Identifying the criteria for corporate real estate decisions through the laddering technique

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Identifying the criteria for corporate real estate decisions through the laddering technique: an analysis of care organisations in The Netherlands

Corporate real estate decisions

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Abstract

Purpose – Board members and real estate managers (decision makers) play an important role in the decision-making process in nursing home organisations. This study aims to provide an understanding of underlying attributes and benefits sought by decision makers when making nursing home real estate decisions.

Design/methodology/approach – Decision makers from seven different nursing home organisations in The Netherlands were interviewed using the laddering technique to determine the individual requirements, the considerations of the decision alternatives, the relevant attributes and benefits and their mutual relationships.

Findings – This study details the motivations behind real estate management decisions in nursing home organisations. The findings show that apart from financial considerations, decision makers strive to enhance the quality of life and satisfaction of users with their real estate decisions and seek to include residents and employees in the process. These benefits are connected to the goals of well-being and innovation in health

All participants in the interviews are thanked for their contribution to this study.

care. Furthermore, functionality, physical and functional flexibility and technology are key considerations when undertaking corporate real estate (CRE) decisions, to ensure that real estate management aligns with the strategic goals of the nursing home organisation.

Practical implications – The insights of this study can support decision makers in healthcare facilities to create strategic value with their real estate. Understanding how to obtain certain benefits from nursing home real estate may result in a better realisation of organisational objectives and user needs.

Originality/value – This study reveals the decision-making process in a nursing home context. Moreover, the laddering technique is used as a new method to explore and gain a deep understanding of CRE decision-making processes.

Keywords Strategic value, Laddering, Decision-making, Nursing homes, Strategy, Health care

Paper type Research paper

Introduction

The clientele of Dutch nursing homes is changing; only clients with a high need for care and complex health issues are accommodated in intramural facilities settings while those with low needs increasingly rely on home care (Van der Voordt, 2016). Additionally, with the introduction of diagnosis/treatment combinations, a fixed, all-in price for accommodation costs must now be calculated. Therefore, maintenance, renovation and new building costs are linked to health-packages. Currently, Dutch nursing home organisations are responsible for their own real estate investment decisions, which are assessed by a capital provider instead of by The Netherlands Board for Healthcare Institutions (Van der Voordt, 2016).

This changing context has created new opportunities and risks for the Dutch healthcare organisations, which must now consider real estate management as a strategic resource. A resource that should be placed alongside financial, human and technology resources (Joroff *et al.*, 1993). Nursing homes in The Netherlands are becoming increasingly aware of the consequences of their real estate decisions for organisational performance and user satisfaction (Van der Voordt, 2016). New real estate strategies that align with organisational ambitions and goals are required to support long-term planning (Rodríguez-Labajos *et al.*, 2018). Therefore, the decision makers in nursing home organisations, such as executives and managers must think strategically when making real estate decisions. Moreover, healthcare organisations must ensure their real estate strategy addresses current and future stakeholder demand and aligns with the real estate supply (Van der Zwart, 2014).

The alignment between corporate real estate (CRE) and the broader organisational strategy is an ongoing topic of interest in the field of CRE management (Heywood and Arkesteijn, 2017). There are several CRE alignment models available in the literature (Arkesteijn *et al.*, 2017), each with a unique viewpoint on how to make strategic CRE decisions. The building characteristics or organisational values that should be prioritised depends on the ambitions and objectives of the organisation, the level of importance that various user groups attach to the positive and negative effects of design alternatives, constraints such as time, money and legislation, and the external context (Van der Voordt, 2016).

Increasingly, Dutch nursing home organisations are focussing on the quality of care and the functionalities of the indoor environment, often referred to as the healing environment, to improve the quality of life of the residents and the well-being of the employees. For example, studies have shown (Ulrich *et al.*, 2008) that the design of healthcare environments can achieve improvements such as a reduction in medication errors, patient falls and stress levels. In addition, a well-designed facility increases patients' satisfaction with their care and can enhance patient-centred care. Such decisions concerning healthcare buildings are

important because they have long-term effects on people and work processes (Elf *et al.*, 2015).

However, the prioritisation of building characteristics and organisational values may also likely depend on the vision of the decision maker, and decision makers may have disparate perceptions of the strategic value of a particular design choice or management alternative over other options (Van der Voordt, 2016). Therefore, it is important to identify how CRE managers make their decisions when considering the design of new healthcare buildings or the renovation of existing healthcare buildings.

Decision-making concerns the thinking processes used to make choices, and several criteria and sub-criteria are used to rank the alternatives of a decision (Saaty, 2008). To make a decision, it is necessary to know the problem, the need, the purpose of the decision, the criteria, their sub-criteria, affected stakeholders and alternative actions (Saaty, 2008; Van der Voordt *et al.*, 2016). Gathering such information is necessary to gain an understanding of the context and the problem and enable decision-making. Presently, it is not clear which key values are incorporated into the nursing home real estate decision-making process and how the concept of added strategic value is adopted in daily practice (Van der Voordt, 2016). In addition, the alignment of real estate decisions with corporate strategies in general is poorly understood (Arkesteijn *et al.*, 2017), as alignment studies focus on the theory of alignment without considering the decision-making process. Therefore, the purpose of this study is to obtain insight into the decision-making process of nursing home CRE managers and specific strategic benefits they seek when managing real estate portfolios. To do so, the laddering technique from decision-making theory is introduced to CRE management.

Laddering is a qualitative research technique for understanding behaviours and has been used in several different fields to explore individuals' opinions, attitudes and beliefs (Veludo-de-Oliveira *et al.*, 2006); however, it has not been applied to CRE management. Laddering is focussed on identifying the cognitive representations of decision makers and thus helps to investigate the differences in CRE choices that are made regarding certain decision problems.

Theoretical background

The design of nursing homes is an important aspect of quality healthcare and nursing home organisations should integrate architecture into their strategic plans to improve the quality of care they offer (Elf *et al.*, 2015). The most important strategic alignment decisions in the planning and design process are made in the early phases (Elf *et al.*, 2015), such as the initial phase when user groups meet to discuss ideas and requirements and prepare for design decisions (Huisman *et al.*, 2018). New innovative building concepts, such as creating a healing environment and various perspectives can be integrated into the design during this phase. The primary purpose of the initial phase is to define the nursing home environment from the user's perspective and align this perspective with the strategic plan of the nursing home organisation. A comprehensive understanding of the alignment process is critical to determine optimal long-term real estate strategies (i.e. new build or renovation).

Planning decisions must consider the changing context in the care sector, characterised by an ageing population and the introduction of new technologies and concepts (Rodriguez-Labajos *et al.*, 2018). Decisions concerning site selection and building design are critical to ensuring an effective response to societal changes.

The next sections, therefore, discuss the existing theory on decision-making processes and achieving CRE alignment with corporate strategy during this initial phase, to identify potential attributes, benefits and situational variables that could be part of the mental representations (MRs) of the alignment decision.

CRE alignment with corporate strategy

Decision makers are increasingly recognising the strategic importance of CRE management (Rodríguez-Labajos *et al.*, 2018) as a tool to satisfy the requirements and preferences of nursing home stakeholders' (Van der Zwart, 2014). However, the CRE decision-making process is complex because of the variety and diversity of stakeholders. Gibler and Lindholm (2012) stated that CRE decisions must align with core business strategies if they are to add strategic value to the organisation. However, decision makers indicate that it is difficult to achieve this alignment (Heywood, 2011). After comparing several alignment models, Heywood and Arkesteijn (2017) highlighted the difficulties in aligning CRE management with organisational strategies to deliver optimal organisational value.

Added value through CRE strategies can be realised through various management interventions. Van der Voordt *et al.* (2016) identified six categories where CRE interventions can be affected: the physical environment, in terms of portfolio, building and space; facilities services; the interface with the organisation's core business; the supply chain; internal processes; and strategic advice and planning. Various lists of CRE strategies have been proposed in the literature (Riratanaphong and van der Voordt, 2015; Van der Zwart, 2014) but have not gained wide acceptance. Decision makers in hospital environments appear to focus on supporting innovation, increasing user satisfaction and improving the organisation's culture (Van der Zwart, 2011). In a recent study, Van der Voordt (2016) added the care-sector specific strategy of creating a healing environment; defined by Huisman *et al.* (2012) as "a place where the interaction between patient and staff produces positive health outcomes within the physical environment" (p. 70).

Specific environmental interventions and their effects on patients' health are well documented (Nazarian *et al.*, 2018). A growing body of literature highlights the effect of the physical environment on the healing process and the well-being of patients, family and staff (Huisman *et al.*, 2012). Therefore, CRE decisions are important, and insight into the criteria used by Dutch nursing home decision makers to evaluate options may help the CRE alignment process.

Decision-making processes

Individual responses to choice significantly influence the decision-making process; choices can be impulsive, with little reflection at the moment a choice is made or controlled by reasoning (Horeni *et al.*, 2014). Craik (1943) postulated that the human mind constructs "small-scale models" of reality that are used to anticipate events, to reason, and to explain. Later, the concept of MRs was explicitly introduced in Johnson-Laird's (1983) mental model theory. MRs are the result of individual perceptions stored in the memory during each choice situation (Arentze *et al.*, 2008; Dellaert *et al.*, 2008). They involve a simplification of reality, including only the relevant attributes of the decision alternatives, the benefit requirements of the decision maker and the situational variables and their causal interrelationships (Arentze *et al.*, 2008; Dellaert *et al.*, 2008).

This study seeks to determine the MRs of nursing home decision makers in terms of the attributes sought, the benefits expected from these attributes and the situational variables that may affect the decision. In addition, multiple attributes can lead to a single benefit, highlighting the need to evaluate the interrelationships between attributes when making a choice (Arentze *et al.*, 2008). Means-end analysis (Reynolds and Gutman, 1988) is a suitable approach to determine the MRs of nursing home decision makers because it allows researchers to explore or elicit individual's preferences and identify how decision makers evaluate attributes and benefits.

Table 1 provides an overview of the main decision alternatives, attribute variables and benefit variables considered when making CRE decisions in the context of healing environments.

Four CRE decision alternatives were considered within this study: a new building at a new location, a new building at an existing location, renovating an existing building or selling a building.

The attributes initially considered in this study were derived from the extant literature and include location, facilities, accessibility, building physics, interior design, physical and functional flexibility, stakeholder participation and technology. Strategic value can be achieved by selecting locations and facilities that attract customers and employees; for example, an accessible location in a desirable area with high-quality staff accommodation is a possible strategy for attracting and retaining employees (Van der Zwart, 2011). Decisions related to building physics (e.g. light, acoustics, indoor air quality) can affect occupants' comfort and health and influence employees' productivity and, satisfaction (Lindholm *et al.*, 2006; Van der Zwart, 2011), while interior design choices can support the culture of the organisation (Van der Voordt *et al.*, 2003). A flexible real estate strategy includes choosing spaces that can be adapted to multiple purposes and creating flexible workspaces to support changing business processes (Lindholm *et al.*, 2006). The participation of stakeholders in the planning and design of workplaces results in spaces that create an inspiring atmosphere and demonstrate an understanding of the values of the various stakeholders (Huisman *et al.*, 2018; Lindholm *et al.*, 2006). Finally, the use of technology plays an important role in improving staff productivity (Van der Zwart, 2011).

From the perspective of MRs, benefits are the outcomes of a decision in terms of the individual's fundamental needs (Arentze *et al.*, 2008; Dellaert *et al.*, 2008). They conceptualize a person's need related to the decision, such as a feeling of safety or pleasure (Arentze *et al.*, 2008; Horeni *et al.*, 2014).

Decision alternatives	To build a new building at a new location To build a new building at an existing location To renovate an existing building To sell a building
Attribute variables	Location Facilities Accessibility Building physics Interior design Physical and functional flexibility Participation Technology
Benefit variables	Atmosphere Image Safety Mobility Self-esteem Productivity User satisfaction Improve quality of life Increase well-being of employees Reduce costs

Table 1.
Decision alternatives,
attribute variables
and benefit variables
in nursing home real
estate management

In this study, benefits describe the expected impact of the CRE attributes on organisational and CRE performance. The healing environment concept applied in hospitals was used as reference point in this study to identify potential underlying benefits sought by nursing home decision makers. These benefits include the perception of the environment, the interaction with the environment and the well-being of the users. Perception of the environment includes aspects such as atmosphere and image (Huisman *et al.*, 2012; Ulrich *et al.*, 2008), while the interaction with the environment is related to safety, mobility, self-esteem and productivity (Huisman *et al.*, 2012; Van der Zwart, 2011; Zhang *et al.*, 2019). The well-being of the residents and employees relates to satisfaction, and the quality of care (Huisman *et al.*, 2012; Zhang *et al.*, 2019). The benefits of the environment for ageing adults have also been reported (Kort, 2017).

Moreover, other variables may be identified when the decision-making process is analysed in more detail. For example, the Dutch healthcare sector is increasingly seeking to reduce expenditure (Van der Zwart, 2011) and strategies such as co-operation in construction are becoming common mechanism to reduce costs for healthcare organisations.

Methods

Laddering is a one-on-one interview technique used to develop a deep understanding of how individuals translate the attributes of products into meaningful associations (Gutman, 1982). Laddering involves a tailored interviewing format, typically using a series of directed probes, and asking “why is that important to you?”, to determine sets of linkages between the key perceptual elements across a range of attributes and benefits (Reynolds and Gutman, 1988). In the field of consumer behaviour, laddering is a successful means-end approach to investigate why and how consumers shop (Gutman, 1982; Horeni *et al.*, 2014) because it allows for the detection of shoppers’ causal links between attributes, such as parking spaces, decoration and personal service, and benefits, such as convenience and pleasure. Arentze *et al.* (2008) developed a semi-structured interview protocol, the causal network elicitation theory for measuring MRs of decision problems through laddering. This process involves generating an individual context-specific MR, where the individual’s benefit requirements, the attributes of the decision alternatives and the relevant context attributes, and their mutual relationships become visible. The technique is used in this study to gain insight into why and how nursing home decision makers make CRE decisions.

Participants

In 2018, 13 different nursing home organisations were contacted via email, of which 7 agreed to participate in the study. The participants were selected based on their function as board member, real estate manager or facility manager in their organisation and their active participation in real estate decisions. The participants reflected on their organisation and what the organisation would consider and do in case they decided to change or expand their real estate. The key characteristics of the participants are provided in Table 2. The nursing home organisations were large companies with multiple locations in different parts of The Netherlands and had a diverse real estate portfolio. The seven participants (one per organisation) were interviewed in person using the causal network elicitation technique. In total, the participants were responsible for the real estate at 126 locations. All interviews were conducted in private rooms at the participants’ workplace and had a duration between 55 and 67 min. All interviews were conducted by the first author, audio-recorded with the permission of the respondents and transcribed verbatim.

Procedure

The participants were presented with hypothetical real estate decision alternatives in three steps. The first step was to consider the decision alternatives (i.e. to build a new building at a new location or existing location, renovate a building or to sell a building) using an open-ended question: *What alternatives are considered in your organisation's real estate decisions?* The second step was to determine the MRs. In this step, the interviewer sought to determine, through open-ended questions, the attributes and benefits the respondents considered relevant for choosing an alternative. The following question was posed to the respondents: *What are your considerations when choosing between these alternatives?* Upon identifying individual attributes, the interviewer then proceeded to identify the benefit with the question: *Why is this consideration important?* The interviewer used the predefined list of attributes and benefits (Table 1) to identify the variables mentioned by the respondents, but added new attributes and benefits during the interview when they came up.

The interviewer used cards and post-it notes to construct the MR during the interview (Figure 1). At this point, the structure of the MR was known and the purpose of the third step was to summarise the attributes and benefits variables in the MR. The interviewer identified each of the decision alternatives, attributes and benefit variables in the model. If the respondent was not satisfied with the summary, due to a missing variable or link between attributes and benefits, the interviewer returned to Step 2 to revise the MR.

Validation of the analysis

Based on Gengler and Reynolds (1995), a content analysis was conducted to validate the constructed MRs collected during the interviews. In the first step, the interview transcripts data were reduced into separated phrases and a distinction was made between attributes (A), benefits (B) and situational variables (S). Separated identifiers with similar meanings were grouped in broader codes. The relation between the codes was determined, allowing for a visualisation of the decision-making process within the nursing home CRE context. Finally, the individual MRs were combined into one generic MR. The interviews were anonymised and data were analysed in MaxQDA 2018.

Results

The research findings are presented in two steps. Firstly, an overview is given of the codes. Secondly, diagrams are developed to simulate the nursing CRE decision-making processes for two decision alternatives and the underlying attributes, situational variables and benefits.

Respondents	Function	Active in real estate decision-making	No. (<i>n</i>) of locations in the portfolio
1	Real Estate Manager	Yes	18
2	Real Estate Manager	Yes	18
3	Board member	Yes, and an oversight role	13
4	Director	Yes	35
5	Real Estate Manager	Yes	23
6	Facility Manager	Yes	1
7	Real Estate Manager	Yes	18
			Total = 126

Table 2.
Characteristics of the
interviewed
respondents

Figure 1.
Example of a mental
representation
construction

Developing the codes

Table 3 shows the content analysis results. In total, 20 codes were identified, with each code identified as an attribute, a benefit or a situational variable. The attributes provide an overview of the physical aspects of the real estate portfolio mentioned by the respondents, while the benefits are outcomes that the nursing home-decision maker hopes to achieve from the attributes.

Some key features can be identified in Table 3 and are summarised below.

Firstly, sustainability (A3), functionality (A4), stakeholders (A6) and building aspects (A7) were added to the previously determined list of attributes in Table 1. Attribute A6 includes co-operation and participation in planning and design to achieve the satisfaction of staff and residents and to increase the quality of life of the residents. It differs from the attribute participation (A8) which includes the participation of residents in the daily routine of the society. Internal design, building physics and services are integrated within the term of building aspects, while accessibility (B6) is redefined as a benefit instead of an attribute.

Secondly, freedom of choices (B2) and social support (B8) were added as new terms to the benefits column, while quality of life (B4) is a broader term that includes quality of care and

Table 3.
Summary of content
codes for nursing
home CRE decisions.
Added codes
retrieved from the
interviews are given
in italic

Decision alternatives	Code	Attributes	Code	Benefits	Code	Situational variables
New building, new location	A1	Technology	B1	Safety	S1	Location
New building, existing location	A2	Physical and functional flexibility	B2	Freedom of choices	S2	Lifecycle (end)
Renovation	A3	Sustainability	B3	Financial	S3	Building concepts for care
Selling a building	A4	Functionality	B4	Quality of life	S4	Legislation
	A5	Facilities	B5	Satisfaction		
	A6	Stakeholders	B6	Accessibility		
	A7	Building aspects	B7	Image		
	A8	Participation	B8	Social support		

the well-being of employees. User satisfaction was renamed as satisfaction (B5), location (S1) was redefined as a situational variable and reduce costs was renamed with the broader term financial (B3). The benefits of productivity, mobility, self-esteem and atmosphere were not mentioned by the respondents.

Finally, four situational variables were identified: location (S1), lifecycle end (S2), building concepts for care (S3) and legislation (S4). A situational variable is a concrete characteristic in the frame of choice that cannot be influenced by the individual in the moment of decision-making (e.g. location, legislation and concept). S1 refers to the characteristics and quality of the neighbourhood and the co-operation with local stakeholders, S2 is the useable life of the building, S3 is an outcome of the goals and objectives of the organisation and S4 refers to changes in Dutch healthcare legislation.

Table 4 summarises the participants' experience with the four decision alternatives of a nursing home CRE decision.

The majority of the respondents had experience with a new building at an existing location and renovation of buildings, while fewer had experience with a new building at a new location

In the next sections, two examples of a decision-making process are further explained via simulated MR diagrams.

Insight into the nursing home corporate real estate decision-making process

The decision alternatives new building at an existing location (B) and renovation (C) were mentioned by most of the respondents when considering nursing home real estate decisions. Therefore, the MRs of the decision-making process of these two decision alternatives are examined in more detail. For these two alternatives, a diagram was constructed to illustrate the decision-making process and the underlying attributes and benefits of the respondents all together (Figures 2 and 3).

New buildings at an existing location

Location (S1) and end of the building life cycle (S2) were the situational variables mentioned by the nursing home decision makers as important strategic factors when deciding on a new building at an existing location. Moreover, location is an important aspect of co-operation with other local stakeholders (A6), such as general practitioners and other care organisations. In addition, facilities (A5) in the local community are a key consideration. Internal facilities, such as a restaurant or a swimming pool and external facilities in the neighbourhood, such as supermarkets are important for the participation (A8) of the residents. For example, a swimming pool inside a nursing home can be used for multiple purposes; the residents can use the pool, while it is also available for the public to rent for swimming lessons. This can create intergenerational contacts and allow residents to participate in them local community, helping them to stay active and reducing loneliness.

Table 4.
Participants'
experience with the
four decision
alternatives of a
nursing home CRE
decision

Decision alternatives	Respondents						
	1	2	3	4	5	6	7
New building at a new location	x			x	x		x
New building at an existing location	x	x	x	x	x		x
Renovation	x	x	x	x	x	x	x
Selling a building	x	x	x	x	x		x

Figure 2.
The nursing home
CRE decision-making
process for a new
building at an
existing location

Note: ^aThe nursing home CRE decision is the decision variable and new building at an existing location is one of the four decision alternatives

Note: "The nursing home CRE decision is the decision variable and new building at an existing location is one of the four decision alternatives

Figure 3.
The nursing home
CRE decision-making
process to renovate
an existing buildinga

These attributes provide the residents with freedom in choices (B2) and increasing the quality of life (B4).

Functionality (A4) is a key consideration in determining the end of a building's life cycle (S2) and the need for a new building. The decision maker has to determine whether the functionality of the building aligns with the current ambitions, objectives and requirements of the nursing home organisation and whether renovating the building towards current standards is too costly (B3). Technology (A1) is also mentioned as a requirement for the design of a new building; in a new building, it is easier to implement new technologies or innovations. Technology, such as eHealth and smart home systems, contributes to improving the safety (B1) of the residents and staff in nursing home organisations and provides the residents with the ability to make their own choices (B2).

One respondent noted that physical and functional flexibility (A2) is a funding requirement stipulated by financial institutions to support the marketability of the building. Flexibility in this context refers to flexibility in design, ensuring that the building can serve future needs and provides a combination of functions. In the design of a new building, real estate managers seek sustainable solutions (A3) to reduce costs (B3).

Some of the nursing home decision makers involve stakeholders, such as employees and client representatives, in the entire design process of a new building (A6), seeking higher client and employee satisfaction (B5) and contributing to quality of life (B4) of residents by designing a building that meets the needs of the users.

Renovation of a building

Location (S1) and legislation (S4) were mentioned as situational variables that influence the decision for the renovation of a building in the real estate portfolio. The legislative environment has currently changed in The Netherlands, affecting building requirements for care facilities.

Often a renovation is required to improve the standards of care, which is affected by building aspects (e.g. building physics, interior). For example, enhancing the safety (B1) of buildings is an expected benefit of improving building aspects (A7).

Safety can relate to the physical layout of the building; for example, to enable ease of movement in the event of an emergency and building features, such as visitor access control.

Renovating a building can allow the implementation of sustainable solutions (A3); for example, installing energy-saving lighting systems to achieve a reduction in energy costs. Flexibility (A2) in the building is also an important aspect; that is, whether the building can be used for multiple functions to increase the marketability (B3) of the building. Furthermore, optimising building use reduces total occupancy costs (B3).

Functionality (A4) describes how well the building supports the primary "core business" of the nursing home organisation; for example, the accessibility (B6) of the building to the residents, their families and visitors. Enhanced functionality can improve clients' and employees' perceptions of the nursing home (B7).

For example, restaurants, shops and activity rooms stimulate participation (A8) and create a social environment, while facilities in the neighbourhood allow residents to engage in the community and provide the residents autonomy.

Finally, nursing home organisations gain support of their stakeholders (A6) by involving them in the redesign of the building (B8), which leads to satisfaction (B5) and contributes to the residents quality of life (B4).

Discussion

The purpose of this study was to identify the various aspects of the decision-making process in nursing home CRE management and the interrelationships within these aspects. The laddering technique was applied to identify the key building attributes considered in the decision-making process to realise specific benefits. Understanding these aspects allows a deeper understanding of the rationale for design and building decisions in the caregiving context. The results contribute to understanding the potential benefits derived from real estate decisions and add empirical support to a range of key attributes that are considered to be relevant in the decision-making process. In the following sections, implications for theory, implications for practice, future studies and limitations are discussed.

Implications for theory

This study contributes to the literature by describing the key underlying criteria for nursing home real estate decisions. Existing CRE alignment models focus on the high-level strategy and do not attempt to describe the decision-making process itself. Also, they generally disregard situational variables that influence decision-making. For example, this study identifies the situational variable building concepts for care (S3) as an important consideration for real estate decisions to support the core business strategy; however, this variable does not have a related attribute in both described decision alternatives. Thus, building concepts appear to be considered as a starting point for real estate decisions. Furthermore, existing alignment models generally have not clearly linked attributes, as input variables for Corporate Real Estate Management to work with, with expected benefits. This attempt to do so specifically for the nursing home sector shows that this is possible when approaching experts on their opinion in specific situations.

The laddering technique is an innovative and clearly adequate approach to determining the underlying criteria that decision makers use to evaluate CRE alternatives and the benefits they seek, so it could be applied in other sectors as well.

This study supports [Van der Zwart \(2011\)](#), who found that hospital decision makers value decisions that support innovation, increased user satisfaction and an improvement in the organisation's culture. These strategic values are connected to well-being and concepts such as "healing environment" and "planetree" ([Huisman et al., 2012](#); [Van der Zwart, 2011](#)). The findings of this study show that nursing home decision makers strive to enhance the quality of life and satisfaction of their customers with their real estate decisions. Moreover, they strive to involve their stakeholders in the design and decision-making process. Involving relevant stakeholders provides nursing home decision makers with a range of perspectives to enhance the CRE decision-making process ([Kang et al., 2015](#)).

This study highlights the distinction between exchange- and use-value. Exchange-value focusses on reducing costs or increasing the values of real estate assets, while use-value refers to non-real estate organisational benefits such as user satisfaction ([Appel-Meulenbroek and Haynes, 2014](#)). The analysis in this study shows that the emphasis in the nursing home context is on use-value; quality of life, safety and freedom of choice are important to CRE managers. However, this study did not support other aspects highlighted in the literature. Productivity improvement, for example, is a key benefit highlighted in the literature ([Van der Voordt, 2016](#)), but was not mentioned by the respondents, nor were self-esteem, mobility and atmosphere which one would expect to be affected by CRE decisions too.

Implications for practice

This study contributes to the understanding and discussion of the complexity of healthcare real estate decisions. Understanding the changing legislative environment and the rapid development of new technologies and concepts in the care sector helps CRE managers to react during the early phases in the planning and design process. Furthermore, this study highlights the relationship between strategic real estate management and organisational management and the need to ensure that strategic corporate values are incorporated in the design and management of nursing home real estate.

The laddering technique used in this study clarifies the decision-making process used by nursing home decision makers from a research point of view, but it can be just as useful for internal management practices and to illustrate the process to other stakeholders.

The real estate decision-making process is complex due to the variety of factors that must be considered. The specific MRs identified in this study can be used by decision makers and applied into their own context to help formulate a clear CRE strategy and share this vision with other stakeholders.

Limitations/future studies

This study has some limitations. Firstly, the research design could be enhanced by including more experts at the initiation phase, to identify additional motives more specific to the nursing home sector. The aim of this study was to be explorative and saturation became visible as no new information or themes occur after five interviews, but more experts could further clarify the other decision variables such as building a new building at a new location. Despite the small sample, the results could also be used in further research to develop a list of attributes and benefits to apply the same method to a broader sample.

Further research is also needed, to understand how the concept of real estate strategic value might vary between different stakeholders. This could further establish the perceptions of real estate added value from the perspective of other project participants or users than these CRE managers.

The literature suggests that the measurement of outcomes and performance of the decision-making process is also still underdeveloped. Further research is needed to identify the key performance indicators applicable to the nursing home decision-making context and how to implement them in the organisation.

Finally, some respondents mentioned total occupancy costs per bed as an important benefit to reach the organisation's goals. Additional research could further investigate the alignment of CRE management with specific strategic organisational goals, both in nursing home organisations and other contexts.

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Further reading

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