



International Seminar
De Rotterdam: Exploring the Vertical City
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4th of July 2014
Rotterdam

04th July 2014**Detailed Program**

Meeting Point:
 Nhow Hotel - De Rotterdam
 Wilhelminakade, 3072 AP Rotterdam
 Conference Room, 6th Floor
 8.30 a.m.

Organizers:
 Marta Brandao
 Nelson Vera

8h45 – 9h00	Introduction Marta Brandao & Nelson Vera
9h00 – 10h15	Guided tour inside the building 'De Rotterdam' <i>by Kees van Casteren & Mischa Molsbergen</i>
10h15 – 10h30	Coffee Break
10h30 – 11h10	Housing and urban planning in the Netherlands, the virtue of necessity Nicolas Pham - Architect & Urban Planner, CH/NL
11h10 – 11h50	The Compact City: spatial planning strategies, recent developments and future prospects in the Netherlands Kersten Nabielek - PBL Netherlands Environmental Assessment Agency, The Hague
11h50 – 12h30	Financing public infrastructure in high-density central urban areas Demetrio Muñoz Gielen - Public officer, Lecturer and Freelance consultant
12h30 – 14h00	Lunch at Nhow Hotel - De Rotterdam (7th floor)
14h00 – 14h40	Architectural Concept of De Rotterdam Kees van Casteren - Project Architect OMA
14h40 – 15h20	De Rotterdam: The overall process of conception, construction and management Mischa Molsbergen - Project Director De Rotterdam C.V.
15h20 – 16h00	The juridical complexity of De Rotterdam: mix of functions, contractors, users and investors Karen Quist - Head of Legal Affairs / Lawyer at MAB Development
16h00 - 16h15	Coffee Break
16h15 – 16h55	Sustainable real estate is, above all, future proof real estate Pieter Zwart - adj. Director Structured Real Estate Finance
16h55 – 17h35	De Rotterdam: Installations and Sustainability Jan van 't Westeinde - specialist in Sustainability, Mechanical & Electrical at MAB Development
17h35 – 18h05	Debate on the subjects of «The Vertical City» and «Design Complexity»
18h05 – 18h15	Conclusive remarks Professors Olivier Crevoisier, Bruno Marchand and Jacques Dubey
18h30	Networking Drink at NHow Hotel terrace (7th floor)

Complex Design INTRO



The issues raised by the massive urbanization of the territory, added of the current social and economical challenges, imply, in terms of sustainable development, the conception of planning strategies that become increasingly complex and that constantly merge subjects of architecture and urbanism.

Amongst the possible solutions for the control of the territorial footprint is the one that envisions an integration of multiple functions - mobility, equipments, housing, activities - within compact volumes of very large dimensions. Conceiving and constructing such enormous built structures, considering their density, dimensions, multi-functionality and large number of participants, represents a very complex challenge. Such complexity is triggered by three fundamental conditions: a) the functional solution - mixing multiple disparate programs; b) the scale and the consequent theoretical ambiguity of the object - a hybrid between architecture and urbanism; c) the complexity of the overall process, involving an endless number of actors.

Several examples of complex projects at an intermediate level – between a city fragment and a building, and at the interface of real estate markets and urban development – demonstrate that, above a critical surface area of 100,000 m², issues relating to energy, construction and conception change radically. The characteristics of these projects (scale, density, mixed-use) are such that they transcend the usual legal categories, require a combination of public and private financing, cross the border line between urban planning and construction permits, involving the adaptation of the cadastral plan to the functional organization, creating a clash between urban development regulations and laws protecting the natural and built heritage.

The research group Complex Design gathers a multidisciplinary team of professionals from different fields, such as architecture, socio-economics and law. The global aim of this doctoral program is to study holistically the way in which realizing a complex project involves knowledge and practices that fall within the domains of architecture, socio-economics and law. To this end, three swiss universities have joined forces to develop a teaching module (TM) and three research modules (RMs) that are tightly interwoven and will explore the issue from various angles.

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Case-Study: De Rotterdam
«A 'Vertical City' within a City in The Netherlands»

"De Rotterdam is an exercise in formal interpretation that is at once reminiscent of an imported mid-century American skyscraper, but epitomizes the off-center experimentalism of modern Dutch art of the foregoing century. The nighttime twinkling of the lights indicating different programs throughout the day lends dynamism and contributes to the humanization of the monoliths."

Council on Tall Buildings and Urban Habitat
announcement of the prize Best Tall Building in Europe, July 2014

High Rise as a possible response to high-density urbanization

Until 2050, the world population is expected to increase by 2.3 billion, growing from 7.0 billion to 9.3 billion. At the same time, the population living in urban areas is projected to gain 2.6 billion, growing from 3.6 billion to 6.3 billion in 2050, hence more than 75% of the world's population is expected to live in urban areas by then (World Urbanization Prospects, UN, 2012).

As a consequence of this fact, it is estimated that, in a near future, new residential, commercial, cultural spaces and services within cities will have to be provided to millions of people, triggering a pressing need for cities to invest in innovative, integrated and sustainable solutions, able to handle the growth of urbanization.

Recurrently seen as a potential solution for the fast growth of the urban population, high-rise buildings are expected to stand prominently in the future of our cities. Thus the architectural/urban model categorized as 'Vertical City' - perceived as a possible response to high-density urbanization - becomes increasingly popular (Future Cities Lab, ETHZ, 2013).

It is indeed known that in cities where land area is limited, high-rise building forms have typified the urban fabric. This statement has motivated the Complex Design group to embark on the scrutiny of a Complex Project developed vertically, besides with the investigation of its conception and its multiple features.

De Rotterdam - case study for the concept of 'Vertical City'

The building De Rotterdam, designed by OMA, represents a case-study of a building conceived as a 'vertical city' within an European city. Inside its massive envelope, the building accommodates a large variety of programmes such as offices, apartments, a 4-stars hotel, conference facilities, shops, restaurants and cafés.

This "tower cluster" does not emerge directly from a density scenario; it rather triggers density on itself within a logic of polarization, becoming a landmark 'cluster' that stands up prominently in the ongoing re-development of the old harbour district of Wilhelminapier, next to the Erasmus Bridge, reaching 150m high (45 floors), with a gross floor area of approximately 162,000 sqm.

Completed soon after the CCTV in Beijing and just before the Stock Exchange in Schenzen, De Rotterdam seems to belong to this family of projects that, as proclaimed by Rem Koolhaas in his 'Bigness' Manifest (S,M,L,XL, 1995), produce a "new type of architecture". Their common features are the exceptional scale, the verticality, the generic architectural language and a "sense of uniformity" denounced by a façade that is independent from any program.

Although Rem Koolhaas avoids describing De Rotterdam as a direct illustration of his 'Bigness' theory, he recognises that the conception of this building has been deeply fed by his 'Manhattan experience'. The potentials of the vertical organisation of Downtown Athletic Club, the massing of Wallace Harrison's buildings or the 'sense of uniformity' of the Rockefeller Center are indeed implicit in De Rotterdam (Rem Koolhaas in interview, Architectural Review, Feb. 2014).

Despite its prominent presence in Rotterdam's skyline, OMA's architectural concept produces more than sheer size: it triggers urban density and diversity - both in the program and in the form - as guiding principles of the project. It is supposed to generate a device that will be active throughout all day-times, expecting to host an average of 5'000 people on a daily basis. Hence, aside from being the most densely built-up piece of land in the Netherlands, it is expected to become the most densely populated area too.

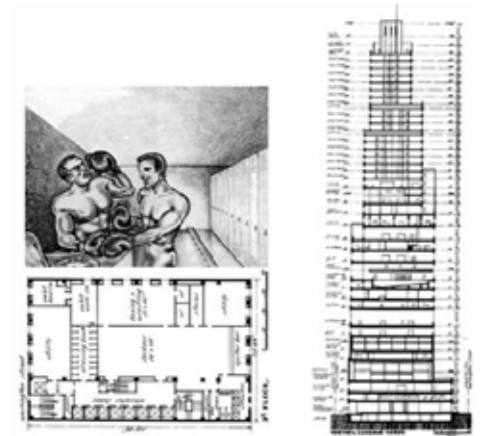
Despite its size and complexity, the largest building recently constructed in Europe has been completed in 4 years, according to plan and within the budget, bearing an exemplary case-study for the overall process (communication, temporality and method) behind to the conception of a Complex Building.



De Rotterdam, night view © OMA



Rockefeller Center, NY



Downtown Athletic Club, NY

© Koolhaas, Rem; Delirious New York, 1978

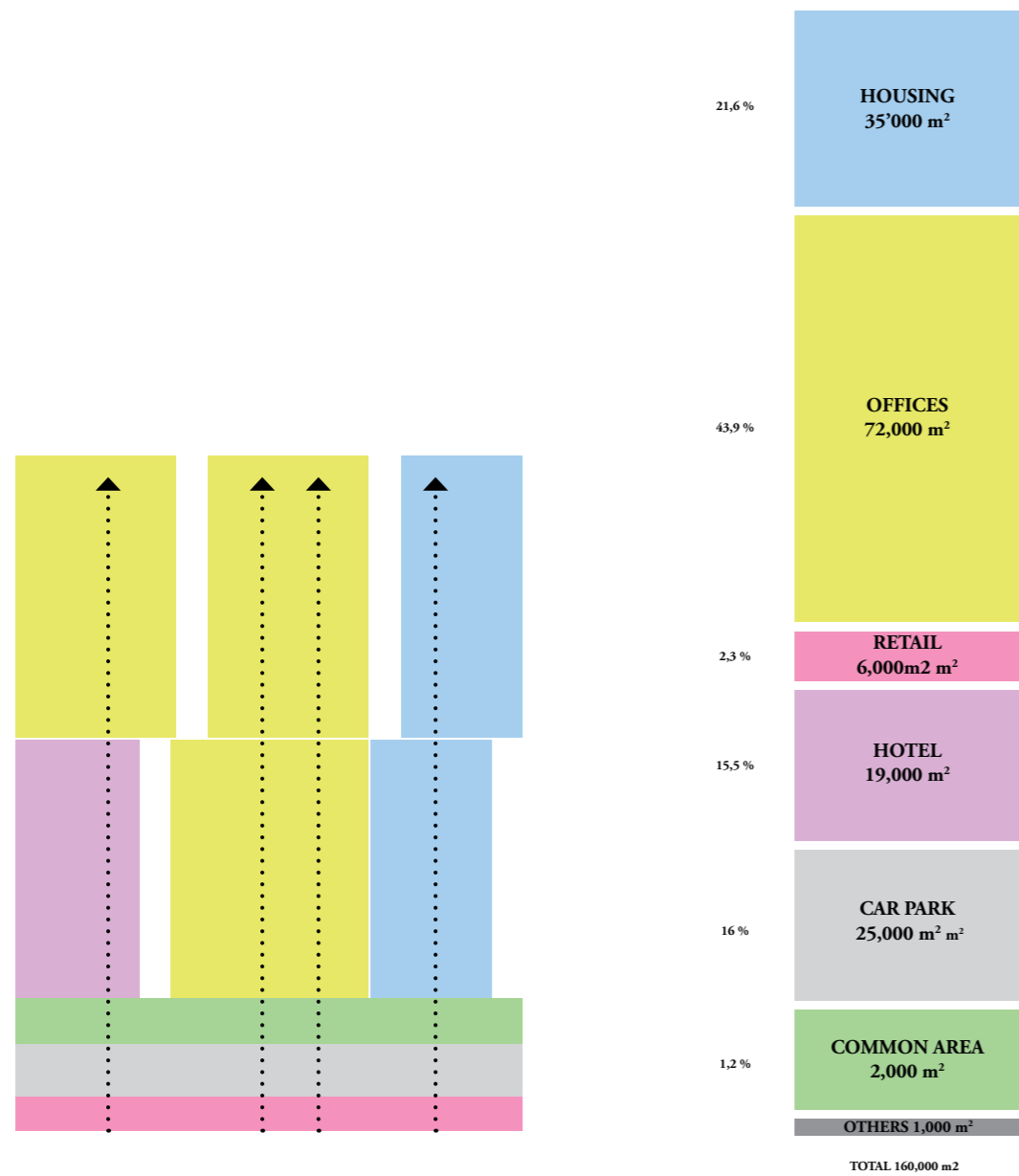
Learning from Complexity

Considering the general context of The Netherlands and the particular case of the building 'De Rotterdam', some specific questions are important to be answered, analysed from different perspectives and within different fields during this seminar:

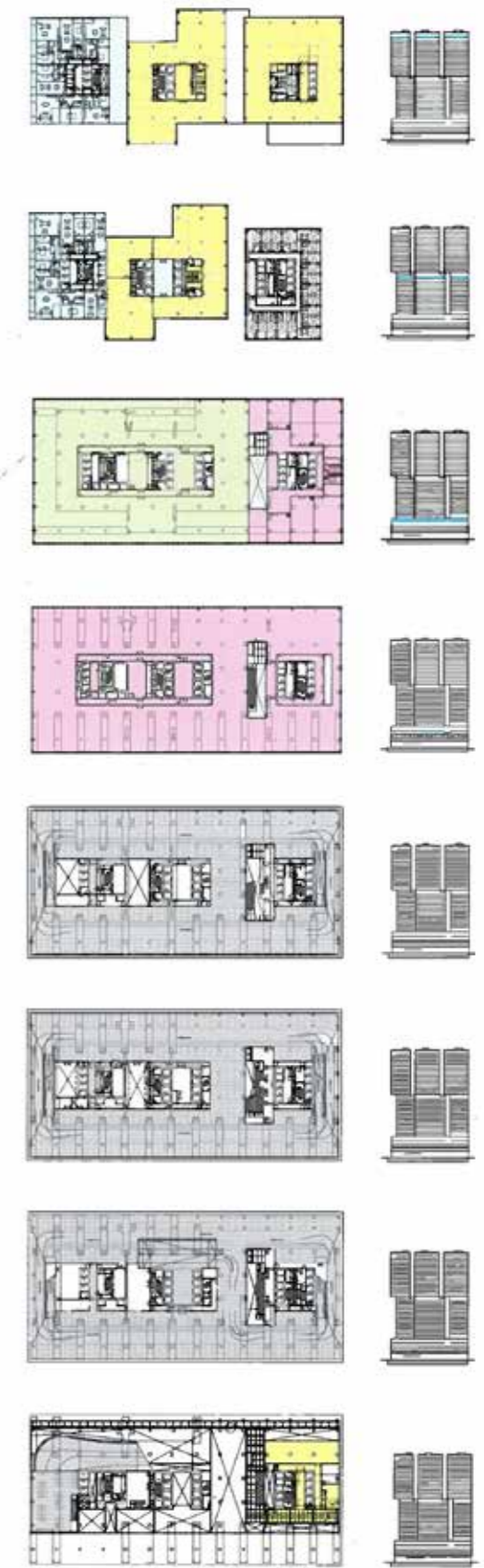
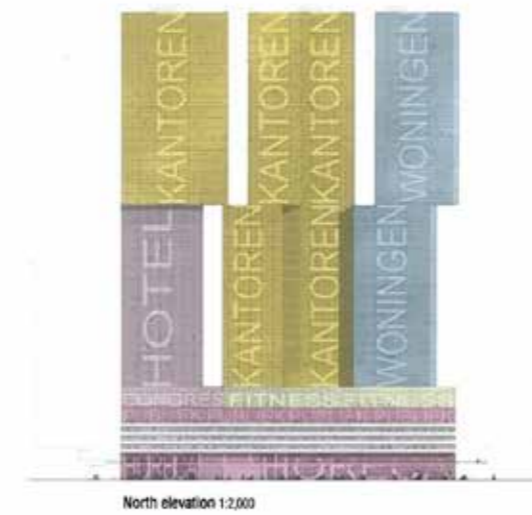
How does this project represent a model of Complexity?

How has such Complexity been resolved towards the completion of this Big Building?

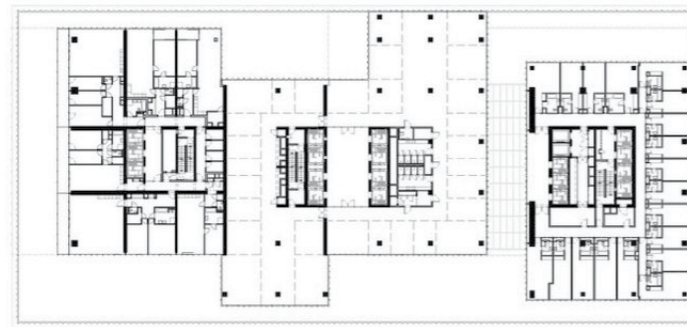
Can this project potentially become 'a model' for a possible response to the pressing need for densification in European urban centres, or shall it be seen as unique?



© Aurora Fernandez, Javier Mozas & Javier Arpa, This is Hybrid, A+T, 2011 (redesigned)

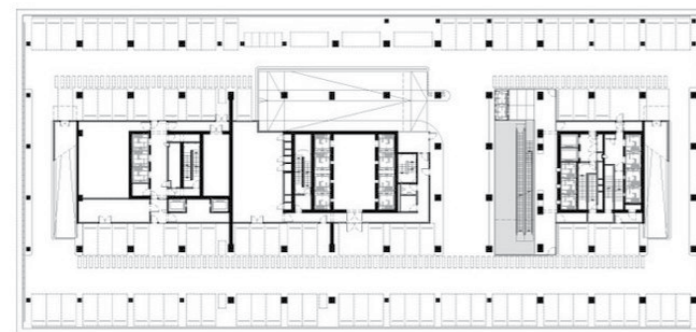


© Aurora Fernandez, Javier Mozas & Javier Arpa, This is Hybrid, A+T, 2011

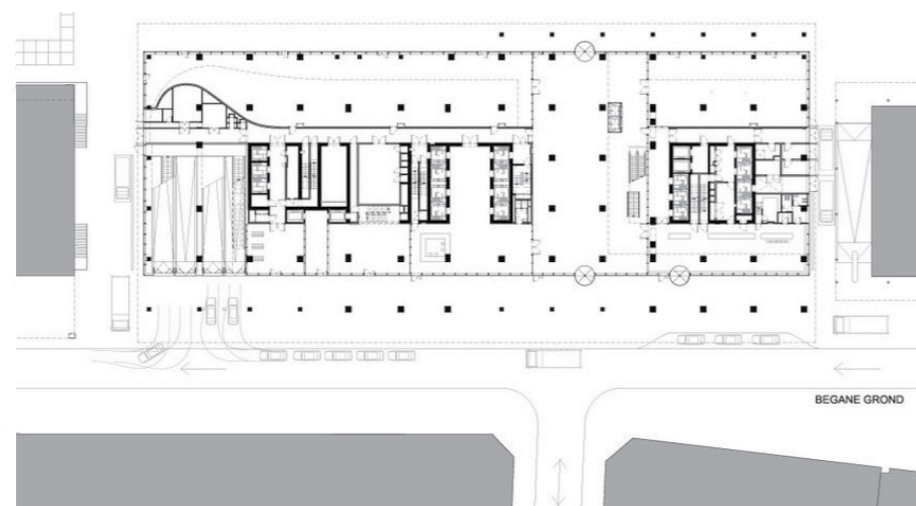


Eighth plan

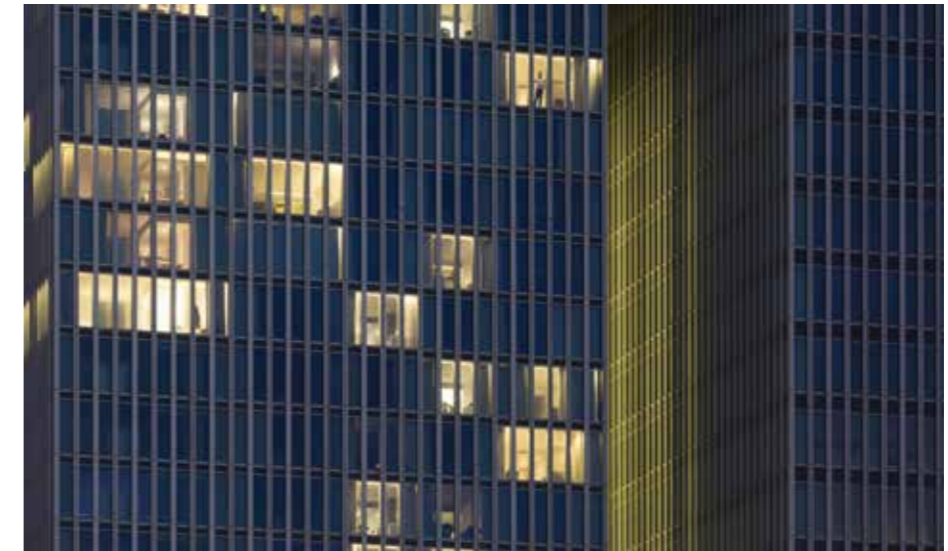
- 1 TRUCK PARK
- 2 OFFICE
- 3 HOTEL RECEPTION
- 4 BAGGAGE STORAGE
- 5 STORAGE
- 6 GARBAGE ROOM
- 7 PANTRY
- 8 TOILETS
- 9 BAR
- 10 MECHANICAL ROOM
- 11 FITNESS LOBBY
- 12 TAXI STOP
- 13 SERVICE ELEVATOR
- 14 LOBBY
- 15 MAIN LOBBY
- 16 OFFICE LOBBY
- 17 APARTMENT
- 18 STORAGE SPACE OF THE APARTMENTS
- 19 PIER
- 20 APARTMENTS LOBBY
- 21 RAMP
- 22 HOTEL ROOM
- 23 BALCONY
- 24 STORAGE
- 25 STAFF CANTEEN
- 26 COLD STORE
- 27 CAR PARK
- 28 SERVICE ELEVATOR



Fourth plan



BEGANE GROND



© Aurora Fernandez, Javier Mozas & Javier Arpa, This is Hybrid, A+T, 2011

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Housing and urban planning in the Netherlands the virtue of necessity

Nicolas Pham

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Housing in The Netherlands has always been a central issue in a society that has been forged in a geography where nature still remains a threat and has created a specific social and cultural bond.

A rather recent country in historical terms, its landscape is the result of a number of collective decisions influenced by the permanent risk of flooding, a soft soil and hence the necessity of strictly organizing the use of land.

The huge societal transformations at the beginning of the 20e century from an agricultural and merchant country to an industrialized one, its political stability and a socially orientated legislation saw the growth of the need of controlled housing production by the public sector.

These conditions find their spatial and built translation in a strongly planned urban environment that still works as a paradigm for its coherence, its emphasis on domestic qualities and the relationship between built environment and the public realm.

Interestingly enough in a country that often defines itself as protestant, both economically and socially liberal, to a great extent characteristically conformist, the avant-gardes were able to play a very significant role in a domain that concerns everyone: the production of mass housing.

From the city extension schemes to the use of experimental morphologies and typologies, the most well known architects in their time are widely considered as cultural references and play an important part in the intellectual debate.

PRESENTATION ABSTRACTS AND SPEAKERS

GENERAL APPROACH - DENSITY - THE NETHERLANDS



Nicolas Pham

Born 1959 in Rotterdam. Studied and graduated at the Ecole Polytechnique Federale de Lausanne in 1986.

After internships at Herman Hertzberger in Amsterdam and Alan Colquhoun and John Miller in London,

he became assistant until 1997 to Prof. Luigi Snozzi and from 1997 to 2000 lecturer at Institute for Theory and History of Architecture the EPFL.

From 2000 to 2010 he taught architecture and urban composition at the TUDelft and from 2010 at the Ecole Nationale Supérieure d'Architecture de Paris-Belleville, EN-SA-PB.

From 2005 he is head of the Master program and since 2010 head of Architecture at the University of Applied Sciences of Western Switzerland in Geneva, hepia.

The Compact City: spatial planning strategies, recent developments and future prospects in the Netherlands

Kersten Nabielek

kersten.nabielek@pbl.nl

The concept of the compact city is a key strategy to limit suburban sprawl and to obtain a more sustainable urban development. In the Netherlands, concepts for compact forms of urbanization have played a major role since more than half a century.

In various Dutch national spatial policy documents different concepts for urban compaction and urban densification have taken a prominent position. The Second and Third National Policy Document on Spatial Planning (1966 and 1973) introduced the concept of 'clustered dispersal' and 'growth centres', whereas the Fourth National Policy Document on Spatial Planning (1988) was based on the concept of the 'compact city'.

More recently, the National Spatial Strategy (2004) set specific goals for so-called 'concentration areas' around greater urban conurbations and 'urban densification' in existing built-up areas.

However, recently ambitions concerning spatial planning and urban compaction have been decentralized to the regional and municipal level and national funds supporting urban regeneration projects have been cut substantially. Moreover, a number of recent studies and publications claim that urban densification is reaching its limits in several Dutch cities because of complex constellations of ownership, increasing costs and complicated legal procedures.

The presentation gives insight into recent developments of dwellings, inhabitants and jobs in Dutch cities and their surroundings. It raises the question if the recent developments can be described as compact urban developments. Furthermore, future possibilities for compact urban developments in the Netherlands are discussed.



Kersten Nabielek

Kersten Nabielek is an architect and urban designer, specialized in research on urban development and graphic visualization of data. He works as a researcher at the PBL Netherlands Environmental Assessment Agency and is a founding member of YEAN – Network for Spatial Research Studies.

Kersten is author of several research studies on recent urban and suburban developments, including the publications Tussenland (RPB/NAi 2004), TiroLCITY (YEAN/fo-lio 2005), Verstedelijking in de stadsrandzone (PBL 2009), Stedelijke Verdichting (PBL 2012) and Smart about Cities (PBL/NAi 2014). Currently, he is working on a study on the relationship of mobility and urban development in the Netherlands.

Financing public infrastructure in high-density central urban areas

Demetrio Muñoz Gielen

Demetrio@urbsadvies.nl

Everyone would agree that urban development should be accompanied by sufficient and good public infrastructure. We all want cities with the necessary roads, green areas, public transport, social facilities, affordable housing and public spaces of high quality. This holds even more for central urban areas, where high-rise buildings typically settle. Central urban areas require good and sufficient public infrastructure to become attractive for inhabitants, users and visitors.

In the recent past public administrations in many European countries financially supported the realization and maintenance of most of this public infrastructure. Some countries were also successful in capturing part of the increased economic land property values, this leading to a mixture of public-private financing. Nowadays, almost all European governments are facing severe cuts in public expenditure. So the question for those countries that did not yet capture much increased property values is how to improve this.

When looking to successful public value capture strategies in Europe, one can categorize them depending on the degree of direct public intervention. A first, more modest intervention consists of the introduction of public policies on development exactions and contributions. This policy positively influences property markets, which tend to internalize these contributions into the property prices and development costs. A second, more intrusive sort of intervention consists of public law land readjustment regulations, which prescribe the rights and obligations of property owners in urban development. These regulations can guarantee, if properly designed and implemented, an effective financing of public infrastructure in private land development. Finally, public administrations can go further and become directly involved by buying in advance the land and becoming the land developer. This so-called 'active land policy' requires however financially strong public administrations with knowledge and sound experience. The Netherlands illustrates this last sort of intervention, included the associated risks.



Demetrio Muñoz

Demetrio Muñoz has worked for over 20 years on improving public-private relations in the financing of public infrastructure in urban development, both in the Netherlands and across Europe. He obtained a PhD degree on this topic at the Radboud University of Nijmegen. He has taught at the Amsterdam School of Real Estate and he is currently teaching at the Radboud University of Nijmegen and at the University of Amsterdam. In addition, he is a senior public officer at the Municipality of Purmerend, in the Netherlands. He's also involved in other professional consultancy activities and regularly participates as an expert and keynote speaker in panel discussions and seminars, organized by the Dutch government and by international organizations (UN-HABITAT, Lincoln Institute).

The Architectural Concept of De Rotterdam

Kees Van Casteren

KvanCasteren@oma.com

PRESENTATION ABSTRACTS AND SPEAKERS

SPECIFIC APPROACH - 'DE ROTTERDAM'

De Rotterdam is conceived as a vertical city: three interconnected mixed-use towers accommodating offices, apartments, a hotel, conference facilities, shops, restaurants and cafes. The project began in 1997 and was put on hold from 2001 until 2006. The construction started at the end of 2009, with completion in November 2013. The towers are part of the redevelopment of the old harbour district of Wilhelminapier, next to the Erasmus Bridge, and aim to reinstate the vibrant urban activity - trade, transport, leisure - once familiar to the neighbourhood. De Rotterdam is named after one of the ships on the Holland America Line, which departed from the Wilhelminapier in decades past, carrying thousands of Europeans emigrating to the US.

The three towers reach 150m high - 45, 41 and 43 floors - with a GFA of 162,000m², making De Rotterdam the largest building in the Netherlands. OMA's architectural concept produces more than sheer size: urban density and diversity - both in the program and the form - are the guiding principles of the project. De Rotterdam's stacked towers are arranged in an irregular cluster that refuses to resolve into a singular form and produces new views from different perspectives. Similarly, the definition of the building changes according to its multiple uses internally.

The various programs of the complex are organized into distinct blocks, providing both clarity and synergy: residents, office employees and visitors can use the fitness facilities, restaurants, cafes and conference rooms of the hotel. The entrance lobbies for the towers are located in the plinth - a long elevated hall that serves as a general traffic hub for De Rotterdam's wide variety of users.

One of the challenges during construction was the poor soil underneath the building. The 230,000 tons of De Rotterdam are supported by 1200 piles which extend to a 15m sand layer, 20m below street level. In general the building has sunken 170mm during construction because of settling. Temporary jacks in the structure have enabled the building to deform because of the cantilevers of the volumes.



Kees Van Casteren

Kees Van Casteren joined OMA in 2001. As associate architect he was in charge of the recently completed De Rotterdam project. In 2008-09 he served as associate in the design for the Prada Transformer pavilion in Seoul, KR. Between 2002 and 2006 Kees Van Casteren worked as project architect on the City Center masterplan and Blok 6 cinema complex in Almere, NL and the Koningin Julianaplein mixed-use building in The Hague, NL. In 2001-02 he contributed in architectural and urban projects in Spain, Italy, Belgium, China, Germany and The Netherlands. From 1998 to 2001 Kees Van Casteren worked for Renzo Piano Building Workshop in Paris. Prior to RPBW he was architect at various offices in NL. Kees Van Casteren has graduated from the Faculty of Architecture at the Eindhoven University of Technology.

De Rotterdam: The process of conception, construction and management

Mischa Molsbergen

Mischa.Molsbergen@mab.com

De Rotterdam, the largest building recently constructed in Europe was completed within 4 years, according to plan and within the budget. This is a really unique achievement, made possible by the professionalism and enormous commitment of all parties involved in the realisation of this project. Aside from the fact that De Rotterdam is a beautiful new icon of the city, superlatives apply to every part of this building. To list but a few numbers: it's a building with more than 7,500 spaces, based on around 40,000 drawings, with, on a daily basis, up to 800 construction workers on site at the same time.

For this reason, as developers, we proudly turn over this building to the city and the new users and we are confident that this vertical city will function successfully.

As part of the Rabo Real Estate Group, MAB Development is a leading and innovative European developer of commercial real estate and multi-use city centre projects.

Our vision has been the key to develop leading projects for forty years now. We are inspired by users and their desires and, on this basis, create high-quality and innovative multi-use city centre projects both in The Netherlands and abroad. For example, we provide city centers with sustainable and successful combinations of living, shopping, working and recreation. Retail is often a key ingredient in mixed-used developments. MAB Development is stationed in The Netherlands.

The juridical complexity of De Rotterdam; Multiple parties, mix of functions, contractors, users investors

Karen Quist

Karen.Quist@mab.com

Over the past ten years, juridical issues typically surrounding large-scale projects have been intensely debated by scholar and practitioner circles.

In many ways, De Rotterdam represents an exemplary form of juridical complexity because of its mix of functions, multiple parties involved; mix of contractors, mix of users and a mix of investors.

This presentation outlines consequences of contracting regarding the architectural process, (environmental/building permit, architect, contractor, constructor, installation-advisor, etc.), financing and acquisition of the ground, fiscal consequences, insurance, lease, sale and finally consultation with all disciplines involved.

Particular attention will be paid to the appointments made with the municipality of Rotterdam, Amvest and NH (Hoteles).



Mischa Molsbergen

Mischa Molsbergen has broad experience in commercial real estate development. As a Project Director, Mischa was responsible for managing a team of Development Managers responsible for innercity developments in the Netherlands: City Centre Almere / Parade Bergen op Zoom / Raaks Haarlem / De Rotterdam, B-Tower, Parkboulevard, Cool63 Rotterdam.

On behalf of De Rotterdam CV (cooperation MAB Development Nederland BV and OVG) Mischa Molsbergen is Project Director of "De Rotterdam". He started "De Rotterdam" in 1998.

Mischa Molsbergen graduated in 1997 in Delft. He studied Architecture, department Construction Management.



Karen Quist

Karen Quist, lawyer at MAB, has more than 25 years of experience in real estate. In particular with counselling and contracting with property development (including administrative matters) and regarding to civil and fiscal aspects of purchase and sale transactions.

Head of Legal Department/Lawyer at MAB Development Nederland BV
2008-present

Partner/Lawyer at Lexence NV
2006-2008

Head of Legal Department MAB BV
1996-2006

Head of Legal Department at Wereldhave NV
1989-1996

Lawyer at Engelman, Snijderds & Van der Kolk
1986-1989

Sustainable real estate is, above all, future proof real estate

Pieter Zwart

pzwart@fgh.nl

The Netherlands is slowly but surely recovering from the longest and deepest recession since the Second World War. The measures that have been taken nationally and internationally in recent years appear to be bearing fruit. Investments in real estate are also once again rising for the first time since the credit crisis began.

The social and economic changes result in real estate users wanting greater independence and ability to select a property on this basis. Trend is towards flexibilisation. This gives the question what constitutes future proof real estate. Crucial factors are the quality of the location, flexibility, and the design of the building. The high vacancy rates (approx. 18%) in the Dutch real estate market is only partially due to the fact that real estate is insufficiently future proof. It is the adaptability of the building which is key. Additional provision can already be made in the construction phase with a view to maximizing this capacity to adapt.

What are future proof locations. First there are the inner urban areas that have the required innovative forces. Creativity and innovation are strongly linked to urban environment and this is why cities are expected to attract more and more business and people in the coming decades. Universities are the drivers behind the mix of education, innovation and leisure.

A second concentration of high potential economic areas is formed by the clusters where high quality knowledge comes together and where innovation is promoted. Example the High Tech Campus in Eindhoven and the bioscience in Leiden or Food and agriculture in Wageningen. Third concentration is near public transportation hubs. Sustainable real estate is, above all, future proof real estate. Be critical of new constructions. The design of a building should take into account the needs and requirements of both the intended initial users and the future users.

The Rotterdam has functions as a vertical city. As a biotope in which different types of users interact with each other – that is our model for future developments. Adaptability is just as important as the question if the building is cradle to cradle or energy efficient.



Pieter Zwart

Pieter Zwart is Deputy Director of FGH's Bank Structured Real Estate Finance (STREF) department. The team in which Pieter works specialises in structuring syndicated loans for financing larger real estate transactions. Pieter began his career in banking as a (group) management trainee at ABN Bank. After several years of serving as a relationship manager for large corporate in the Nordic countries, he moved to Rabobank. Pieter took up a position as Corporate Clients team leader in the Construction and Logistics sector at Rabobank. He holds both an MBA and a Master's Degree in Logistics (Supply Chain Management). Pieter has now been with FGH Bank for ten years, the first seven of which he served as Branch Director of The Hague regional branch office.

De Rotterdam: Installations & Sustainability

Jan van 't Westeinde

jan.van.t.westeinde@mab.com

De Rotterdam accommodates a great variety of functions: offices, apartments, a hotel, retail and a parking garage. This mix of functions had a great influence on the M&E design. At the same time sustainability was from the start of the development a main issue during design and realization of this project.

De Rotterdam is an example of mixed use and sustainability. The sustainable design is based on a number of aspects e.g. the intensive land use, the use of sustainable materials, energy reducing concepts, and a sustainable production of energy.

For the sustainable generation of energy in De Rotterdam a centralized energy system has been developed. This system generates in a sustainable way heating and cooling and electricity. The energy is generated through the use of cityheating combined with co-generation (bio-fuel) and cooling with the use of the river Maas.

The central energy system consists of a heating-and cooling distribution system and all building parts are connected to this system. Via a high temperature heating distribution system heating is delivered to all functions with a need of warm water for shower/bath (hotel and apartments). Low temperature heating is used for spaceheating of offices, retail and hotel rooms. Cooling is generated through three watercooled cooling machines which are connected to the river Maas.

Due to the height and the size of the building during early design phase a master plan for fire safety was made. This plan was the base for the realization of all fire safety measures and has been planned in close consultation with the Fire Department of Rotterdam. The whole building is provided with a sprinklersystem (two sprinklerpumps) and each tower has a pressurized wet riser system for the Fire Department. The escape staircases are provided with an overpressure installation. The complete building is provided with a firealarm-and evacuation system and in the centre of the building a command room is realized from which all fire safety installations can be operated.



Jan van 't Westeinde

Ing. Jan C.N. van 't Westeinde REC has a background in Mechanical Engineering (Energy Saving Technique) and graduated in 1984. Currently he is working within MAB Development Nederland BV (part of Rabo Vastgoed) as Senior Manager Sustainability/M&E and BREEAM expert. He has a broad experience in project-management of all M&E concepts in complex multifunctional projects (national and international) and sustainable concepts in commercial real estate. During development of projects he is focusing in the early design phase on integral design and the interaction between architecture, building technique (facades), construction, climate concepts and sustainability. Some of the projects which he was involved in the past or is currently working on are Heuvelgalerie (Eindhoven), Olympic Stadium (Tunis), De Resident (The Hague), Stadshart (Almere), Oosterdokseiland (Amsterdam), Palaisquartier (Frankfurt), De Rotterdam (Rotterdam).

Thank you

A special thank you to all the speakers for having kindly and generously accepted to share their time and knowledge with us:

- Nicolas Pham
- Kersten Nabielek
- Demetrio Munoz Gielen
- Kees van Casteren
- Mischa Molsbergen
- Karen Quist
- Pieter Zwart
- Jan van't Westeinde

To MAB Development, specially Vanessa Westbroek, for the help with the contacts and the guided tour.

To Bruno Marchand, Olivier Crevoisier, Julien Fornet, Antoine Vialle and Fiona Pia for their valuable support, advice and recommendations.

To Sonia Laifi for the help with the organisation.

To the FNS for financing this event.

To the Complex Design Team for their enthusiastic interest.

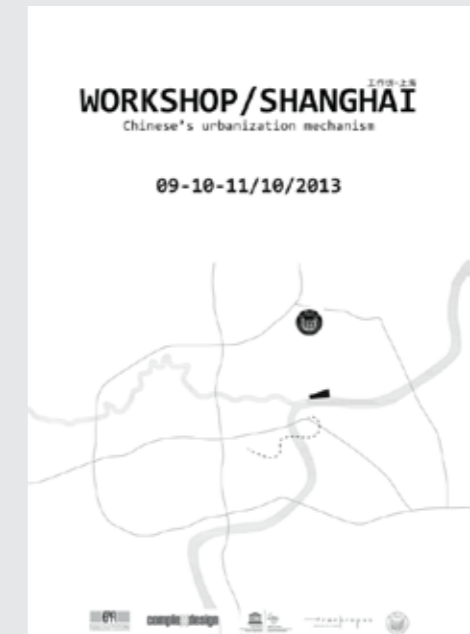
To all attendees for their presence.

Marta Brandao & Nelson Vera, 4th of July 2014

Complex Design International Seminars



Entrepôt Macdonald
 Paris, 28th of June 2013
 Organized by Mathieu Mercuriali



Chinese Urbanization Mechanism
 Shanghai, 09th of October 2013
 Organized by Marlène Leroux



Alpine Workshop Andermatt
 Andermatt, 20th of Februar 2014
 Organized by Fiona Pia & Nathalie Adank



De Rotterdam: Exploring the Vertical City
 Rotterdam, 04th of July 2014
 Organized by Marta Brandao & Nelson Vera

