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Beckers, R; van der Voordt, DJM; Dewulf, G

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## **MANAGEMENT STRATEGIES FOR ALIGNING HIGHER EDUCATION ACCOMMODATIONS WITH USER NEEDS**

**Ronald Beckers**

HAN University of Applied Sciences, Faculty of Economics and Management, Nijmegen,  
The Netherlands

**Theo van der Voordt**

Delft University of Technology, Faculty of Architecture and the Built Environment, Delft,  
The Netherlands, and Center for People and Buildings, Delft, The Netherlands

**Geert Dewulf**

University of Twente, Faculty of Engineering Technology, Enschede,  
The Netherlands

### **Abstract**

**Purpose** – This paper aims to explore the management strategies of facility managers and corporate real estate managers to align corporate real estate (CRE) with the needs of their organization and the end users in a changing context.

**Design/methodology/approach** – The paper first outlines the theoretical issues of CRE alignment processes and the management of accommodation needs. It then presents the findings from a multiple case study in 14 Dutch Universities of Applied Sciences (UAS) from the perspective of the CRE/FM manager. The empirical study is based on interviews and a questionnaire.

**Findings** – The theory shows three key process activities in managing the alignment of CRE with the needs of end users and the organization as a whole: coordination, communication and decision making. The way organizations manage this process can be represented by eight opposite perspectives. These eight perspectives refer to two management strategies for CREM departments: an involvement-oriented strategy and a control-oriented strategy.

**Practical implications** – The distinguished eight management perspectives and two management strategies can be used by CRE/FM managers to reconsider their current approach for aligning CRE with the needs and requirements of the client, customers and end users. This is to improve the match between demand and supply in order to find future-proof accommodation solutions.

**Originality/value** – CREM issues and the effect of CRE on students and staff and vice versa is an underexposed topic in research in the field of higher education. There is still limited understanding of how to optimally align school buildings with education. The current study combines insights from other disciplines such as management & organization and IT-alignment with insights from CREM theory.

**Keywords** - Corporate Real Estate Management, Alignment, User Needs, Strategies, Higher Education.

**Paper type** Research paper

## **MANAGEMENT STRATEGIES FOR ALIGNING HIGHER EDUCATION ACCOMMODATIONS WITH THE USER NEEDS**

### **1. Introduction**

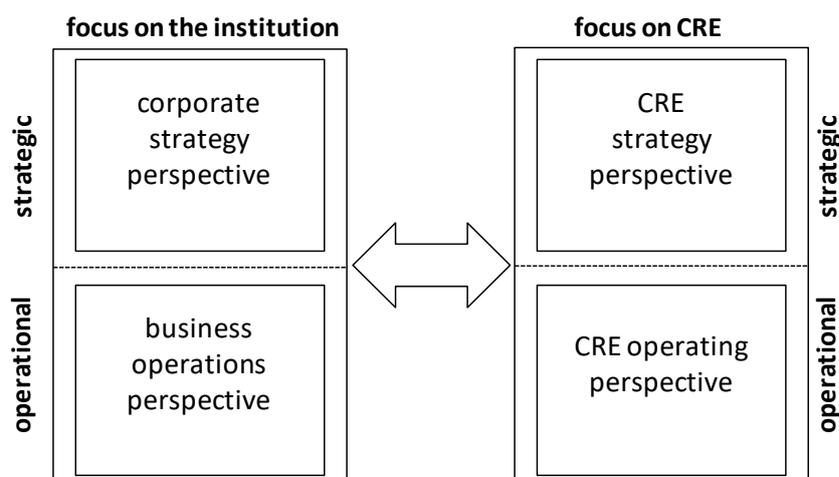
In the field of Corporate Real Estate Management (CREM), there is ongoing interest in how organizations align their Corporate Real Estate (CRE) with the goals of the organization and its core business (Nourse and Roulac, 1993; Osgood, 2004; Scheffer et al., 2006; Lindholm et al., 2006; Appel-Meulenbroek and Feijts, 2007; Haynes, 2012). Many CRE alignment studies focus on addressing CRE strategies that match the corporate strategy, and on indicating which CRE operating decisions create a building or a built environment that fits the corporate goals best (Appel-Meulenbroek et al., 2010; Heywood, 2011). According to the ‘Strategy Alignment Model’ of Osgood (2004) CRE alignment requires a continuous process of matching the building supply to the objectives of an organization in its own business with specific trends and developments.

A business which has been facing substantial changes is higher education (Robinson, 2010; Johnson *et al.*, 2011). In the last decades there has been a shift from a supply-driven approach to traditional teaching and learning to new, more customized and demand-oriented ways of teaching and learning (Simons *et al.*, 2000). The role of school has changed from a place of instruction to a place for producing learning (Barr and Tagg, 1995). Barr and Tagg deliberately use the verb *produce*, to emphasize that learning for students has become a co-production with the school, instead of simply a case of consuming instructions in a classroom. These changes in education have been affecting the accommodation of learning and teaching (Johnson *et al.*, 2011; Beckers *et al.*, in press). Yet, literature shows that many buildings of Dutch higher education institutes are not sufficiently prepared for future needs and demands (De Vries *et al.*, 2008). De Vries *et al.* attribute this to limited understanding of the alignment of educational buildings with changes in learning and teaching. Based on an extensive literature study, Temple (2007, p. 8) concludes that “the literature throws almost no light on managerial decision-making about space issues affecting students or staff: this is a topic where further work would be useful.” This is endorsed by Boddington and Boys (2011) who indicate that there is a need for more appropriate methods and tools for the management and construction of learning spaces in higher education. Yet, CRE managers need a better understanding of how to align educational buildings with the developments in higher education. In order to contribute to this understanding, a study has been conducted to

determine the current management approaches for aligning CRE with the needs and requirements of higher education institutes. Therefore this paper first outlines the theoretical issues of CRE alignment processes and the management of accommodation needs. Next, it presents the results of an empirical study based on a series of interviews with CRE or FM managers from Dutch Universities of Applied Sciences (UAS) and an additional questionnaire. The paper ends with theoretical and practical implications and concluding remarks.

## 2. Theoretical background

Traditionally CREM theory shows four alignment perspectives of CRE with the core business (Manning and Roulac, 2001), see figure 1. Two perspectives are related to the institution (demand side) and two to CRE (supply side). Within these perspectives a distinction is made between the strategic and the operational level (Krumm *et al.*, 2000; Den Heijer, 2011).



**Figure 1.** Four CREM perspectives

The arrow between the demand and the supply side in figure 1 represents the process of aligning CRE with the organization and the end users. That process aims at analyzing the corporate goals and the day-to-day operating activities in order to determine the right CRE strategy and the matching CRE operating solutions. Yu *et al.*, (2010a) use the term ‘requirements management’ for this process. Their research points out that requirements management is crucial for the delivery of appropriate CRE solutions, and that “there is a lack of identification, management and traceability of the requirements” (Yu *et al.*, 2010b, p. 372).

Yu *et al.*, (2010a) identified a number of potential problems in understanding the requirements based on a several studies. The formulated requirements are often incomplete and inconsistent. Decision makers misunderstand and misinterpret the requirements, and there is often a lack of involvement of the end users.

Omar and Heywood (2014) confirm that there is still a gap between CREM executives and the building users. One of their solutions to close that gap is to pay more attention to the relationship with these users. Relationship management can also be considered an instrument to help the CREM department “learn[...] the language of the business” (Fisher, 2009 referring to Roper, 2001). McCarthy *et al.*, (2006) describe several aspects of relationship management in CREM such as: the need to know the core business, open communication with the users, access to strategic business information, and the user’s involvement in decision making. Literature shows three ways of involving the building users in CREM issues (Horgen *et al.*, 1999; Dewulf and Van Meel, 2002):

- Informing: the CREM department only informs the building users.
- Participation: building users participate by giving input for CREM issues.
- Co-creation or co-design: the users are not only given possibilities to express their opinions and ideas, but also have decision-taking powers.

There are several levels at which building users can operate. This paper adopts the tripartition of CEN (2006) with the client who represents the building user at the strategic level, the customer such as heads of departments at the tactical level and the end user at the operational level. Different ways of managing the involvement of the client, customers and end users can be found in the literature of business organization and business process management (Garvin, 1998; Llewellyn and Armistead, 2000). They distinguish two main dimensions: a structural dimension and a behavioral dimension. The structural dimension is related to the coordination of the people you reach and the ways of reaching them (Llewellyn and Armistead, 2000) and to activities such as budgeting and planning (Garvin, 1998). The behavioral dimension is related to the organization’s way of acting and interacting, such as communication and decision making (Garvin, 1998). The foregoing leads to an analytical framework for the management of the CRE alignment process which is presented in table 1.

**Table 1.** Analytical framework for managing the CRE alignment process (derived from: Garvin, 1998; Llewellyn and Armistead, 2000).

context (developments in the business of the organization)		
process dimensions	key process activities	management perspectives for the key process activities
structural dimension	coordination	related to whom you reach and how you reach them, and preconditions like planning and finances
behavioral dimension	communication	related to correct information that is relevant for aligning CRE with the needs of clients, customers and end-users
	decision making	related to the levels of influence in CREM issues of client, customer, end-user and the CREM department

In the next sections this paper explores the analytical framework of table 1 in the context of Universities of Applied Sciences.

### 3. Empirical study: methodology

The empirical part of this research was conducted at 14 large Dutch Universities of Applied Sciences (UAS). The Netherlands have 37 UAS (in 2013) with a total number of 440,235 students (in 2013) and 43,549 employees (in 2012) ([www.vereniginghogescholen.nl/](http://www.vereniginghogescholen.nl/)). The 14 institutions involved in the research together represent 38% of all Dutch UAS and 84.5% of all students in Dutch UAS (in 2013). At the start of the research (2011) the UAS used 157 buildings for education and staff, with a total number of approximately 1.65 million square meters gross floor area.

The first part of the study concerned interviews with the CRE or FM managers who were responsible for the management of the accommodations. The interviews were conducted in the period of September 2011 till February 2012. The main purpose of the interviews was to study the management approaches for aligning CRE with the accommodation needs. All interviews were tape recorded and transcribed for subsequent analysis in Atlas.ti and Excel. The linkage of text fragments from the interviews to the key process activities in the framework of table 1 was based on open coding (Corbin and Strauss, 2008).

Second, during a meeting in May 2014 CRE directors of Dutch UAS were asked to fill out a questionnaire to get more detailed information about their opinions and management approaches regarding the topics that came up in the interviews. The research aimed to involve

the same UAS which participated in the interviews. Seven respondents were interviewed as also filled out the questionnaire. In the other cases the manager who was interviewed differed from the manager who filled out the questionnaire. Table 2 shows an overview of which UAS participated in the interviews and which UAS filled out the questionnaire.

**Table 2.** Figures of the Dutch UAS involved in the research

Case	number of students (ref date 2013)	market share (ref date 2013)	number of employees (ref date 2012)	UAS that participated in the interviews (2011/2012)	UAS that participated in the questionnaire (2014)	managers who were interviewed and filled out the questionnaire	buildings (ref date 2010)	gross floor area indication (x 1,000) (ref date 2009/2010)
#1	48,207	11.0%	3,558	yes	yes	yes	13	150 - 175
#2	42,484	9.7%	3,662	yes	yes	yes	32	> 200
#3	36,454	8.3%	3,608	no	yes	no	12	150 - 175
#4	32,443	7.4%	3,321	yes	yes	no	11	125 - 150
#5	31,921	7.3%	3,170	yes	yes	yes	23	150 - 175
#6	30,138	6.8%	2,423	yes	yes	no	8	150 - 175
#7	27,705	6.3%	2,275	yes	yes	yes	6	125 - 150
#8	26,223	6.0%	2,784	yes	yes	no	18	125 - 150
#9	25,336	5.8%	2,369	yes	yes	no	3	100 - 125
#10	24,783	5.6%	2,021	yes	yes	yes	4	100 - 125
#11	20,112	4.6%	2,009	yes	yes	yes	14	100 - 125
#12	14,675	3.3%	1,573	yes	yes	no	3	75 - 100
#13	7,171	1.6%	662	yes	yes	yes	8	< 50
#14	4,195	1.0%	523	yes	no	no	2	< 25
	<b>371,847</b>	<b>84.5%</b>	<b>33,958</b>				<b>157</b>	<b>1,600 - 1,700</b>

#### 4. Research Findings

The interviews with the CREM/FM managers have resulted in 550 text fragments that refer to the management perspectives for the CRE alignment process as shown in the framework of table 1. Table 3 shows an overview of how often in a case to the key process activities of table 1 have been referred. In the next paragraphs the results of the interviews will be presented in combination with the results of the questionnaires.

**Table 3.** Overview of text fragments related to the key process activities of table 1

key activities of the management of the CRE alignment process	cases in Dutch Universities of Applied Sciences														TOTAL
	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	
contextual developments	20	11	-	12	9	8	4	1	2	8	14	13	6	5	113
coordination	19	17	-	12	11	20	22	11	9	6	22	15	5	14	183
communication	10	10	-	8	8	7	12	12	7	13	11	15	2	2	117
decision making	12	17	-	19	13	5	23	6	7	3	14	4	6	8	137
	<b>61</b>	<b>55</b>	<b>-</b>	<b>51</b>	<b>41</b>	<b>40</b>	<b>61</b>	<b>30</b>	<b>25</b>	<b>30</b>	<b>61</b>	<b>47</b>	<b>19</b>	<b>29</b>	<b>550</b>

#### 4.1 Contextual developments in higher education and Dutch UAS

In the interviews the CRE/FM managers mentioned several developments and changes in the context of Dutch UAS of which they think that these might influence the CRE, such as:

- Fast IT developments in society (e.g. social media) and in education (e.g. e-learning, blended learning - which is a mixture of e-learning and face-to-face meetings at school, or the concept of the flipped class room, where student watch web-lectures at home and come to school to work together on assignments in class).
- Educational developments, like the shift from teaching in classrooms with one teacher talking and thirty students listening, to students that progressively work together in small groups. These developments become apparent in ‘a shift from a cognitive focus on education to a social focus’, ‘an increasing need to meet’, ‘increasing flexibility in educational processes’ and an abandonment of ‘one size fits all’.
- The financial crisis which led to cuts of the Dutch government to the Education budget and to the resources for supporting activities, buildings and facilities.
- The social debate in the Netherlands about the improvement of the quality of higher education and increased attention for ‘the student’.
- The growing impact of the ‘experience factor’: school must be fun and education must be attractive to the students.
- Demographical developments land the expectation that the number of students will decrease after 2020.
- The current demand for valorization of knowledge of higher professional education leads to the need for increased cooperation of these institutions with ‘the outside world’, e.g. companies in the region.

In the follow up questionnaire the respondents were asked to mark how strongly they thought these developments would influence the accommodation needs of their institution on a 5-point scale, from ‘definitely not’ to ‘very much’. Table 4 shows that IT developments in education and changing didactics in education are the main drivers for the changing needs for the accommodation, directly followed by the increasing expectations of students in higher education.

**Table 4.** Influence of developments on the higher education accommodation

How do these aspects influence the accommodation needs?	definitely not (1)	not (2)	perhaps (3)	much (4)	very much (5)	total N	mean	sd	median
IT developments in education	0	1	0	6	6	13	4.31	0.85	4.00
Educational developments	0	0	3	6	4	13	4.08	0.76	4.00
Financial cuts to the Education budget	0	1	6	6	0	13	3.38	0.65	3.00
Quality improvements in higher education	0	2	8	2	1	13	3.15	0.80	3.00
Demographical developments	0	1	5	6	1	13	3.54	0.78	4.00
Increasing expectations of students	0	0	1	12	0	13	3.92	0.28	4.00
Need for cooperation with 'the outside world'	0	0	3	9	1	13	3.85	0.55	4.00

The interviews showed four possible consequences for the accommodation of these developments:

- A decreasing need for square meters in educational buildings.  
*Interviewee [case #14]: The influence of IT in education will result in a reduction of traditional learning space such as large lecture rooms.”*
- The need for other learning space settings, e.g. more informal learning settings instead of traditional class room space.  
*Interviewee [case #5]: “Both inside school buildings and outside on the campus, I think that there will be more creative spaces which support the need to meet.”*
- Quality improvements of the actual square meters in the building.  
*Interviewee [case #4]: “Because of the experience economy in our society we refurbished the entrance and created this well-designed meeting area.”*
- The possibility that there will be no or hardly any consequences for accommodation.

The questionnaires show that most respondents think that developments in higher education will lead to the need for other kinds of learning settings and a higher quality of these settings. The CRE/FM managers are ambiguous about the consequences for the quantity of learning space (see table 5).

**Table 5.** Consequences for the accommodation

What are the consequences for the accommodation?	definitely not (1)	disagree (2)	don't know (3)	agree (4)	definitely (5)	total N	mean	sd	median
other functional needs in learning settings	0	0	1	6	6	13	4.38	0.65	4.00
quality improvements of the actual square meters	0	0	3	6	4	13	4.08	0.76	4.00
less need for square meters	0	1	5	3	4	13	3.77	1.01	4.00
no or hardly any consequences	7	6	0	0	0	13	1.46	0.52	1.00

## 4.2 Coordination

In the first place coordination activities concern the structural aspects of managing the CRE alignment process. The interviews show two aspects. First, coordination ‘with whom?’. The interviews especially focused on the internal stakeholders related to learning and teaching. CRE managers distinguish four categories of internal stakeholders:

- executive board: top management;
- middle management: academy directors, institute directors, program directors;
- teachers and non-teaching staff;
- students.

The executive board and educational managers are defined as the client and the customers respectively. The teachers, non-teaching staff and students are considered the end users.

*Interviewee [case #4]: “Facility managers in a building are responsible for their own customer relations and account management, e.g. who is the customer and end user, what are their requirements, are building adjustments needed, et cetera.”*

The second one is ‘how’? i.e. figuring out the needs and requirements of education takes place by asking (e.g. account management), by measuring ex post whether people are satisfied with the accommodation solutions (e.g. by a customer satisfaction survey) and by occasional conversations with the client, customers and end users (e.g. surveying complaints). Account management is a frequently-used and planned way to stay in tune with building users, but not always clearly structured; it mostly depends on coincidence.

*Interviewee [case #7]: “Another way we get informed about user requirements is through the monitoring of complaints via the service desk.”*

It is remarkable that investigating the accommodation needs is mainly based on traditional approaches. Only one of the UAS mentioned the use of social media (i.e. Twitter) to communicate with end users.

The next coordination aspect concerns the organization of the preconditions. The most powerful precondition that was mentioned in the interviews was the allocation of the financial resources. The financial resources are decreasing and the volume is often obscure. Two different ways for allocating the financial resources concerning CRE did show up in the interviews. First, the financial resources are allocated on a strategic level by the executive board or by the CRE executive. Most other building users do not have a clear idea of CRE costs and cannot make decisions about which financial resources are available for the accommodation. For a sincere allocation of the financial resources the CREM department

uses standards for space use such as a number of m<sup>2</sup> per enrolled student.

*Interviewee [case #11]: “Financial incentives only work at a certain organizational level, let’s say at a management level [...] but teachers care less.”*

Second, the financial resources are delegated by the executive board and allocated to lower organizational levels of the institution (e.g. managers of academies, faculties, course directors). These organizational units pay for the use of their accommodation, often per square meter.

*Interviewee [case #5]: “On behalf of the executive board, we are the (delegated) owner of the buildings. Faculties are the tenants of a building. They pay for the square meters of space they use.”*

In some cases these units are even the owners of CRE. This way of allocating financial resources may lead to obvious differences between the way academies, faculties and courses, are accommodated (e.g. a different number of square meters per student, different quality of the finish of buildings).

#### 4.2 Communication

Concerning the communication with the client, customers and end users, the CRE managers are quite critical about the way these internal stakeholders define their accommodation needs. From the interviews three key aspects came to the fore, which were supported by the findings of the questionnaires:

- Needs and requirements often arise from dissatisfaction with the current situation. Representatives of education are quite conscious about what they do not want but do not really know what they do want or need and how to formulate their real needs.

*Interviewee [case #9]: “If I ask teachers how they see future education, then it falls painstakingly silent.”*

In the questionnaire twelve of the CRE/FM managers agreed that course managers also find it difficult to define their accommodation needs and requirements.

- Needs and requirements are often formulated in operational terms and solutions (e.g. moving walls, doors) and not in the desired outcome or aimed performance (e.g. what are our processes, which are our intended goals and results, how can CRE support our needs).

*Interviewee [case #4]: “Requirements are mostly formulated in terms of ‘we need this separation wall removed’, and ‘I would like to have a glass door for this classroom’.”*

Twelve of the respondents indicated in the questionnaire that course managers indeed formulate their accommodation needs in operational terms instead of the desired outcome.

- Needs and requirements are often formulated in terms of familiar solutions and what is known from the past, e.g. ‘we want more of what we already have, but then refreshed and new’. Also the needs and requirements are mostly ad-hoc or short term and not focused on the long term. Strategic plans of Dutch UAS have a time scope of only four years ahead. Most clients, customers and end users find it difficult to think ‘out of the box’.

*Interviewee [case #7]: “Academies think about the here and now and not about what they want to do in the future and that what they need to achieve that.”*

The questionnaire shows that eleven CRE/FM managers agree with this statement.

Because of the lack of strategic, long term information in the communication of the internal stakeholders about education, CRE managers have to cope with the dilemma of having a time horizon with their property that goes far beyond that of education. CREM requires long term thinking, which is not always in line with the dynamics of education especially when CRE managers are faced with new construction projects, large building renovations, or long term lease contracts. CRE managers often have to deal with an enormous number of square meters of the current stock as an inheritance of the past, which hinders their ability to cope with for instance the growing need for efficiency, cost reduction, sustainability and flexibility. Ten of the CRE/FM managers feel that they ‘often lag behind the facts’. Three of them are ambiguous about that statement.

### *4.3 Decision making*

Decision making is strongly related to the power distribution between those involved in CREM issues. In the interviews the CRE/FM managers mentioned that decision making about CREM issues is often not clear and transparent. Besides, the involvement of the internal stakeholders shows a huge variety. Sometimes the executive board leads in decision making, but in other UAS decisions are made by lower management echelons or by the CREM department.

In the questionnaire the CRE/FM managers were asked to specify the power of the client, customers and end users for three CREM situations: 1) construction project activities with a

clear scope (e.g. new construction projects or large renovations), 2) CRE alignment activities regarding going concern accommodation management (e.g. smaller mutations of buildings, changes concerning the lay-out of buildings and relocations, etc), and 3) maintenance.

According to the literature a distinction was made between those who are only informed about CREM issues, those who participate in CREM issues and those who have the full power to make decisions about CREM issues. Table 6 shows an overview of the answers, with the most given answer out of the total 13 respondents between brackets (the modus).

**Table 6.** Involvement of internal stakeholders in decision making about CREM issues

Internal stakeholders for CREM		projects	account management	maintenance
client	the executive board	decide (12)	decide (11)	participate (7)
customer	course management	participate (9)	participate (8)	inform (8)
end-user	teaching and non teaching staff	participate (10)	participate (10)	inform (9)
	students	participate (9)	inform (8)	inform (10)

Regarding the role of the CREM department itself, the interviewees mentioned several ways they operate in decision making regarding CREM issues. Two opposite perspectives were mentioned:

- Reactive or proactive. The reactive CREM department reacting to concrete demands from the client, customers or end users. The proactive CREM department anticipates on educational and societal developments, in order to come up with proposals to accommodate those developments.

*Interviewee [case #2]: “We are responsible for the availability of facilities and accommodation. Therefore we have to take the lead in the development of these facilities and accommodation. So we can’t wait until an academy express their requirements. We should always be a step ahead.”*

- Advisory or directive. The CREM department may play the role of the consultant who helps the client with the translation of needs into CRE operating solutions. The client (executive board) finally decides.

*Interviewee [case #5]: “What if education wants to change their teaching processes? As a facility professional and partner of the core business, we can help them with the possible consequences for the physical environment.”*

In the other role the CREM department is more directive. The customer (course management) can request mutations in the accommodation, but the CREM department decides whether that request will be granted (supported by the client of course).

*Interviewee [case #7]: “We play an important role in the decision whether building adaptations occur or not. [...] Requests have to be submitted to the CREM department. We translate these into business cases with an advice for the executive board. Finally they decide, we get the resources and are responsible for the realization.”*

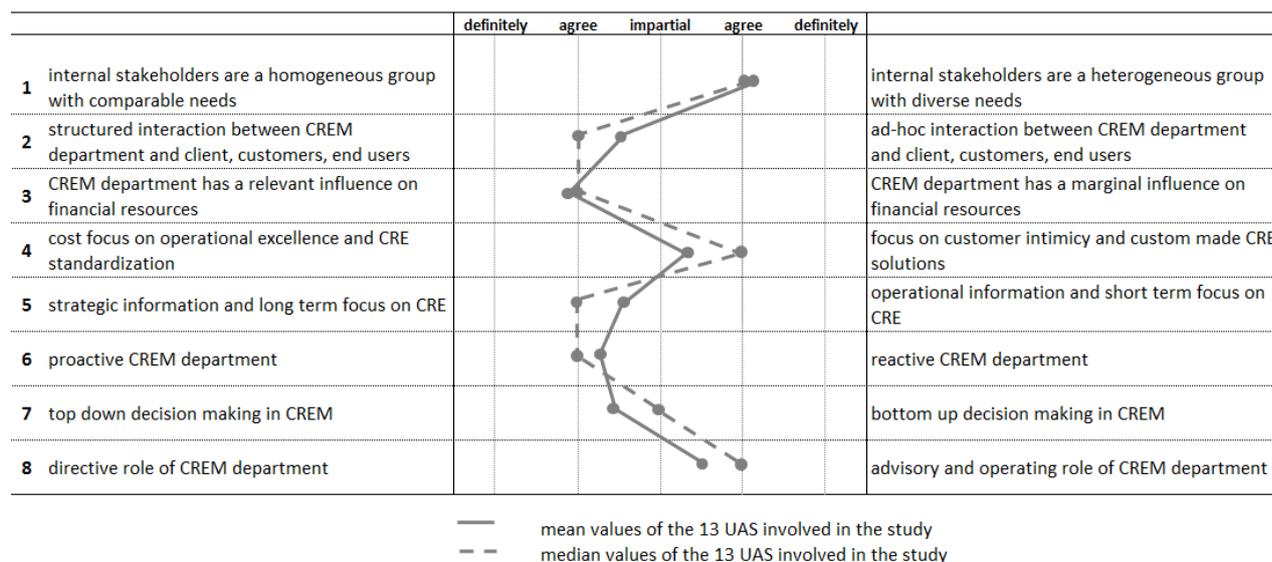
#### 4.4 Eight perspectives for managing CRE alignment

The interviews of the explorative study in Dutch higher education show eight opposite management perspectives to how CRE/FM managers cope with coordination, communication and decision-making to align CRE to the accommodation needs and requirements of the client, customers and end users, see table 7.

**Table 7.** Opposite management perspectives for aligning CRE to internal stakeholders’ needs

Coordination	1	The internal stakeholders form a homogeneous group with comparable needs,	versus	The internal stakeholders form a heterogeneous group with diverse needs;
	2	Structured interaction between CREM department and client, customers, end users,	versus	Ad-hoc and occasional interaction between CREM department and client, customers, end users,
	3	The CREM department has a relevant influence on the financial resources,	versus	The CREM department has a marginal influence on the financial resources;
	4	Cost focus on operational excellence and CRE standardization,	versus	Focus on customer intimacy and custom made CRE solutions;
Communication	5	CRE decisions are based on strategic information and a long term focus on CRE,	versus	CRE decisions are based on operational information and a short term focus on CRE;
Decision making	6	The CREM department is proactive,	versus	The CREM department is reactive;
	7	CREM decision making is top down,	versus	CREM decision making is bottom up;
	8	The CREM department has a directive role in CREM decision making,	versus	The CREM department has an advisory and operating role in CREM decision making;

The interviews did not specifically reveal how the individual CRE/FM managers act related to these opposite perspectives. In the questionnaire of May 2014 the respondents indicated the way they would situate their organization based on a 5-point scale. The results are shown in figure 2.



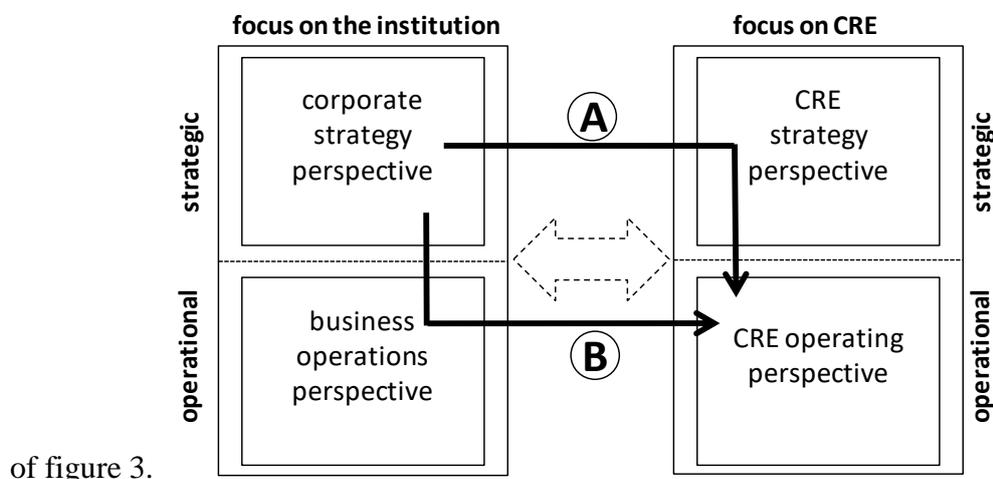
**Figure 2.** Eight opposite CREM perspectives to align CRE to internal stakeholders' needs

## 5. Discussion

The eight management perspectives as presented in figure 2 can be interpreted as two opposite strategies for the CREM department to manage the CRE alignment process. The two strategies that show up in the Dutch UAS cases correspond with traditional management strategies like control-oriented management and involvement-oriented strategies (Meyer, 1991; Lawler, 1992). The first strategy (A) which refers to the eight perspectives in the left-hand column of figure 2, is comparable to control-orientation in which the responsibilities, power and often also the financial resources are allocated to the strategic CREM level. The corporate strategies are translated into CRE strategies, which are the starting point for operating solutions. The middle management submits demands and requests from the core processes to the executive board. Communication between demand and supply is mainly organized at a strategic level. The second strategy (B) refers to the eight perspectives in the right-hand column of figure 2 and is more similar to involvement-orientation in which the responsibilities, power and often also the financial resources are allocated to lower levels in the organization. The CRE operating solutions are directly derived from the operational processes and activities, resulting in a bottom-up approach in which communication with end users is key. Thus, the CREM department mainly organizes communication at that level.

These two opposite strategies can be linked to the four alignment perspectives of CREM, see figure 3. The present study had its starting point at the developments in the

organizational context. Therefore both strategies start at the corporate strategic level at the upper left hand side of figure 3, and result in CRE operating decisions at the lower right side



**Figure 3** Two opposite strategies for managing the CRE alignment process

The visualization of the two strategies A and B in figure 3 resembles the strategic alignment perspectives in the IT industry in the 1990s, based on the Strategic Alignment Model of Henderson and Venkatraman (1990). Like the strategies A and B in figure 3, Henderson and Venkatraman show two opposite ways of how the business strategy may lead to operating IT solutions. Yet, the study in Dutch UAS illustrates that the large arrow between the institution and CRE can be represented by the two arrows of strategies A and B. Henderson and Venkatramann (1990) showed that it is also possible to formulate strategies in a reverse way, where changes in the supply of IT, or changed IT strategies can contribute to changes in the core business. It would be interesting to also explore this perspective in the CREM context in future studies.

## 6. Conclusion

The present study shows three key activities for managing CRE alignment with the needs of the client, customers and end users: coordination, communication and decision making. The way in which organizations manage these key activities can be represented by eight opposite management perspectives and two opposite strategies for CREM departments: an involvement-oriented strategy and a control-oriented strategy. The results of the empirical study do not show explicit preferences of the case organizations for one of the two strategies. However, the mean values show that the organizations tend to adopt a control-oriented

strategy, combined with an eye for the end users. In practice that means that end users mainly participate in CREM issues or are informed about these issues by the CREM department. Yet, they are much less involved in decision-making than the executive board and middle managers.

The eight management perspectives and the two strategies can be used to raise awareness of different possibilities for managing the alignment of CRE with the accommodation needs and requirements and for incorporating this knowledge in decision-making. An increased understanding of coordination, communication and decision-making mechanisms can bring the demand side and the CREM department closer together. This may help develop a common language between the demand and supply side, explore new ways for managing the alignment of CRE with the needs of policy makers and end users, and translate these needs into future-proof accommodation solutions.

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