

# CORPORATE REAL ESTATE STRATEGIES FOR FUTURE HIGHER EDUCATION

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## **Abstract**

**Purpose** – This paper aims to explore the alignment of Corporate Real Estate (CRE) strategies of Dutch Universities of Applied Sciences (UAS) with the developments in higher education.

**Methodology/approach** – The paper first illustrates the key developments in higher education learning and teaching, and relevant CRE management literature. Subsequently, it presents two studies that examine the CRE strategies of large Dutch UAS, to align their CRE with current and potential future developments. These are explored based on interviews and scenario analysis with experts in the field of higher education and CRE management.

**Findings** – The findings of the two studies show that CRE in the short term is well aligned with recent and current developments in higher education. Yet, in the long term, CRE-managers in general doubt the probability of some developed scenarios and are not sufficiently prepared for disruptive developments due to inflexibility of the CRE portfolio.

**Originality/value** – There is still limited understanding of how to optimally align school buildings to education. Furthermore, the future is unclear. The two studies in this paper contribute to insights about strategies of CRE-managers in the education sector to translate current and assumed developments into future proof accommodations. The presented frameworks and the scenario approach are applicable in other sectors as well.

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

**Paper type** Research paper

## **1. Introduction**

This paper addresses the alignment of Corporate Real Estate (CRE) in Dutch higher education with learning and teaching developments. Higher education has gone through substantial changes in the past decades (Beckers, 2016; Driessen, 2016; Marais, 2011; Collis & Van der Wende, 2002). Today's schools should prepare young people for tomorrow's knowledge economy by teaching them 21st century skills (Voogt & Pareja Roblin, 2012; Ananiadou & Claro, 2009). The new way of learning can be characterized as a shift from a supply-driven approach of learning to more customized and demand oriented ways of learning (Van Aalst & Kok, 2004). The changing context of higher education leads to reconsidering the physical learning environment and to studying how new learning spaces can be used to support an effective pedagogical transition (Beckers, 2016; Marmot, 2012). The two studies described in this paper aim to contribute to a better understanding of how higher education institutions formulate CRE strategies and future proof learning environments to align the physical learning environment with the developments in learning and teaching. The first study describes how CRE-managers of large higher education institutions perceive the recent developments in education and how they align their CRE with these developments.

The second study shows four scenarios for higher education towards 2030, which have been discussed with CRE-managers of higher education institutions to see how they assume that these scenarios might influence their CRE strategies.

In the final part of the paper, the results of the two studies will be compared and discussed related to the literature. The paper ends with general recommendations and an overall conclusion.

## **2. New ways of learning in education**

Literature shows many developments in education in the last decades. In essence, there are three mayor developments that are relevant for new ways of learning or new learning, namely: new generation of students, Information Technology (IT) in education and new educational formats.

### **2.1. New generation students**

First, a new generation of students is entering the classroom. These modern students differ in their use of technology in daily life. Literature indicates this generation, born between 1985 and 2000, as the Net generation (Oblinger & Oblinger, 2005) or digital natives (Prensky, 2001). These students are always online and have access to the whole world for both social ends and educational needs. They bring their devices - like their smartphone or tablet - into the classroom, connect to digital learning environments and (wireless) networks to access educational content. This generation of students is a trigger for change and will increase IT developments in education (Veen & Vrakking, 2006).

### **2.2. IT in education**

Learning anytime and anywhere emerged from IT developments in education such as: the

Massive Open Online Courses (MOOCs), blended learning, iPad education and game-based learning concepts (Sursock, 2015; Johnson et al., 2015, 2014). All these developments are to a greater or lesser extent based on online learning. Since the turn of the century more education organizations have embraced these online learning techniques and applied them in their curricula. The increase of IT in education makes it easier for students to have access to a huge source of data. Students use IT as a tool to find resources that can help them to achieve their learning goals. The lecturer no longer has the exclusive rights on knowledge supply (Van Aalst & Kok, 2004). He or she will become one of the many sources in the students' network, which can be consulted for educational goals. According to Martin et al. (2007, p.13), the role of the teacher needs to change from “the sage on the stage” to “the guide on the side”. That demands new educational formats supported by state of the art technology.

### 2.3. New educational formats

‘New ways of learning’ is an answer to the traditional industrial educational model, in which students are treated as if they are on an assembly line in a learning factory (Leland & Kasten, 2002). In 1995, Barr & Tagg foresaw that schools should change from a place of instruction to a place that produces learning (Barr & Tagg, 1995), where learning for students should be a co-production with their peers and their teachers, instead of simply consuming knowledge and instructions in a classroom. This requires self-directed students who take responsibility for their own learning process, learn how to build and use networks to cooperate with others. Currently, in so-called flipped classroom concepts (Abeysekera & Dawson, 2015; Johnson et al., 2014), students use the Internet for watching web lectures at home or in other places and come to school to meet for social reasons, for working together on assignments, and for face-to-face contact with their tutors.

## 3. Alignment of CRE and educational developments

These three foregoing developments can be framed in a new ways of learning framework (Beckers & Van der Voordt, 2013). To facilitate and accommodate new ways of learning optimally, the framework shows that alignment demands a philosophy in which the physical learning and teaching environment is developed in concert with the new student generation, IT in education and new educational formats.

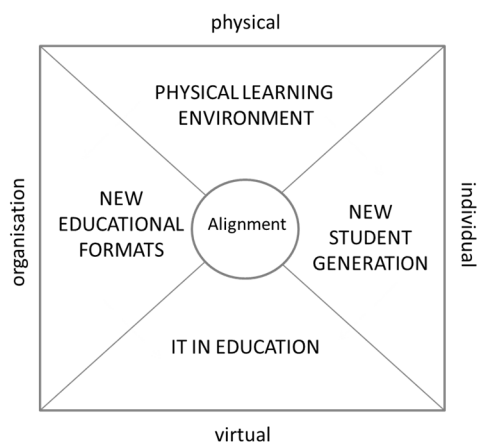


Figure 1. New ways of learning framework (adapted from Beckers & Van der Voordt, 2013)

This alignment of the CRE with the core business of organizations in higher education has been the subject of several studies (Beckers, 2016; Driessen, 2016; Van Sprang et al., 2013; Den Heijer, 2011). Regarding CRE and buildings, there are two perspectives that are relevant for aligning the properties a building should have with its intended use (Szigeti & Davis, 2005). On the one hand, there is the demand perspective that refers to the requirements of the organization and its end users. The organizational requirements often result from developments in the societal context and external influences, which organizations have to deal with (Beckers et al., 2015a). On the other hand, there is the supply perspective that refers to the physical environment. Within the two perspectives, one can make a distinction between the strategic and the operational level (Beckers et al, 2015a; Den Heijer, 2011; Krumm et al., 2000). At a strategic level, CRE-managers formulate CRE strategies to meet the organizational strategies related to the preferred organizational outcome. In educational organizations, the CRE strategies themselves result in operational building solutions that should match the day-to-day learning and teaching processes as well (Beckers et al., 2015b). This CRE alignment framework for higher education is presented in figure 2.

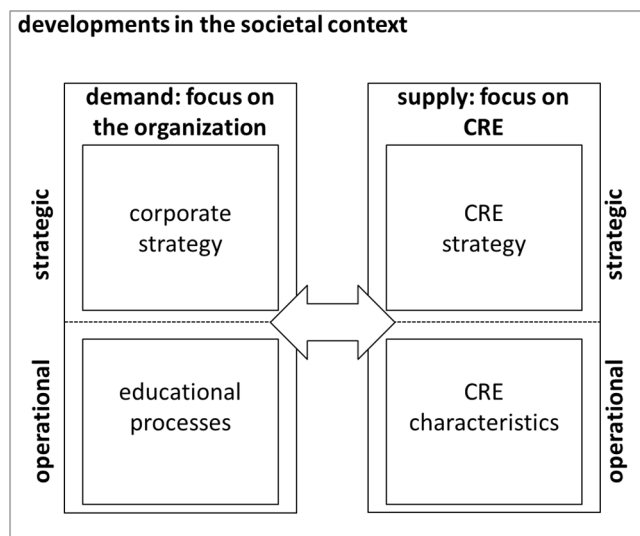


Figure 2. CRE alignment framework for higher education

The alignment between demand and supply can be shown over time by using the DAS-frame (De Jonge et al., 2009), which has been developed to design accommodation strategies for organizations. In this model (presented in figure 3), the demand side is compared with the supply side in both the current and the future situation. So, the consequences for the accommodation of organizations, can be determined by matching the future demand with the current supply in their real estate.

The application of the DAS-framework is as follows: the bottom left box represents the current accommodation supply of organizations. By comparing current supply with current demand, the current match can be determined. The arrow between current and future demand, pointing right, indicates the shift in required demands due to the development in the organization and in the society. Subsequently, the future match can be determined (oblique arrow) followed by the determination of the needed supply. The last step is to improve the

CRE based on a step-by-step-plan (represented by the dotted arrow).

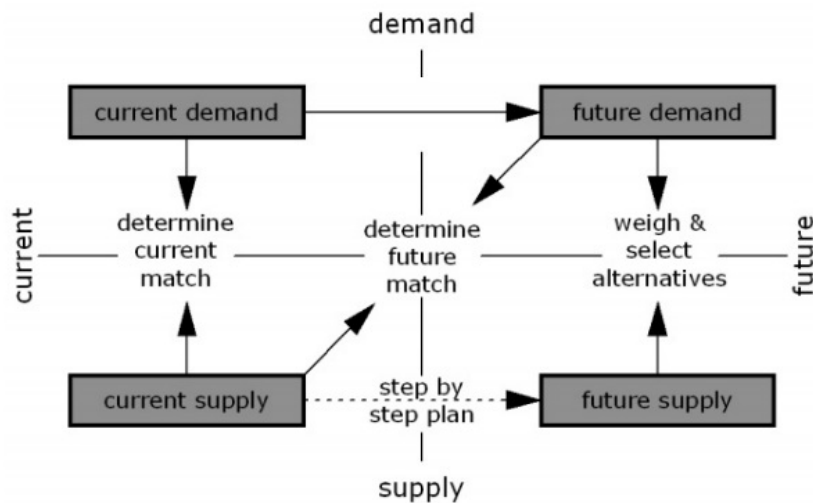


Figure 3. DAS-framework (De Jonge et al., 2009)

The next paragraph of this paper illustrates how CRE-managers formulate CRE strategies to align the physical learning and teaching environment (supply) with future developments in higher education (demand). The first study is concerned with determining the current match. The second study aims to develop scenarios for the future demand and explores the consequences for current and future CRE strategies.

#### 4. Empirical studies: methods and findings

The two studies of the empirical part of this paper were conducted in large Dutch Universities of Applied Sciences (UAS). There are 37 government-funded UAS in the Netherlands with a total number of 434,509 students in 2014 (Vereniging hogescholen, s.d.).

Study 1 was conducted in the period of October 2011 till February 2012 and involved interviews with thirteen CRE-managers of Dutch UAS. Firstly, the respondents were asked for their perception of the latest developments in higher education (current demand). Furthermore, they were asked how these developments had influenced their CRE strategy for the current supply.

Study 2 was conducted in 2016 and showed two phases. The first phase concerned the exploration of future scenarios for Dutch UAS towards 2030 (future demand), based on an extended literature search and a scenario planning approach (Harris, 2013; Van der Heijden et al., 2002). The latter involved a panel of six experts who were all related to the education sector (lecturers, researchers, business suppliers of (virtual) learning environments and advisors in strategy and change processes). The second phase of study 2 concerned interviews with CRE-managers of nine large Dutch UAS to study the respondent's attitudes and vision considering the developed scenarios and their perception of the CRE strategies for the future supply that are needed to prepare for the scenarios. Eight of the nine UAS of study 2 were also involved in study 1. The case characteristics are shown in table I. The interviews of both studies were semi structured, but for each of the two studies based on different open-ended questions. All interviews were tape recorded and analyzed based on open coding.

Table I. Case characteristics

Dutch UAS	Number of students (ref date 2014)	Market share (ref date 2014) (%)	Study 1: participation in the interviews (2011/2012)	Study 2: participation in the interviews (2016)
1	47,581	11.0%	yes	yes
2	41,703	9.6%	yes	yes
3	33,554	7.7%	no	yes
4	33,467	7.7%	yes	yes
5	31,821	7.3%	yes	yes
6	28,432	6.5%	yes	yes
7	28,283	6.5%	yes	yes
8	26,247	6.0%	yes	no
9	25,324	5.8%	yes	yes
10	25,190	5.8%	yes	yes
11	18,750	4.3%	yes	no
12	14,204	3.3%	yes	no
13	7,444	1.7%	yes	no
14	4,107	0.9%	yes	no
	<b>366,107</b>	<b>84.3%</b>	<b>13 UAS</b>	<b>9 UAS</b>

#### 4.1. Results study 1

The interviews showed that all three outlined developments from literature were recognized in the practice of the CRE-managers. Fast IT developments in society - like social media - and in education are absolutely a key development in higher education. For example, e-learning, blended learning - which is a mixture of e-learning and face-to-face meetings at school - or the concept of the flipped classroom. The CRE-managers experienced that these developments result in new educational concepts that show a shift from teaching in classrooms with a teacher talking and thirty students listening, to students working progressively 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'.

Concerning the new generation of students, CRE-managers especially mentioned a growing impact of the 'experience factor' for this new generation, besides the growing impact of IT in education. Nowadays, for students school must be fun and education must be attractive. Other contextual aspects that were mentioned by CRE-managers were the financial cuts of the Dutch government in the education budget and in the resources for supporting activities, buildings, and facilities. Furthermore, the social debate in the Netherlands about the improvement of the quality of higher education and increased attention for 'the student'. Finally, CRE-managers noted that the demographical developments may lead to a decrease of the number of students after 2020.

The mentioned developments can be recognized in the strategic plans of higher education institutions, in terms as 'we offer inspiring education and future proof learning concepts based on state of the art IT facilities'. However, these strategic plans barely pay attention to CRE strategies to show how to facilitate and accommodate these corporate strategies. This seems to represent a limited understanding at the strategic level of higher education institutions of the added value of CRE for the organization and the end users. Nevertheless, in practice CRE-managers apply CRE strategies that match the strategic plans of the institution well.

Alignment of the CRE strategies with the corporate strategies of higher education institutions appears to focus on creating a 3E study environment. Firstly, an effective environment that supports user activities, for example by offering a variety of learning settings for students. Furthermore, CRE strategies that focus at stimulating collaboration by facilitating informal learning space, meeting spaces supported by catering facilities, and stimulating mobility in and between educational buildings.

Secondly, CRE strategies that aim for efficiency by controlling CRE costs, creating flexibility and stimulating efficient space use. Finally, CRE-managers formulate CRE strategies that aim for an experience rich study environment, which contributes to increasing user satisfaction and to supporting the image of the organization. They do that by creating attractive, fancy, colorful, transparent buildings with highly decorated open space, high quality interior design and the use of comfortable furniture, plants and even art.

#### 4.2.1 Results study 2, phase 1

During the scenario planning session, the experts made an inventory in small groups of the main developments for Dutch higher education towards 2030, by using brainstorm techniques (future demand). The inventory was based on the expertise of the participants, so the driving forces were not picked out of a long list. Next, the experts clustered the developments, which resulted in twelve clusters of developments (driving forces). Finally, the experts discussed and indicated the impact and the uncertainty for each driving force (table II).

Table II. Driving forces of higher education in 2030 (Driessen, 2016)

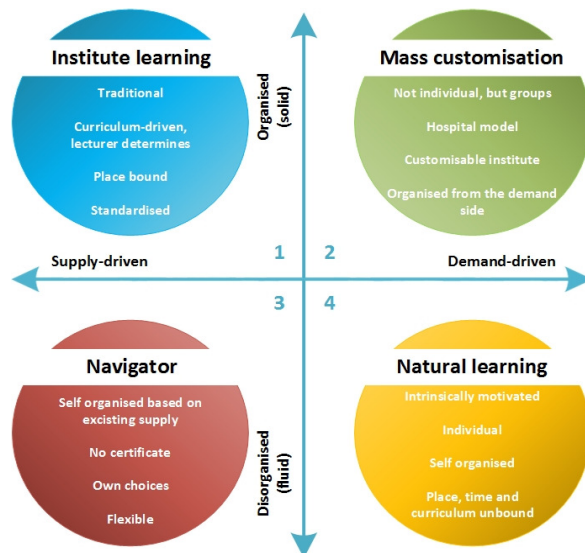
DRIVING FORCES		degree of	
#	description	uncertainty	degree of impact
1	decrease monopoly from HEIs	very uncertain	high impact
2	student focused, determines what to learn at own pace, initiation through own ideas (demand-driven)	very uncertain	high impact
3	tilting system	uncertain	high impact
4	authentic learning in context (real issues)	average	average
5	ICT as learning tool	very certain	high impact
6	students acting sustainable	very certain	high impact
7	collective learning in communities	certain	average
8	evidence informed learning	certain	some degree of impact
9	internationalisation	uncertain	average
10	increase flexibility (courses, theme, curriculum)	very certain	high impact
11	increase small scale (within large)	uncertain	some degree of impact
12	education increasingly overburdened	uncertain	high impact

The scenarios for 2030 higher education were determined by the core uncertainties from the addressed driving forces (Van Rijn & Van der Burgt, 2012). The panel indicated the most relevant driving forces, being the ones that have a greater than average expected impact and are (very) uncertain. These are: decreased monopoly Dutch UAS, student focused (demand-driven), and a tilted or flipped higher education system.

These driving forces represent two core developments: 1) a movement towards demand-driven education with the focus on students and 2) a system changeover where Dutch UAS lose their current monopoly and other suppliers enter the education market. This resulted in two axes that are plotted against each other. One axis represents the contrast of the current organized (solid) system against a disorganized (fluid) variant and the perpendicular placed axis represents the current supply-driven education system against a demand-driven

approach. Subsequently the panel appointed the scenarios in each quadrant, which resulted in the following four scenarios for 2030 higher education (figure 4).

Institute learning is closely related to the current situation. This scenario is illustrated as traditional and inflexible, driven by the government and the current institutions. Actual developments in education will demand flexibility in learning settings; but classrooms are still dominant. The current CRE portfolio will not change significantly.



Mass customisation refers to tailor-made, demand-driven education. The student gets a personal study program with an individual study route, based on individual learning aims. This requires a wide diversity of study settings for individual activities and small group work. Developments in blended learning lead to a smaller CRE portfolio.

Key in the 'navigator' is the decline in the monopoly of the government and traditional HE institutions. As a consequence the funding goes straight to the student, who find their own way to modular education offered by a variety of education suppliers. This scenario demands a flexible CRE portfolio and very attractive study environment to attract and retain students.

Natural learning refers to intrinsically motivated students, who study unbound place, time, content and institution. A highly developed virtual learning environment facilitates a tailor-made curriculum that is defined by the student and is based on working with personal (digital) portfolios. Education will hardly require traditional school buildings, but demands study hubs, independent from education institutions, comparable with co-working spaces for office workers.

Figure 4. Scenarios for higher education in 2030 (Driessen, 2016)

Looking at the inventoried and discussed possible consequences for CRE in Dutch UAS, the members of the panel formulated five key aspects of CRE related to the four scenarios, namely:

- Flexibility of CRE: ability to change the function of buildings in accordance with the developments;
- Consequences for traditional education spaces in higher education buildings;
- Innovation of learning spaces;
- The supply of learning space quantity for students in higher education buildings;
- Value of CRE for image and distinctiveness of Dutch UAS;

In general, the impact of the education scenarios on CRE is estimated less significant for scenario 1, medium significant for scenario 2, more significant for scenario 3 and most significant for scenario 4.

#### 4.2.2. Result study 2, phase 2

In the second phase of study 2, the scenarios of figure 4 were presented to the nine CRE-managers in interviews. They commented on the scenarios and indicated whether and how they formulated CRE scenarios in order to be prepared for future developments.

In general, the respondents doubt the probability of the outlined scenarios. The CRE-managers considered that probably not all higher education students would be able to handle scenarios 3 and 4, especially younger students, and that these scenarios would solely be intended for older students. Therefore, the respondents assumed the impact on real estate in



scenarios 3 and 4 to be lower than estimated by the experts. Besides, the majority indicated a gradual change instead of a quick shift towards new learning concepts. Furthermore, the CRE-managers address the user's (lecturers) behavior as rigid with a corresponding traditional demand. The alleged reason is the high average age of lecturers, carrying out their job for decades in the same way while being unaware of the possibilities of IT, combined with privileges acquired long ago that they want to keep. This behavior hinders change and innovation in the learning and working environment.

Regarding the future demand, most of the respondents argued that consequences of the first two scenarios, which build on organized higher education, seem manageable. Yet, the change is rather gradual. With regard to scenarios 3 and 4, where the monopoly of Dutch UAS diminishes and a system changeover occurs, the respondents' answers diverge. In that case, the flexibility at space and building level provides options to only partially meet the qualitative demand of the scenarios. Solutions have to be found in a smaller CRE portfolio and an increase of rented buildings based on flexible lease terms. Some of the respondents currently anticipate on selling buildings if education space demand will decrease in the future, but at the same time ignore the low marketability of their real estate. Only one of the respondents possesses a real estate portfolio whereof 80 percent is depreciated within 15 years, which implies a flexible real estate portfolio in 2030. Another respondent is located in Amsterdam, the capital of the Netherlands, where there is almost always a demand for buildings, irrespective of the economic situation.

## **5. Discussion, conclusions and recommendations**

The results of the two presented studies contribute in several ways to the knowledge of aligning CRE strategies with developments in higher education institutions.

Study 1 shows that these developments mainly take form gradually instead of quickly, or are more like an evolution, rather than a revolution. This makes that CRE-managers are able to keep CRE aligned with the occurring developments and that on the short term the CRE strategies and evolving building solutions and CRE characteristics are well aligned with the actual developments in higher education. The latter also indicates that CRE-managers and CRE professionals are actually aware that CRE can be more than just a support function or a necessity, and that CRE can add value to serve the corporate interests. Furthermore, the CRE strategies show a focus on creating added value with CRE for the organization and its end users. That is in line with actual ideas and theories about added value (e.g. Jensen & Van der Voordt, 2017).

The findings of both studies substantially showed that the different time horizon of the strategies for organizations and for CRE (Gibler et al., 2002) results in the main dilemma of aligning CRE with educational developments. The strategic plans of Dutch UAS mostly show a planning horizon of four years, whereas the strategic planning horizon of buildings can span 30 years or even longer. Interestingly, when the scenarios are presented, with a scope towards 2030, the CRE-managers become ambiguous about how to deal with these. So on the longer term, CRE-managers are not well prepared for future demands. This is similar with findings of De Vries (2007) who then argued a limited understanding of alignment of CRE of Dutch UAS with developments in higher education. In study 2, only a few CRE-managers have

specific ideas to align CRE with these future scenarios by creating flexibility on two levels, namely: a building level and a portfolio level.

The main recommendation that evolves from the two studies in this paper is that CRE-managers may adopt scenario-planning techniques to help them be aware of possible future events and could help to formulate strategies to anticipate on developed scenarios. Several examples (e.g. Van Reedt Dortland et al., 2014; Dewulf & Van der Schaaf, 2004; Collis & Van der Wende, 2002), show that working with scenarios could increase the awareness for change and could help to keep future CRE aligned with changed requirements and demands from the organization. Next, study 2 showed that many respondents are successfully facilitating small experiments in new learning environments. Applying this method reduces risk due to the small scale used and these requests can be facilitated rather quickly. Both studies show the value of the ‘new ways of learning framework’ of figure 1, which illustrates the integral character of aligning CRE with educational developments.

To conclude, the two studies show that CRE in short term is well aligned with recent and current developments in higher education. Yet, in the long term, CRE-managers in general doubt the probability of future scenarios and are not sufficiently prepared for disruptive developments.

## **6. Acknowledgements**

The authors would like to thank HAN University of Applied Sciences and Aeres University of Applied Sciences for supporting the research and all participants for their contribution. We also comment Nicole Ketelaars for her help with the English text.

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