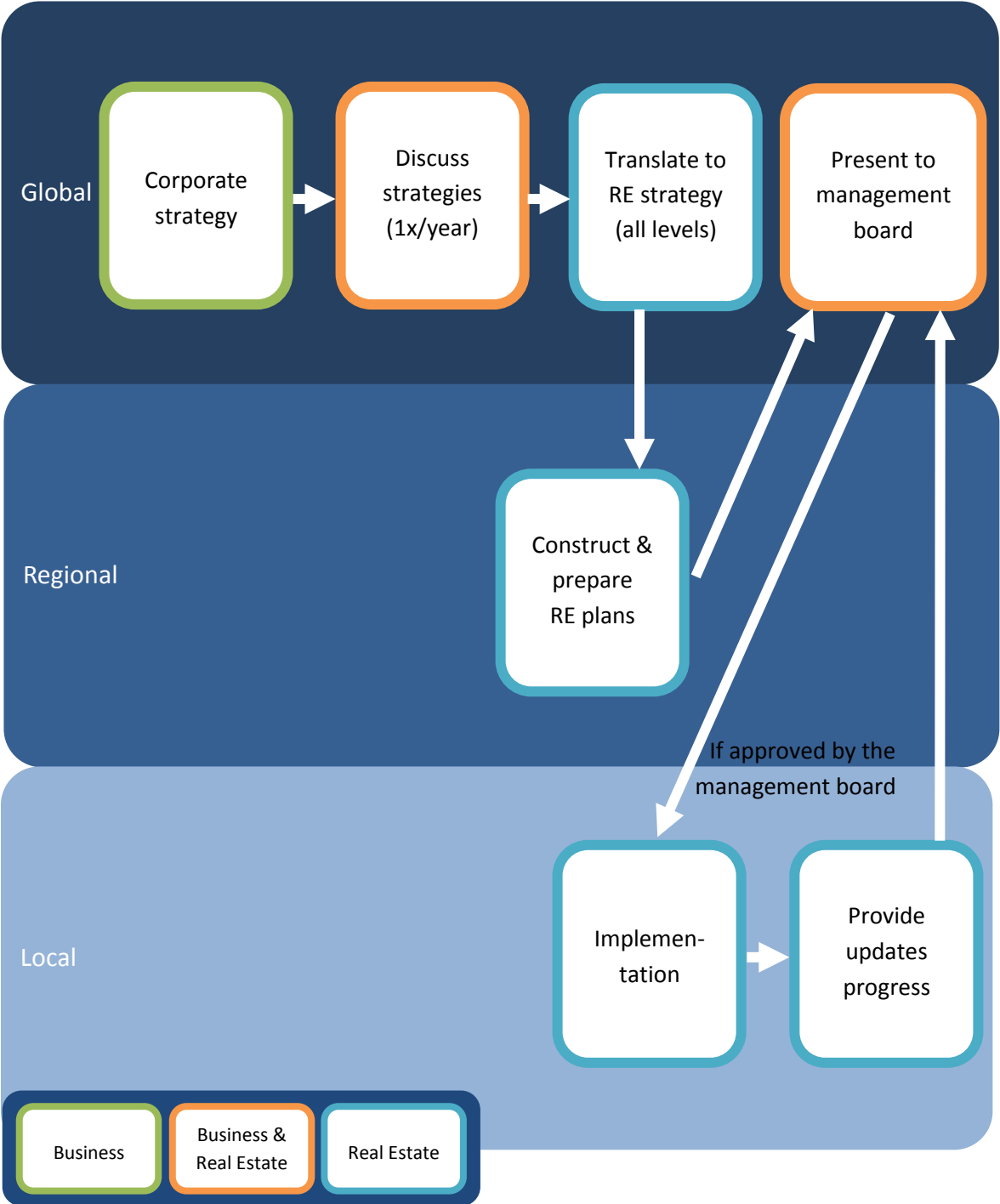


Figure 7.7 CRE alignment at F1, own illustration

8. Case study 3: T2

The full case study description of T2 can be found in Appendix 8. Below a summary is given.

Summary

T2 has been developing and selling a wide range of information technology products and services for 30 years. Their customers are enterprises, service providers, commercial businesses and public institutions, to whom T2 delivers solutions to develop, connect and integrate networks between their people, technologies and the internet (T2, 2015a, p. 9). T2 occupies around 600 buildings worldwide, of which 400 offices, spread across more than 165 countries, as seen in Figure 8.1. The firm has 700 different suppliers and employs over 70.000 people who design, develop, sell and deliver T2's IT-based products and services (T2, 2015a, p. 1).

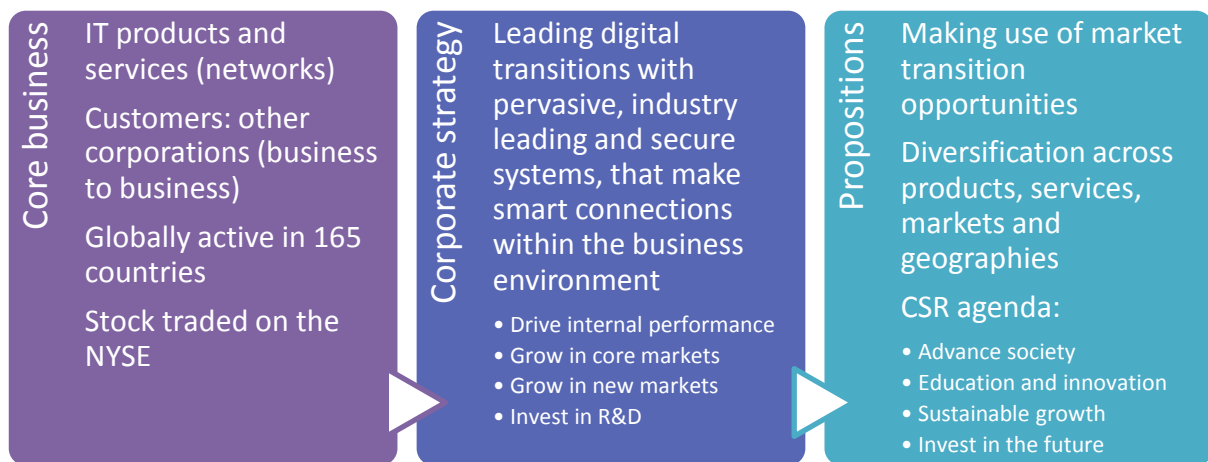


Figure 8.1 Business summary, own illustration based on (T2, 2015a)

T2's corporate mission is to lead their customers in the digital transition of their firms, with pervasive, industry leading and secure systems, that make smart connections within the business environment (T2, 2015a, p. 2). Together with their key partners and developers, T2 focuses on providing intelligent, automated and highly secure solutions for data infrastructure and connections across organizations. This way, their customers are enabled to take advantage of their dispersed data to gain insights about their business in a secure, agile and scalable way (T2, 2015a, p. 2).

The past few years T2 has transformed their core business from selling stand-alone products and services towards integrated solutions, to go along with the transitions they recognized in the market (T2, 2015a, p. 2). One of their main strategic objectives is thus to internally drive performance, through enhancing operational excellence, simplifying their business processes and communication and invest in attracting talent and corporate culture. T2 also strives to grow in their core markets, by leading market transitions, as well as growing by entering new markets, where data networks plan an important role. In order to grow in both markets, T2 not just offers their current range products and services, but is also continuously involved and investing in R&D and innovation. By doing this, they both enhance their current offerings in price and performance, as well as developing new solutions, so that their customers can keep expanding the range of T2 solutions they are using. By combining these four strategic focuses, as seen in Figure 8.1, T2 aims to sustain their strategic position and leadership within the industry (T2, 2015a, p. 2).

Business organization

The past 30 years, T2 has been expanding their business across the globe to tap into new markets and expand their networking business. The firm is managed by geography and organized in three segments: the America’s, Europe, Middle East and Africa (EMEA) and Asia Pacific, Japan and China (APJC). T2 subdivides their products over eight different categories: Switching, NGN Routing, Collaboration, Service Provider Video, Data Centre, Wireless, Security and Other, while their services are all organized in the Service category. The products and services are supported by global shared service centres, amongst which there is the Real Estate team, seen in Figure 8.2 (T2, 2015a, p. 1).

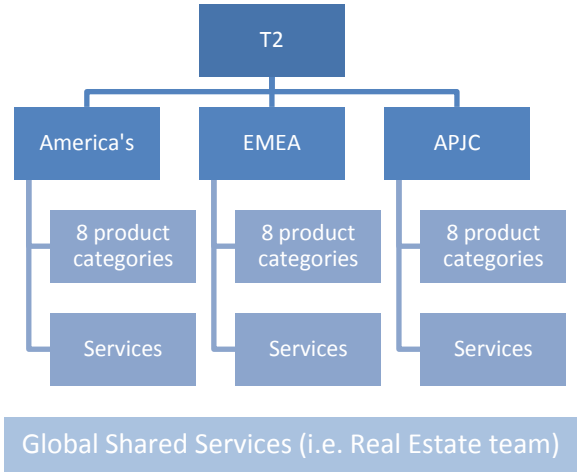


Figure 8.2 Business organization T2 (T2, 2015a, p. 1)

T2’s Real Estate team connects to and gets informed by the business in two ways. First of all, through the Global Site Strategy (GSS), which is a framework that looks at the typologies of the different environments, buildings and spaces that are in the portfolio and defines their degree of criticality to the business: core/strategic, core/non-strategic and non-core/non-strategic. Secondly, there is an engagement model in place which is key in the communication and engagement between the global, regional and local level. Through this model, people operating on different levels can discuss and understand what is happening within the firm and how they should respond. Whenever these people connect and develop a business case, for instance to relocate a building or open a new office, input are given from the global level, which the region representative will then communicate to the local level and the other way around (T2, 2016a). The engagement model therefore structures the organization top-down and bottom-up.

Within the RE team there are several global relationship managers, who engage with the key leaders of other shared services at a global level, such as engineering, services, HR, Finance and Sales. They communicate and connect with these other business services to find out where the business is going at a global level and think of a global site strategy to help the business with input (T2, 2016a). Below the umbrella of the global real estate team, there are also three different real estate regions for the three regions of the business, as seen in Figure 8.3. Within each region, there’s one region representative who engages with the relationship managers at the country level, through country leadership board meetings. In this board are the country managers, HR, legal, tax, etcetera. The information that’s discussed here, is then brought back to the global level by the region representative.

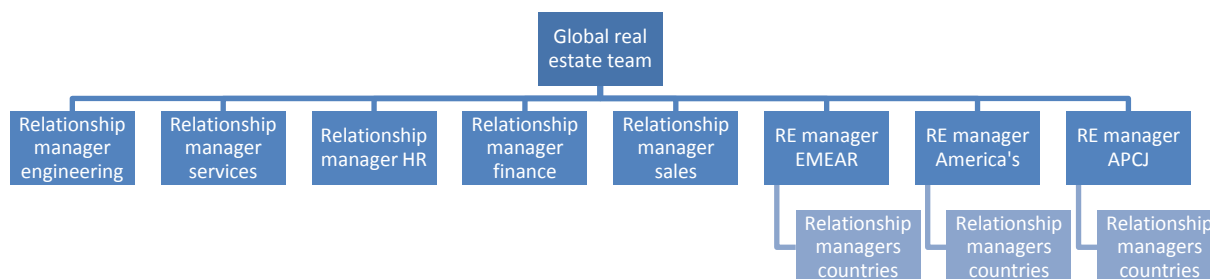


Figure 8.3 Conceptual illustration of the country relationship managers, own illustration, based on (T2, 2016a)

CRE needs

With their global growth strategies and focus on R&D and innovation, T2 has been involved in a lot of acquisitions, making almost 200 acquisitions in the history of the company. These acquisitions lead to a large growth in the CRE portfolio, because each acquisition comes with not just a number of new employees, but also real estate. After each acquisition, the decision is made whether the employees of the acquired company are moved to existing T2 sites or kept in their original site. When the original sites are not retained, exit strategies are made. However, sometimes the original site is retained to help that part of the company develop and grow further how they are, not interrupting or interfering too much in their current activities (T2, 2016b).

In T2's Global Site Strategy the real estate typologies and degree of criticality to the business is defined and this framework is mapped against the entire portfolio. The RE team has established three typologies within their CRE portfolio: core/strategic, core/non-strategic and non-core/non-strategic. The sites that are considered core/strategic are the locations that for different reasons T2 is likely to occupy in the long term. The core/non-strategic sites are mainly locations where T2 occupies a lot of space or has a large amount of critical mass, making these sites more important to the business, as well as more difficult to exit. The third category is non-core/non-strategic, which are mainly sales offices. These sites are easier to exit or transfer to a different location (T2, 2016b). T2's CRE portfolio is thus categorized according to these three typologies and not subdivided in different functions, there is only one encompassing real estate function. The internal RE team looks at all of the real estate of the company, being offices, data centres and labs, and deals with all of the different requirements of the business. Any member of the team is capable of working across all of the different environments (T2, 2016b).

CRE strategy

As shown in Figure 8.4, the Real Estate team's mission is to provide innovative, scalable, agile and connected workplace services and solutions to enhance the employee experience. They do this according to four CRE strategic aims and objectives. The RE team aims to increase operational effectiveness by enabling speed of execution and obtaining excellence in delivery, improve the employee experience by simplifying engagement and driving innovative environments and services, enhancing employee engagement by increasing engagement and accelerating talent development and drive the profitability and efficiency of the CRE by optimizing the portfolio and driving efficiency (T2 Workplace Resources, 2015). Doing this, the RE team tries to optimize the portfolio where needed, reinvest in places that are retained and the business are staying, invest in environments to give employees a better work experience and provide a better customers experience, integrate new acquisitions into the portfolio and work with the business on where they want to innovate and disrupt (T2, 2016a).

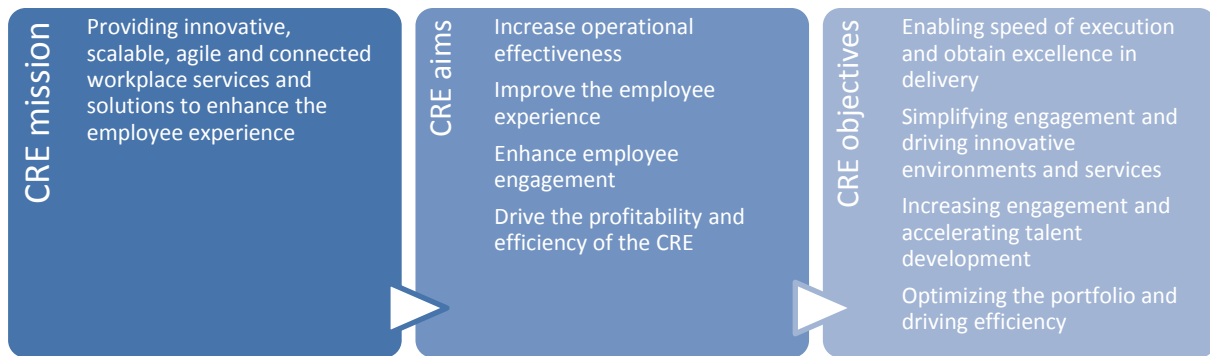


Figure 8.4 CRE mission, vision and objectives T2, based on (T2 Workplace Resources, 2015)

CRE management

The RE team has four main CREM principles, all focused on how to build business cases: leveraging data, extensive collaboration, validation of business cases and stimulating innovation. First of all, as much data points as possible are leveraged to build the business cases. Secondly, the team is stimulated to collaborate extensively, making sure they are working with HR, IT, Legal, Finance and all the different partners, when building a business case. Third of all, every business case has to be validated bottom-up as well as top-down, from the regional and local validation to the global perspective. Finally, there is a focus on innovation, from the operational aspect, in which the CRE managers decide on how to manage the labs, data centres and offices, to data and data analytics about their own real estate performance and analyzing utility and electricity efficiency. Across all of the principles, the RE team is stimulated to stay ahead of the game and be at the cutting edge of the RE profession. The global and regional leaders challenge their teams to stay up to date on what is happening in the industry as much as possible (T2, 2016b).

Sustainability in real estate

T2 has a sustainability program in place of about 500 different energy efficiency and renewable energy projects within their real estate portfolio, which encompasses more than 21 million square feet globally (about 2 million square meters). T2 expects this programme to reduce energy use by 140 GWh and CO₂ emissions by 500.000 tonne a year (T2, 2015b, p. 102). Besides reducing T2's environmental impact, these projects will also decrease operating expenses and increase the cost-efficiency of the real estate portfolio. They expect the projects to pay themselves back within 4 years after implementation. Reducing the energy consumption and green house gas emissions of the real estate portfolio therefore also makes good business sense. T2's main sustainability strategy on real estate level is to:

- Increase efficient use of space (by Connected Workplace strategy);
- Increase energy efficiency of the real estate, especially the R&D labs;
- Apply on-site systems that generate low-carbon electricity;
- Use renewable energy (T2, 2015b, p. 101).

Real estate plans

T2's Global Site Strategy (GSS) is a planning process in which business strategies are translated into an integrated and coherent composition of strategies and initiatives, from the global to regional to local level. These strategies and initiatives subsequently drive prioritization of investment (opportunities) and execution plans, by improving project and program definition and enhancing implementation. The planning process mainly represents a shift in mindset and behaviour of both the

business and real estate towards making decisions (T2 Workplace Resources, 2015). The GSS helps the overall organization understand what the Real Estate team knows and works with currently, as well as what still needs to be learned to obtain better alignment with the business. The GSS is revised annually, supplemented with quarterly updates in order to drive actual implementation of the plans (T2 Workplace Resources, 2015). However, it often still takes months, if not years, for the strategies to get translated to actual real estate plans that get approved and implemented.

By having the GSS process in place, T2 is able to have a scalable and repeatable process on a global scale, which helps them grow their business worldwide. T2’s Real Estate team is thus in the position to influence what T2 will look like in the future, as well as shaping some of their business decisions, for instance about new concepts for the R&D environment, that decide how research and development is done. On the workplace level, the RE team is focused on showcasing T2 technology in everything they do, in order to develop and operate innovative workplace solutions to best support the business and maximize their results. For their workplaces the RE team designs and delivers their strategy called ‘Connected Workplace’, in which they align the needs of the workforce with the work environment (T2, 2016c). With the ‘Connected Workplace’ strategy, the RE team has transformed the work experience for their employees, as seen in Figure 8.5.

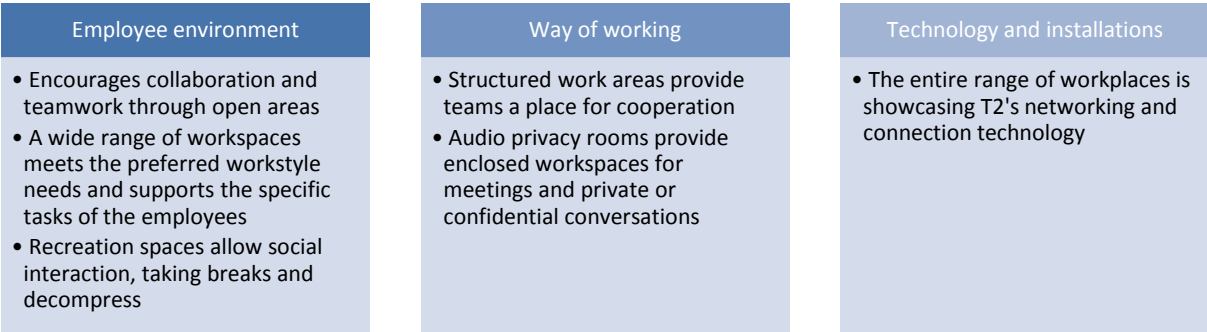


Figure 8.5 T2 Connected Workplace, as derived from (T2, 2016c)

Implementation

For each RE decision, several different analyses are done, after which the proposal is presented to the business. Each business plan has to go through a pay-back, return on investment and NPV analysis to decide what is the value, why T2 would invest any money and what it would take to save money. These analyses are conducted by the regional RE team, who work together with the business. They look at the revenue projections, headcount projections, the costs today and the different options, such as expanding, retracting or relocating. This is then taken into a NPV model with the multiple scenario’s and priced. After doing the analyses, the RE team brings their recommendations and data to support their analyses back to the business. The business cases get tested with and approved by the local business and local controllers and depending on the amount of dollar value, they then go up to the corporate level for review and approval, which happens on a quarterly basis (T2, 2016b).

Every quarter, the capital investment board meeting takes place, in which the individual business cases are presented. Once they are discussed and approved, the team in the field will generate something called an EPAF, which is an Electronic Project Approval Form. This is a tool to populate the story, the options and the data. There are two sets of people who engage in that, the people who endorse the project and the people who approve the project. The endorsers are people from other

support functions like IT, safety and security, financial analysis, financial controllers, so the people who are contributing to it. The region leader is the one who formally submits that document in the system after which it gets routed through the clients, for their approval, and through the controllers, all the way up to the CEO, depending on the approval level and budgets. Once that's completed, the document comes back to the region leader fully signed. When that document is fully signed, the team has the authority to execute it.

Evaluation and re-initiation

The performance of the CRE portfolio is measured according to a balanced scorecard, with matrixes that are benchmarked once a year against industry benchmarks. The matrix covers the portfolio's main themes of financial measures, client measures and process measures, which are subdivided according to the four main CRE strategies. Every year, the benchmarked matrix targets are revisited on a global and regional level (T2, 2016a). The matrices with performance outcomes are reviewed on a quarterly basis on a regional level and at the same time, business reviews are done with the global leaders. In these meetings the Real Estate team shares their data and drives conversations about where to invest, where to optimize, where to (further) align with both the local and the global level. The matrices and balanced scorecard at the global and region level are thus mainly used to illustrate trends and see how T2's CRE portfolio is performing each quarter and each year.

The decision to initiate new projects is driven by different sets of data, mainly coming from the business. These can be the costs of CRE to the business, how the employees are behaving relatively to the real estate, the utilization rates and the alignment to the business needs. Besides the quarterly reviews in which the CRE performance and benchmarked data is discussed with help of the balanced scorecard matrices with both the global, regional and local level, there is a meeting each year in the month of May, where the Real Estate team goes back to the original GSS 'vision, strategy and execution' document. They go through it to see if it is still relevant to the company and if it is still relevant to the RE organization itself, in order to define what to measure and what to focus on as a RE organization. After each re-evaluation in May, there is a timeline attached to that, with the quarterly reviews, benchmarking and the industry benchmarks. The next year again in May, the leadership team gets together, discusses the results of the past year and sets the targets and the execution initiatives for the following fiscal year.

Conclusions

T2 doesn't just diversify their offerings in products and services, but also diversifies across customers, geographies and market segments, to enhance their revenue mix and be able to make use of and play into transitions they recognize in any market. Because T2 diversifies across markets and offerings, they require a wide range of technologies, products and skills. Their growth strategies are based on three aspects of innovation, which T2 calls their 'build, buy, partner' approach. This approach states that to achieve innovation, one can either build new or enhanced solutions internally, partner up in strategic alliances or acquire other companies to do this.

The IT networking products and services that T2 sells to the market, are also used internally, in order to better understand how these work, can be used best and influence a range of aspects, from the behaviour of people and use of space, to increasing productivity and efficiency of energy usage and workplace management. This then provides valuable insights all the way up to the cost structure of the business, where to invest and where to de-invest.

T2's Real Estate team has three main tasks. First of all, due to their large involvement in acquiring other companies, their main task is optimization of the CRE portfolio, which is often through disposition. Secondly, they are involved in CRE planning, construction and space configuration, which is mainly important for their two growth strategies to expand in current and new markets. Thirdly, facility management and related services are done for their employees, amongst which implementing the T2 Connected Workplace strategy, that showcases their networking technologies to employees and customers.

Within their Global Site Strategy (GSS), the RE team has established three typologies within their CRE portfolio: core/strategic, core/non-strategic and non-core/non-strategic. The RE team provided the GSS framework and the business then classifies each of their locations and determines whether it's a core/strategic site. The classification is based on the revenue that is generated there, the customer base that is served, the political environment to do business, the critical mass of employees working there and on whether it's a region where T2 would be making future acquisitions. Within the classification of the sites in T2's CRE portfolio is thus not just looked at the costs, but also the resilience and business continuity planning.

The GSS is also used as a planning process where business strategies are translated into an integrated and coherent composition of strategies and initiatives, from the global to regional to local level. These strategies and initiatives subsequently drive prioritization of investment (opportunities) and execution plans, by improving project and program definition and enhancing implementation. The GSS is revised annually, supplemented with quarterly updates in order to drive actual implementation of the plans. However, it often still takes months, if not years, for the strategies to get translated to actual real estate plans that get approved and implemented.

T2 defines CRE alignment as being that the business and RE team both want the same thing and that everything the RE team is planning and doing, is in compliance with where the business is going. The people operating at the regional level are actually the link between the global level, where alignment is obtained between plans and strategic directions of RE and the other support functions, such as HR, Finance and Sales, and the local level, where the actual execution initiatives for the various business units (product and service categories) and different countries are prepared and implemented. The engagement model ensures communication and collaboration between global-regional and regional-local levels, through set meetings. This way, the people operating on different levels can discuss and understand what is happening within the firm and how they should respond. Whenever these people connect and develop a business case, for instance to relocate a building or open a new office, input are given from the global level, which the region representative will then communicate to the local level and the other way around. The engagement model therefore structures the organization and it's management top-down and bottom-up. Figure 8.6 shows the summary of T2's CRE alignment process, products and the stakeholders involved.

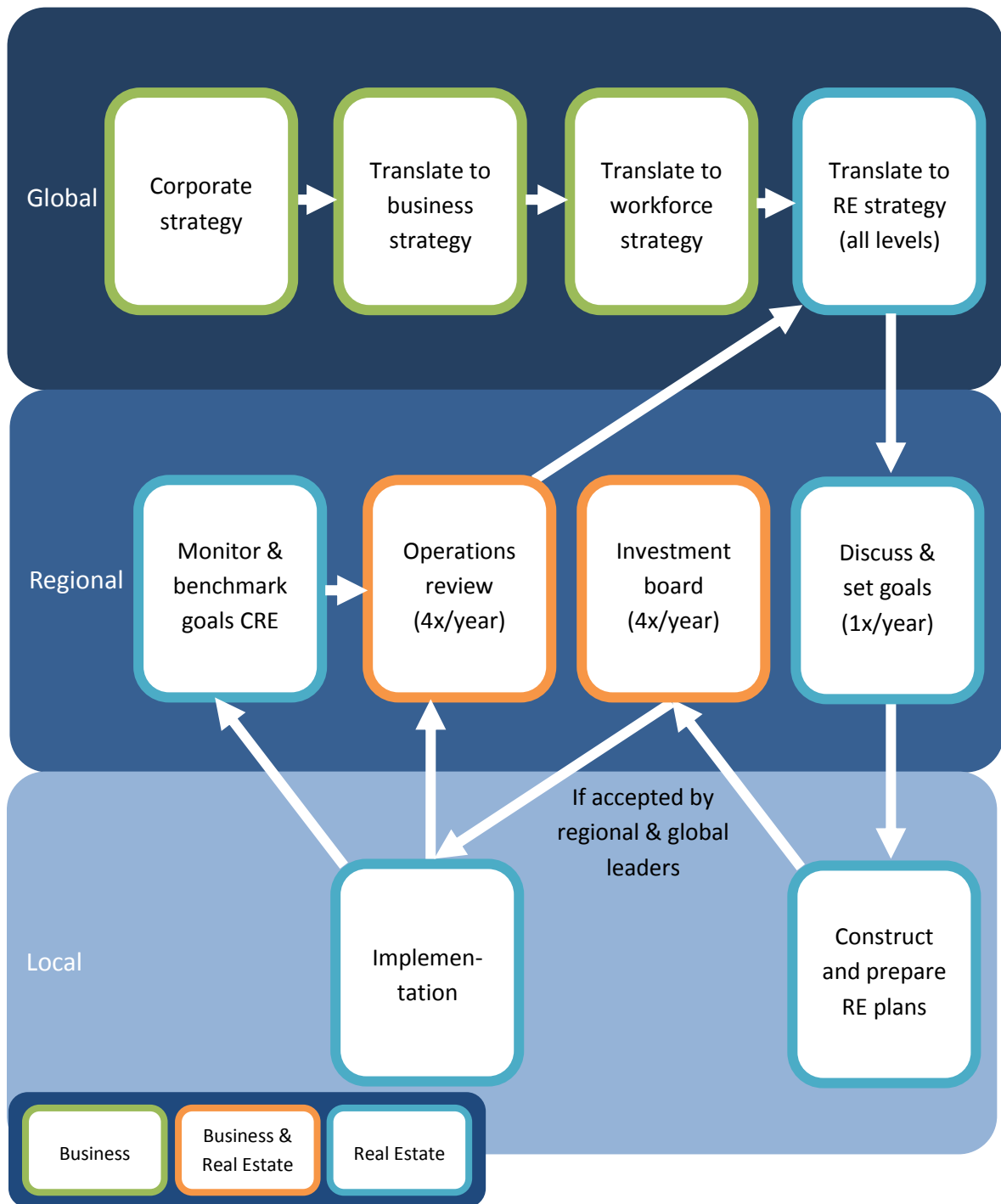


Figure 8.6 CRE alignment at T2, own illustration

9. Case study 4: T3

The full case study description of T3 can be found in Appendix 9. Below a summary is given.

Summary

Royal T3 is a global technology and industrials firm, whose stock is publicly traded on the NYSE (New York Stock Exchange) and AEX (Amsterdam Exchange Index). End of 2015, Royal T3 counted sales and service sites in about 100 different countries and manufacturing sites in 25 countries, employing a total of 113.000 employees and occupying 2.400.000 square meters. Under the umbrella of Royal T3 there are several subsidiary firms, of which the T3 subsidiary officially split up into Lighting and Healthcare in the beginning of 2016. In 2014, T3 decided to sharpen their strategic focus by splitting up into these two stand-alone companies, mainly because both sectors are subject to different market conditions and other business influences, so it was impossible to set a strategic path for the firm that would work for both sectors (T3, 2015, p. 5). This case study analysis will look specifically into the CRE alignment at T3 Healthcare, since this subsidiary firm is responsible for the management of its own businesses and CRE portfolio worldwide. However, due to the recent split up, separate data on T3 Healthcare was not available for analysis yet. Therefore, to give an overview of the firm, business data of Royal T3 are shown.

T3 Healthcare's core business is mainly based on the recognition that on a global level, especially with an continuously expanding and aging population, as well as the rise of chronic diseases, many different healthcare and health management challenges still exist. These become especially challenging when energy resources constraints keep increasing and the climate changes further. Besides these challenges, T3 sees health technology as a meaningful innovation with which people's lives can be positively impacted in various locations and ways (T3, 2015, p. 6). T3 Healthcare has two main customers: professional healthcare and consumer end-markets. Professional health systems increasingly came under pressure the past years, due to decreasing subsidies from the government and increasing demands from more and more customers, which sparked the need for more integrated forms of healthcare delivery systems (T3, 2015, p. 6). In the consumer end-markets, people are increasingly looking for a more active role in their own health management. Different types of integrated technologies, combined with the vast experience of T3, can provide great solutions for end-users (T3, 2015, p. 10).

T3 Healthcare's corporate strategy comprises of three focus points, as shown in Figure 9.1. First of all, since the restructuring of the firm, T3 aims to further improve their internal business processes and performing. The next two strategy objectives are both growth strategies. T3 Healthcare aims to invest more in R&D and innovation, as well as filing more patents, to broaden their range of products, as well as improving their current offerings. Finally, in order to enhance sustainable growth over the coming years, T3 Healthcare aims to continue closing large-scale long-term healthcare enterprise deals with medical centers, as well as being involved in the mergers and acquisitions of companies involved in healthcare technology. They do this to increase the understanding of their customers needs, both strengthen and improve their position in the market and enhance their second growth strategy of product innovation and development (T3, 2015, p. 7). T3 thus focuses on driving growth as well as increasing value coming from their core activities in the field of healthcare technology. In both T3' (external) growth strategies, the digitalization of healthcare is used in order to find innovative ways of monitoring and managing people's health. Compared to their strategic focus as it was before the split from Lighting, this mainly means a shift from providing devices

towards providing software and services, as well as a shift from acute or late-stage interventions towards prevention and more integrated health systems. With this, T3 Healthcare tries to play into the fact that the world is getting increasingly interconnected.



Figure 9.1 Business summary, based on (T3, 2015)

Business organization

Royal T3 is the umbrella, or parent company of the T3 Group, consisting of three different subsidiaries: T3 Healthcare, T3 Lighting and T3 Innovation Group & Services, as seen in Figure 9.2. The activities of T3 Healthcare are further divided into three divisions: Personal Health, Diagnosis & Treatment and Connected Care & Health Informatics, to make a difference between the consumer health market, the professional health market and health technology, data and informatics (T3, 2015). These three divisions are further subdivided into 18 lines of business, or business groups. T3 Consumer Lifestyle used to be an individual group, but has been merged within the Personal Health group in Healthcare. The Innovation Group & Services encompasses all of the shared services for the Healthcare, such as HR, IT, Finance, Procurement and RE. T3 Lighting has become a separate entity with its shared services and are brought to the stock market (T3, 2016b).

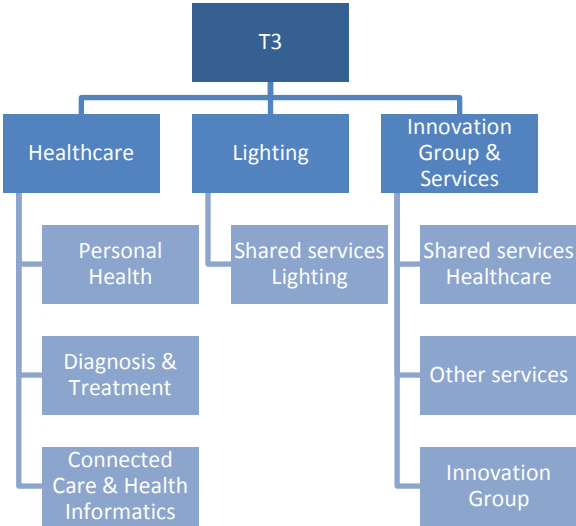


Figure 9.2 Business organization, based on (T3, 2015)(T3, 2016a)

One of T3 Healthcare’s shared services is CRE management. T3 Real Estate is organized according to the structure seen in Figure 9.3. Under the head of Real Estate there are four heads of the global markets: Benelux, Asia-Pacific, North- and Latin America and Europe, Middle-East and Africa. These heads have an organization below them with their own transaction capacity, construction project

and facility management teams. The people responsible for this keep the overview of their piece of T3 and organize programmes when needed. These programmes are then outsourced and executed by service providers. Besides the four global regions, under the head of Real Estate is also the staff organisation responsible for processes and systems, transactions and construction projects, transformation and HR business markets, the design of the Centre of Excellence of facility management and finally portfolio and merger and acquisitions. The analytics team not only analyzes the portfolio and M&A's, but does the entire T3 Real Estate organisation.

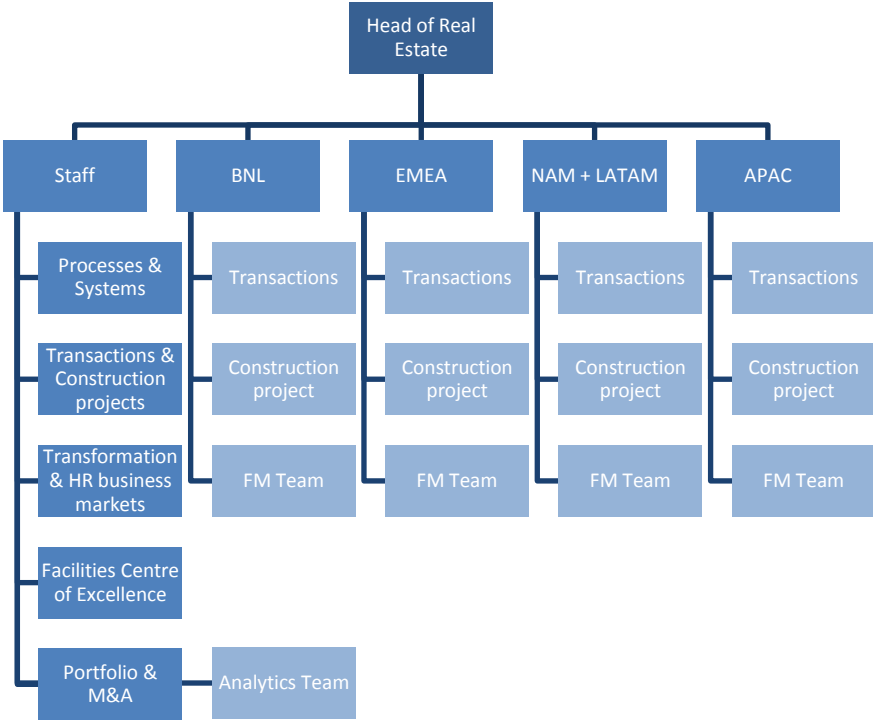


Figure 9.3 T3 Healthcare Real Estate organization, as derived from (T3 Real Estate, 2016b)

CRE needs

T3’ growth strategy of investing in R&D and growing these departments, barely shows in the overall CRE portfolio. This growth is almost fully accommodated within the existent RE portfolio, through more efficient use of space, different methods of R&D or other groups that are shrinking. T3’ second growth strategy, being involved in M&A, on the other hand does impact the real estate portfolio. T3’ RE group is involved in this process as early as possible and helps during the due diligence investigations of the companies they want to merge with or acquire. This is done in order to either make a deal at an early stage to not take on the RE portfolio of the company or make sure the acquired RE gets incorporated in T3’ RE portfolio as smoothly as possible.

All in all, T3 real estate portfolio thus has four different types of real estate: their corporate front and back offices, manufacturing sites and R&D sites. Which group is located where is decided upon their core business and customer markets. Professional customers have different wishes and needs than end users (T3, 2016b). The four main real estate functions also differ in look and feel, due to the different ways the staff is organized, especially in the corporate offices and R&D environment. Where the R&D employees used to do mainly technical research in laboratories with experiment setups, this has changed to an IT-environment with a lot of computing capacity. Furthermore, the R&D

employees are working in project teams more often, where they are using methods like brainstorm techniques, for which T3 is now adapting our portfolio (T3, 2016b). In T3' corporate office environment the 'new ways of working' has been implemented, mainly due to the communication methods that are currently available, which enable people to work further apart and use their offices differently. Another impact is the increased mobility and in- and outflow of people within the corporate offices, not just employees, but also customers. Especially in the front office sales environments, Real Estate is now cooperating with corporate branding and corporate imaging.

CRE strategy

Within T3, there are CRE and CREM strategies at different scale levels. The highest level CRE strategy is on a global portfolio level, which then is translated to strategies on the building and the workplace level. Because of the recent organisational transformation, a completely new CRE strategy has been made. The CRE mission of T3 Real Estate is to create great places to work, that support and enable the business (T3, 2016a). T3 Real Estate then has eight different aims and objectives, five CRE aims and objectives which they use to improve their products and three CREM aims and objectives, as seen in Figure 9.4. T3 main CRE aims are to right-size the RE footprint, achieve or outperform market transaction benchmarks, drive delivery of construction projects, create attractive and affordable workplace solutions and obtain appropriate and creative FM solutions (T3 Real Estate, 2016c)

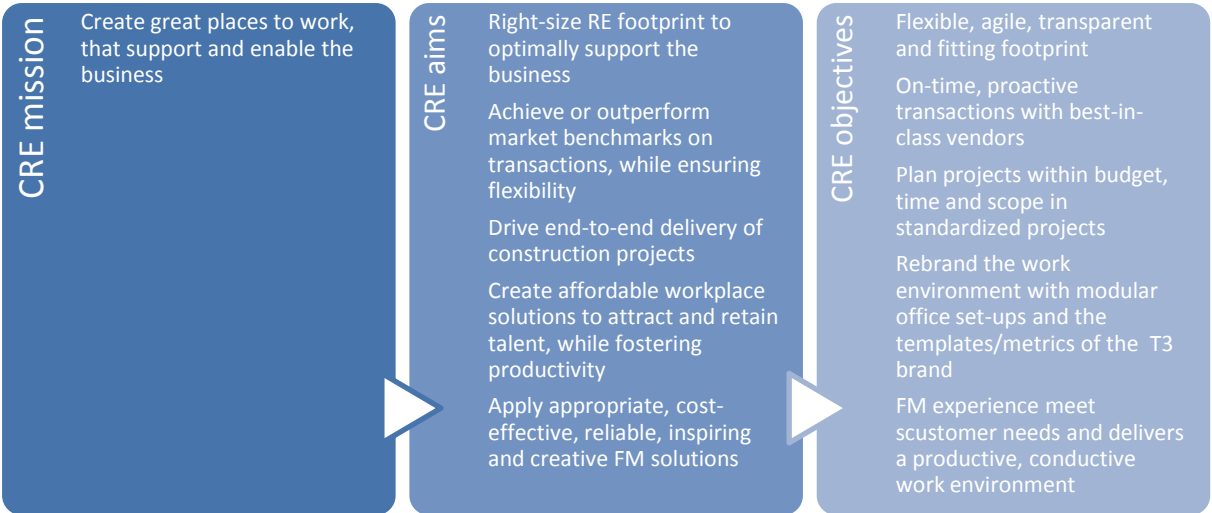


Figure 9.4 CRE strategy, based on (T3 Real Estate, 2016c)

The entire T3 umbrella has a product policy in place that states that whenever a product replaces another product, it should be more sustainable. This therefore also applies to T3 Healthcare's CRE portfolio. Whenever a building is new, renovated or refurbished, it should become more sustainable than the previous situation. This is measured by taking a list of sustainability criteria into account in each investment decision. Most of these criteria have to do with cost-efficiency, which often also leads with a more efficient use of space, materials or energy. The other criteria look at aspects such as attracting talented employees and transportation for both employees and customers. Within each investment decision, a sum is made of all these criteria and the total score should be better than the previous accommodation (T3, 2016b).

CRE management

The five CRE objectives are translated to programmes and projects, but the three CREM objectives are enabling projects about the ways of working at T3 Real Estate, these objectives are made to

improve the CREM practices. The CREM mission T3 Real Estate is to be the recognized and trusted business partner of T3. They aim to do this through creating end-to-end business management systems, accurate financial reporting and analysis in cooperation with Finance and continuously improve their organization and operating model. These aims are achieved through the CREM objectives, as shown in Figure 9.5.

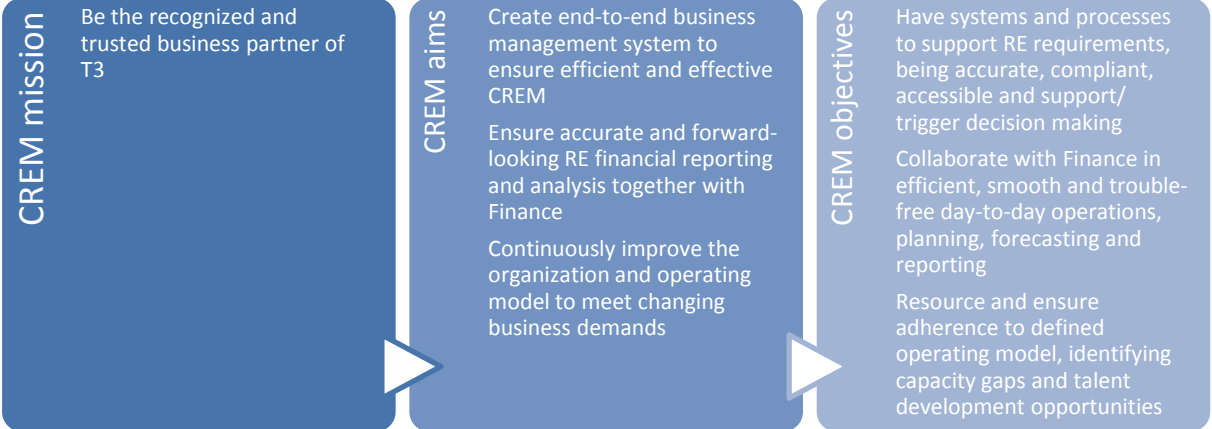


Figure 9.5 CREM strategy, based on (T3 Real Estate, 2016c)

Translation to portfolio level

When the CRE strategy on portfolio level is approved, it gets deployed. Under each of the strategic objectives, about three different programmes are set up in order to carry out the objectives on a lower level. Within each individual programme, around 3 projects are set up, which are on the building level. This means that with 8 CRE and CREM strategic objectives, there are on average 24 programmes and 75-80 projects. The CREM objectives however don't get translated all the way down to actual projects, so there is more space for taking up extra CRE projects. These projects are all planned to be implemented in the coming three years, but also assume that most of the (prioritized) projects are finished within a year, which means that in the next yearly evaluation and discussion, new projects can be taken up (T3, 2016a).

Obtaining approval

Whenever a new project is initiated, in order to get approval for this project, a system is used called @Investor. For each project, a business case is made in a set format by the local team: the regional head of Real Estate, transaction manager, facility manager and facility controller, in cooperation with the business. In order to build the business case, one of these people is appointed as project leader. This leader sets the scope, planning and budget format for the business case (T3, 2016a).

For T3 Real Estate, the most important part of these business cases is the checklist against the RE policies. Within this checklist is looked at the quality objectives and financial objectives of Real Estate. The policies driving these objectives are shown, together with one or more questions to ask yourself when filling in the @Investor request (T3 Real Estate, 2016a). The first check within the checklist are the questions that should be answered with a 'yes' or 'no'. All should be answered with a 'yes', in order to make sure all policies are taken into account. If they would fill in a 'no', an explanation needs to be given. From this process and the total scores of each option comes the best option for the business group. This means all real estate related business cases always fully have to comply with the T3 Real Estate objectives. These objectives are the same for the entire portfolio, all of the buildings of T3 on a global scale (T3, 2016a).

Evaluation and re-initiation

In their CRE system, T3 Real Estate keeps track of several Key Performance Indicators (KPI's) which they use for portfolio management. The performance of the CRE portfolio is thus measured per site, which is a roll-up of all the buildings in that location, on standard Real Estate performance indicators, which are mainly combinations of square meters, costs and amount of employees (i.e. costs per square meter, costs per employee and employees per square meter), but also on business fit and market fit. The business fit is decided in cooperation with the different business groups, through the business alignment meetings. There is a strategic cycle in which once a year the representatives of all 18 business groups across all 4 markets (around 50 people) walk through the entire real estate portfolio with the real estate managers. During this meeting they will have a look at each of their buildings to see whether it still fits their needs and budgets the coming 1, 3 and 5 years. Whenever there are issues recognized to come up, this drives the initiation of new projects. The market fit is mainly comparing the buildings to the market, whether the costs, square meters and amount of employees there are below or above average. Especially the market fit performance in respect of finances are measured and benchmarked (T3, 2016a). T3 however only benchmarks against the market on the higher levels and on their general data, like the total costs of real estate for their business, compared to other businesses. On the lower levels, they benchmark mainly against themselves. Whenever a benchmarking exercise to the market or to themselves shows large differences or outliers, this triggers new programmes on a portfolio level and projects on a building level.

T3 usually makes their strategies for periods of three years. However, each year an update is made, which ensures the strategy evolves if something is less relevant or a slightly different focus point is chosen. Within the yearly meetings is communicated from the bottom-up by the various business groups whether a certain strategy is working, or if it needs fine-tuning. This process of fine-tuning the strategy has not been the case in T3 new strategy now, because of the revolution with splitting up into two separate firms. T3 Healthcare had to start from scratch in making their corporate, as well as their CRE strategy (T3, 2016a).

Conclusions

During the previous years, growth and productivity levels at T3 were quickly declining. However, T3 did see large opportunities for both their Health technology department, as well as their Lighting department. These could only be fully captured when both would become a separate brand. By splitting up they could re-identify themselves and focus their strategic direction from diversified technologies towards one core business, with clearly defined directions and boundaries: Lighting and Healthcare. This way, T3 was able to restore the growth rates and improve the productivity of both firms (T3, 2015, p. 6). After the company transformation, it was vital for T3 to see positive results of this change in strategic direction. In 2015, several performance improvements were recorded, such as a 2% increase in sales, driven by 4,5% growth in the Healthcare portfolio. Due to many internal improvements, the overall operational performance of T3 Healthcare increased the past year and is expected to keep increasing the coming years (T3, 2015, p. 7).

Even though T3 Healthcare has set their scope to health technology, the firm still has a broad scope and is highly diversified in the offerings of their 18 different business groups, both products and services, across 5 different market segments in 4 global regions. In each of these global regions, the customers and employees have different wishes and needs, while resources, regulations and other

constraints may also differ. This makes it a constant challenge for T3 to obtain and remain a coherent business worldwide, as well as keeping an overview across the firm and the CRE portfolio. This may be the reason most operational tasks are outsourced, ensuring T3 employees can focus on organizational or management tasks.

T3 Healthcare's corporate strategy of internal optimization of processes and performance, is mainly due to the recent split from Lighting. The organizational and management processes and systems still needs to find their optimal form, therefore this is currently the main focus of the firm. When a solid basis is set, they can further focus on their two growth strategies of R&D and innovation or M&A and partnering. The same goes for the CRE and CREM strategies, programmes and projects. Meetings are still being held with all of the 18 business groups, in order to drive alignment between the business and CRE plans. When this is all set, yearly meetings are held with the steering board to discuss the strategies of T3 Healthcare and the different divisions, as well as meetings with the individual business leaders across the markets (50 people in total), in order to check the fit of the current portfolio. This way, alignment is driven both vertically and horizontally.

T3 Real Estate makes or improves their CRE strategy on their own initiative, to structure their plans and pair them up with the higher level objectives they have. Whenever this is done, they propose it to the steering committee, who keeps the overview on behalf of the entire firm. However, because T3 Real Estate is closely connected to the business and has a good understanding of the corporate strategy, their CRE strategy will most likely always be accepted. The process is therefore iterative, there's no clear start or end in making or improving the CRE strategy (T3, 2016a).

T3 Healthcare's CRE portfolio can be subdivided in 4 main functions it needs to support: front office, back office, manufacturing sites and R&D sites. The encompassing global CRE strategy counts for all of them. However, when translated to programmes and projects, these are only made for specific business groups or locations. Due to the way the employees use the space and are organized, the front offices and R&D sites ask for a more flexible, agile and transparent footprint, while the back office and manufacturing sites ask for a more traditional lay-out. Also, across the globe there are several differences in customer and employee needs or in regulations. Therefore, when getting into more detail, the same overall objectives turn out differently for each specific situation.

Within T3 there's a hierarchical decision-making structure, because for each of the local projects an investment request with a business case has to be made and approved by the decision-makers that are responsible for that part of the business. Also, C-suite business leaders still decide on the main strategic directions of the different parts of the business and communicate this in the yearly meetings. However, by having a clear communication structure and yearly meeting with the steering committee and individual business leaders, the Real Estate Group is always up to date on the strategic directions and decisions of the business, and can thus ensure the CRE alignment horizontally and vertically. A summary of T3 Healthcare CRE alignment process, products and the stakeholders involved is shown in Figure 9.6. As can be seen, at T3 the business is involved in assessing the business fit of the CRE portfolio, as well as constructing and preparing RE plans and sending these in for approval.

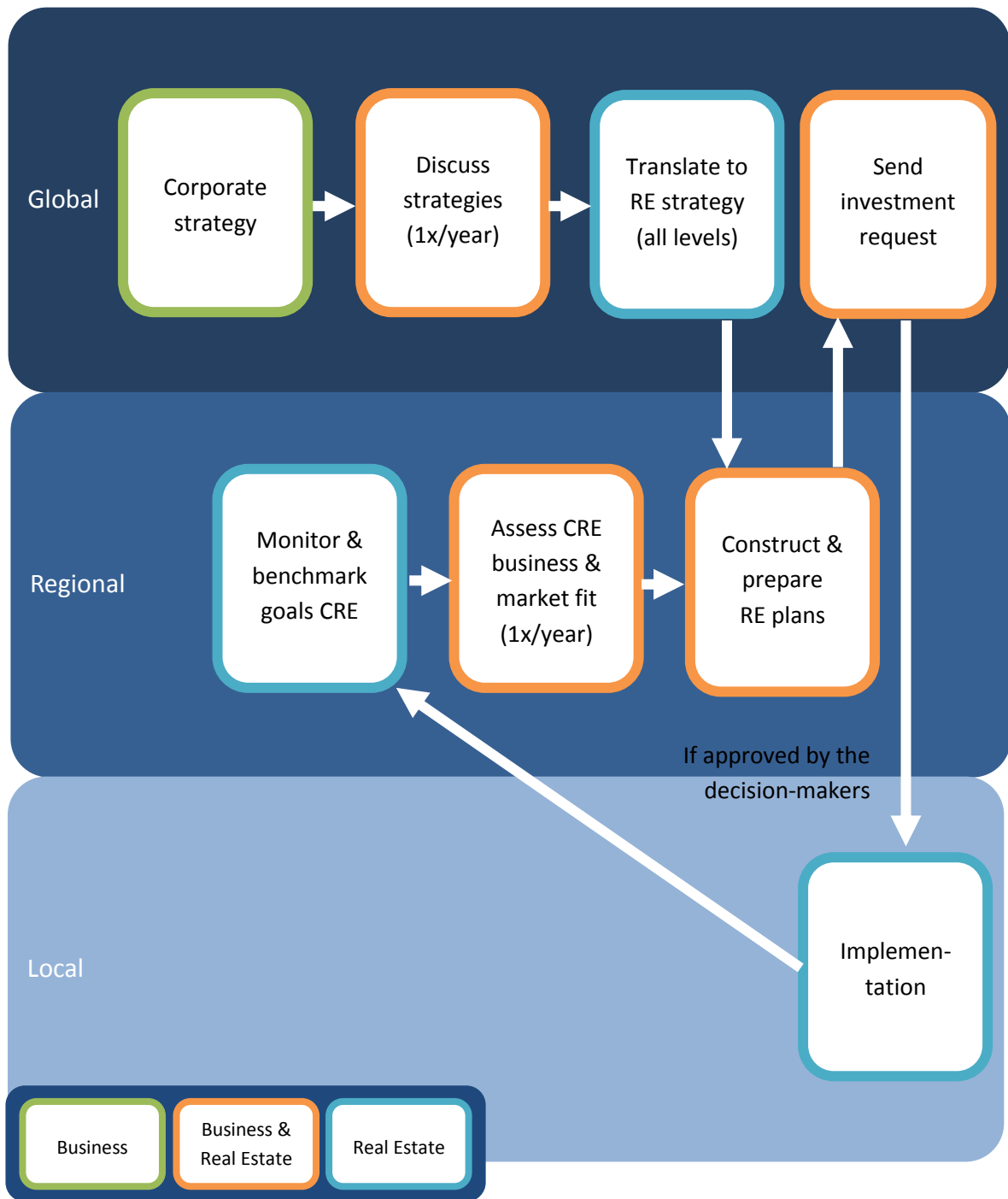


Figure 9.6 CRE alignment at T3, own illustration

10. Case study 5: F2

The full case study description of F2 can be found in Appendix 20. Below a summary is given.

Summary

F2 is a globally operating financial institution, that originates from a merger of two financial services firms 25 years ago. It's stock is publicly traded on the NYSE (New York Stock Exchange) and AEX (Amsterdam Stock Exchange). F2 serves approximately 32 million customers in more than 40 countries, ranging from individuals to public and private businesses of all sizes. F2 offers their customers products and services for retail banking, direct banking, commercial banking, investment banking, asset management and insurance services (F2, 2016a). F2 has strong market position in a number of European countries, especially the Benelux. They have also gained ground in other West-European countries and Australia, as well as further expanding in Eastern-Europe and Asia. F2 aims to expand further in the America's and Asia and strengthen their current market position in Europe over the coming years (F2, 2014b).

The financial services industry is dealing with a rapidly changing business environment. Three trends are mainly impacting F2 and their competitors. First of all, the uncertain economic conditions and low interest rates have impacted their financial performance. Secondly, changes in the regulatory environment are forcing banks to re-design their business models and look for new competitive advantages, due to changing cost structures and financial examinations. Third of all, digitalization and changing customer needs have reframed their markets. Due to changing customer expectations and increased mobility, clients are more willing and able to spread their financial services across multiple banks, which drives these banks to re-assess how they can best serve their customers (F2, 2014b). Besides that, technological developments have transformed the way F2 interacts with their customers. Digital services are influencing the financial industries income streams, since consumers are increasingly using these digital platforms, which subsequently also changes their expectations.

As can be seen in Figure 10.1, F2's corporate vision is empowering people to be a step ahead in life or in business and make smart financial decisions by making banking easy, clear and available at all times. They view themselves as a firm that is right at the core of society (F2, 2016b). Their corporate mission is to create a differentiating customer experience for their clients, constantly improving their products and services, while focusing on primary relationships (F2, 2014b). These primary relationships are the customers with a banking account and at least one other product of F2. The customer experience is mainly differentiated through the digital platforms, being based on accessible, easy and clear products, services and tools. This way, customers are best enabled to make sound financial decisions. The primary relationships, as well as the customer ratings, are used by F2 to benchmark themselves against peer banks in their leading European markets (F2, 2015a, p. 5).

F2's corporate business strategy consists of four main objectives to achieve the before stated vision and mission. First of all, F2 aims to streamline and simplify their organisation with short reporting lines and highly skilled employees to increase agility of the business. Secondly, F2 aims to increase their operational excellence, through clear benchmarks and performance measurements. The third strategic focus is on enhancing the internal performance culture to attract and retain talented employees as well as increase the pace of innovation. This way, new ideas can be coordinated and promoted, while new technologies and local best practices can be implemented and successful innovations can be delivered to the market more quickly. With these first three internal strategic

focuses, on the one hand the complexity of the firm is reduced, reducing the costs and increasing the performance, and on the other hand the products and services of F2 are improved. Furthermore, it helps with developing the internal analytical skills to understand their customers and customer needs better (F2, 2015a, p. 6). F2’s final corporate objective is focused on growing the business, developing new services and business models beyond traditional banking, lending by 4% annually and diversifying the asset mix (F2, 2014b).



Figure 10.1 Business summary, own illustration based on (F2, 2015a) (F2, 2016b)

Business organization

F2 organizes the countries they operate into three categories: market leaders, challengers and growth markets and develops the products, services and strategies accordingly, as shown in Figure 10.2. Market leaders are countries where F2 has obtained a market leader position, such as the Benelux. Challengers are countries in which F2 has been present for some time, but still aims to further strengthen their market position, which are several West-European countries and Australia. Growth markets are mainly strongly expanding economies that F2 believes offer growth opportunities for the business, such as East-European countries and Asia. Across these geographic categories, F2 has two separate divisions that offer retail and wholesale banking services (F2, 2016a). All of the geographic regions and the business divisions are serviced by global shared service teams, such as Finance, IT, Legal, Procurement and Real Estate (F2, 2016b).

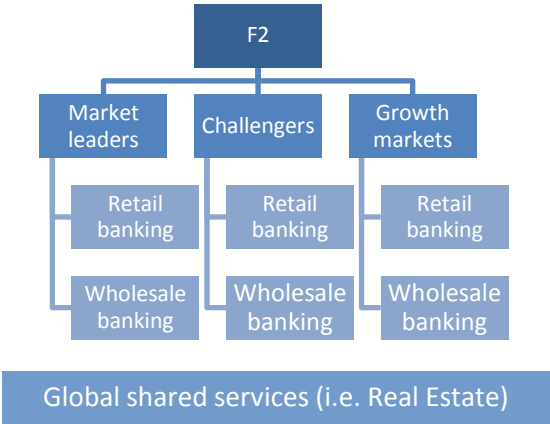


Figure 10.2 Business organization, based on (F2, 2016a) (F2, 2016b)

The Real Estate team is responsible for the management of F2’s CRE portfolio of 2.5 million square meters, spread across more than 40 countries. Within each country, the real estate leaders communicate with the business, but especially on the global level, the global Real Estate team makes

sure they stay close to the most important stakeholders of the bank by having regular meetings about strategic directions and plans. The head of the Real Estate team reports to the COO of F2, who is part of the global executive board, as seen in Figure 10.3 (F2, 2016b)

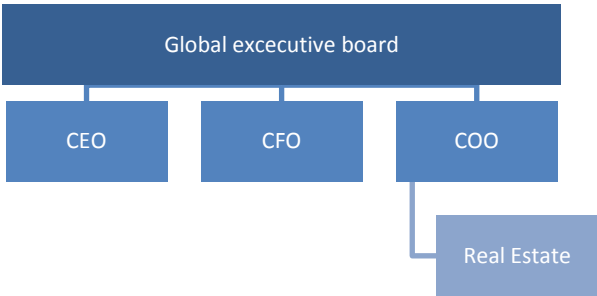


Figure 10.3 Reporting lines Real Estate, based on (F2, 2016b)

CRE needs

The CRE portfolio of F2 is subdivided according to four main functions: headquarter office, regional offices, banking retail locations and separate ATM locations, as seen in Figure 10.4. The head office is mainly used for the front office functions, while the regional offices are often in the same sites as the banking retail locations and offer the full range of office functions. The banking retail locations are mainly used for receiving customers and providing them products or services. In constructing strategies for the retail locations, aspects such as the customer in- and outflows are tracked. The separate ATM locations need the least management, especially finding a good location is important, after that, they can work separately (F2, 2016b). The real estate strategy thus differs per function, due to the differing needs, but also differs per country. This mainly has to do with the variety of products and services F2 offers and their different uptake and usage per country.



Figure 10.4 Conceptual image of real estate portfolio, own illustration based on (F2, 2016b)

CRE strategy

F2's CRE mission is to support the business in all of their needs and activities. They aim to do this through a portfolio that is fit-for-purpose, cost efficient, flexible, sustainable and satisfies the employees, as seen in Figure 10.5. Doing this, they should be able to support the needs, react to changes in business directions, as well as growth or shrinking the groups.



Figure 10.5 CRE strategy, own illustration based on (F2, 2016b)

Corporate sustainability in real estate

At F2, the corporate sustainability philosophy is mainly translated to the quality and efficiency of the buildings in their costs, space and work environment. F2's Real Estate group recognized over the past decade that exiting buildings is not something that can easily be done, due to its influences on society and risks of obtaining a bad reputation for leaving vacant or unusable buildings on the market. Therefore, they decided that whenever they exit a large building, they ensure further use for a different company or function. In some cases, the buildings can easily be rented or sold to other corporations, but if they are not suitable for office use anymore, are transformed to different functions such as housing (F2, 2015b). The transformation of the offices F2 decides to vacate is their main sustainable activity on the real estate level, because they are not putting any vacant buildings on the market and instead are adding quality spaces to the market supply with different or improved functionality.

CRE plans

In locations where the demand of the business and the supply of the real estate don't match, real estate plans consisting of several options are constructed and analyzed on their pro's and con's. In making these alternatives, the individual buildings that are either already in the CRE portfolio, or could potentially be interesting to add to the portfolio, are assessed on five different criteria. The most important criteria is fit-for-purpose, because the CRE should support the business to its best capabilities. The other criteria are flexibility, costs, sustainability and risks. Four of these criteria are thus the same as the CRE strategy. Only employee satisfaction is missing, because this is not possible to know about sites that are not yet occupied and risks is added, because this is important to assess in new projects.

When the position of mutual trust is obtained between the Real Estate team and the executive board and they share in-dept information on their business strategies and directions, the Real Estate team is able to construct and present CRE plans. For each new real estate plan, there is a set format that is used all across the firm to propose plans to the executive. If the format is not used, it will not be discussed by the board. Besides constructing the business case within the set format and performing the set analyses to formally present a plan to the board, in order to get this plan approved, support needs to be gathered from the most important stakeholders in the firm. This is something the Real Estate team does by having the regular meetings with the executive board and already discussing potential options and plans for the CRE at a very early stage, to give the board time to think about it and get enthusiasm about the possibilities (F2, 2016b).

Evaluation and re-initiation

The entire CRE portfolio of F2 is assessed by the Real Estate Group to check its suitability to the business. The criteria that are used in doing this are closely related to the CRE strategy. This information about the CRE portfolio and its suitability to the business is taken to the board of the bank and discussed, in order to check why certain trends are recognized and what the board thinks the future of F2 will look like. The information is either confirmed or extended with extra information (F2, 2015b). In locations where the demand and supply don't match, real estate plans consisting of several options are constructed and analyzed on their pro's and con's.

Over the past years, F2 Real Estate has documented for each of their buildings across the globe, what they call the 'building fixation', in which they look at the intrinsic building and the amount of primary (usable) square meters as compared to secondary square meters; the routing, staircases, bathrooms,

etcetera are not taken into account in the usable square meters (F2, 2016b). They then set this off against the lettable and total square meters and with the documentation of this data, F2 Real Estate is able to compare the usable square meters all across their portfolio, as well as negotiate better lease deals with their landlords, because they are able to show how many square meters they are paying for and which amount they can actually use. This does however make benchmarking against the industry and market more difficult, because this indicator is not used. Therefore F2, mainly benchmarks against themselves.

After examining the entire CRE portfolio on a portfolio and building level, the Real Estate team labels each of the individual buildings as 'target' or 'non-target' sites. Target sites are buildings where F2 aims to stay for a longer period of time, while non-target sites are buildings they would like to exit from, as shown in Figure 10.6. When a building is labelled non-target, a process are started to see when and how this building can be exited and whether it has a future as an office function or whether it should be transformed to a different function, to make sure it will not be left on the market vacant. Some of the non-target sites have a question mark label, which means the Real Estate group would like to vacate these sites, but is unsure whether the business agrees (F2, 2015b). These are mainly buildings where exiting the building would have large non real estate related consequences. In that case the Real Estate team will set up meetings to discuss the future of the buildings and whether they should be retained, renovated, refurbished, consolidated or exited from.



Figure 10.6 Portfolio assessment, based on (F2, 2015b)

Conclusions

Similar to many other firms in the financial services industry, F2 is dealing with a rapidly changing business environment. Three trends are mainly impacting their business. Uncertain economic conditions and low interest rates impact their financial performance and regulatory changes to cost structures and examinations are forcing banks to re-design their business models, look for new competitive advantages. Third of all, digitalization and changing customer needs have reframed F2’s markets and the services or products they need and expect. All in all, these trends drive F2 to re-design their business to become more agile and ensure a competitive and sustainable future for the firm. Diversification across geographies, products and services and growth stages of their business groups, increases the revenue mix and helps F2 meet the needs of a wide range of customers. This provides them with competitive advantage over many other banks in Europe.

Instead of organizing their firm across global regions, F2 organizes the countries they operate in according to their market presence and growth opportunities. All of the geographic regions and the business divisions are serviced by global shared service teams, such as Finance, IT, Legal, Procurement and Real Estate. CRE alignment at F2 is not quantitatively defined, but mainly in the behaviour of the business and Real Estate group, their mutual trust levels and governance structure. The dialogue that has grown over the past decade between business and Real Estate, enables Real Estate to fully understand the business and translate the business plans to real estate plans.

Real Estate management and strategic decision-making on it's CRE has only recently been centralized at F2. It used to be the responsibility of the local FM teams, but because the business mainly expect operational services from FM, this meant there was no encompassing CRE strategy, on top of missing communication between the local FM teams, who were therefore unable to learn from each other. Currently, F2 has a global CRE team that communicates with and gets informed by the various local businesses and FM. This is relatively easy, because they originate from the local FM teams and still know people working there. The global CRE team subsequently addresses the main CRE decisions about the whole portfolio, such as the type of locations and buildings, whether to invest or divest and whether to lease or own. They then construct plans to implement these strategic decisions, that are executed by the local teams. This way, the local stakeholders are involved in the CRE strategies and projects, while CREM decision-making, knowledge and skills transcend the countries.

F2's global Real Estate team is very pro-active in managing the CRE, especially when it comes to ensuring further use and uptake of the buildings they decide to exits. This is one of the main added values of having a centralized CREM department as F2, instead of organizing them in local FM teams. The business itself is not focused on the sustainability impact of exiting buildings and may not see the consequences of leaving a vacant or unusable building on the market. Also, in order to see and understand whether a building has a future as an office, or should be refurbished or transformed to a different function, one needs to understand real estate and it's characteristics. In order to grasp the full extent of the real estate portfolio, as well as constructing pro-active plans, insight in the real estate markets and their functioning is required. These skills are currently well-organized in F2's global Real Estate team.

Another advantage is that, since the Real Estate team has become a separate division from Facility Management, they still have a close relationship with FM. Because previously, there was no overview over the solutions all of the FM teams were using in their individual buildings and no encompassing strategy, the Real Estate team is now starting to stimulate the FM teams to not just perform employee satisfaction surveys, but examine in more detail which workplace solutions are successful and which are less successful. This will help them to learn across the CRE portfolio and obtain best practices. By documenting this, it can become a learning experience across the firm and the operational performance can be increased.

The entire CRE portfolio is monitored in a matrix showing each individual building according to a set of efficiency ratio's that are largely related to the CRE strategy (costs, space, headcounts) and characteristics of each building, such as their market value or lease duration, technical state, locational aspects and employee satisfaction rates. With this information, the Real Estate team labels each of the individual buildings as 'target' or 'non-target' sites. When a building is labelled non-target, a process are started to see when and how this building can be exited and whether it has a future as an office function or whether it should be transformed to a different function, to make sure it will not be left on the market vacant. Labelling the buildings thus helps in decision-making and (re-) initiation of projects. Figure 10.7 shows the CRE alignment process at F2.

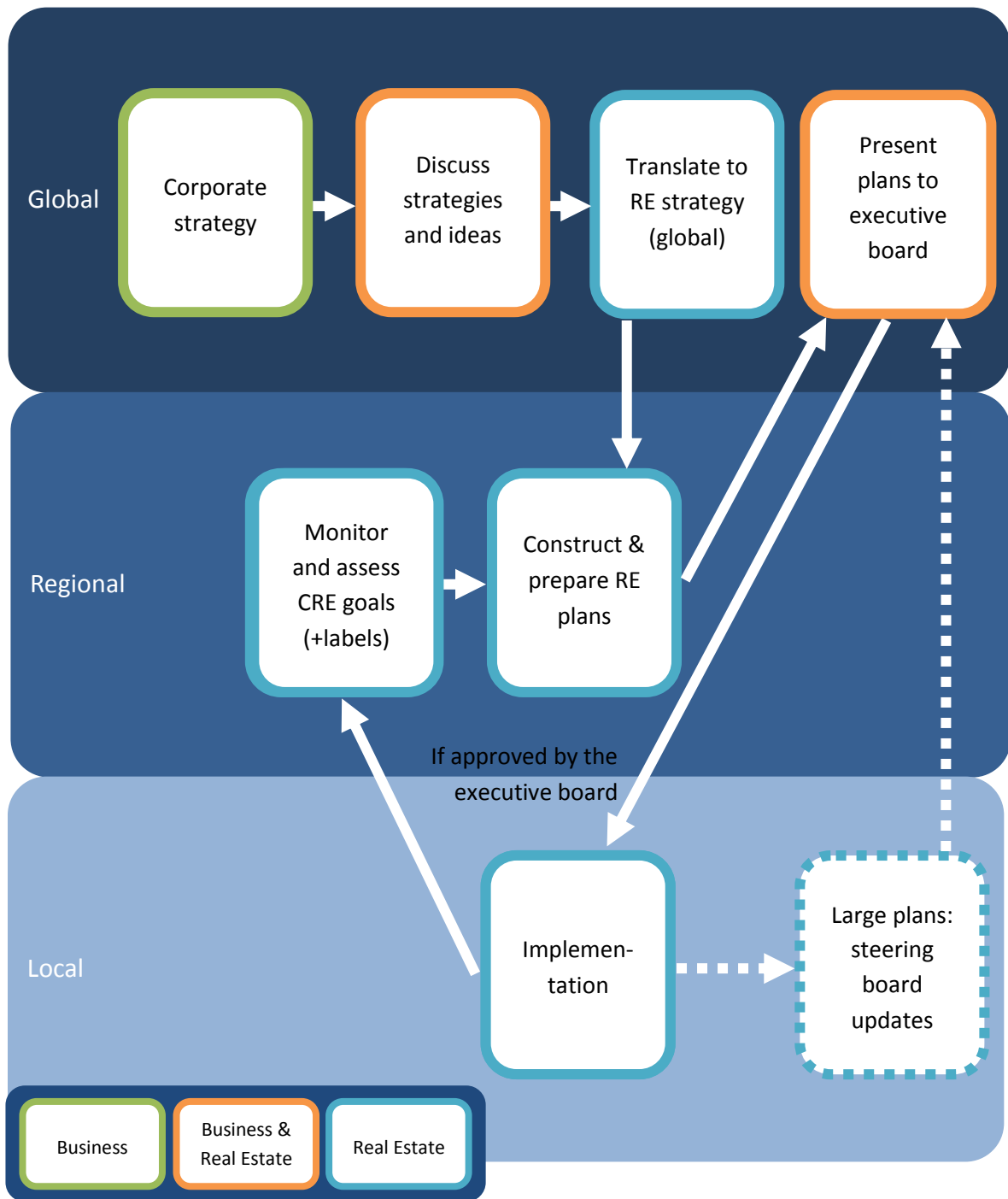


Figure 10.7 CRE alignment at F2, own illustration



E) SYNTHESIS

11. Individual cases compared to literature

In this chapter, the findings from each of the five case studies are compared to the findings from literature, by using the conceptual frameworks that have been made according to the main theoretical underpinnings, as shown earlier in chapter 3, Figure 3.12. After comparing the individual cases, a cross-case summary of the results is shown, to show the state of practice compared to the state of literature, according to these five cases. To find out these similarities and differences between practice and literature, as well as making sense of the data derived from coding the interview transcripts in Atlas.ti, both conceptual frameworks are filled in with the quotation count. The first conceptual framework is used to define the context of CRE alignment and the second conceptual framework to determine the components of CRE alignment at the studied multinationals. In making the comparison, each code, no matter how many times it is counted, counts equally, because this only shows how often the interviewees have mentioned something, which could be a coincidence or personal favourable subject to speak of. All of the codes thus count equally in explaining if a contextual factor or component (process or product) is taken into account in CRE alignment at the five multinationals.

11.1 The CRE alignment phenomenon

The first conceptual framework, from Heywood & Arkesteijn (in press), is essential in this analysis, because CRE alignment can be viewed or approached in different ways. In their article, Heywood & Arkesteijn analyze a variety of alignment models and summarize these in characterizing CRE alignment by four interrelated dimensions, that structure the wide range of understandings of CRE alignment. These dimensions show that alignment is multi-dimensional, multi-directional and can be viewed or approached in many different ways, explicitly or implicitly. With the quotation count derived from coding the interview transcripts in Atlas.ti, as can be found in Appendix 4, can be seen which codes are found in the transcripts. With these codes, for each of the multinationals their understandings of CRE alignment are defined, and thus the phenomenon. The comparison of the individual cases to the first conceptual framework is shown fully in Appendix 11.

Relationship

Figure 11.1 shows a summary of the findings across the cases, in which one can see that all but four of the codes were retrieved from the results from Atlas.ti, all of them being within the relationship dimension. Heywood & Arkesteijn (in press) show with this dimension how closely related the corporate strategy and the CRE strategy are, differing from a main emphasis closely related (consistency, integration and movement), utility (usefulness and strengthening), informed by the corporate strategy (awareness or derivation) and measurement (assessment). According to Heywood & Arkesteijn, in some of the models they compared in their article there was a relationship, but the link was undefined, or there was no relationship dimension mentioned at all. The latter two types 'no relationship' and 'undefined' were not found in the coding exercise of the interviews with the CRE managers of the five studied multinationals. It is likely that these dimensions are only possible in literature or at corporations who don't do CRE alignment for a variety of reasons, because within this research, the CRE managers of the five multinationals were interviewed specifically about the way they approach and perform CRE alignment, which means at some point within these interviews they will mention some type of relationship between the CRE and corporate strategy, which is then found either directly or implicitly in the interview transcripts by using the different descriptive values.

The other two relationship dimensions that were not retrieved from the coding exercise were 'derivation' and 'integration'. There are three possible explanations for this: they may not appear in practice at the five studied multinationals, or they may be apparent but not mentioned by the CRE managers within the interviews, or they may be apparent and mentioned, but not be retrieved from the interview transcripts in the coding exercise in Atlas.ti, due to the descriptive values that were used. The third option is not likely, because the descriptive values to code the interview transcripts were derived from a variety of literature sources, looking for synonyms and performing a pilot coding study. This iterative process improved the coding scheme several times, so it should encompass the correct descriptive values for the set of codes. For 'derivation' the second explanation is most likely, because from the CRE alignment schemes it can be seen that this relationship is definitely present in CRE alignment at all of the studied multinationals, if not one of the most important relationships. It is possible that derivation or its descriptive values were not mentioned in the interviews, because the interviewed CRE managers always derive their CRE strategy from the corporate strategy and therefore assume it to be common knowledge or logical information, which they thus don't mention (implicitly or explicitly). The relationship dimension of 'integration' on the other hand, has also not been retrieved and may not appear in these five case studies, at least how it was interpreted within this research. Here, 'integration' is seen as the corporate strategy and CRE strategy being integrated and becoming one, and in all studied cases the CRE strategy is and will remain to be something separate from the corporate strategy. They have therefore been assumed as not integrated or becoming one, because the subjects of the strategies differ. However, if 'integration' was interpreted otherwise, for instance as the CRE strategy being included in the corporate strategy, or the other way around, other descriptive values may have been selected, and the results may have been different.

When looking further into the quotation count of the first conceptual model, as derived from Atlas.ti and shown in Appendix 11 between brackets next to the codes, even though the number of quotations doesn't matter in qualitative content analysis, at each of the studied multinationals, an emphasis may be recognized towards certain relationships. Out of the five, T1 has the least emphasis towards a specific relationship type. At F1 the emphasis is towards measurement. T2 emphasizes there is a close relationship between the corporate strategy and CRE strategy, mainly mentioning it to be consistent and moving together. T3 emphasizes the utility relationship and F2 both the awareness and utility relationships between the CRE and the corporate strategy.

Form

Secondly, the form of alignment is defined in the conceptual framework. Heywood & Arkesteijn (in press) state that CRE alignment can occur in one or multiple forms at once. According to this article, most of the time an alignment plan consists of a process which leads to a change in state, so these three forms of alignment often occur together and are called the plan-based form of alignment. The CRE manager of T3 confirmed this statement and called a plan a useful communication-tool (T3, 2016a). However, Heywood & Arkesteijn (in press) also state that the plan-based form of alignment may limit the capability to react flexibly to changes in circumstances, since the approach may be quite rigid, especially in rapidly changing business environments. This would then mainly be the case in the examined technology firms T1, T2 and T3. According to the CRE managers of these technology firms however, this is not the case, because their strategies are discussed at least once every year, after which they evolve by adaption or re-design (T1, 2016)(T2, 2016b) (T3, 2016b). As explained earlier in Chapter 2, Heywood & Arkesteijn (in press) state that ideally CRE alignment consists of all four forms, but that this may not be possible to achieve in practice, because they thus differ in

flexibility. However, from the results of the 5 case studies it can be concluded that at these five multinationals, the four forms of alignment are combined, with a slight nuance in emphasis amongst them. When interpreting the findings from Atlas.ti, one could conclude that F2 has the least emphasis towards an artefact/plan, mainly mentioning the behaviour, process and state. T1, T2, F1 and T3 truly have a mixed form of alignment. None of the studied cases has a specific focus on the plan- or behaviour-based form of alignment, as seen in Appendix 11.

Cognitive objects

The cognitive objects within the third dimension show which entities are actually being aligned. As stated by Heywood & Arkesteijn (in press), to ensure full alignment, all six entities should be aligned to each other, which then requires nine alignment actions or at least checks to ensure they are brought into agreement, which they expect may also be difficult in practice. Because within this research the six individual cognitive objects have been used as the main codes in the coding scheme shown in Appendix 3, and not the nine alignment actions or checks, based on these five case studies it can only be concluded that at each of the studied multinationals all six cognitive objects are being used within CRE alignment. However, from the results of the coding exercise in Atlas.ti it could not be derived which entities are being aligned to which. It would therefore be a good opportunity for further research to look into the nine alignment actions or checks to see which entities are getting aligned to which in practice, instead of just the awareness or use of the cognitive objects.

Within the interviews the CRE managers of all five studied multinationals often mentioned the cognitive objects that have to do with the CRE, it's strategy, objects or management, up to two times as much as the cognitive objects that are business-related. This may be explained by the fact that it is their job to understand and align the CRE cognitive objects, while the business strategy, performance and needs are not their responsibility. However, they all make sure the CRE cognitive objects are aligned to all of the business cognitive objects, with some nuances in emphasis towards certain objects. Within the CRE dimension, T1 and F1 emphasize mainly their CRE objects, while T2 emphasizes CRE management and T3 emphasizes both. F2 does not have a specific emphasis.

Directionality

Finally, at all of the studied multinationals the CRE alignment is multi-directional, both internally, externally, horizontally and vertically. In this dimension, there are also differences in emphasis at each of the multinationals, but all of them have multi-directional processes in place, meeting with different stakeholders from the other support functions or various divisions within the company, in order to take their wishes and needs into account, to best support the business and/or make sure the CRE portfolio is optimized. T1 mainly emphasizes internal horizontal alignment, across the various business units and with the other support functions, which can be explained by the way they are organized in Global Shared Service Centres. T2 and T3 emphasize both internal horizontal and vertical alignment, having meetings in place with both their horizontal peers, as well as the board and local level groups. F1 and F2, both of the financial services firms, emphasize mainly vertical alignment, both bottom-up and top-down within the firm, by also meeting with the board and local level groups. Alignment with external stakeholders is mentioned least by the interviewed CRE managers, although it does occur at all of the studied multinationals. This may be explained by the fact that the involvement of external parties is not included in their own job description, but happens at lower levels within the company. They may therefore not have a lot of information about this or interest in it, because it is not their responsibility.

Conclusions

Across the cases, there may be slight differences in emphasis between the various dimensions of CRE alignment and the way it is done, viewed and experienced by the interviewed CRE managers at these five multinationals, but in general the results confirm the statement from the article by Heywood & Arkesteijn (in press) that the phenomenon of alignment is multi-dimensional: it has multi-valent relationships, multiple forms, multiple cognitive objects and multi-directional, both in practice and in literature. Both in literature and practice, the phenomenon is not and doesn't have to be defined in order to research or practice it.

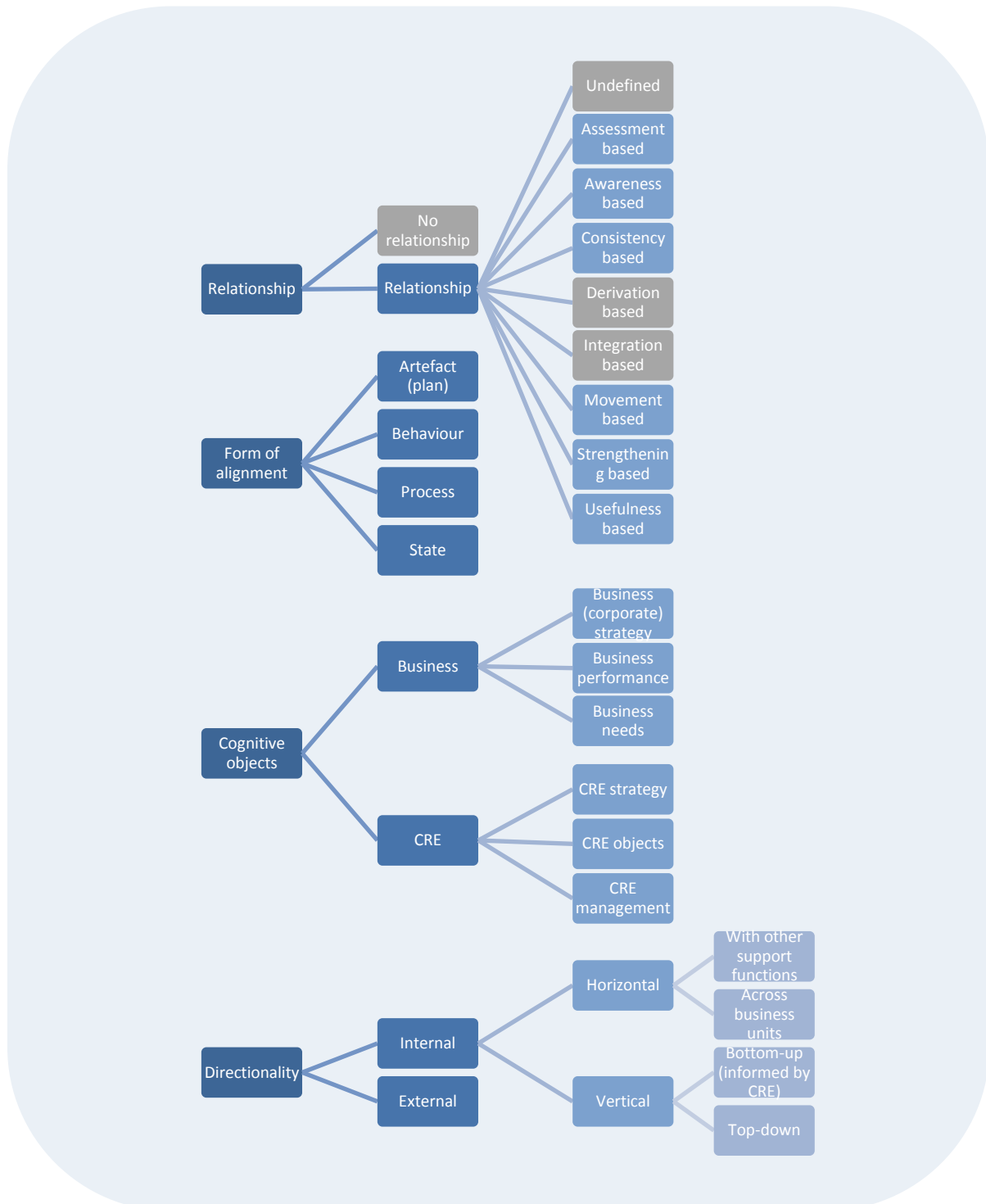


Figure 11.1 General findings conceptual framework 1, own illustration as derived from Atlas.ti (Appendix 4)

11.2 Main building blocks and components

In the second conceptual framework, as shown earlier in Chapter 2, Figure 2.5, Heywood (2011) and Arkesteijn & Heywood (2013) summarize the set of CRE alignment models from literature that they examined into 4 main building blocks and 12 components. The main building blocks represent the (iterative) processes that take place in CRE alignment and within these blocks, they subdivide the 12 main components of CRE alignment, representing the different sub-processes and products (inputs or outputs). Strategic momentum, after Appel-Meulenbroek & Haynes (2014), has been added to the framework by the author, because the encompassing and iterative characteristic of the process could not be directly recognized in the framework yet, although it was stated in text by Arkesteijn & Heywood. Similar to conceptual framework 1, the 17 aspects (main building blocks, components and arrow) of conceptual framework 2 have been used as the main codes when coding the interview transcripts in Atlas.ti, in order to find out whether these processes and products as derived from literature are actually used in practice by the studied multinationals. The full comparison to each individual case can be found in Appendix 12.

Understanding corporate strategy

The first building block encompasses the process for the CRE manager to fully understand the corporate strategy, in order to establish the context in which decisions are made and to be able to compare the CRE supply to the needs coming from the business (Heywood & Arkesteijn, 2013). When examining the quotation count as retrieved from Atlas.ti however, in most cases one or two components of the first building block were not found in the coding exercise. In four out of five cases 'business drivers and forces' was not retrieved, this code was only mentioned by T1. In one out of five cases 'strategic triggers' was not mentioned, which was the F2 case. This could possibly be explained by the fact that corporate strategy always, both directly and indirectly, takes its shape through the business drivers and forces and strategic triggers, therefore these two components may not be found in the coding exercise of some of the interview transcripts. It may also be the case that some CRE managers assume this is not their task, because it already belongs to the business leaders constructing the corporate strategy. However, obtaining an understanding of these components for CRE managers is essential in order to get a full understanding of the business and the corporate strategy (Heywood, 2011). 'Internal strategic drivers' is retrieved in each of the studied cases, as seen in Appendix 12, because this component also relates to the organizational structure of the firm and the position of the CRE department in relation to the business, which is something that does affect the CRE managers and the way they (can) perform their job.

Understanding real estate performance

As Arkesteijn & Heywood (2013) explain, the main challenge of CRE managers is to attain a CRE portfolio that is able to support the current business processes and objectives, while remaining flexible to also meet future needs. The second building block therefore encompasses the process for the CRE manager to fully understand the current real estate performance, which can then be compared to the components of the first main building block, in order to find the (mis)match between supply and demand. All of the components in the second building block, 'audit of existing real estate', 'assess the effect of CREM action' and 'real estate market data', have been retrieved from the coding exercise in Atlas.ti for each of the five studied multinationals.

Designing real estate strategy

Within the third building block, focused on the design phase of the CRE strategy, the component 'strategy integration' was not retrieved from the coding exercise in Atlas.ti for all five studied cases. The explanation may be similar to that of the first conceptual framework, as shown in Figure 11.1, where the relationship dimension 'integration' was also not retrieved. Here also, the component may not be found due to the fact that within this research 'integration' was interpreted as the corporate strategy and CRE strategy being integrated and becoming one, which was not the case at any of the studied multinationals. However, if 'integration' would have interpreted otherwise, other descriptive codes may have been used and the results may have differed.

Implementing real estate strategy

The components in the fourth building block were both retrieved from the coding exercise and thus apparent within the CRE alignment at each of the multinationals. These two components have produced a high number of similar quotations, which may mean they are closely related, if not acting as one, in practice. Besides the fact that they are used in practice, none of the interviewed CRE managers was able to explain in much detail the implementation of the real estate strategy, because they all work at a higher level of abstraction, at the global level within the firm. Whenever CRE plans are made, they are implemented on the local level and thus given down to local teams or outsourced to local providers. The CRE managers thus have little influence or overview on the actual actioning of the real estate intervention or lower level CREM practices, besides making the encompassing plan.

Strategic momentum

The addition of the arrow containing the iterative process, or 'strategic momentum' as it is called by Swayne, Duncan & Ginter (2006), below the framework by Heywood (2011) and Arkesteijn & Heywood (2013), visualizes this, according to literature, important characteristic of CRE alignment. In practice this characteristic also appears to be important. Although only mentioned often at T3, at each of the studied multinationals, the strategic decisions, managerial actions and/or CRE portfolio are evaluated after implementation of plans, which leads to learning and an iterative process of new strategy and project initiatives.

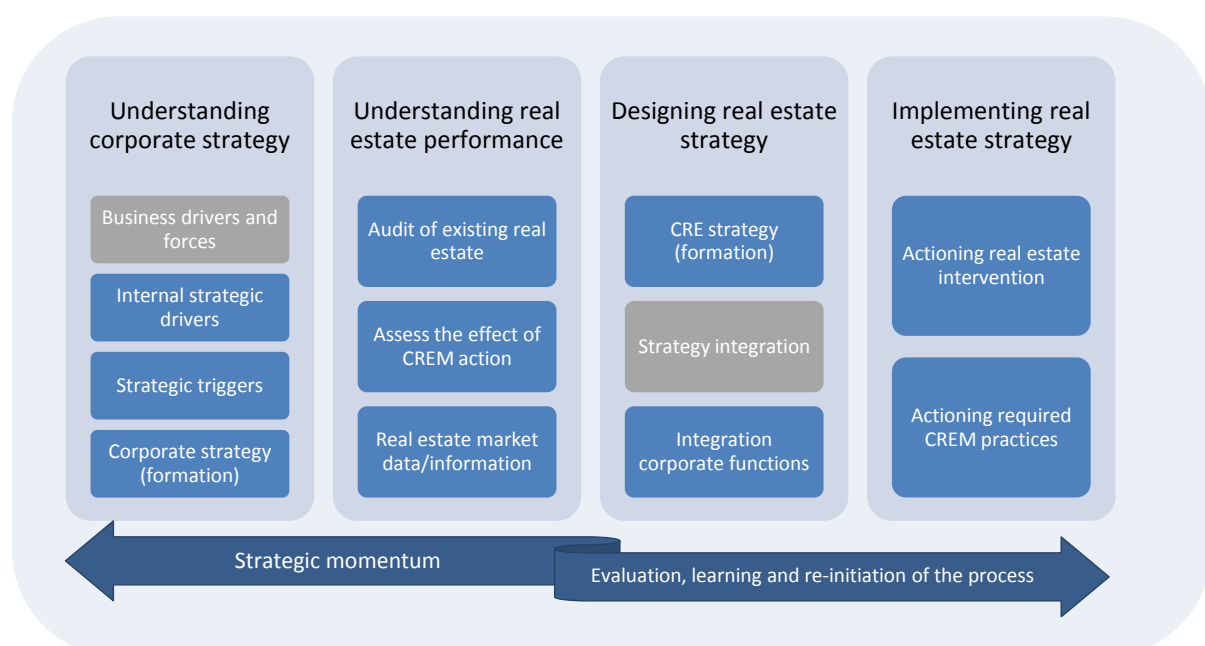


Figure 11.2 General findings conceptual framework 2, own illustration as derived from Atlas.ti (Appendix 4)

Conclusions

Because corporate strategies are very diverse, depending on the core business, organization, drivers and competitors of that specific firm, the alignment of CRE strategies with the business is closely related to the organizational context (Osgood, 2003). CRE alignment may therefore differ greatly between firms. However, based on the results from the five case studies that were undertaken in this research, it appears that Heywood and Arkesteijn have provided a framework with main building blocks and components that shows which entities are used in CRE alignment, with the exception of two components, and can be used by practitioners as guidance in approaching and performing CRE alignment across different industries, when made specific to the firm's characteristics.

Recommendations

Based on the results from the five cases, there may still be possibilities to further improve the conceptual framework shown in Figure 11.2, mainly concerning its visualization. Because the three components in the first building block 'business drivers and forces', 'internal strategic drivers' and 'strategic triggers' are the basis inputs for the 'corporate strategy' and its formation, it may be an option to show them as bullet points underneath or input blocks in front of the 'corporate strategy (formation)' component, in order to visualize the relationship between these four components.

Something that could be made more explicit in the first or second building block, which is explained in text by Heywood (2011) and Arkesteijn & Heywood (2013) and was mentioned often by the interviewed CRE managers as a key task is 'understanding the RE needs'. This can currently not be directly interpreted from the components in either the first or second building block. Obtaining a deeper understanding of the requirements and wishes of the variety of business divisions for the CRE portfolio is essential for CRE managers to best support the business. It may be an improvement to add a component of 'understanding the RE needs (from the business)', or add it to one of the current components, making the text within the component more explicit. Furthermore, the name 'assess effect of CREM practices', may not be the ideal designation for this component, because the literal interpretation of this component would be the measurement of the past or future effects of CREM. However, the interviewees stated that they did not literally measure these effects, because it is difficult to measure management aspects, since these are not necessarily quantifiable. They did state that they made sure they understood the effects of different CREM actions. It may therefore be an option for improvement to consider a slight name change from 'assess' to 'understand'.

Based on the results, the component 'real estate market data/information', appeared to belong to the second building block, but be used in mainly in the third building block. It may therefore also be an improvement in visualization to have it cross over both building blocks. However, potentially an even better solution may be to visualize the lay-out of the main building blocks and components differently, because currently, there seems to be a division of the components within the building blocks, while Arkesteijn & Heywood (2013) underscore there is not a specific order in the main building blocks or components. At each firm, the components may appear or can be used in different blocks (phases). A different lay-out and visualization may make the framework easier to use for CRE managers, enabling them to fill in the details of their own firm and shuffle the components around, deciding on the sequence of the processes and inputs or outputs (products) themselves. However, further empirical analysis should show whether these recommendations are indeed an improvement and provide the needed guidance to CRE managers in practice, especially since the CRE managers of the studied multinationals stated currently not to base their practices on any model from literature.

11.3 Overlap in conceptual frameworks

During the composition of the coding schemes and the coding exercise itself, overlap was found between the two conceptual frameworks. Some of the codes in the first and second coding scheme had the same descriptive values, thus leading to equal quotations. This should be avoided to obtain clear and consistent results, since both conceptual frameworks have a different objective. However, when the overlap was found, due to time constraints it was decided to use the frameworks as they were originally set up. This does mean that in further research the frameworks should either become one or the overlap should be removed. Since they describe the phenomenon of CRE alignment on the one hand and the main building blocks and components (processes and products) on the other hand, it would be best to retain two separate frameworks. Gemino and Parker (2009) also suggest that using multiple frameworks can have benefits over using a single conceptual framework, because it enables a more complete understanding of the subject under study. Siau and Lee (2004) however, state that this is only the case when there is little overlap in the information in the frameworks.

Removing the cognitive objects dimension from the first framework would eliminate most of the overlap, as shown in Figure 11.3. All of the business and CRE cognitive objects overlap with one or multiple components from the second conceptual framework. Removing the cognitive objects and possibly making these components more explicit in the second conceptual framework, means the phenomenon of CRE alignment is described with the remaining three dimensions: the relationship, form and directionality. Based on the results discussed in section 11.1, it can be concluded that these dimensions are indeed able to show the multi-dimensionality of CRE alignment. The relationship and form of alignment can't become a main building block or component, because they are not a process or product. Only the directionality dimension may be examined and discussed whether it describes a phenomenon or entails components. While internal vertical alignment describes a phenomenon, internal horizontal and external alignment could be captured by the second conceptual framework, because they can be components. Two out of three already overlap: 'internal horizontal with other support functions' with 'integration corporate functions' and 'external' with 'RE market data'. Further improving the conceptual frameworks would mean removing the overlap, and capturing the aspects that may not yet be covered/explicit in the frameworks, as mentioned in section 11.2. However, further research is needed validate these recommendations to the conceptual frameworks.

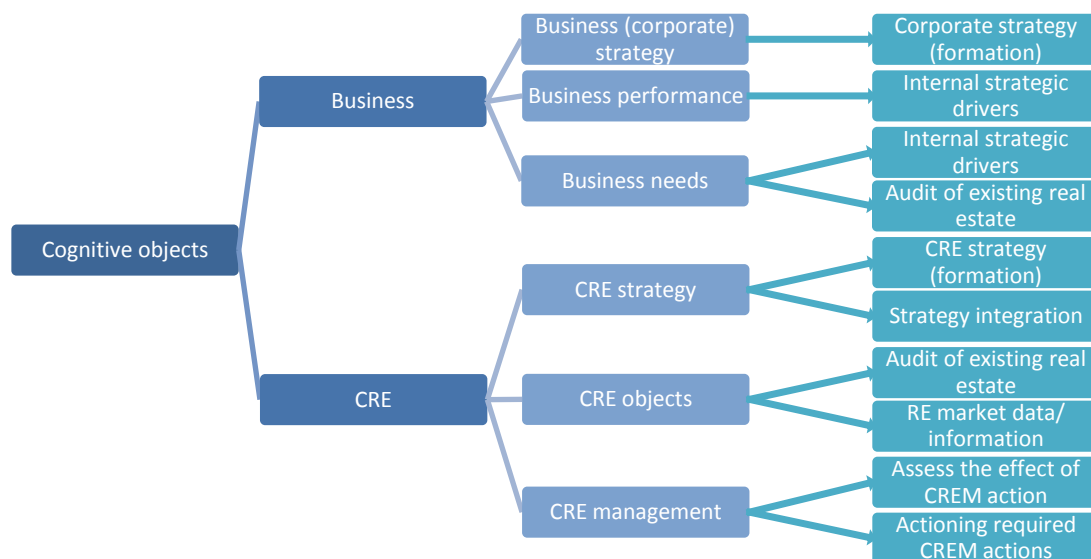


Figure 11.3 Overlap in codes conceptual frameworks, own illustration

12. Cross-case analyses

12.1 Quantitative characteristics

In order to make a comparison between the individual cases, first of all, it is essential to establish the characteristics of these multinationals, as seen in Table 12.1. T1, T2 and T3 are active in the technology sector, while in varying industries and thus serving different markets. F1 and F2 are both active in the financial services sector and banking industry. F1 and T3 are the oldest firms, being founded respectively 181 and 125 years ago, while T1, T2 and F2 have been founded respectively 39, 32 and 25 years ago. The three technology firms have spread across most countries globally, obtaining a presence in at least 100 different countries, while the financial services firms are present in 30-40 different countries on a global level. T1 and T2 are currently in their business development phase focusing on growth and expansion, while F1 and F2 are more mature businesses, already past their expansion phase. T3 got to the phase of business decline and has therefore set in a large reorganisation of the firm in 2014. The amount of employees is highest for T1, employing over 130.000 people, followed by T3 with 100.000 and T2 with 70.000. Again, the financial services firms are comparable, both employing around 50.000 people.

All of the studied multinationals are publicly traded on a variety of stock markets. Their financial performance can be expressed by their market capitalization, share price and earnings per share. T1 and T2 have the highest market capitalization, of €150 and €120 billion, while the financial services firms F1 and F2 are both worth about €50 billion and T3 €25 billion. The share price of T1 is highest, at €35, while T2 and T3 shares cost around €25 and F1 and F2 costs €15 per share. The earnings per share are also highest at T1, at €2, F1 following at €1,75, T2 €1,50, F2 at €1,25 and T3 at about €0,75. Investing in shares of these companies pays off most at F1 and F2, where the EPS compared to the price is around 10%. At T1 and T2 this is about 6%, due to the higher share prices and at T3 just 3%, due to the low EPS. The profit per FTE is highest at T2, at almost €115.000, being followed by F1 and F2 at €95.000, T1 at almost €70.000 and T3 just €6.000, due to their high operating expenses, low profits and high number of employees. Looking at the financial performance, it can be concluded that both financial firms perform similar, while the technology firms also have a comparable performance on different aspects, especially T1 and T2. T3 performs most different from the other companies.

The actual profitability of the five multinationals can be defined by four profitability ratio's, the net profit margin (NPM), operating expenses to revenue and return on stockholder equity (ROE). The NPM, which is the ratio of net profit compared to total revenue, tops at almost 40% for F1, stays slightly above 25% for T1 and F2, while being 18% for T2 and 3% for T3. This means that the operating expenses compared to the total revenue are highest at T3, which is also shown in the second profitability ratio, with operating expenses being more than 95% of the total revenue. The others range from 78% at T2 and 65% at T1 to 46% at F1 and 30% at F2. Finally, the ROE is highest at F1 at 26%, while being 20% at T1, 15% at T2, 11% at F2 and again lowest at T3, being 5%. It can be concluded that especially the financial services firms are steadily operating healthy firms, followed by T2 and T1, while T3 has went through some tougher times as a firm.

The expenses on property, plant and equipment (PPE) each year are similar for T1 and T2, around the €3 billion, while T3 and F2 spend €2 billion and F1 €1,5. While the expenses differ between T1, T3 and F2 all occupy a similar amount of square meters; around 2,5 million m². This information could not be retrieved for F1 and T2, but since they have similar PPE costs, it is expected they also occupy

2-2,5 million square meters of space. The amount of buildings in the CRE portfolio of T2 and T3 is about 600 sites, unfortunately this could not be shared by T1, F1 and F2. Here may also be assumed they have an equal number of sites in their portfolio. Comparing the PPE expenses to total yearly revenue, for both financial services firms it's around 11%, while T1 and T3 are about 10% and T2 7%. However, when comparing the PPE expenses to the non current assets, both of the financial firms drop below the 1%, because they have a very high amount of non current assets. The technology firms T1, T2 and T3 range from 7,7% to 9,0% and 12,7% respectively. The expenses on property, plant and equipment (PPE) per employee are similar for T2 and F2, around the €40.000, while also being similar at T1, F1 and T3, around the €25.000.

| | T1 | F1 | T2 | T3 | F2 |
|--|--|---------------------------------------|---------------------------------------|--------------------------|--------------------------|
| Main characteristics | (T1, 2015a)(F1, 2015a)(T2, 2015a)(T3, 2015)(F2, 2015a) | | | | |
| Sector | Technology | Financial | Technology | Technology | Financial |
| Industry | Software & IT | Banks | Networking Tech | Health Tech | Banks |
| Founding year | 1977 | 1835 | 1984 | 1891 | 1991 |
| Global presence | 145 countries | 33 countries | 165 countries | 100 countries | 40 countries |
| Development stage | Growth | Mature business | Growth | Decline (split) | Mature business |
| Number of employees | 132.000 | 50.000 | 70.000 | 105.000 | 53.000 |
| Financial performance | (NYSE, 2016a, 2016b, 2016c, 2016d)(ASX, 2016)(Yahoo Finance, 2016) | | | | |
| Market capitalization | \$ 163,3 billion = € 146,1 bill. | \$ 71,5 billion = € 49,0 bill. | \$ 133,4 billion = € 119,3 bill. | € 24,1 billion | € 45,0 billion |
| Price of share | \$ 39,36 = € 35,20 | \$ 24,70 = € 16,93 | \$ 26,51 = € 23,71 | € 26,42 | € 11,64 |
| Earnings/share (EPS) | \$ 2,21 = € 1,98 | \$ 2,51 = € 1,72 | \$ 1,75 = € 1,57 | € 0,70 | € 1,27 |
| EPS/price ratio | 5,6 % | 10,1 % | 6,6 % | 2,7 % | 10,9 % |
| Profit per FTE | \$ 75.287 = € 67.005 | \$ 144.000 = € 96.480 | \$ 128.300 = € 114.187 | € 6.143 | € 92.943 |
| Profitability ratio's | (NYSE, 0216a, 2016b, 2016c, 2016d)(ASX, 2016)(Yahoo Finance, 2016) | | | | |
| NPM | 26,0 % | 37,7 % | 18,3 % | 2,7 % | 27,4 % |
| Opex to revenue | 63,7 % | 46,4 % | 78,1 % | 96,0 % | 30,2 % |
| ROE | 20,4 % | 26,4 % | 15,0 % | 5,5 % | 11,0 % |
| Corporate real estate | (T1, 2015a)(F1, 2015a)(T2, 2015a)(T3, 2015)(F2, 2015a) | | | | |
| Property, plant and equipment (PPE) | \$ 3.686 million =€3.280 million | \$ 2.221 million = € 1.488 million | \$ 3.332 million = € 2.965 million | € 2.322 million | € 2.027 million |
| PPE to revenue | 9,6 % | 11,2 % | 6,8 % | 9,6 % | 11,3 % |
| PPE to non curr. assets | 7,7 % | 0,3 % | 9,0 % | 12,7 % | 0,4 % |
| PPE per employee | \$ 27.924 = € 24.852 | \$ 44.420 = € 29.761 | \$ 47.600 = € 42.364 | € 22.114 | € 38.245 |
| Portfolio (sites) | - | - | 600 | 600 | - |
| Amount of m² | 2.600.000 m ² | - | - | 2.400.000 m ² | 2.500.000 m ² |

Table 12.1 Quantitative characteristics, derived from multiple sources as shown in headers

12.2 CRE strategies

In order to compare the CRE alignment at the studied multinationals, first of all their CRE strategies are compared. These strategies all contain a mission, sometimes consisting of multiple aspects, and several aims and objectives. The objectives explain how to achieve the aims. As shown in Figure 12.1, the main CRE missions of the technology firms T1, T2 and T3 are all focused on providing quality workplaces to support and enable the business and it's employees, since this is the main task of the CRE department. T1 and T2 also state how they do this, by providing quality services to the business and T2 goes into more detail by mentioning four characteristics what these quality workplaces should be or become (innovative, scalable, agile and connected). T3 is the only firm that has a specific focus on CREM, in which their mission is to obtain trust and recognition as a business partner. Financial services firm F1 has a commercial focus in obtaining global consistency in the workplaces and their operations, to delight the customer. The commercial focus as well as global consistency both show the firm is aiming for centralization. While the others mainly focus on the workplaces and services towards the business and it's employees, this is the only firm specifically mentioning the customer. F2 has a more abstract mission, mainly focusing on the CRE objects. The column on the right of Figure 12.1, 12.2 and 12.3 shows the main conclusions on the five CRE missions, aims and objectives. As can be seen, the missions of the technology firms T1, T2 and T3 are fairly comparable, although getting less abstract in that order. Financial services firm F2 is also fairly abstract and F1's mission differs most, focusing on centralization and on the customer.

| | | |
|------------|---|---|
| Mission T1 | <ul style="list-style-type: none"> •Deliver high quality services •Deliver high quality workplaces | Abstract, workplaces and services |
| Mission F1 | <ul style="list-style-type: none"> •Commercial focus, global consistency and delighting the customer | Centralization and focus on customer |
| Mission T2 | <ul style="list-style-type: none"> •Providing innovative, scalable, agile and connected workplace services and solutions to enhance the employee experience | Characteristics workplaces and services |
| Mission T3 | <ul style="list-style-type: none"> •Create great places to work, that support and enable the business •Be the recognized and trusted business partner of T3 | Workplaces, services and CREM |
| Mission F2 | <ul style="list-style-type: none"> •Obtain a CRE portfolio that best supports the business | Abstract, focus on CRE objects |

Figure 12.1 CRE missions, based on (T1 Real Estate & Facilities, 2015c) (F1 Global Group Property, 2015b) (T2 Workplace Resources, 2015) (T3 Real Estate, 2016c) (F2, 2016b)

As seen in Figure 12.2, the CRE aims of T1 are not literally translated from the mission, while those of F1, T2 and T3 are a more detailed explanation of the mission. T1's CRE aims are at a high level of abstraction and unlike their mission mainly focused on CREM and their services, aiming for high performance, best practices, innovation and proactive strategic plans. These aims are not specific for T1 and may as well have been the aims of any other corporation. F1 has similar high level aims and summarizes them in three categories: business agility, scalable services and greater asset value, each of them including one sentence explanation. It seems that unlike their abstract mission, within their CRE aims, F1 does have a focus on workplaces and services, which the other multinationals did mention clearly in their mission. Further F1's aims explain the mission of centralization and customer focus. F2 also has abstract CRE aims, which are a translation of their mission, focusing mainly on the

CRE objects instead of the lower level workplaces and the services. F2 and T2 are the only firms amongst the five studied multinationals that mention measurable CRE aims. At T2 these are operational effectiveness, employee experience and engagement and profitability and efficiency of the CRE at this level. These are the main themes T2 uses to categorize the criteria (KPI's) and benchmarks they use in measuring the RE performance, as can be seen in Figure 8.11 in the full case study description of T2 in Appendix 8. Out of all multinationals, T3 has the most extensive and concrete list of CRE aims guiding the CRE team, at a much lower level of abstraction, with a detailed description of the characteristics of the mentioned aspects. The first five aims are focused on the CRE portfolio, optimizing it's footprint, transactions, construction projects, workplace solutions and facility management. The last three aims on the CRE management are about enhancing the CREM systems, cooperation with Finance and CREM operating models.

The five studied multinationals have all translated their CRE aims to CRE objectives, again with different levels of abstraction, as can be seen in Figure 12.3. At T1, the CRE objectives are translated from the CRE aims, but still very abstract. As stated in the case study description, T1's CRE strategy is mainly focused on guiding the CRE team in their CRE management, their aims and objectives are not meant for translation to actual lower level RE plans, because these plans come forth from the various studies done for the business by the RE group. The CRE aims and objectives at T1 are therefore very similar to the 9 operating principles they work with, as can be further read in Appendix 6. At F1 on the other hand, the CRE aims are explanations, translated down to CRE objectives that are the main guidelines for new RE plans and CREM, focusing on establishing a variety of CRE, optimizing space and costs, optimizing internal connections, operations and resourcing, and creating agile buildings and workplaces. These CRE objectives are then translated all the way down to the local level by the responsible CRE managers of the various divisions. F2 and T2 translate their measurable CRE aims to CRE objectives that provide guidelines in prioritization and design of new RE plans. These objectives are still focused on the CRE objects (F2) and workplaces (T2), as well as their services, and translated down to the local level by the responsible regional and local CRE managers. Both F1, F2 and T2 don't specifically mention CREM aims or objectives, unlike T1 and T3. T3 again has an extensive list of CRE objectives, the first 5 focused on CRE and the last 3 on CREM. T3' CRE and CREM objectives describe how to achieve the CRE and CREM aims and are translated to multiple local level projects in order to implement it, clearly stating all of the characteristics. Besides T2 and F2, the CRE objectives of the other three multinationals are not focused on being measurable/measured.

T1, T2 and T3 are technology firms dealing with quickly changing business environments. They therefore re-evaluate and re-design their business strategies often, T1 and T3 yearly and T2 every 6 months, which happens much less often at F1, each 3-5 years, and F2, when needed. At both T1 and F2, the CRE strategy was mainly derived from the interviews and implicitly from the documents, because there doesn't seem to be a CRE strategy that is written down on paper, which may be because of the regular changes in business strategy and direction of T1, and the adaption in CRE strategy in reaction to that, as well as plans to consolidate or exit the real estate added through the mergers and acquisitions. At F2, it may be due to the fact that the CRE function has been recently centralized from the local to the global level and they are still in the process of constructing a global CRE strategy. Due to the quick changes in business environment of the technology firms T1, T2 and T3, they may be less able to make long term real estate plans, unlike the financial services firms F1 and F2. Due to the rapid changes in business environment and the effects it had on their business, T3 even decided to reorganize their entire firm and re-focus their corporate strategy. Now, T3 has a very

detailed CRE strategy, although they don't specifically mention measurables, they mention a large amount of characteristics of both CRE and CREM. The ability to make a very detailed strategy, may also be due to the smaller firm size of T3 and lower level of centralization than T1 and T2. T2 has constructed a CRE strategy that is completely made up out of measurables, so they can track their progress, as well as keeping the strategy itself of a high level of abstraction, so the main lines don't need to be adapted as often as their business does. This may also be the reason why T1 has such a high level of abstraction within their CRE strategy, so it can be relevant all the time.

| | | |
|--------------------|---|--|
| <p>CRE aims T1</p> | <ul style="list-style-type: none"> •Achieving high performance •Obtaining best practices •Increasing innovation •Constructing proactive strategic plans | <p>No literal translation of mission, general CRE aims, focused on CREM and services</p> |
| <p>CRE aims F1</p> | <ul style="list-style-type: none"> •Business agility: enhancing performance across the organization •Scalable services: further centralizing operations, products and services •Greater asset value: improving the real estate quality for customers and employees | <p>Translation of mission, focus on workplaces and services</p> |
| <p>CRE aims T2</p> | <ul style="list-style-type: none"> •Increase operational effectiveness •Improve the employee experience •Enhance employee engagement •Drive the profitability and efficiency of the CRE | <p>Translation of mission, focus on workplaces and services, measurable aims</p> |
| <p>CRE aims T3</p> | <ul style="list-style-type: none"> •Right-size RE footprint to optimally support the business •Achieve/outperform benchmarks on transactions, ensuring flexibility •Drive end-to-end construction projects delivery •Affordable workplaces to attract/retain talent and foster productivity •Appropriate, cost-effective, reliable, inspiring and creative FM •End-to-end management system for efficient and effective CREM •Accurate and forward-looking RE financial reporting and analysis •Improve the organization and operating model to meet changing demands | <p>Detailed translation of mission, 5 CRE aims, 3 CREM aims, characteristics</p> |
| <p>CRE aims F2</p> | <ul style="list-style-type: none"> •Fit-for-purpose •Cost efficiency •Flexibility •Sustainability •Employee satisfaction | <p>Translation of the mission, focused on CRE objects and services, measurable aims</p> |

Figure 12.2 CRE aims, based on (T1 Real Estate & Facilities, 2015c) (F1 Global Group Property, 2015b) (T2 Workplace Resources, 2015) (T3 Real Estate, 2016c) (F2, 2016b)



Figure 12.3 CRE objectives, based on (T1 Real Estate & Facilities, 2015c) (F1 Global Group Property, 2015b) (T2 Workplace Resources, 2015) (T3 Real Estate, 2016c) (F2, 2016b)

12.3 CRE alignment schemes

For each multinational a CRE alignment scheme is made, as shown in Chapter 6-10. The schemes visualize the global and strategic level, the regional tactical level and local operational level, and the involved stakeholders: business in green, real estate in blue and orange if they are both involved. The blocks show the processes and products used in CRE alignment, as seen in Figure 12.4.

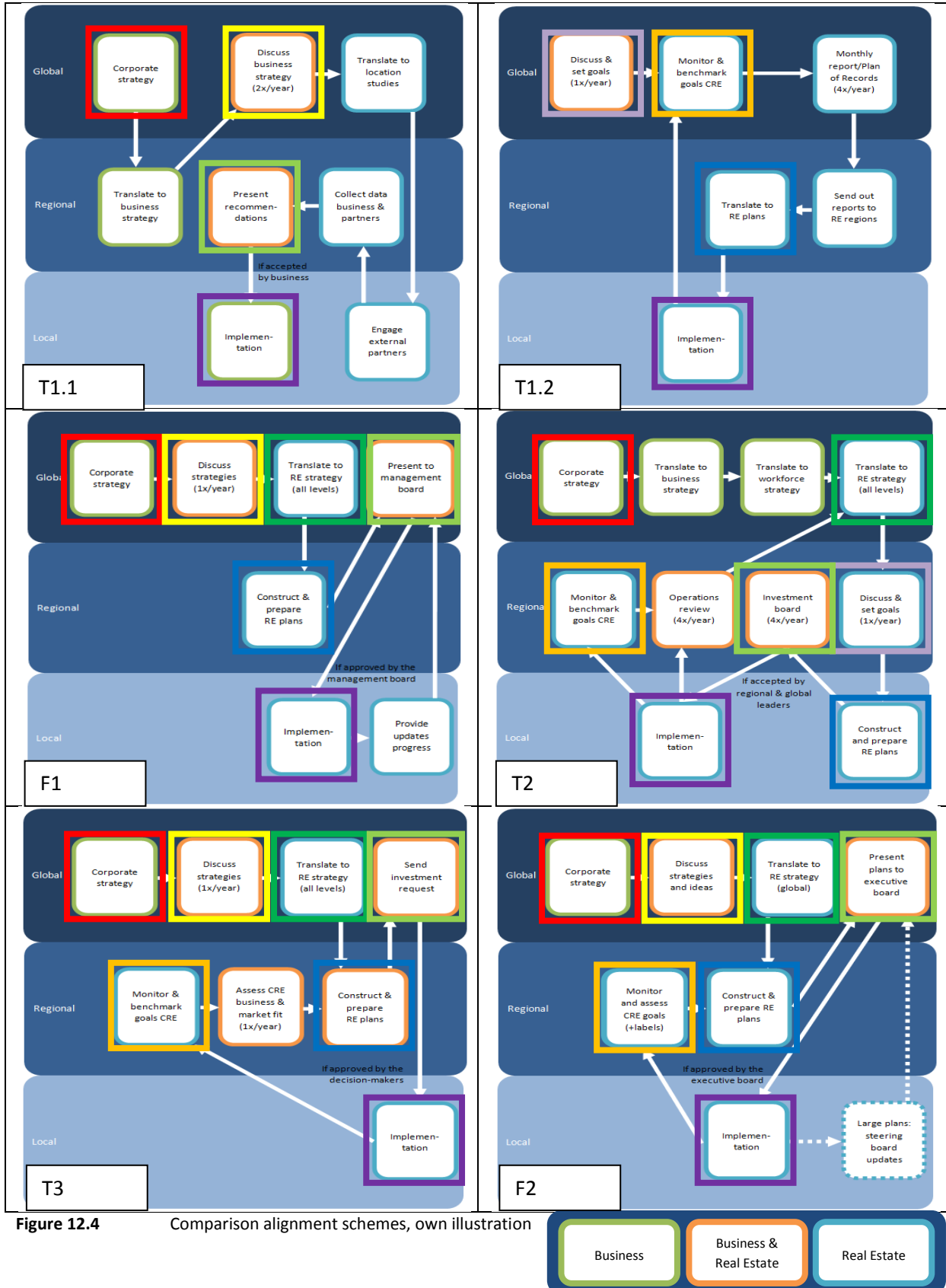


Figure 12.4 Comparison alignment schemes, own illustration

As can be seen in Figure 12.4, T1 is the only firm with two schemes, because T1’s Real Estate team is also involved in the business process (scheme 1). In this case, the corporate strategy is translated to lower level business strategies and through discussions between Real Estate and the business twice every year the strategies and plans of the various business lines are translated to the needed location studies, with either a focus on workforce or real estate. Subsequently, local external partners are engaged and data is collected through these partners and from the business line itself. Recommendations based on these studies are presented towards the business, after which the business decides whether to implement them and is fully responsible for the execution of the plans. In this case, Real Estate thus has a large influence in the business decision-making and plans. Here, CRE alignment where the business makes decisions informed by the CRE is recognized. All of the other firms have a CRE alignment process where Real Estate is aligning to the business. The second process at T1 is their Real Estate process, which is more similar to these other firms.

In order to find similarities between the schemes and make a cross-case summary scheme, the components with the same process and/or product have been marked with several colours, as summarized in Figure 12.5. At all five multinationals, their CRE alignment scheme starts with the corporate strategy formation by the business. Since real estate is none of these multinationals core business, it is important to have a core business strategy in place, to which the Real Estate strategy can then be aligned. After that, the business can decide whether they get informed by the CRE strategy and take this influence up into their corporate strategy formation or not. At T1, F1, T3 and F2, after forming the corporate strategy, this strategy is discussed, together with other cross-functional strategies, in a meeting with all of the business leaders, occurring on average once every year. Only at T2, the corporate strategy is immediately translated to strategies for the business divisions and workforce plans, on which the Real Estate strategy is then based. At F1, T3 and F2, the Real Estate strategy is made according to the strategy discussions with the business. F1 and T3 make the CRE strategy for all levels within the firm (global to local), while F2 constructs it only for the global level. At T1, there is no overarching CRE strategy, only regional level RE plans.

After having the CRE strategy in place, the regional (F1, T3, F2) or local RE teams (T2) construct RE plans, at T3 in cooperation with the business, and prepares a business case or presentation around it, using a set format consisting of several analyses about the project’s finances, characteristics and alternatives. The RE plan is then presented to the (executive/management) board for approval, at F1, T2 and F2 this is a physical meeting, at T3 this is done digitally through the software they use. At T2, these meetings takes place at set moments in time, every quarter of the year, and occurs at a regional level, while F1, T3 and F2 plan the meetings with the involved business leaders whenever they are needed. After approval by the decision-makers from the business, the RE plans can be implemented and are send down to local RE teams, which are often outsource providers (F1, T2, T3).

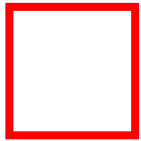
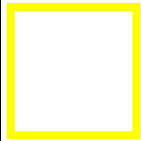
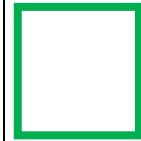
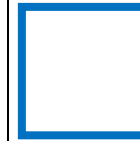
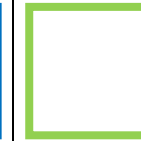


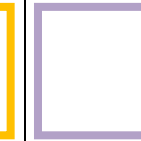
| | | | | | | | |
|---|---|---|---|---|--|---|---|
|  |  |  |  |  |  |  |  |
| Corporate strategy formation by the business | Business and Real Estate discuss strategies | Real Estate translates corporate strategy to RE strategy | Real Estate constructs & prepares new RE plans | Real Estate presents plans to business for approval | Local RE (outsourcer) teams implement RE plans | Real Estate monitors, assesses & benchmarks CRE goals | Business and RE discuss performance & set next goals |

Figure 12.5 Main components generic CRE alignment schemes, own illustration

Only at T1, this process is completely different. As seen in scheme 2, the RE plans are based on information coming from the monthly and quarterly reports based on the monitoring, assessing and benchmarking exercise the global RE team performs on the entire portfolio. This information is sent out to the regional RE teams, after which they construct the RE plans and send them to local teams for implementation. After this, the monitoring and benchmarking exercise continues.

T2, T3 and F2 also monitor and benchmark their CRE portfolio, in which they see changes after each new RE plan is implemented locally. Based on the assessment and benchmarking of the set CRE goals, new RE plans are initiated, making it an iterative process. Only F1 doesn't derive their RE plans from this exercise. At T2, the process takes longer, because the progress of implementing the RE plans, as well as the findings from the monitoring and assessment, are first discussed in the quarterly operations reviews, which are then translated to RE strategies, based on which new goals are discussed and set for the next year and only then the new RE plans are made. T1's second CRE alignment scheme starts with the discussion and setting goals for the next year. Taking all of these similarities between the CRE alignment schemes of these five multinationals into account, 8 main components are recognized as seen in Figure 12.5 and summarized as shown in the generic CRE alignment scheme in Figure 12.6. This provides an overview of the current state of CRE alignment in practice, its processes, products, involved stakeholders and at which level these are occurring.

Comparison generic scheme to literature

When comparing the generic CRE alignment scheme in Figure 12.6 to the DAS-framework by De Jonge *et al.* (2009) as shown earlier in chapter 3, Figure 3.4, many similarities can be found between how CRE alignment is approached in practice and how it is described and prescribed in literature. The current demand in the DAS-frame is captured by the discussions between RE and the business to set the goals for the CRE and the current supply is the CRE portfolio itself. By monitoring, assessing and benchmarking the CRE portfolio, the current (mis-)match is determined. The corporate strategy in the cross-case scheme would be the future demand in the DAS-frame and the future supply is the RE strategy. Weighing and selecting alternatives is done during construction and preparation of RE plans and the step-by-step plan is used in implementation of the RE plans by local (external) RE teams.

One aspect from the generic CRE alignment scheme is not directly captured by the DAS-frame is the presentation of RE plans to the business leaders in order to get their approval for execution. Another difference with the DAS-frame is the order of the processes. First, the current (mis-)match is determined, then the future (mis-)match, after which alternatives are weighed and selected and a step-by-step plan is constructed. This is not necessarily the order in which CRE alignment happens in practice, where RE plans can both be initiated from a current (mis-)match, as well as a future (mis-)match, this does not (always) occur subsequent to each other, as is also seen in Figure 12.6, where they are two separate blocks, one being a yearly meeting with the business, the other a continuous process by the RE team all throughout the year. The main building blocks by Heywood & Arkesteijn (in press) are better able to capture this difference and not set any order to the processes.

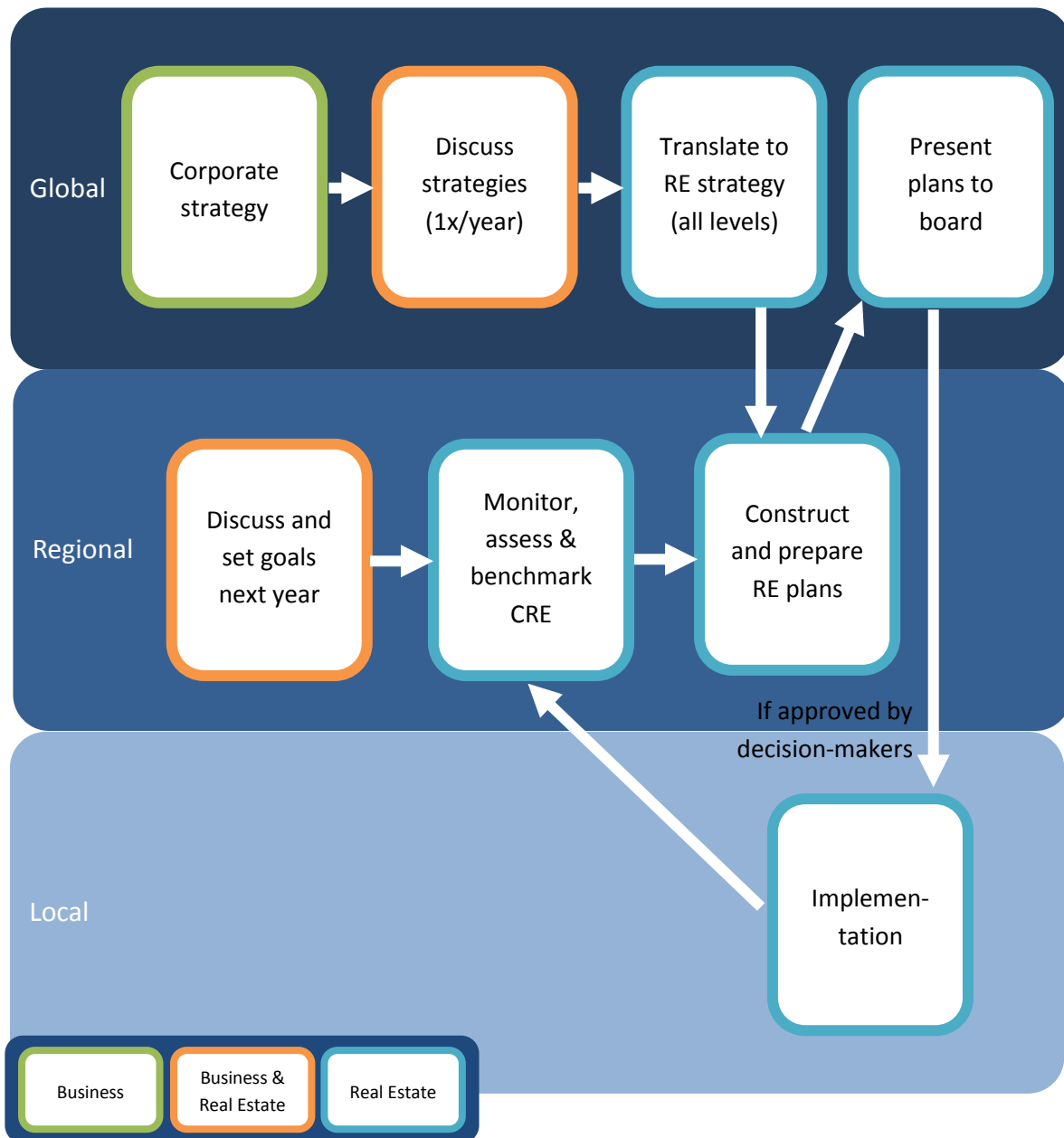


Figure 12.6 Generic alignment scheme, own illustration

12.4 Main components

Table 12.2 shows the cross-case analysis of the main components appearing in CRE alignment at the five studied multinationals, based on the list of most representative quotations that was selected from the coding exercise in Atlas.ti. This list of most representative quotations can be found in Appendix 5 and chapter 5 explains the selection methodology. The quotations have also been used in writing the full case study descriptions, as found in Appendix 6-10. The cross-case comparison is done according to the five main themes (building blocks) and 12 components from conceptual framework 2, that have also been used in the coding exercise. The most representative quotations have been summarized in Table 12.2 to briefly explain how each of the multinationals views and approaches this part of CRE alignment and an explanation of the summary and the differences or similarities across firms is provided below each main theme with set of components.

| | T1 | T2 | T3 | F1 | F2 |
|---|---|---|---|---|---|
| Understanding corporate strategy | | | | | |
| Business drivers and forces | Business factors used in weighted scorecard analyses by RE team (politics, infrastructure). | - | - | - | - |
| Internal strategic drivers | Changing organisation and ways of working of the business. | Costs to the business, ways of working and employee satisfaction. | (Mis)match in CRE supply and business plans (growth/flexibility needs/ activities). | Changing business needs (markets, activities, flexibility, customer needs). | Optimize support (fit-for-purpose, costs, flexibility, sustainability). |
| Strategic triggers | Business growth and acquisitions, variety in needs from divisions. | Business innovation, growth and changes in product/services. | Organisational changes and refocusing the strategy. | Changes in customer needs and products/ services. | - |
| Corporate strategy | Centralization, enhance collaboration, R&D/ innovation, drive growth. | Enhance performance, R&D/innovation, engage partners, drive growth. | Enhance processes and performance, R&D/innovation, engage partners.* | Centralization, strengthen position, drive growth. * | Enhance processes and performance, centralization, drive growth. * |

* = adjusted with information from case studies in chapter 8, 9 and 10 due to little comparable information in the quotes

T1 is the only firm specifically mentioning that they take a set of external drivers and forces pushing the business into a certain direction into account in their real estate analyses, such as the local infrastructure, political situation, regulations or economical aspects. For each location, as well as each business group, these factors are weighted on importance and influence and within the analysis scored, to come to a weighted average score per factor. These can then be discussed with the business to agree on the score and the recommended actions.

T1 and T2 are both impacted by changing internal organisation and ways of working of their employees, which is a driver for re-evaluation or re-design of the corporate, and thus also CRE, strategies. At T2, the employee satisfaction is also a driver, being the main theme in 2 out of 4 performance measurement and benchmarking exercises. At T3, F1 and F2, the main internal strategic driver comes from a (mis)match in CRE supply and demand from the business, through changing corporate strategies, in which T3 and F1 are more re-active, while F2 is pro-active, aiming to obtain information early on, foresee issues and find solutions before the need is there.

Triggers for corporate strategy re-evaluation or re-design at T1 and T2 are mainly growth and business activity related, while at T3 they are due to a large restructuring of the firm and re-focusing of the strategy and F1 is mainly triggered by changing demands from their customers. Similar to section 12.2, here it is apparent that F1 is the only multinational specifically mentioning their customers and T2 being very focused on employee satisfaction.

The corporate business strategies of T1, T2, F1 and F2 are all focused on growth. As seen in section 12.1, F1 and F2 are more mature businesses, while T1 and T2 are still in their business growth phase. T3 is the only one being in the phase of shrinking, consolidating and restructuring their firm, which is also seen in their corporate strategy. They mainly aim for enhanced internal processes and performance, increased innovation and finding new partners to do business with. T2's strategy is fairly similar to that of T3, but then also includes growth, something they have been doing rapidly over the past decades. The technology firms all focus on innovation/R&D. T2 and F2 also aim for enhanced processes and performance. T1, F1 and F2 all aim for centralization of their business. T2 doesn't have this focus, which can also be seen in the scheme in section 12.3, and T3 is still re-organizing their business, so centralization is not something they are aiming for right now.

Understanding real estate performance

| | | | | | |
|--------------------------------------|---|---|---|---|---|
| Audit of existing real estate | Monitoring each location in CRE portfolio on costs, space, workstations and people (assigned/ flex), measuring performance (vacancy, utilization) . | Monitoring CRE portfolio on costs, space and people, performance and benchmarking (utilization, satisfaction). Labelling sites core/strategic, to non-core/non-strategic. | Monitoring each location in CRE portfolio on costs, space and people, measuring business fit and market fit, and benchmarking KPI's (efficiency ratio's). | Monitoring each location in CRE portfolio on costs, space and people. | Monitoring each location in CRE portfolio on fit-for-purpose, cost and space efficiency and sustainability and labelling target/non-target/?. |
|--------------------------------------|---|---|---|---|---|

| | T1 | T2 | T3 | F1 | F2 |
|---|--|---|--|--|--|
| Assess the effect of CREM action | Perform analyses to inform the business and support decision-making and developing plans by business/RE. | Engagement model to understand the business and develop plans, RE provides framework to support business decision-making. | Reorganisation of engagement with the business to understand the business and match business and RE plans. | Understanding the influence of RE on the business, learning from the past and obtaining position of trust from the business. | Engagement with business to time decisions on RE timeline, inform/support decision-making. |
| Real estate market data | Data used in analyses on location options. | Data used in benchmarking targets. | Data used in benchmarking and market fit. | Data used in analysis on site options (in city). | Data used in analysis supply/demand. |

All of the studied multinationals continuously monitor the sites in their CRE portfolio, mainly on costs-, space- and people-related criteria, T1 also adding workstations, making a distinguishing them on flex or assigned workstations, and F2 adding sustainability. T2 and F2 go a step further in the audit of their CRE, labelling their building on importance, which helps in the subsequent decision-making about the sites. All multinationals except F1 specifically measure the performance on mostly standard KPI's, T2 and T3 also benchmark these against the industry. In benchmarking and performance measurement, T3 has added two of their own metrics: business fit, which is similar to the fit-for-purpose at F2, and market fit, measuring the fit of supply and demand internally and externally.

CREM actions at T1, T2 and F2 are focused on informing the business and supporting their decision-making. T2, T3 and F2 have close engagement with the business to understand their wishes and needs, at T2 this is even written down in an engagement model. F1 differs most from the others, being the only one focusing on learning from past CREM actions, understanding their influences and obtaining a position of trust with the business. This is something that the interviewee from F2 mentioned he wanted to move towards over the coming years (F2, 2016b). All of the multinationals provide recommendations towards the business about RE plans and after the business approves them they can be implemented, however T1 is most involved in analyses about business decisions and therefore most influential.

Real estate market data is either used in the design phase during analyses for location options, at T1, F1 and F2, or understanding the current real estate portfolio through benchmarking, at T2 and T3. This supports the comment on overlap of this component across two building blocks, as was made previously in chapter 11, section 11.2, because the RE market data can be used in multiple building blocks, the emphasis differs per firm and the processes they have in place.

Designing real estate strategy

| | | | | | |
|--|---|---|---|--|--|
| CRE strategy | Understanding and supporting the business with best and most productive space per employee. | Optimize portfolio, strategically invest, enhance employee and customer experience, integrate new acquisitions. | Optimizing CRE portfolio and CREM practices, by obtaining best practices and creating great workspaces. | Supporting the digitalization of the business, enhancing flexibility in portfolio and workspaces. | Optimizing CRE portfolio, making it cost and space efficient, sustainable and fit-for-purpose. |
| Strategy integration | - | - | - | - | - |
| Integration corporate functions | Corporate functions involved in criteria and weights used in RE analyses, scores agreed afterwards. | Relationship managers engage with corporate functions to match plans and obtain approvals. | Large projects approved and controlled by steering group that contains leaders of all functions. | Large projects approved and controlled by management board that contains leaders of all functions. | Large projects approved and controlled by steering committee that contains leaders of all functions. |

Both T3, F1 and F2 have a steering committee or management board in place containing leaders of all corporate functions, to which larger size RE plans are presented to and if approved, this committee will remain in control of the implementation of the plan, regularly receiving information on the progress. At T2, approvals are also obtained through the leaders of the corporate functions, but this is divided across the geographical regions and they are not responsible for controlling the project during implementation. Due to the more regional and less centralized focus of T2, actually obtaining approvals for plans may take a lot longer than at all of the other, more centralized, multinationals. T1 has the most different way of working, they mainly do a range of analyses for the business, after which the business decides on which action to take and further implementation of that action. T1's Real Estate team is thus much less focused on presenting plans, getting approval and having a control system in place. The different wishes and needs of the corporate functions are taken into account within the analyses, by having them give input on the criteria and weights that are used, as well as agreeing on the scores after analysis. Only at T1, there is an equal relationship between RE and the business.

| | T1 | T2 | T3 | F1 | F2 |
|--|--|---|--|---|--|
| <p>T2, T3 and F2 have a CRE strategy focused on optimizing the portfolio, while T1 and F1 are more focused on supporting the business. With some differences in detail and emphasis, they aim to do it through fairly similar objectives; increasing cost and space efficiency, enhancing employee experience, obtaining best practices and internal performance, improving flexibility and greater sustainability. A full examination of the CRE strategies is found in section 12.2.</p> | | | | | |
| Implementing real estate strategy | | | | | |
| Actioning real estate intervention | Plan of Records looks at future effects of current plans and actions, provides information to support further decision-making. | Each quarter year, the progress on projects is shared in the operations review meetings and further approval or funding is obtained. | After design and approval of RE plans, they are outsourced to local providers for implementation and the overview is kept by T3. | After design and approval of RE plans, they are executed by local teams. | After design and approval of RE plans, they are executed by local teams and controlled by the steering committee. |
| Actioning required CREM practices | Through a wide range of analyses the RE team performs for the business, they support them in all their different needs/decisions. | Quarterly operations review ensure the right governance, as well as an overview what is happening across the firm. | Meetings with the business ensure match between business and CRE strategies and plans, as well as mutual understanding. | Meetings with the business ensure compliance of the CRE to the business needs. | Meetings with the business ensure early engagement in new directions or plans and governance when needed. |
| <p>T1 is the only firm that uses their planned actions as input to see what the future consequences are on the portfolio, up to three years out. They then send this information out to the responsible regional teams in order to support their further decision-making. At T2, the progress on individual projects is discussed with all of the business leaders in an operations review meeting, in which an overview is gained of all on-going projects, but also further approval, funding or guidance is obtained for the projects. T3, F1 and F2 have a similar structure in implementing RE strategies. After constructing the plans and obtaining approval, they are executed by local teams, which are outsource providers at T3.</p> <p>T3, F1 and F2 also have a similar relationship with the business, regularly meeting to ensure a match between the business and CRE directions, strategies and plans. This close collaboration ensures mutual understanding and getting the needed governance in place. At T2 this is all arranged in the quarterly operations reviews. T1 has a different relationship with the business, mainly informing them and supporting their decision-making through a wide range of analyses they perform for the business. They are able to influence decisions made by the business, but not responsible for making these themselves.</p> | | | | | |
| Strategic momentum | | | | | |
| Evaluation, learning and re-initiation | Global RE does analyses and recommendations for outliers, regional RE initiate smaller projects, all by continuously monitoring the CRE portfolio. | Regional RE do analyses and make recommendations, by continuously monitoring the CRE portfolio and receiving input from the local and global level. | Global RE translates CRE strategy to local level projects, progress and additional projects are evaluated yearly. | Global RE evolved from re-active 'business line' to pro-active 'partner', understanding the business needs and initiating plans based on this (not solely RE focused) | Global RE seeks cooperates with local teams in RE decision-making, implementation and cross-organisational learning. |
| <p>New plans are mainly initiated by monitoring the CRE portfolio, according to set criteria and targets, either by the global or regional team. Here can also be clearly recognized that where most multinationals make a clear difference between the global and regional, or global and local team, T2 is the only one with a focus on the regional level, receiving input from both the global and local level. Evaluation of RE strategies and plans after implementation was not specifically mentioned by any of the interviewed CRE managers, which may be because they operate at a global (T1, T3, F1 and F2) or regional level (T2), and the plans are implemented by local teams. They thus only have the global overview of projects happening in the portfolio and the outcomes, but no local knowledge about the actual implementation, it's successes and failures.</p> <p>F1 and F2 specifically mention what they have learned over the past five years, F1's RE organization evolving from being re-active to the business plans to being pro-active by seeking collaboration and co-creation with the business. F2's RE organization on the other hand was centralized from a local FM organization to a global CRE team. However, they continued to seek cooperation with their local peers in decision-making on RE plans, the implementation and learning what appeared to be successful or not, thus obtaining best practices. F2's global RE team is thus most close to the local team, as compared to all of the other studied multinationals, which can be explained by their history operating as one.</p> | | | | | |

Table 12.2 Summary and conclusions on most representative quotations, as selected from Atlas.ti (Appendix 5)



F) CONCLUSIONS

13. Conclusions

This graduation research was set up in order to answer the following research question: *How do multinational corporations in the technology and financial services industries align their corporate real estate and corporate business strategy in practice and how does this relate to the main findings from literature?* This question is twofold: how do multinationals approach CRE alignment in practice? And how does this relate to literature? Both of these subjects are discussed in the sections below, after which the main conclusion to this research is given. Finally, the limitations of this research are discussed and recommendations are provided for further research.

13.1 Discussion: CRE alignment in practice

From the case studies performed in this research, it appeared that at these five multinationals, the CRE strategy is derived from or based on the corporate strategy. This confirms the statement by Beckers & Van der Voordt (2013) that CRE alignment, and thus removing inconsistencies between the corporate and CRE strategy, means adapting the CRE strategy, as discussed in Chapter 3, Section 3.6. Although Heywood (2011) states that in some cases adapting the corporate strategy to the CRE may also be desirable to provide the firm enterprise-wide value, as seen in Figure 13.1, this does not seem to be the case (yet) in practice, let alone the corporate strategy adapting to the CRE strategy. Although it is important for the business to be informed of the CRE within their decision-making and understand the consequences of business decisions on the CRE, for these multinationals CRE and its management is and will remain a support function and not the core business. CRE will therefore not be the leading factor in their decision-making, nor very influential in the corporate strategy. However, as also explained in Chapter 3, Section 3.2, it is understandable that since CRE is often seen as a cost or burden by the business (Teece, 2010) and CREM or CRE alignment is not covered in business literature on alignment, CREM researchers are aiming to empower the CRE function in both literature and practice through these statements.

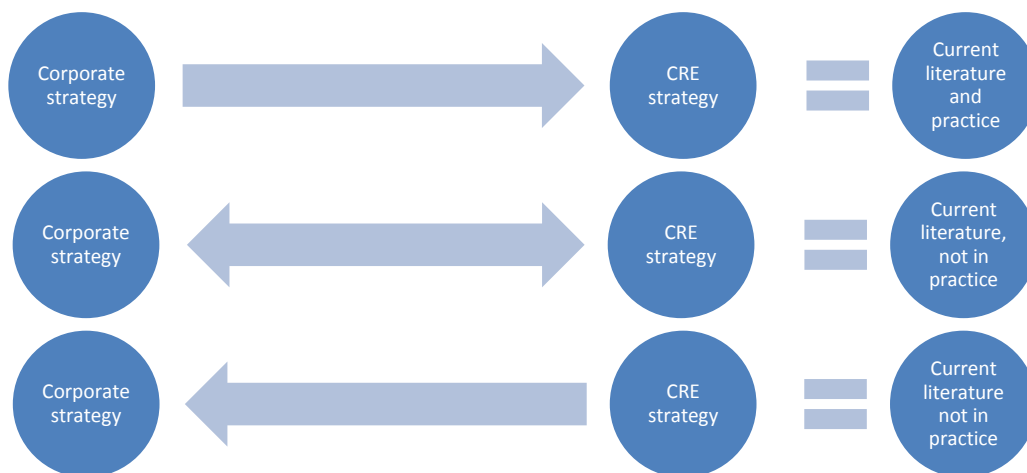


Figure 13.1 Relationship CRE and corporate strategy, own illustration

Amongst the five multinationals, the CRE strategies differ in scope and level of concreteness, due to the variety in corporate strategies. These are based on the size and growth stage of the firms, as well as their core business activities, markets and customers. However, the influences of the business environment of these firms on their CRE strategies stretch much further. As explained in Chapter 3, Section 3.1, multinationals deal with many location-related impacts: the political, economical, legal, social, environmental and technological context. Even though the studied multinationals are active globally (technology firms), while some focus on a specific region (financial services firms), they

emanate from one country and culture, which shapes the business throughout its lifetime. T1 and T2 originate from the USA, F1 from Australia and both T3 and F2 from the Netherlands. Each firm thus has its own history, corporate culture and management style. Still, some similarities can be found, as seen in Figure 13.2. As also explained in Chapter 3, Section 3.2, firms in the same industry are dealing with equal business environments and are impacted by similar trends. These firms thus have the most comparable corporate and CRE strategies, as well as the way they approach alignment. The technology firms are dealing with rapid (disruptive) innovations and developments, causing them to aim for agility and regularly re-evaluate and re-design their corporate strategies, up to twice every year, which also triggers the design of new CRE strategies or plans. At the financial services firms this occurs less often, about every 3-5 years, because their business environments are changing less quickly, mainly impacted by digitalization. The financial services firms are therefore more able to make long-term plans than the technology firms.

The rapid innovations and developments in the technology industry also provide many opportunities. The studied technology firms, T1, T2 and T3, all have a corporate strategic aim to invest in R&D and innovation, in order to enhance their current range in products and services and develop new ones. T1 and T2 are still growing and expanding across the globe, acquiring, merging or partnering with other technology companies every month. The financial services firms F1 and F2 are more consolidated and mature. Still, these four multinationals all have growth as one of their corporate strategic aims. T3 is the only firm not focused on growth, since they were badly impacted by the changing business environment. T3 needed to completely transform and restructure to become two separate firms, in order to ascertain a sustainable future. Their corporate strategy mainly aims for improving the internal processes and performance, investing in innovation and finding new partners. The growth phase of multinationals is thus very influential in shaping their strategies.


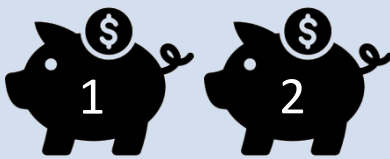
| Technology firms | Financial services firms |
|--|--|
|  |  |
| Growth stage: T1 and T2 are growing, T3 is shrinking and re-focusing, with the aim to grow again | Growth stage: F1 and F2 are both mature businesses |
| Globally active, no focus on specific region | Global focus on region (F1 Asia-Pacific, F2 Europe) |
| In rapidly changing business environment, business focus on agility, R&D and innovation, mainly short-term strategies and plans (yearly) | In more stable business environment, mainly impacted by digitalization, able to make long-term strategies and plans (3-5 years) |
| All dealing with higher expectations and changing demands coming from the customers and employees, on top of that: fishing in the same talent pool, looking for employees with similar education and skill-set | |
| More flat business organization: emphasis on the horizontal alignment across various divisions and with cross-functional partners | More hierarchical business organization: emphasis on the vertical alignment across various levels of the firm, both top-down and bottom-up |

Figure 13.2 Similarities per industry, own illustration

As shown in Figure 13.2, the similarities that are found per industry are mainly on the business side. When looking at the CRE and CREM in general, all five studies multinationals have a comparable CREM process in place, as shown in Figure 13.3. The Real Estate teams continuously monitor the CRE

portfolio and individual sites and measure the performance on standard KPI's (costs, space, people and combinations between these three). From these outcomes, new RE plans are initiated, which the RE teams construct by performing several analyses (financial, real estate characteristics, internal and external alternatives). After constructing the RE plans, the recommendations are presented and discussed with the business. When the RE teams receive approval from the business, implementation can commence, which is performed by local teams and often outsourced partially or completely.

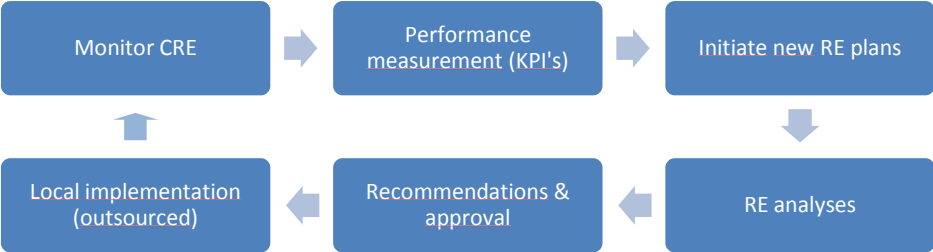


Figure 13.3 General CREM process, own illustration

Besides these similarities within the industries and CREM in general, when examining CRE alignment in more detail, mainly differences are found in the specific practices (processes and products) at the five studied multinationals. For each firm, the five most recognizable practices are shown in Figure 13.4. T1 and F1 are most centralized of all five firms, which is also recognized in their corporate strategy and more abstract CRE strategy, while T2 operates mainly on the regional level. Therefore, obtaining approvals for RE plans at T2 may take much longer than at the other, more centralized, multinationals. CREM at F2 is only recently centralized, historically being in local FM departments. F2's RE team is therefore still in the process of constructing a global CRE and workplace strategy. Both T3, F1 and F2 have a steering committee in place, to which larger RE plans are presented and if approved, this committee will remain in control of the implementation of the plan.

CREM at T1, T2 and F2 is focused on informing the business and supporting their decision-making. T1 does this by performing various analyses for the business and using the planned business or RE actions as input to see what the future consequences are on the CRE portfolio, up to three years out. They then send this information out to the responsible regional teams, after which they decide on which actions to take and are responsible for further implementation. Only T1's RE team therefore has a partner-like relationship with the business. T2 and F2 inform and support the business by having close engagement (meetings) with the business and T3 is working on a similar engagement model since their reorganization. In Chapter 3, Section 3.5, Silen (2012) also suggested regular meetings with the C-suite and being involved in their process is essential to construct a pro-active CRE strategy, while Beckers & Van der Voordt (2013) stated CRE strategies may be mainly re-active, reacting to current issues. Here, this would mainly be the case at F1.

F1 is the only firm specifically focusing on learning from past CREM actions, understanding the influences and obtaining trust from the business. However, this is something the CRE manager at F2 stated to want to move towards the coming years. Both T2 and F2 have a CRE strategy that is made up of measurables that they use in monitoring, assessing and benchmarking the CRE portfolio. These two firms are also the only ones labelling their individual buildings on importance. In performance measurement, T3 has added two of their own metrics: business fit, which is similar to the fit-for-purpose at F2, and market fit, measuring the supply versus demand internally and externally. Only T2 and T3 benchmark against the industry, T1, F1 and F2 benchmark against themselves.




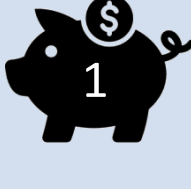

| | | | | | |
|---|---|--|--|---|---|
|  | Most centralized operations | Partner-like relationship with the business, also performing business analyses | RE team focused on informing and supporting decision-making by the business | Inputs planned actions to see consequences on CRE portfolio up to 3 years out | Benchmark against themselves |
|  | Mainly operating at regional level | Discuss progress of all projects/plans in quarterly review: overview across the firm | RE team focused on informing and supporting decision-making by the business | Label each site in CRE portfolio on importance | CRE strategy made up of measurables, benchmark against the industry |
|  | Centralized operations, currently re-organizing due to split and re-focus of the business | Implementation of RE plans controlled and guided by steering committee | RE team engages with corporate functions and business leaders for alignment | CRE strategy provides extensive guidelines for RE plans on all levels | Performance measurement/ benchmarking with own metrics: business fit and market fit |
|  | Most centralized operations | Implementation of RE plans controlled and guided by steering committee | RE team focused on learning from past CREM actions, understanding their impact | CRE strategy literally translated to RE plans on all levels | Benchmark against themselves |
|  | Recently centralized CRE from local FM departments | Implementation of RE plans controlled and guided by steering committee | RE team focused on informing and supporting decision-making by the business | Label each site in CRE portfolio on importance | CRE strategy made up of measurables, benchmark against themselves |

Figure 13.4 Most recognizable practices per firm, own illustration

13.2 Discussion: relation to literature

First conceptual framework

In this research, two conceptual frameworks have been used to compare the findings from practice to literature. The first conceptual framework from Heywood & Arkesteijn (in press), shows that according to literature the CRE alignment phenomenon is multi-dimensional, since it can be viewed or approached in many different ways. In the coding exercise in Atlas.ti, with codes based on the first conceptual model, all but four of the codes were retrieved. These four codes sit within the relationship dimension. The two relationship types 'no relationship' and 'undefined' were most likely not found in the coding exercise because these dimensions are only possible in literature or at firms that don't align their CRE. In this research, since the CRE managers were interviewed about the way they approach CRE alignment, they always defined the relationship, either explicitly or implicitly. The other two relationship dimensions that were not retrieved from the coding exercise were 'derivation' and 'integration'. From the CRE alignment schemes it becomes clear that 'derivation' is actually

apparent at all of the multinationals, but most likely, the CRE managers deem this to be logical and therefore don't mention it. 'Integration' on the other hand, is most likely not apparent within the five studied multinationals, because within this research it has been interpreted as the corporate and CRE strategy becoming one, which was not the case.

All of the other codes, based on the alignment forms, cognitive objects and directionality in CRE alignment have been retrieved from the coding exercise. This means that in a comparison of the findings from practice to the first conceptual framework, mainly similarities are found, which would thus confirm the theories from Heywood & Arkesteijn (in press) that the phenomenon of alignment is multi-dimensional: it has multi-valent relationships, multiple forms, multiple cognitive objects and multi-directional. Based on the five case studies performed in this research it can be stated that both in literature and practice, the CRE alignment phenomenon is viewed and approached in many different ways and doesn't have to be defined in order to research or practice it.

Second conceptual framework

Within the second conceptual framework several main building blocks and components are provided for CRE alignment, from Heywood (2011) and Arkesteijn & Heywood (2013) and slightly adapted by the author with 'strategic momentum' after Appel-Meulenbroek & Haynes (2014). In most cases, all but 1-3 components have been found in the coding exercise in Atlas.ti. Within the first building block in four out of five cases 'business drivers and forces' was not retrieved, this code was only mentioned by T1. In one out of five cases 'strategic triggers' was not mentioned, which was the F2 case. This may be explained by the fact that the corporate strategy always, both directly and indirectly, takes its shape through the business drivers and forces and strategic triggers and these inputs may therefore not be mentioned by the CRE managers. It could also be the case that some CRE managers assume it is not their task to understand or know these components, because it already belongs to the business leaders constructing the corporate strategy. However, obtaining an understanding of these components is essential for CRE managers to obtain a full overview of the business and corporate strategy (Heywood, 2011). Within the third building block, the component 'strategy intergration' is not found. The explanation of this may be similar to the first conceptual framework, that within this research 'integration' was interpreted as the corporate and CRE strategy being integrated and becoming one, which was not the case at any of the studied multinationals.

Because corporate strategies are very diverse, the alignment of CRE strategies with the business is closely related to the organizational context (Osgood, 2003) and CRE alignment may therefore differ greatly between firms. However, based on the results from the five case studies undertaken in this research, it appears that Heywood and Arkesteijn have provided a framework with main building blocks and components that shows in general which entities are used in CRE alignment and can be used by practitioners as guidance in approaching and performing CRE alignment across different industries, when made specific to the firm's characteristics. Still, there may be possibilities to further improve the framework, mainly concerning its visualization, as explained in Chapter 11, Section 11.2. The current visualization seems to provide a sequence in the components and a division across the main building blocks, although Arkesteijn & Heywood (2013) underscore that the building blocks and components are not in any specific order and can be used simultaneously or across each other. Further empirical analysis should show whether the provided recommendations for improved visualization of the framework and designation of specific components are indeed correct.

CRE alignment scheme

In performing and describing the case study analyses and answering the main research question on how the five studied multinationals view and approach CRE alignment, the need for visualizing how these firms do their CRE alignment arose. When asking the CRE managers of these five firms after having the two interviews if they currently have a visualization of their CRE alignment, they all stated that they don't. Only T3 used to have a visualization of it, but since the firm was split into two entities and is still in the process of reorganizing, they have yet to make a new visualization. Also, all interviewees stated they don't use a model from their own firm or from literature on which they base their CRE alignment. This confirms the statement of Appel-Meulenbroek & Haynes (2014) in Chapter 1, that the uptake of current CRE alignment models from literature in practice is disputable, although the CRE managers indicate they are currently aligned and, similar to the statement by Heywood (2011), that they are positive about their CRE alignment practices.

In order to visualize these CRE alignment practices, for each of the individual cases a scheme is made showing the sequence of the processes, products (inputs and outputs) and stakeholders involved, across the three scale levels within these multinational firms (global, regional, local). This scheme was made to visualize not just the what, which was captured by the two conceptual frameworks, but also the where, who, when and how. The main set-up of these CRE alignment schemes was made after a further analysis of the individual models studied by Heywood & Arkesteijn (in press), in order to find out if these could potentially be used or be combined to use in order to visualize each of the multinational's CRE alignment in it's entirety. However, when analyzing these models further, it appeared that they did not provide visualization of the scale level within the firm, the involved stakeholders and the sequence of the processes and products. I have therefore constructed my own method of visualization, which is used to show for each of the multinationals how they approach and perform CRE alignment, as well as a general scheme of CRE alignment in practice, based on the cross-case analysis of the individual schemes. This is thus not a model for guiding a CRE manager how to do CRE alignment, but a more complete way to visualize what is already happening at these firms. This visualization method is not company-specific and could be used by firms from different sizes and scopes, as long as they fill in their processes, products, sequence and involved stakeholders across the different scale levels. The main elements of the visualization method are shown in Figure 13.5.

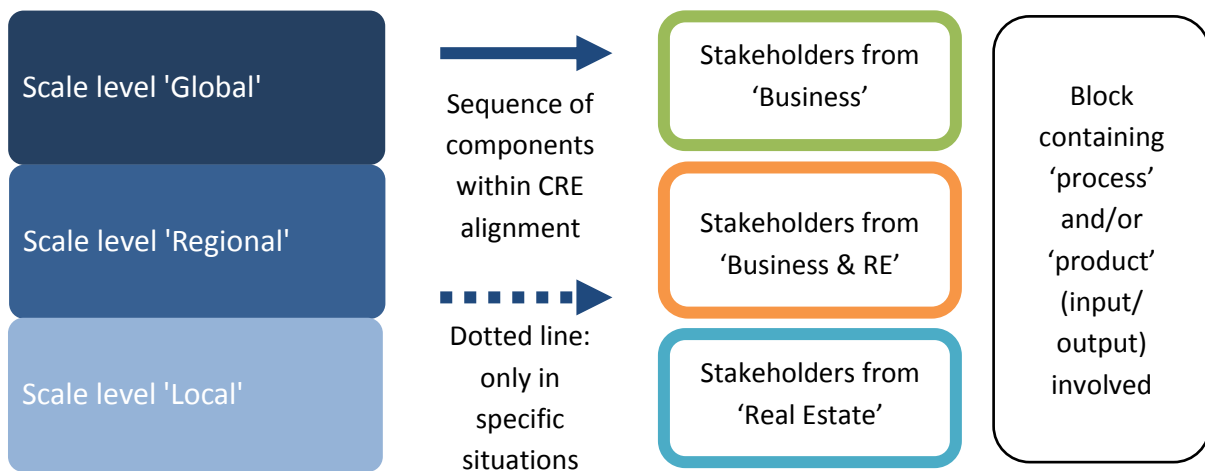


Figure 13.5 Main elements visualization method, own illustration

13.3 Final conclusion

When reviewing articles from CREM literature that compare CRE alignment theories and models by other authors, it was found that alignment of the CRE with the business is seen as the core objective of CRE management. However, although CREM literature proposes a wide variety of approaches and models for it, either based on or validated in practice, there is not much empirical evidence of their uptake or use in practice after conception. Also, on the one hand, CRE professionals indicate to be positive about the alignment at their firms, but on the other hand they see it as a difficult task and would like to receive more guidance. The question thus arose how CRE professionals approach and perform CRE alignment in practice and whether this relates to literature. The main hypothesis of this research, as well as the opening statement of this thesis, was therefore the following:

"In theory, theory and practice are the same. In practice, they are not."

- Albert Einstein

From the start, it was expected that there currently is a difference between literature and practice, and at the same time implied that this may be a problem. With this in mind, the research focused on mapping and comparing the current state of CRE alignment in both literature and in practice, studying the CRE alignment practices of five multinationals in the technology and financial services industries. However, as explained in the previous section, in the comparison between practice and literature, with the help of the conceptual frameworks set up for this research, not many differences are found. In general, the difference between practice and literature may thus not be that large and may also not be a problem. Based on the results of the comparison, several recommendations were made that could possibly improve the conceptual frameworks, mainly concerning its visualization and the designation of certain components, but further empirical research is needed to validate these. In general, Heywood & Arkesteijn have provided two frameworks, one that shows the multi-dimensionality of CRE alignment as a phenomenon and another that could provide practitioners guidance in approaching and performing CRE alignment, by providing them with the main building blocks and components, which they can then translate to their own context.

The main findings from practice are thus closely related to the main findings from literature in this research. This is not surprising, since most CREM and CRE alignment literature is based on or validated in practice and often written by practitioners, sometimes in cooperation with researchers. Also, because the main theoretical underpinnings and conceptual frameworks of this research come from articles comparing and summarizing a wide range of CRE alignment models and theories by other authors, these provide a more general overview of CRE alignment as a phenomenon and the processes and products involved, which have then been confirmed by the findings from practice. When the theoretical underpinnings would have been based on CRE alignment literature describing specific processes and products used in CRE alignment, it is likely that the differences between the main findings from practice and literature would be larger. When looking past the similarities between the main findings from practice and literature and going into more detail, the following statement may be more fitting to this thesis:

"In theory, practice is simple. But, is it simple to practice theory?"

- Trygve Reenskaug (University of Oslo)

This statement captures why one would expect to find a difference between literature and practice: it depends on the perspective. In literature, practice seems simple, because it is simplified in order to

be relevant across industries and scopes. Scientific literature provides an abstract overview and general guidance or explanation of specific concepts. However, in practice, practicing literature is not simple. In order to apply the theories, practitioners have to translate them to their own context and fill in the details, which is normal in applying literature by practice, as also stated by Dainton & Zelley (2005). It is not surprising that CRE professionals still view CRE alignment as a difficult task, because, as this research confirms, CRE alignment is complex, multi-dimensional and has to take into account the full range of facets of a company. On top of that, CRE managers need to be able to react to sudden internal or external occurrences, which is something that can't be described or prescribed by academia, because there is not one solution and most importantly not one problem that is similar. To each issue, a solution needs to be tailor-made, which is a challenge time after time.

Still, although practice and literature are closely related, practice doesn't seem to be directly based on CRE alignment literature. While Heywood & Arkesteijn (in press) suggested that a possible obstruction for practitioners to use the CRE alignment models proposed by CREM literature could be that the models from literature differ widely in content and completeness and that there is not one encompassing 'core technology', this doesn't seem to be the case at the five multinationals studied in this research. The CRE managers stated after the interviews that they currently don't use a specific model from literature and didn't seem to be familiar with most of the models as studied by Heywood & Arkesteijn. Constructing an encompassing 'core technology' in CREM literature may therefore not necessarily make a difference in practice. The proposed framework with main building blocks and components of Heywood & Arkesteijn may already provide enough guidance, if taken up in practice. This could be done through education or conferences, however it remains unclear what the real obstruction is for practitioners to use CRE alignment models or frameworks from literature. Most likely, they are currently basing their practices on knowledge from their education, conferences, work experience or talking to peers, which means they do indirectly base the practices on literature.

There is not one correct way to approach or perform CRE alignment. Corporate strategies can be very diverse, because they depend on the core business, organization, drivers and competitors of that individual firm. Therefore, the alignment of CRE strategies with the business is closely related to the organizational context. Across firms, CRE alignment processes, products and the stakeholders involved may differ greatly and literature is not, and should not be, able to prescribe these, due to its interrelation with the organizational context, which is constantly changing. As Heywood (2011, p.12) also stated: *"Organisations are imperfect, human constructs that never operate precisely as theory suggests they may"*. All of the studied multinationals appeared to have their own CRE alignment practices, as well as their own terminology for it. However, when translating them back to a higher level of abstraction, they start to look more alike and similar to literature. It appears that in this case, Albert Einstein was proven wrong.

13.4 Limitations

Size and time

There are several limitations to this graduation research. First of all, the results are limited by the size of the research, which is determined by the number of case studies that was performed. In order to gather all the needed data to construct the case studies, through interviews and document analysis, within the set timeframe for the graduation process, it was not possible to perform more than five case studies. Also, to ensure the research was feasible and the results comparable, this research only

examined firms from the technology and financial services industries. In order to draw and validate the conclusions, generalize the results and make in-dept recommendations for further research, the number of case studies should be at least 3 to 6 cases of each individual industry.

Besides limiting the size of the research, the timeframe of the graduation process also limited the findings of the case studies. The case studies have been performed during a period of 5 months, which is a relatively short period of time to fully grasp and understand (the extent of) the concepts under research. Being able to examine the CRE alignment at these multinationals for multiple years in a row, would not just provide much more in-dept information on the process, products and involved stakeholders, but would also provide valuable insights on the evaluation and evolution of the strategies and their alignment.

For each case study, two interviews have been held with the (global or regional) CRE manager of that multinational. Due to time constraints, it was not possible to interview other employees of the firms, such as board members, cross-functional managers or business division leaders. This means that the results from the interviews are based on one point of view; that of the CRE manager. The results may therefore be slightly subjective and information that is unknown by the CRE manager may be missing, which could have been retrieved through interviews with other employees if the time was less constrained. However, being able to conduct a second interview with each of the CRE managers has been very useful to retrieve in-dept information and confirm understandings derived from the first interview. This has greatly improved the quality and dept of the case studies.

Data

The data from the documents that have been examined to construct the five case studies, depended on which documents were actually used at these multinationals and which documents they were willing to share after the first and second interview. None of the studied cases used similar documents, which meant that for each case the amount of data on the various subjects under study differed largely, resulting in a more extensive explanation in one case and a more abstract, concise explanation in another. Because the CRE alignment process, products and involved stakeholders, as well as the documentation of activities differs greatly for each firm, this limitation could not be prevented. However, if the problem lies in the fact that the CRE managers did have the documents, but were not willing to share them, a longer cooperation would increase the level of trust and help to access to all of the data, as well as obtaining in-dept understanding of the CRE alignment at that firm.

Besides the information retrieved from the interviews and the documents the CRE managers shared afterwards, public information from the corporate websites and annual reports has been used in order to describe the case studies, especially the characteristics of the firms. The quantitative and financial data of the firms has been retrieved from these sources at a specific moment in time (May 2016), which means that when reading this report, it is not up-to-date anymore.

Methodology

This research has been performed according to qualitative content analysis, which is an interpretive method and therefore relies a lot on the analytical and synthesizing skills of the researcher. In the chapter on methodology, the research process has been explained as extensive and transparent as possible, all further information can be found in the Appendices. These provide clear definitions, procedures and descriptions, which helped the author to perform the research, as well as the readers to fully grasp and understand the results and where they come from. Still, the researcher's own

interpretation of certain concepts in the research may have influenced the results from the coding exercise. The descriptive values that have been used have been based on the description of the code, but each individual researcher may put a different emphasis on certain characteristics of that code. Furthermore, the descriptive values that have been selected are based on several sources, but other values may have come up if other sources were used. With other descriptive values, other quotations may have come up and the results of the coding exercise may have been slightly different. However, this issue was mitigated as much as possible, by basing the descriptive value on a number of articles from different authors, as well as the pilot exercise and looking for synonyms.

A final limitation lies in the conceptual frameworks that have been used, that were based on the main theoretical underpinnings from Heywood (2011), Arkesteijn & Heywood (2013) and Heywood & Arkesteijn (in press), slightly adapted after Appel-Meulenbroek & Haynes (2014). Using these articles for the theoretical underpinnings means that mainly one point of view on the subject is taken, the perspective of Heywood and Arkesteijn. If other articles would have been selected, the conceptual frameworks would be different and the use of these may have resulted in other conclusions.

13.5 Recommendations

Based on the experiences and findings from this research, several recommendations can be provided for further research. Within this research, CRE alignment in practice is studied at multinationals in the technology and financial services industries, it would be a great addition to the current findings if CRE alignment would also be studied at multinationals in other industries. Another focus may also be looking into different sizes firms (national or international corporations), or distinguishing between public and private sector firms. Furthermore, in studying CRE alignment, the processes, products and involved stakeholders have been examined and mapped. However, something that is yet to be examined is the actual alignment between the corporate and CRE strategies: are these strategies truly derived from or based on each other or do the interviewed CRE managers only state they are? Follow-up research could examine these firms further to determine their actual strategy alignment.

Another subject for further research may be improving the conceptual frameworks that have been used and potentially combining them into one framework. The comparison between practice and literature provided some potential improvements to these frameworks, which were mainly suggestions about the visualization of the framework and designation of certain components. However, these recommendations have yet to be validated, for which further research is needed. If optimized, these frameworks could provide solid guidelines for practitioners. When the conceptual frameworks are indeed used for further research and a similar coding scheme is set up, research is needed on the overlap between the frameworks and within the coding schemes, to find out the possibilities for combining the two. Also, a deeper dive should be done into the descriptive values used to retrieve these codes from the interview transcripts in Atlas.ti, because it is possible these are based on the interpretation of the researcher and thus may differ across researchers.

As also stated in Chapter 4, Section 4.4, increasing the collaboration between academia and practice would help advance both, as well as increasing the mutual understanding. Due to time constraints within this research project and the need for engagement of many different stakeholders, applying engaged scholarship through collaborative research methods, for instance by organizing a meeting with academics and practitioners to discuss and possibly explain the findings from this research, unfortunately was not possible. This may however be interesting to apply in further research.

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Case study references

The references of the five case study analyses are found in Appendix 14 (this information will not be publicly accessible due to confidentiality of some of the sources).