Corporations and Cities

main mentor: Herman Vande Putte

Corporate accommodation is driven by internal organisational logic and realised in a real urban context. This results in a productive tension between the private and public interest, that on the long term advantages both (Aureli, 2008). This studio focuses on the means corporations have been using to install their businesses in urban areas and the way these have been guided by municipal initiatives.

Some examples of concrete topics for research are:

- the office concepts developed by OMA and their interaction with the urban context – the conversion of the Rijnstraat 8 building in The Hague put into perspective (http://oma.eu/projects/rijnstraat-8). In collaboration with OMA.
- the origin, life and death of mono-functional inner-city office zones, and the initiatives to regenerate them into mixed use areas – the case of the Brussels North area (Persyn, 2017) and alike. In collaboration with the developers and municipalities of the chosen area(s).
- the use of ‘volumetric urbanism’ by corporations locating in inner-cities. The origin, shaping and future of the permeable envelop – from the case of the Rockefeller Centre in New York up to the cases of BNP Paribas Fortis headquarters in Brussels (Vande Putte, 2009-2010) and the Shell headquarters in The Hague (Kouwenberg, 2012). In collaboration with the city architect(s).

Obviously, the studio is open to concrete topics of the graduates themselves.

The economics of tall buildings

Researchers: Ilir Nase (i.nase@tudelft.nl), Peter De Jong

The topic draws from a keen interest of the researchers in addressing a key research question in this area formulated as ‘How does value in use translate to value in exchange’? This is a user-defined question that, based on the Lancaster (1966), Rosen (1971) and Roback (1981) model of hedonic theory of implicit markets, treats property price formation (value in exchange) as an overall utility function derived from the usefulness of different features of a property (value in use). The topic comprises of two subtopics of different scope.

1- The first subtopic has a global focus and investigates the economic, behavioural etc. reasons behind tall buildings. Particularly with the availability of country and city-level building cost data, unique opportunities are presented to investigate the skyline change by incorporating this important feature in addition to the more conventional underlying urban economic principles. This topic is of significance to urban policy makers and city leaders all across the globe in developing future proof strategies for the development and economic growth of their cities.

2- The second subtopic has a national focus (particularly the four big G’s) and investigates the economics of tall buildings in Dutch office (sub)markets. The theoretical underpinnings are provided by urban economics and agglomeration theories. In a similar spirit to horizontal urban agglomeration this research will investigate vertical, within building, agglomeration and rent premiums (Liu et al 2018, Nase et al 2018). The findings of this research are of importance to urban policy development, property taxation, improving transparency in commercial property negotiation and the property development and investment sectors.

References


Related MBE theses

Research subject: Adaptive Reuse

Overview

This graduation research theme focuses on Adaptive Reuse, an overarching research topic within the MBE department. Since 2003, the office vacancy rate has been above 10% at the national level. Due to overproduction, declining demand for office space per employee and disposal of office space, the vacancy rate is largely structural and cannot be solved with reuse as an office. As a result, office vacancy has become a major economic, social and environmental problem nationwide, with undesirable consequences such as capital destruction and waste of human resources, degradation and non-sustainable use of materials and energy. Adaptive reuse and conversion to new functions can be a solution.

Similar challenges exist for obsolete/vacant school buildings, churches and industrial real estate, many of which have a monument status. A lot of research has been done into opportunities and obstacles for adaptive reuse, but there are still several knowledge gaps. The three most important are: 1) location-oriented transformation, 2) circular transformation, and 3) energy-neutral adaptation of offices.

1- Energy neutral building adaptation

Renovation of existing buildings in order to create a smart, healthy and energy-neutral office supply is a sustainable alternative to expanding the office stock that will create more vacancy. Relevant themes are new (re)use approaches, investment, financing, planning and governance. With an office stock that is not yet 25 years old, and that can accommodate more than 400,000 additional FTEs, the main question is how can a development and investment model for office adaptation be developed that includes the lifecycle costs of office buildings, with the aim of realising energy-neutral office buildings?

2- Circular adaptive reuse

Circular economy principles for adaptive reuse and adaptable buildings focus on user preferences, and contribute to lowering life cycle costs and increasing future value. Important issues are 1, develop adaptive reuse approaches to reduce waste production, material and energy use, 2, reduce environmental costs without increased building costs, 3, Develop a new tool to test the sustainability of adaptive reuse, 4, develop new policy frameworks to enable and facilitate circular adaptive reuse, and 5, develop a decision-making model for circular adaptive reuse that includes innovative business, financing and governance models.
3 - Creating value from waste of resources

‘Creating value from waste of resources’ means that waste is eliminated and the saved resources are used in other real estate management processes. Here waste means any resource that is used more than needed, including human resources. The World Economic Forum (2017) found that almost 40% of the human capital is wasted or neglected globally. Relevant issue is the identification and reduction of waste through business process re-engineering and re-design in a variety of processes in the field of real estate management - including asset, maintenance and facility management processes.

General literature

Topic 1 Energy neutral building adaptation

The reference list below includes literature on sustainable building adaptation and studies on the relationship between rent premiums and energy efficiency labelling of commercial property.


Topic 2 Circular adaptive reuse

The reference list below includes much cited literature, scientific and from practice related to the topics of circularity in the built environment and adaptive reuse.


**Topic 3 Creating value from waste of resources**

The example of literature below includes papers from re-engineering, sustainable business models, and re-engineering by creating value from waste of resources in two fields, namely in the public field and the real estate sector.


**MBE research**

**Topic 1**

Previous MBE research in this topic has had an end-user perspective focusing on the analysis of the demand for sustainability (energy) labelling across various national and international (sub)markets. It has accumulated a wealth of case study information, qualitative and quantitative evidence on the impact of energy labelling on commercial office rent levels and on criteria for adaptation. The focus of the research relates particularly to the commercial office sector. Within this context project objectives include.

1) Empirical analysis of the impact of sustainability (energy) labelling on office rents across different Dutch markets
2) Conducting case studies, developing a case study database for the research
3) In-depth analysis with representative cases developing decision support models and criteria for sustainable building adaptation.

**Topic 2**

MBE research on this topic has been related to research projects like REPAiR (see http://h2020repair.eu/) and to the MOR project for the solar decathlon competition (see http://mor.tudelft.nl/), and in the past to research projects like ‘buildings with adaptive capacity’, developing viable schemes for functionally and technically adaptive buildings. Within this topic research objectives include

1) Developing circular, adaptive and modular solutions for existing and new real estate, focusing on a, modular systems, b, long lifespan vs multiple lifespans.
2) Developing a framework, guideline, strategy for governance and policy of building adaptability by analysing policy, legal and economic-financial frameworks and understanding the stakeholders in the adaptive reuse process.

**Topic 3**

Previous MBE research has studied the current state of value creation in several real estate service processes through in-depth case studies. The objectives in studying circular value creation include to study the change in the way to do business (i.e., new sustainable business models) and the change in value proposition through corporate re-engineering, smart use of resources and value management.

**MBE graduation theses**

Topic 3: New

**Main researchers**

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Public real estate strategies for universities, hospitals, governments
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MBE research has a long-standing focus on providing (public) real estate managers with management information to support decision making. University campuses, hospitals, schools, and city halls are just some examples of built environments that support public goals and have a large impact on society. Managing these buildings – often heritage on iconic locations – is never the primary task of the institutions that use them. However, they need to set an example to society and have a responsibility to implement public policies, resulting in meaningful, functional, affordable, and sustainable built environments.

Managing Public Real Estate is about connecting four variables in every decision: public goals, financial resources, people and buildings.

More than 15 years ago, MBE has published two books about Public Real Estate (see website below for more info). After that, public real estate has been the subject of dissertations and projects: hospital and healing environments, museums, government buildings, the real estate portfolio of the (national) police and – more thoroughly – university campuses.

For more than fifteen years MBE has done research on the management of campuses, for universities and universities of applied sciences in the Netherlands. More recently this has been done in the European context and on specific aspects, such as sustainability and innovation. In this area, the research currently focuses on gaining a more thorough understanding of campus management at European universities of technology. The Campus Research Team (core members: Den Heijer & Arkesteijn; postdoc/PhDs: Curvelo Magdaniel, Valks, Azcarate).

Graduate students can focus both on public real estate in general or on a specific sector (or case).

References

- www.managingtheuniversitycampus.nl (select page PUBLICATIONS or PUBLIC REAL ESTATE)