Adding Value by Health Care Real Estate: Parameters and Priorities

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Abstract

Purpose Due to the transition of the Dutch health care sector from a governmentally steered domain towards regulated market forces, health care organisations have become fully responsible for their real estate. This paper explores if/how Dutch health care organisations adopt the concept of adding value by corporate and public real estate, which value parameters are included in daily practice and how, and which values are prioritized.

Methodology Literature study and interviews with CEOs, project leaders, real estate managers and facility managers working in Dutch hospitals, assisted living facilities for the elderly, and mental health care facilities. The interviews were jointly prepared by students and the author of this paper being their main supervisor.

Findings End-user satisfaction, stimulating innovation and increasing productivity are highly prioritized. The operationalisation into concrete design choices and strategic management of buildings-in-use is still underdeveloped. Which values are prioritized depends on the organisational objectives, the target group, the available budget, and the external context, in particular governmental policy and competition with other health care suppliers.

Research implications Although much work has been done to operationalise the added value of corporate real estate and building related facilities, there is still a lack of a widely agreed taxonomy of added values and how to measure and manage these values. Ongoing international collaboration between researchers and practitioners is needed to build a common framework and to develop standardised measurement methods.

Practical implications The insights can support decision makers in how to add value by public and corporate real estate, to explore conflicting values, and to improve current corporate and public real estate management by incorporating adding value parameters and taking into account the needs and interests of different stakeholders.

Social implications A clear insight in value adding management of corporate real estate may result in a better fit between real estate and organisational objectives and individual needs.

Originality/value The findings link added value theory to Corporate Real Estate Management in Dutch health care practice

Keywords: Added value; corporate real estate; health care; KPIs; prioritization

1. Introduction

As in many other countries, in the Netherlands, too, the external context of health care real estate management has been changed from formerly strongly being steered by the national government towards a more open market competition. This transition results in more autonomy of health care organisations but also higher risks. In former days once the proposal for a new hospital building or renovating an existing building had been approved by the government to fit with the planning regulations regarding the number of beds per 10,000 inhabitants, particular

building regulations for health care (a maximum number of square meters per bed or per function and guidelines for space requirements per function of activity), the standardized maximum budget for investment costs per square meter, and the usual permit requirements laid down in the National Building Code, all running costs related to the building were reimbursed by the government. Nowadays all capital costs have to be paid back by the income from treatment-diagnosis combinations. Furthermore health insurance companies are more selective in making contracts with hospitals and look more carefully to the quality and costs of supplied health care, which leads to a growing competition between health care providers. In the cure sector of old people's homes, nursing homes and assisted living facilities for the elderly, the political, financial and legislation context is changing as well. Customers with a light need for care are no longer accommodated in intramural facilities and rely on home care. This changing context has a strong impact on the design and management of health care real estate. Table 1 shows a number of changes in CREM based on Fritzsche et al. (2005) and Hoepel et al. (2009).

Table 1: Changing CREM context

From	**To**
Certainties	Opportunities and risks
Seeking approval	Taking responsibility
Building plans based on regulations and standards	Building plans based on business plans
Maximizing floor area and investments within the m2 and cost standards	Less but high quality m2 to maximize operating efficiency and minimize total costs
Investment assessed by Netherlands Board for Healthcare Institutions (CBZ)	Investment assessed by capital provider
Retrospective financing of approved investments	Standardized accommodation budget based on health care production
Poor cost awareness of end users	Raised awareness due to more transparency and charging medical staff
Property owned	Comparative assessment of ownership, rent, and sale and lease back
Equity capital locked up in real estate	Equity capital invested in primary process
Mono-functional premises	Flexible premises

Organizational changes due to mergers and building network organisations, new insights regarding healing environments, demographic changes, technological developments, and the economic context play a role as well. This dynamic context affects the health care real estate stock and asks for all kind of interventions. This made us curious to investigate which key values are incorporated in the design and management of health care real estate and if and how the concept of the added value of Corporate Real Estate Management (CREM) is adopted in daily practice.

This paper first explores the meaning of added value of corporate real estate. Next the paper presents the findings of empirical research within the health care sector regarding which values are incorporated in practice, how, and which values are prioritized.

2. Added value of CREM and FM

The concept of 'added value' or - formulated in a more active way – 'adding value' by real estate and building related facilities and services is "hot". The search for added value is a popular topic in research within the fields of Corporate Real Estate Management (CREM) and Facility Management (FM) (e.g. Den Heijer, 2011; Jensen, 2010; Jensen et al., 2012a, 2012b, 2013, 2014; Van der Zwart, 2014) and a popular subject at international conferences of inter alia the International Council for Research and Innovation in Building and Construction (CIB) (Jensen, 2014) and the European Facility Management Conferences (EFMC) (Alexander, 2014; Jensen and Van der Voordt, 2015).

According to the dictionary, 'value' means the worth of something in terms of the amount of other things for which it can be exchanged. In financial terms, the value of a product or service refers to the monetary or material worth i.e. the amount of money that a person or organisation is willing to pay for it. Value also refers to non-monetary appraisal in terms of excellence, usefulness, importance, and to esteem highly (dictionary.com). In line with this, De Vries et al. (2008) and Den Heijer (2011) defined the added value of corporate real estate as its contribution to organisational performance. This definition links added value to the revenues, with cost reduction being one of the value parameters. Jensen et al. (2012) defined the added value of FM and CREM as the trade-off between the benefits of FM and CREM interventions and the costs and risks to achieve these benefits. This corresponds with 'value for money '. Due to the focus on the impact of physical resources, the concept of added value of CREM and FM can also be related to resource-based theory (see for instance Peteraf and Barney, 2003).

The added value of a particular design choice over other choices or managerial interventions in buildings-in-use can be very diverse. Hans de Jonge, professor of real management and development at TU Delft, mentioned seven possible added values (De Jonge, 1996):

1. Increasing labour productivity by means of the accommodation, facilities and services, for example, by a clever choice of the location, short walking distances between features that are used frequently, ergonomic furniture, smoothly functioning ICT and a pleasant and healthy indoor climate.
2. Reduce costs by saving on capital costs and operating costs of real estate and other facilities. For example, by strict m2 standards, measures to reduce energy consumption and introduction of flexible workplaces in connection to New Ways of Working.
3. Risk control, for example by diversifying the real estate portfolio (smart location policy; a mix of rent, lease, and ownership; and in case of operating as an investor in real estate: a mix of different types of real estate such as offices, retail and leisure, housing), conducting scenario analyses, and monitoring the performance of the real estate.
4. Increasing the value of assets through timely buying and selling real estate, renovation or conversion of obsolete property and appropriately responding to developments in the real estate market.
5. Increasing flexibility, technically by creating flexible space that can easily be adapted to future needs and other functions, organizational for example by applying flexible working hours, and juridical through a mix of ownership, rent and lease and short-term lease contracts.
6. Supporting culture by an accommodation and facilities that fit with the values and habits of the organisation, or to build a new building to act as a catalyst to support the integration of different cultures after a merger.
7. Marketing and PR through the building and other facilities in order to contribute to the branding of the organization and a positive image and as such to attract and retain high talented staff and more customers.

Other researchers have adapted this list or extended the list with additional values such as stimulating innovation or increasing user satisfaction (Lindholm et al., 2006; De Vries et al., 2008; Jensen, 2010; Den Heijer, 2011; Jensen et al., 2013; Van der Zwart, 2014; Riratanaphong, 2014) or sector specific values such as creating a healing environment (Prevosth and Van der Voordt, 2011). De Vries et al. (2007) summarised all values into three key values: profitability, productivity, and distinctiveness. Den Heijer (2011) did the same but added a fourth key value: sustainability. Jensen et al. (2012b) classified many different values into use value, customer value, economic value, social value, environmental value, and relationship value. Up until now no agreement seems to exist about a taxonomy of added value parameters.

Added value for whom?

What is much worth for one person may be of little or no value to another person. Regarding value adding management of real estate it is therefore important to determine who will benefit from particular choices regarding the accommodation, facilities and services, and who pays for the costs. In the CREM literature, the added value of corporate real estate used to be linked to shareholder value, productivity growth and revenue growth (e.g. Lindholm et al., 2006; Lindholm and Levainen, 2006). Nowadays most authors connect added value to the interests and needs of clients, customers and end users (Jensen et al., 2012b) and the society as a whole (Jensen et al., 2013). Den Heijer (2011) presents four perspectives: the strategic perspective of policy makers such as CEOs, the financial perspective of the controllers, the functional perspective of the end users, and the spatial-technical perspective of property managers and technical specialists. This approach can be zoomed in to smaller scales such as business units and departments, and zoomed out to larger scales such as umbrella organisations and the society as a whole, local, regional, national or global. Internal decision-makers include the Board of Directors, managers of business units and department heads. External policy makers include local authorities such as the municipality and industry associations, or the national government. Internal users may include employees, visitors, students (schools) or patients (health care facilities); external users can be local residents and passers-by. For instance sustainable real estate is not only important for the organization – due to the benefits of energy savings or a positive image of corporate social responsibility - but also for the society as a whole. Choices regarding the program of requirements and the design and management of buildings-in-use should always be tested against the effects on the various stakeholders (Van der Zwart and Van der Voordt, 2013).

3. Empirical research into prioritised values in Dutch health care practice

It may be expected that the incorporation of particular values in CREM and FM in practice depends of the mission, vision and goals of the organization, the level of importance various stakeholders attach to the positive and negative effects of design variants, constraints such as time, money, and legislation, and the external context. In a time of economic crisis, cost reduction will probably be number one on the list of objectives. In a period of shortages in the workforce employee satisfaction may be high on the list in order to attract and retain scarce talent.

Supervision of various students and a PhD candidate offered the opportunity to investigate if and how decision makers in the health care sector incorporate the concepts and parameters mentioned above in daily practice and which values are prioritised. This section presents the data of four graduation studies. The main questions raised were: which values are incorporated in the design and management of health care real estate, which values are prioritised, and how are these values operationalised in concrete choices regarding the building and building related facilities?

Research methods

Van den Bouwhuisen and Doodkorte (2014) interviewed 21 general managers, care managers, real estate managers and cluster managers working at the Argos Care group and the Schakelring, both organisations that deliver home care and day care and run a number of old people's homes and nursing home. They asked their respondents to mark the level of importance of added values of real estate in a list of 10 values. 16 people responded to this question. Wetzels (2014) disseminated an online survey among 84 organisations that offer mental health care (representing 90% of all mental health care). With N = 20 his response was 24%. Ten organisations were additionally questioned in a follow-up phone call. For this paper we focus on his question "How intensively do you steer on the added value of real estate? Please mark your effort regarding 9 values on a 5-point scale". Prevosth (2011) interviewed 8 facility managers and asked them to rank the top 3 of most important values out of a set of 10 values (see also Prevosth and Van der Voordt, 2011). Van der Zwart (2014) interviewed 10 hospital managers including CEOs, project leaders and real estate managers that were responsible for the strategic housing plan. He presented 9 values on little cards in a matrix of 3 x 3 and asked his respondents to rank each row and column in order of importance. Hereafter the respondents were asked to rank all nine values in order of importance. For a detailed description of both latter studies see Van der Voordt et al. (2012).

Prioritised values

Table 1 provides an overview of prioritized values found in the four studies.

Table 1: Prioritization of added values in Dutch health care real estate and facilities management

To increase/to stimulate:	Housing with Care[1] N=16	Mental health care[2] N = 20	Cure FM[3] N = 8	Cure CRE[4] N = 5	Cure CEO[4] N = 5	Total N = 54
User satisfaction	6	3 (11)	7	3	4	23
Innovation	4	4 (9)	1	3	4	16
Productivity	4	4 (13)	4	2	-	14
Cost reduction	-	6 (17)	3	3	1	13
Flexibility	3	7 (16)	2	-	-	12
Risk control	1	5 (13)	2	1	1	10
Healing environment	7	N.A.	1	N.A.	N.A.	8
Culture	N.A.	1 (6)	2	2	2	7
Positive image	2	1 (6)	2	1	1	7
Opportunities to finance	1	3 (9)	2	-	-	6
Sustainability	4	N.A.	-	N.A.	N.A.	4

1 = Van den Bouwhuisen and Doodkorte (2014); highest or second highest score on a 10-point scale

2 = Wetzels (2014); very intensively steered on + "intensively steered on" between parentheses

3 = Prevosth and Van der Voordt (2011); in top 3 of most important values

4 = Van der Zwart (2014); in top 3 of most important values

N.A. = Not asked for; - = Not listed in top of prioritised values

Because the questions and the lists of presented values differ slightly in each research, the findings are not entirely comparable. Nevertheless, a clear picture is emerging. User satisfaction is on top. Apparently the impact of the building and building related facilities on the end users (residents, patients, and staff) is leading. This fits with the primary task of health care institutions to provide affordable high quality care. Stimulating innovations and supporting productivity are also high on the list of most frequently prioritised values. The low ranking of sustainability has mainly to do with the primary focus on high quality and affordable care; generally only sustainability measures with a pay-back time of about five years will be considered.

Measures to attain added value by health care real estate

Table 2 shows a number of examples *how* i.e. by which measures the involved health care organisations try to steer on the added value of their real estate.

Table 2: Examples of measures to attain added value by real estate

	Accommodation/ facilities	**Management**
User satisfaction	Appropriate installations to create an attractive indoor climate; well-designed interior; being able to choose between 1-bedroom of multiple bedroom; well-thought signposting; sufficient paring facilities; room service (TV, internet, good coffee and snacks);	Floor management e.g. well-thought task division between care and FM-staff; policy to attract and retain patient-friendly staff; hospitality policy; keeping a list of customers' complaints and suggestions; quick response to complaints; sound communication; annual satisfaction survey;
Innovation	Infotainment bed-terminals; ICT; places for staff to meet and exchange ideas;	Creating skills labs and knowledge centres; internal and external brainstorm sessions to stimulate innovations; suggestion box; personal budget to support staff empowerment and development; co-location of health care providers;
Productivity	Introduction of New Ways of Working; spatial clustering of related functions; rooms and bathrooms with sufficient space to assist patients and using hoists); digitalisation of document management; use of smart phones and apps;	Improved efficiency of meetings; clear distinction between front and back office; optimisation of care processes, patient logistics, and transport of goods; attracting and retaining well-qualified staff;
Cost reduction	Less m2 due to more efficient use of space, space sharing of standardised consulting rooms, and strict space standards; reduction of energy consumption;	optimisation of care processes; centralised purchasing; appoint someone as contract manager; outsourcing; life-cycle cost system; clear policy how to cope with empty beds;

Table 2: Examples of measures to attain added value by real estate, *continued*

	Accommodation/ facilities	**Management**
Cost reduction	Less m2 due to more efficient use of space, by space sharing of work spaces and standardised consulting rooms, and strict space standards; reduction of energy consumption;	optimisation of care processes; centralised purchasing; appoint someone as contract manager; outsourcing; life-cycle cost system; clear policy how to cope with empty beds;
Flexibility	Technical, e.g. by separation between supporting structure and fill-in, and expandable zones; functional e.g. by flexible use of standardised activity-based spaces and multifunctional use of space; procedural e.g. shorter lease contracts;	Flexible working times; flexible labour contracts;
Risk control	Safe building (e.g. safe stairs, flat non-slip floors); control of indoor air quality; protocol for fall prevention; future adaptive re-use potential by dividing the building in different zones (hot-floor, hotel, office, factory);	Well-considered business cases; planning and control cycles; regular inspections according to accreditation; annual risk inventory and evaluation by a health and safety executive; training of staff; evacuation plan;
Healing environment	Supply of 1-bedrooms; places to meet; healthy indoor environment regarding interior design, indoor air quality, temperature, ventilation, acoustics, light; daylight; outside view; greenery; art; appropriate signposting; healthy food; facilities for family to stay at night;	Hospitality policy; healing environment program; application of Planetree concept;
Culture	Opportunities to meet and share ideas; creating a non-institutional environment;	Stimulating collaboration; leadership program; own house style; training of staff;
Positive image	Attractive location; nice architectural appearance; attractive interior design; affordable high-quality care;	Well-thought communication; steering on high position on ranking lists; hospitality policy; positive connections with the neighbourhood and city;
Opportunities to finance	Creating future value by flexibility and high adaptive reuse potential; attracting more patients by using real estate, facilities and services as a marketing tool;	Well-thought business case; well-thought long-term accommodation plan; mix of ownership, rent and sale-and-lease back; real estate fund with other organisations; use of private investments;
Sustainability	Sound isolation of building skin; heat recovery; green roofs; Led lighting;	Supply of organic food; waste policy; selection of suppliers based on sustainable products and processes; 'green' energy; sustainability coordinator; campaign to raise awareness among staff and patients;

4. Discussion

Noteworthy “soft” values such as end user satisfaction and business-related values such as innovation and productivity are high on the list of prioritised values. Remarkably, “hard” values such as cost reduction, flexibility and risk management are prioritised less frequently. This may be caused by the phenomenon of socially desirable answers: "the patient is central" and "employee satisfaction contributes to better care" sounds more appealing than "as cheap as possible." It could also be that user-centred values come earlier in the retina when talking about added value of care accommodations than financial considerations. In an analysis of 40 municipal strategic real estate plans a different picture emerged: here cost reduction and increasing property value were most frequently mentioned, followed by increasing employee satisfaction and flexibility. Productivity and marketing were much less common in the text (Ham, 2014). In interviews with corporate real estate managers from different multinationals on benchmarking, cost reduction, optimizing facilitation of production and services, limiting space and financial flexibility showed to be the key values (Bisschops, 2014). Interviews with corporate real estate managers and facility managers from the office sector and the industry also showed that cost reduction, productivity and user satisfaction are high on the list of prioritized values (Van der Voordt and Jensen, 2014).

Although the studies presented in this paper shed more light on value adding management in the care and cure sector, the studies are limited regarding the response rates, the number of respondents and the length of the interviews (1 - 1,5 hours). Additional studies with in-depth interviews, focus groups, document analysis and observations of actual behaviour and actual care production are needed to get a more complete picture. An example is the graduation thesis of Taverne (2011) who analysed the floorplans of two hospitals, joined care staff during their walks through the hospital buildings, and asked them to think aloud about where and why the building and other facilities supported or hindered them to be productive. His study showed that a smart spatial lay-out can result in a 25% reduction of walking distances between emergency rooms and intensive care. Another graduation study also used interviews, observations and walk-throughs to understand how a well-designed hospital can contribute to a high productivity, directly - by adequately facilitating care processes) - and indirectly, through a positive influence on the patient, so that he or she needs less care (Van der Burg et al., 2012). Main topics included:

- Short walking distances between related functions with many contacts
- Uninterrupted sightlines between the nurses’ desk and patient rooms
- An ergonomically designed building and furnishing, for instance: safe stairs and flat non-slip floors to prevent falls; rooms and bathrooms with sufficient space to assist patients and for the use of hoists
- Daylight and outside views
- Good lighting, night and day, activity-related, where appropriate adjustable in strength
- Patient rooms with private facilities
- Attractive and healthy indoor climate

In order to be able to determine whether the accommodation goals are achieved and the intended added values are actually realized, measurable indicators are needed. Knowledge is power, but measuring also takes time, money and effort. In line with the prioritization of values, it is also important to identify the key performance indicators on which one wants to steer, the so-called Key Performance Indicators (KPIs). In business, in particular financial indicators such as capital and operating costs per m2 and the Total Occupancy Costs per m2 are used. Other indicators include the utilization efficiency of buildings, rooms and spaces and the number of m2 per workspace or per FTE (Bisschop, 2014). Regarding employee satisfaction and perceived support of labour productivity, Post-Occupancy Evaluations and user surveys can give valuable

insights (Van der Voordt et al., 2012). Key indicators for sustainability include energy consumption (total and per m2), CO2 emissions, and scores on sustainability certificates such as national energy labels, the Building Research Establishment Environmental Assessment Method (BREEAM) or the Leadership in Energy & Environmental Design (LEED) certification of the US Green Building Council.

Together with graduation students we hope to continue this kind of research, both in the health care sector and other sectors. Besides, an international group of researchers working in the fields of FM and CREM is preparing a book in collaboration with practitioners on how to measure and manage the added value of facilities, in which the state of the art regarding the main value parameters will be presented and elaborated in KPIs (Jensen and Van der Voordt, eds., forthcoming).

5. Concluding remarks

The last decade a growing body of research has contributed to a better insight into the added value of corporate and public real estate and how to manage real estate taking into account the needs and interests of different stakeholders, both theoretically and practically. Added value shows to be a multi-dimensional concept, which various types of values that have varying degrees of importance to different stakeholders. Although the final choices depend of inter alia the sector in which the organization operates, the organizational and corporate real estate objectives, available resources and the external context, it is important to work on a harmonization and standardization of definitions and measurement methods. Still much work has to be done to operationalise different value parameters, to be able to measure the benefits and costs of CREM and FM interventions in a reliable and valid way, and to be able to compare the performance of buildings and real estate portfolios in connection to various value parameters (benchmarking). Witnessing the great diversity in measuring systems and KPIs there is still a long way to go.

A clear insight into possible added values of corporate and public real estate, which interventions can contribute to these values, how to prioritize different values and why, taking into account the interests and needs of different stakeholders, can help practitioners to become more aware of how to get value for money and how to cope with potential conflicts. More standardized ways of measuring of various value parameters can increase the value of benchmarking, both within and between different sectors such as offices, health care, education, and retail and leisure.

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