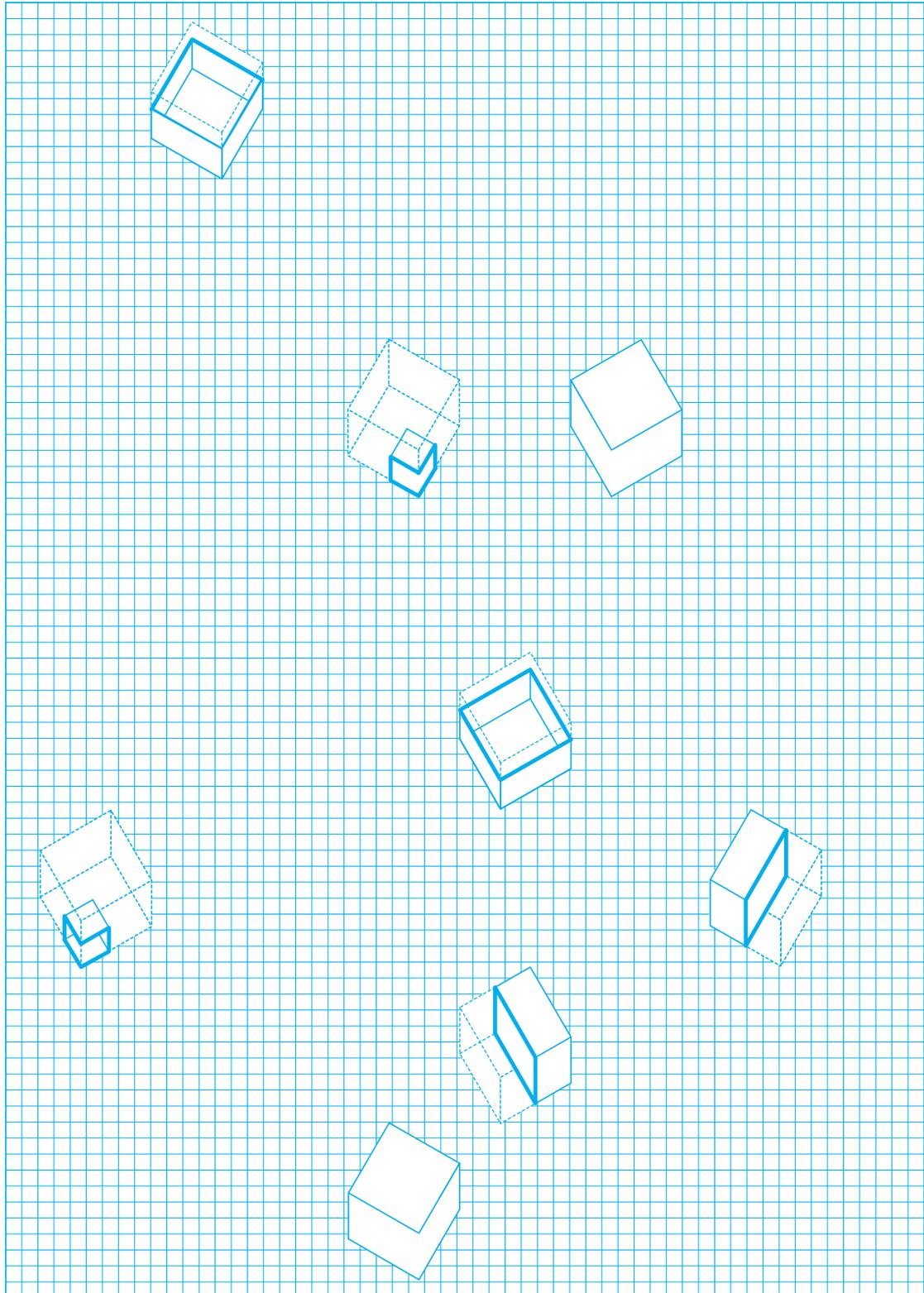


**END
OF LINE**

**COMBINING HOUSING,
FACILITIES AND TRANSPORT
INFRASTRUCTURE IN BRUSSELS**



END
OF LINE

**COMBINING HOUSING,
FACILITIES AND TRANSPORT
INFRASTRUCTURE IN BRUSSELS**



L O L A B O R A T O R Y
U S U R B A N I S M
I S I N F R A S T R U C T U R E
E E C O L O G I E S

ULB FACULTÉ D'ARCHITECTURE
lacambrehorta

 Vrije
Universiteit
Brussel

cosmopolis
CENTRE FOR URBAN RESEARCH

This Master Class was held from October 28th until November 8th 2013, organised by Louise (Laboratory for Urbanism, Infrastructure and Ecologies, Faculté d'Architecture de l'ULB) and Cosmopolis (Centre of Urban Research, VUB) with the support of the Secretary of State in charge of urbanism for the Brussels-Capital Region.

Scientific Committee

Jens Aerts

Cosmopolis – VUB

Nadia Casabella

Louise – ULB

Cosmopolis – VUB

Philippe De Clerck

Louise – ULB

Geoffrey Grulois

Louise – ULB

Géry Leloutre

Louise – ULB

Judith le Maire

Louise – ULB

Sarah Levy

Louise – ULB

Benoit Moritz

Louise – ULB

Marco Ranzato

Louise – ULB

Michael Ryckewaert

Cosmopolis – VUB

Philip Stessens

Cosmopolis – VUB

BATir – ULB

Yannick Vanhaelen

Louise – ULB

Organisation

Jens Aerts

Philippe De Clerck

Geoffrey Grulois

Benoit Moritz

Michael Ryckewaert

Philip Stessens

Master Tutors

Yves Malysse – URA

Federico Parolotto – Mobility In Chain

Guest Tutors

Susanne Eliasson – GRAU

Lars Lerup – RICE

Academic Staff

Jens Aerts – VUB

François Andrieux – ENSAPL

Nadia Casabella – ULB/VUB

Carles Crosas – ETSAB

Catalina Codruta Dobre – ULB

Bénédicte Grosjean – ENSAPL

Geoffrey Grulois – ULB

Géry Leloutre – ULB

Judith le Maire – ULB

Sarah Levy – ULB

Philippe Louguet – ENSAPL

Benoit Moritz – ULB

Jorge Perea – ETSAB

Véronique Patteeuw – ENSAPL

Marco Ranzato – ULB

Michael Ryckewaert – ULB

Maria Chiara Tosi – IUAV

Yannick Vanhaelen – ULB

Ward Verbakel – KUL

Hao Wang – Tongji University

Brussels Universities

Université libre de Bruxelles

Vrije Universiteit Brussel

Invited Universities

ENSAP Lille – FR

ETSA Barcelona – ES

Tongji University – CN

Università IUAV di Venezia – IT

KU Leuven – BE

Participants

Muruvvet Aktas

Samuel Amory

Luis Bellera

Alessandro Benacchio

Niels Biesemans

Cécile Brissez

Lucas Brusco

Valentine Dailly

Eva De Fré

Valentina De Poli

Alessandro De Savi

Giorgio De Vecchi

Francesca Dell'Aglio

Zakia Douibi

Mahmoud El Boujamai

Céline Foubert

Carlo Frassinelli

Anna Livia Friel

Camille Gardien

Ferran Iglesias

Deng Kaiwen

Chen Kaixiang

Jeroen Kessels

Jérôme Kockerols

Chantal Marfà

Tiziana Mazzolini

Patrick Morgado

Guillaume Munné

Justine Pierson

Marina Povedano

Li Qing

Sahar Safieddine

Etienne Schillers

Federico Segat

Emily Sevrin

Marc Subirana

Laura Tavernier

Stefano Teker

Jeroen Vandervelden

Sara Vima

Su Xiaorui

Li Yangfu

Su Zongyi

Jury

Jens Aerts

Joachim Bergerhoff

Nadia Casabella

Catalina Codruta Dobre

Bert Gellynck

Geoffrey Grulois

Anthony Jammes

Charlotte Kokken

Yves Malysse

Benoit Moritz

Veronique Patteeuw

Marco Ranzato

Michael Ryckewaert

Maria Chiara Tosi

Kiki Verbeeck

Ward Verbakel

Hao Wang

FOREWORD

The first edition of the Brussels Master Class was held two years ago. The aim of this now recurrent event is to provide structures, needed food for thought and reflect on the issue of urban planning in the Brussels Capital Region.

The first edition, entitled '120% Brussels', focused on the reflections supporting the development of the Regional Sustainable Development Plan – PRDD/GPDO – as well as the adjustments made to the Regional Land Use Plan – PRAS démographique / Demografisch GBP. The Master Class examined the impact that the demographic boom facing the Brussels Capital Region would have on the fabric of the city.

The second edition, 'RE:WORK', focused on the city's economy and the task of reconciling urban living with economic activities, mainly the ones related to the secondary sector. Students and teachers from Belgian and foreign faculties of Architecture and Urban Planning were invited to attend this event, gathering a wide variety of opinions on the matter in order to generate new prospects.

I am now delighted to be able to present the results from the third edition of the Master Class, 'End Of Line'. This third edition integrated the work of the two previous editions by focusing on the complementarity between places and networks. The participants were given the opportunity to examine

the needs of Brussels through a new thematic approach: harmonising the storage infrastructures needed to fulfill the mobility requirements of the city, with urban housing programmes or public facilities associated with the demographic growth of Brussels. Until now, no study of any kind had been carried out on this subject.

It was with great pride that, once more, we were able to welcome many students from other countries for a major multicultural brainstorming session on this topic.

The participants were able to base their work on a series of conferences on urban integration and a major colloquium on 'Research by Design', which looked at the role, potential and development possibilities of research by design in Brussels.

In particular, I would like to thank the two partner bodies that organised this third edition of the Master Class: the Louise research centre at the Faculté d'Architecture de l'ULB La Cambre-Horta, and the VUB's Cosmopolis Centre for Urban Research. I also hope that you will be excited as I am as you discover the ideas and proposals that this third edition has provided us.

Enjoy your reading,
Rachid Madrane

PRÉFACE

Il y a deux ans se tenait la toute première édition de la Masterclass. L'objectif de cet événement, devenu entre-temps récurrent, était de susciter la réflexion autour des problématiques d'urbanisme et d'aménagement du territoire en Région bruxelloise.

Cette première rencontre, placée sous le titre '120% Brussels', s'inscrivait dans le cadre des réflexions qui ont soutenu l'élaboration du Plan Régional de Développement Durable – ou PRDD – et la modification du Plan Régional d'Affectation du Sol – le 'PRAS Démo'. Elle avait exploré l'impact que va avoir sur les formes urbaines le boom démographique auquel la Région de Bruxelles-Capitale se retrouve confrontée.

La deuxième édition, dénommée 'RE:WORK', s'était construite autour du thème de l'économie urbaine, et de la cohabitation entre les lieux d'habitat, les lieux de vie et les lieux dédiés aux activités économiques qui relèvent en particulier du secteur secondaire.

Afin de brasser les opinions et de faire émerger des idées neuves, des étudiants et enseignants de facultés d'architecture et d'urbanisme de Belgique et de divers horizons étaient invités à la réflexion.

Je suis très heureux de vous présenter les résultats de la troisième édition de la Masterclass, 'End of Line', qui opère une synthèse des deux éditions précédentes en travaillant sur le lien entre les lieux et les réseaux. L'occasion a été donnée aux participants d'explorer les besoins

de Bruxelles en les abordant au travers d'une nouvelle thématique: l'articulation entre les infrastructures au service de la mobilité bruxelloise et les programmes urbains de logement ou d'équipement liés à la croissance démographique. Ce sujet n'avait jusqu'alors fait l'objet d'aucune étude.

J'ai été très fier d'accueillir, cette année encore, plusieurs étudiants venus d'au-delà de nos frontières pour une grande séance de remue-méninges multiculturelle autour de cette thématique.

Leurs réflexions ont pu s'appuyer sur un cycle de conférences autour de l'insertion urbaine et sur un grand colloque consacré à la 'Research by Design', qui abordait le rôle, les potentialités et les pistes de développement de la 'recherche par le projet' à Bruxelles. Cette démarche, qui s'impose de plus en plus dans les pratiques urbaines contemporaines, consiste à explorer des scénarii concrets, originaux mais réalistes, pour le développement d'un lieu.

Je remercie particulièrement les deux institutions partenaires qui ont organisé cette troisième édition, le centre de recherche Louise de la Faculté d'Architecture de l'ULB La Cambre-Horta et Cosmopolis Centre for Urban Research de la VUB, et vous souhaite une passionnante découverte des réflexions et des idées qu'elle a suscitées.

Bonne lecture,
Rachid Madrane

VOORWOORD

Twee jaar geleden vond de eerste editie van de Master Class plaats. De doelstelling van dit inmiddels terugkerend evenement is de reflectie rond de problematiek inzake stedenbouw en ruimtelijke ordening in het Brussels Hoofdstedelijk Gewest te voeden.

De eerste bijeenkomst met als titel '120% Brussels' kaderde in de denkpijptes die de uitwerking hebben ondersteund van het Gewestelijk Plan voor Duurzame Ontwikkeling – of GPDO-, evenals de aanpassing van het Gewestelijk Bestemmingsplan – 'demografisch GBP'. Hier werd de impact onderzocht die de demografische expansie, waarmee het Brussels Hoofdstedelijk Gewest wordt geconfronteerd, zal hebben op het stadsweefsel.

De tweede editie, die de naam 'RE:WORK' meekreeg, stond in het teken van de stadseconomie en van de verzoening van stedelijk wonen met economische activiteiten die voornamelijk tot de secundaire sector behoren. Studenten en onderwijzers van Belgische en buitenlandse faculteiten Architectuur en Stedenbouw werden uitgenodigd voor deze denkoefening, teneinde talrijke meningen te verzamelen en nieuwe ideeën te doen ontstaan.

Ik ben verheugd u de resultaten van de derde editie van de Master Class, 'End of Line', te kunnen voorstellen. Deze derde editie vormt een synthese van de twee voorgaande edities door te werken aan de samenhang tussen

plaatsen en netwerken. De deelnemers kregen de gelegenheid om de behoeften van Brussel te onderzoeken door ze te benaderen volgens een nieuwe thematiek: de afstemming tussen de opslaginfrastructuren ten dienste van de Brusselse mobiliteit en de stedelijke huisvestingsprogramma's of voorzieningen die verband houden met de demografische groei. Tot op heden werd er nog geen enkele studie over dit onderwerp gevoerd.

Met veel trots konden we ook dit jaar vele studenten uit het buitenland ontvangen voor een grote multiculturele brainstormsessie rond dit thema.

Hun reflecties konden steunen op een reeks bijeenkomsten rond stedelijke integratie en een groot colloquium gewijd aan 'Research by Design', dat de rol, het potentieel en de ontwikkelingspistes ervan in Brussel aansneed.

Ik dank in het bijzonder de twee partner-instanties die deze derde editie hebben georganiseerd: Louise, een onderzoekscentrum binnen de Faculté d'Architecture de l'ULB La Cambre-Horta, en Cosmopolis, Centre for Urban Research van de VUB. Verder wens ik u een boeiende ontdekking van de ideeën en denkpijptes die deze derde editie met zich heeft meegebracht.

Veel leesplezier,
Rachid Madrane

CONTENT

<u>FOREWORD</u>	05
<u>INTRODUCTION</u>	11
<u>END OF LINE</u>	
COMBINING HOUSING, FACILITIES AND TRANSPORT INFRASTRUCTURE IN BRUSSELS Jens Aerts & Benoit Moritz	17
FROM CONFRONTATION TO INTERACTION Yves Malysse	25
<u>PROPOSALS</u>	
SITE 1 – CUREGHEM DEPOT	35
SITE 2 – CENTRAL WORKPLACE	55
SITE 3 – AVENUE DU ROI	77
SITE 4 – CERIA/COOVI	99
SITE 5 – ERASMUS	119
<u>READINGS</u>	
END OF LINE OR CITY DEPARTURE? Nadia Casabella & Géry Leloutre	139
RESEARCH BY DESIGN IN THE CITY OF ANTWERP Team Ontwerpend Onderzoek	147
AN INTERVIEW WITH LARS LERUP AND GRAU Philippe De Clerck, Geoffrey Grulois, Michael Ryckewaert	155
<u>PROFILES</u>	165

INTRODUCTION

Benoit Moritz (Louise) and Jens Aerts (Cosmopolis)

This publication contains the results and the debates produced by the International Master Class 'End of Line', co-organised in Brussels by Université libre de Bruxelles (ULB) and Vrije Universiteit Brussel (VUB) from October 28th until November 8th 2013. It was the second International Master Class coordinated by these institutions, with the first edition held in 2012 on the topic of inserting centres of economic activity in our cities that correspond to the city's demography.

This year's Master Class focused on inserting transport-related architectural objects into the urban environment, being both the structures needed for the deployment of public transport (bus and tram depots, underground stations), and the interface locations between individual and public transport (transit car parks and neighbourhood parking for residents). The issue of transport was thus tackled not only from the traditional angle of structuring the service and the network, but also from a less common perspective exploring the contribution that can be made by architecture, namely programmatic couplings that support both collective and individual mobility and the shape these couplings can take.

Designed as purely utilitarian, hidden away in Brussels' periphery or completely ignored by it, these infrastructures are now in urgent need of renewed consideration both from planning and architectural perspective. This stems from the fact that public policies today often strongly favour the development of public transport and that major financial

investments are being made in this regard, generating growth both in service and demand. In 2012, the regional public transport company MIVB-STIB recorded nearly 349 million journeys – nearly double that recorded 10 years earlier – and this rising trend shows no sign of letting up, with a predicted 400 million journeys in 2016 and as many as 550 million by 2025.

This surge translates into a proliferation of rolling stock (the number of vehicles) and a subsequent need for storage, which in turn has a physical impact on the region: new depots need to be built while existing depots must be rationalised within refurbishment projects.

During the course of two weeks, teaching staff from five universities, together with the ‘master tutor’ of the Master Class, Yves Malysse from the architecture and urban design firm URA, guided the students in some research on this topic. This supervision was complemented by talks from local experts in the transport field, and also the major contribution of international expert Frederico Parlotto, senior partner at the Italian mobility consultancy ‘Mobility In Chain’.

In order to reflect the variety of urban situations involved with the dual issue of demographic growth and requirements in transport infrastructure, five project sites were selected, in the city centre as well as the inner and outer zones of the city. The work carried out and illustrated in this publication testifies to the creative vitality generated by the Master Class’ organisational methods. It also demonstrates the advantage of conducting research by design exercises of this kind. A short but very closely supervised exercise can produce a rich source of knowledge.

Besides being an enriching exercise, research by design methods can also serve as a lever for action and discussion on public policies linked to planning and regional development. This was shown at the conference ‘Research by design and public policy’, which we held at Bozar as part of this Master Class. The intervention by Patrick Janssens on research by design in Antwerp was very concrete in this

sense. An article about the origin and operational aspects of the ‘Ontwerpend Onderzoek’ team is included in this book. The conference as a whole and the subsequent debate allowed participants to outline a few initial themes for possible structural collaborations between the Brussels universities and the regional authorities.

This introduction is the opportunity to express our gratitude to all the students and professors who took part in the Master Class, to the conference attendees and external contributors, to the company T&T Project – which provided us with an exceptional venue for the two-week Master Class – and foremost to the Secretary of State in charge of Urbanism and to the members of his Cabinet who authorised and supported the organisation of this Master Class. Finally, we would like to thank Philippe De Clerck and Philip Stessens, whose contribution ensured the efficient organisation and smooth daily running of the Master Class.

END
OF LINE

COMBINING HOUSING, FACILITIES AND TRANSPORT INFRASTRUCTURE IN BRUSSELS

Jens Aerts & Benoit Moritz

As with the two former Master Classes, this edition opens with the acknowledgement of the sharp rise and scale of demographic growth as a major challenge for Brussels and its surrounding conurbation. It is also an opportunity to look beyond the sole need for production of housing. After slow but continuous growth since 1995, the Brussels-Capital Region reached the 1.1 million mark in 2010 and is likely to grow to 1,230,000 Brusselites by 2020¹. This means an unavoidable rise in the need for mobility, as well as demand for other amenities such as schools, youth and sports centres.

Brussels' mobility situation has been precarious for a long time. As a capital, it not only provides transport for its inhabitants, but also for a large metropolitan area with more than 2.5 million people. Despite the recent enormous upgrades of public transport systems and the offer of alternatives to the private car, such as car-sharing, bike infrastructure, bike rentals and night buses, the fact remains that the actual infrastructure system has reached maximum capacity on peak hours. This saturation is a major problem, especially as one of the major objectives of the regional mobility plan 'Iris 2' is the reduction of car traffic with 20% by 2018, which will mean an even greater need for alternatives. In order to achieve this reduction under the predicted demographic growth, public transport infrastructure alone will have to double its 2011 capacity.

¹ Previsions according to the estimates of the Institut Bruxellois de Statistique et d'Analyse

NEW PROPORTIONS IN THE MOBILITY NETWORK

According to the modal split, which gives insight into the proportionate uses of the major categories of transport modes, the relationship between car and public transport use becomes very evident. In 2001, 28.5% of all movements within Brussels were made by public transport, increasing to 34% in 2010. At the same time, private car use decreased from 45% to 30%². A similar evolution in favour of public transport happened for the movements of commuters: public transport use rose from 34% in 2001 to 46.5% in 2010. This increased use of buses, trams, metros and trains could be achieved smoothly. There was existing over-capacity, a tax reduction was offered for both employees and employers in favour of the use of public transport. There was also the acquisition of new rolling stock with more capacity, more efficient use of material and infrastructure and the extension projects of some tramlines.

However, a bottleneck may appear in the future, when the objectives of the regional mobility plan are put into practice. The share of commuter movement by public transport is expected to rise to 55% – nearly a 10% increase – and car use should fall to 37%. These ambitions are realistic from the perspective of urban policy makers, inspired by cities such as Paris or London where public transport has a share of above 80%. Nevertheless, insufficient capacity of lines and rolling stock could become problematic soon, since some scenarios predict an increase of 50% on several major transport lines. The regional public transport company MIVB/STIB recorded nearly 349 million journeys in 2012, nearly twice as many as in 2002. They expect to reach 400 million journeys in 2016 and an impressive 550 million by 2025. The regional mobility plan and the investment plans of the MIVB/STIB therefore plan for the construction of a new depot at Erasmus, while more prospective visions foresee the need for new bus depots in the West and South of Brussels.

² Data from the new Regional Development Plan, www.prdd.irisnet.be, p. 222

TOWARDS A COMPREHENSIVE INTERMODAL MOBILITY SYSTEM

These needs for additional storage and maintenance do not only have a physical impact on the territory of the Brussels Region, they also reflect the urgent need for an updated vision on a comprehensive, intermodal mobility system articulating multiple scales in the whole metropolitan region. Currently, spaces for new depots are sought mostly in the ‘second crown’ of the city-region. Meanwhile, the Flemish public transport operator is planning four new tramlines in the Brussels conurbation to interlink with the tram network managed by the Brussels operator STIB/MIVB. The potential for a transregional public transport system therefore becomes very appealing. It would foster a metropolitan logic with, for example, depots in the other regions that border Brussels. Meanwhile older depots in the inner centre – now too small for the newer and longer public transport vehicles – have a potential for conversion into other public amenities such as neighbourhood parking.

A genuine, high-performance, mobility policy cannot be limited to simply providing more public transport infrastructure. It needs an intermodal system, with hubs where changes from one mode to another happen smoothly and where the unique accessibility enables a variety and density of other urban amenities. Higher transport quantity must be matched with urban quality. Terminals and crossings of major public transport axes could thus become high-performing hubs, offering large capacity transit car parks for commuters entering the city, or simply providing a bike to rent for the last mile.

THE NEED FOR URBAN PROJECTS

These twin issues for contemporary Brussels – a growing population and an increased demand for public transport – imply a reconsideration of the urban insertion of transport sites. This is not only from the perspective of potential functional combinations between depots, car parks and

other urban functions (e.g. housing, facilities, public spaces) but also in terms of the capacity of these sites to act as catalysts for mixed urban development.

Adding public amenities is an essential part of any urban project aiming to be contextual and to articulate different needs within parts of a city. Mobility and urban programmes can be combined to leverage those highly accessible and therefore central parts of the city. Moreover, the massive demand for housing has increased the pressure to allow development of residential projects on mono-functional utilitarian zones, such as mobility spaces. These spaces are by definition accessible, and hold great potential to become new multi-centralities in the metropolitan region.

Slowly, but with increasing regularity, those responsible for economic or utilitarian programmes have opened reflections in that sense:

- (a) In the 'Marconi' masterplan, the MIVB/STIB has explored the possibilities to plan a secondary programme on the roofs of the new depot currently under construction;
- (b) The regional development agency Citydev will deliver a mixed-use programme of housing and small-scale production units at 'Marco Polo', a site next to the intermodal hub of CERIA/COOVI where the metro stops. A future train stop and the park and ride will be located there also. In parallel, Citydev will develop another mixed use project 'Gryson' with student housing and small production units specialising in food, next to the college campus at CERIA/COOVI where many students study cooking and food processing;
- (c) In the framework of the European Fund for Regional Development FEDER/EFRO, the Brussels abattoir is conducting a thorough reflection on its role and situation within the neighbourhood and the city;
- (d) The Brussels-Capital Region has launched feasibility studies on building housing on some transit parkings.

Beyond the existing situation, the urban condition of Brussels today is still being debated in the context of widespread congestion: congestion of public spaces with more and more private and public functions, traffic congestion, congestion of construction sites... Just as congestion has led to new urban typologies and urban fabric in the first part of the 19th century, the challenge may be similar today. Demographic growth and its pressure on increasingly scarce land for development forces us to go beyond the 'business-as-usual' scenario. For this reason, we decided that this Master Class would focus on specific sites under such pressure. Each has different expectations towards mobility, but each also offers prime examples for the shared urban challenges described earlier. A central tram depot can be an element of urban composition, with the option for transformation or extension, depending on the research outcomes: the functional mix for new tram depots in an urban context, with housing or amenities to become a project of urban articulation. New metro depots act as new centralities for dense urban projects, transit parking as metropolitan public spaces, accessible and comfortable for different kinds of users. District parking areas act as local hubs for residents, with public amenities, storage and distribution of goods, as places for personal contacts and social control in the urban centres of the Brussels Region.

By transforming these five types of mobility infrastructures towards urban projects, the Master Class can be an inspiration to develop a new, accurate mobility system for the metropolitan area, embedded in newly developed urban conditions that respond to the need for more housing and mobility in one transversal approach.



FROM CONFRONTATION TO INTERACTION

Yves Malysse (URA)

‘End of Line, Combining Housing, Facilities and Transport Infrastructures in Brussels’ was held over a period of two weeks in the fantastic Hôtel de la Poste on the site of Thurn&Taxis in Brussels. The complexity of the subject of the workshop was supplemented with the intensity of constant visits, lectures, debates, and colloquiums, all of which contributed to the learning experience. This overwhelming intensity undoubtedly had a great influence on the participants and their output. After all, this complete experience was the reason why students participated, why they worked hard, and the reason they gained a tremendous amount of knowledge and experience.

Five sites, varying from a small-scale city centre environment to large-scale outskirts – border situations with barely any physical context, defined a large scope of possible scenarios and approaches. Yet the subject of the workshop itself, to combine mobility infrastructure such as tram and metro depots with housing, services and the city in general was incredibly rich and complex from the outset. The aim of the workshop for URA was therefore to make the sites and the programme comprehensible for the students, by using simple but direct tools. In accordance with common practice at URA, tools rely on a phenomenological approach, where observation, intuition and interaction with the site are the

starting point of an intricate research process, where visible and non-visible experiences merge with the restraints of the chosen programme.

BACK AND FORTH

Different teaching experiences have shown us a significant shift from designing by research towards an analytical approach. This way, decisions derive from a highly abstract level and are afterwards applied to the real issues on the site.

For this reason, we felt it was necessary to introduce a sequencing of the two weeks of the master class, addressing very different aspects of urban project design. These elements were not to be researched completely, but the developed reflections were brought together into one project. The gap between the programme and its integration in the context was a challenge for the students, which could not be taken on in a defensive approach of simply ‘fitting’ the programme on site.

We strongly believe in a two-way strategy design: one from a very distinct, almost radically abstract level, the other from the physical experience of space: elements and phenomena happening on site at different times. By dealing with the two scales at the same time, a sort of evidence on the two scales has to be developed. Five tools were developed to tackle the complexity of both context and programme; five exercises with

strict graphic and content regulations; five steps eventually leading towards an overall project, where the link between context and programme is the centre of investigation. These links take shape in different definitions, in different circumstances, on different scales.

Constantly switching between project-related exercises, between scales of consideration, between the real and the abstract, stimulated thinking processes, allowing a proper balance between ambition and precision.

The methodology was kept on a tight schedule, forcing the participants of the workshop not to dwell on abstract generalities, but to focus instead on specific elements essential to the project. This intentionally strict focus also made the main topics of the projects clear and visible, and made comparisons between projects possible.

OBSERVATION

The five sites were chosen because of their current situation, their position within the city's mobility networks and their potential for development: the demand for sustainable mobility can be linked with new programmes and connections within the city by acting on such strategic sites.

After being briefed on each of the sites, the 50 students were grouped in 10 teams, two groups per site. The inherent tension between the two possible scenarios that were explored for each site enhanced the intensity of the workshop and gave extra impulse for both students and tutors. It also gave a clear message to policy makers, owners of the sites and other stakeholders: the Brussels Master Class does not offer a solution: it explores scenarios, some of which may be contradictory.

Through their background in architecture, all participants had already developed a very specific way

of observing a context: their everyday experience of the city is somewhat blurred by their education. By adopting other identities – as a lost tourist, a passer-by going through the place on a daily basis, a child looking for a place to play – the participants were pushed into visiting and experiencing the site in a different way. This provided a confrontation with aspects of the site that they would not have perceived with the eye of an architect. This confrontation with the physical context had to take place at different moments of the day, creating a basic understanding of a place's relationship with time: moments of (in)activity, calmness, tension, loneliness.

Next to the general data-driven analysis, physical interaction with the site was therefore an essential starting point for urban and architectural ambitions. Both positive and negative aspects were highlighted during a first review visit by Lars Lerup and Susanne Eliasson from GRAU.

After this exercise, students began to look at the site from a completely different perspective and scale. Only after this did Federico Parolotto of Mobility In Chain introduce the Master Class to the essence of mobility research and design in the contemporary city, guiding the students in formulating their large-scale approaches. Showing references around the globe and analysing the chosen sites from the perspective of mobility flows, brought new insights to the project.

The direct experience of the site, combined with the top-down perspective from mobility, forced the participants to make choices and take positions that were valid on both scales.

The context had been absorbed and spatial ambitions derived from it. Not one word had been mentioned about the programme up to this point, with one week left to go.

LINK

The programme is the link between the site and the city, it serves the city, it is relevant and deserves a designated place. The constant visits gave the participants the chance to become 'experts' on their site. They knew what was going on, because they had seen it, talked about it with people, and discussed their experiences within the group. A relevant programme had to be developed on site, taking into account the present condition of the context. Groups were given the freedom to explore the limits of development.

The overall success of each urban project is defined by its connection with the public space. The specificity of the interaction between city and programme defined the viability of each proposal. This interaction is not as much a question of programming, as it is one of spatiality and atmosphere. This link has been explored in the workshop through the axonometric perspective, a tool able to express the project and its direct environment with both precision and expression. Here the students had to deal with the very concrete consequences of their earlier choices.

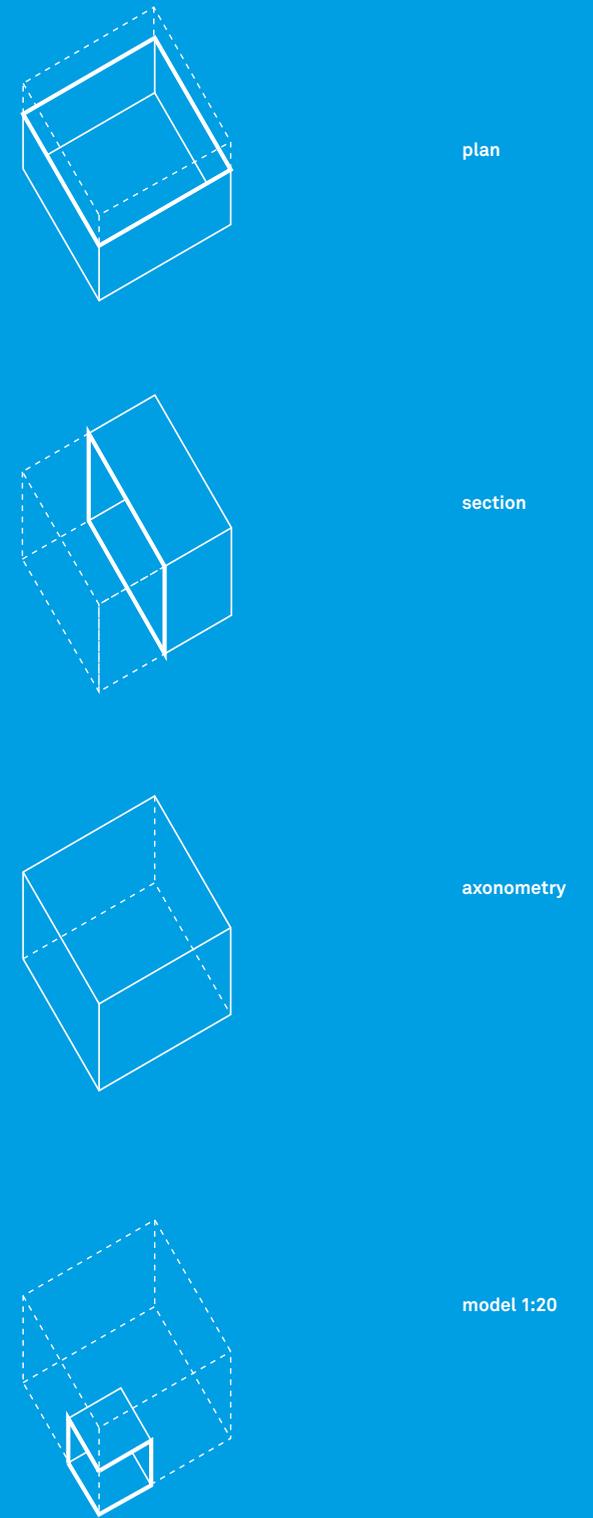
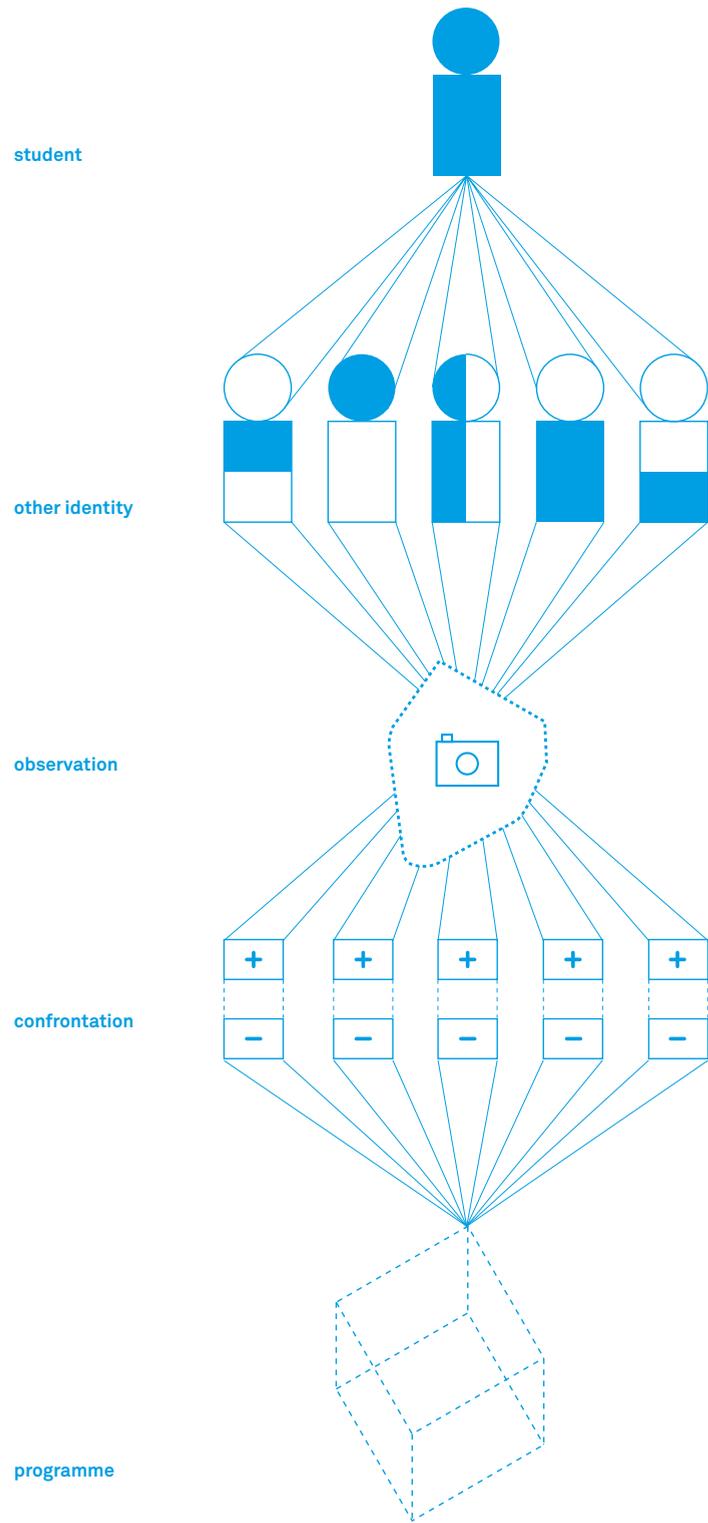
Each project thus focused simultaneously on the large and the small scale. As the students came from different backgrounds, even from different (design) cultures, the final exercise showed the universal approach of each architectural question through the model. In every proposal, the intrinsic qualities of linking, connecting, interaction, had to be investigated in a standard-sized model, on 1:20 scale, in white foam.

These models suddenly put all proposals – all sites big or small, in the city centre or the outskirts – on the same level, and made comparisons possible in terms of space and connection between project and city.

THE BOTTOM LINE?

Two weeks is a short time to deal with such complex questions. Using direct but simple tools, dealing with the context, the programme and the interaction between them, gives an opportunity to develop a relevant answer on what could become of several undefined places in Brussels, as soon as programming and spatial ambitions are projected on them through the lens of urban mobility. Each group succeeded in dealing with the project, no matter what scale or complexity. In a clear and direct communicative result, the projects were shown and analysed by a diverse group of international experts, in urban architectural fields, as well as from the stakeholders group. The two resulting proposals for each project are documented extensively in this publication. Every proposal touches on specific, relevant issues. Each exercise illustrates possible strategies to answer complex urban questions. Each result nourishes the discussion about the urge to look for an integrated approach of urban projects, a holistic design method addressing all issues.

As such, this book is directed at professionals, architects, urban designers, decision makers, but also at anyone interested in the possible roles of integrated design on complex urban situations.

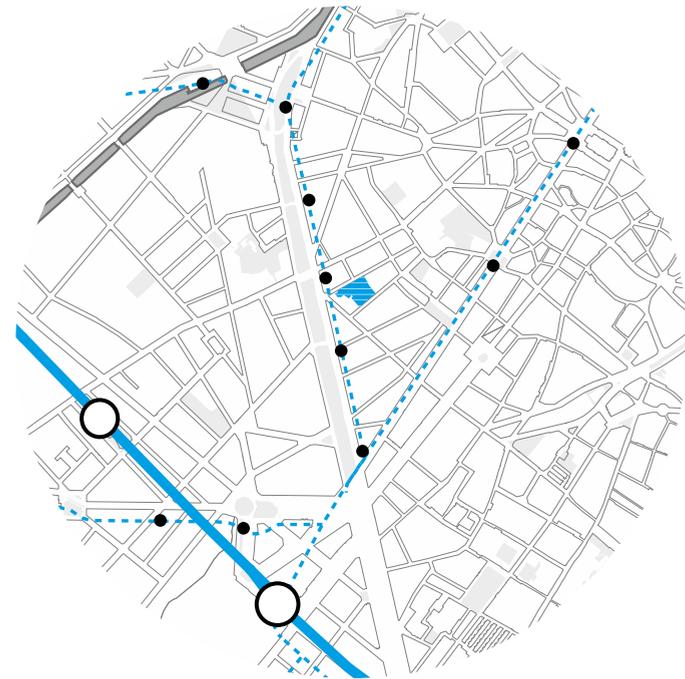


PROPOSALS

- 1. CUREGHEM DEPOT**
- 2. CENTRAL WORKPLACE**
- 3. AVENUE DU ROI**
- 4. CERIA / COOVI**
- 5. ERASMUS**



SITE 1 CUREGHEM DEPOT



TUTORS

GEOFFREY GRULOIS
YANNICK VANHAELLEN
CARLES CROSAS
JORGE PEREA

GROUP A

NIELS BIESEMANS
CAMILLE GARDIEN
CHEN KAIXIANG

GROUP B

SAHAR SAFIEDDINE
EMILY SEVRIN
SU ZONGYI



GROUP A:
**A FLEXIBLE
 CROSSING MACHINE**

Niels Biesemans, Camille Gardien, Chen Kaixiang

This proposal aims to create a new heart for the socially and economically fragile neighbourhood of Cureghem. A social and economic regenerator, with a fourfold programmatic infill, replaces the old structure of the tram depot. The flexible design of the building allows each part to host either one of the programmatic elements, where the proportions can evolve to meet the changing needs of neighbourhood and city.

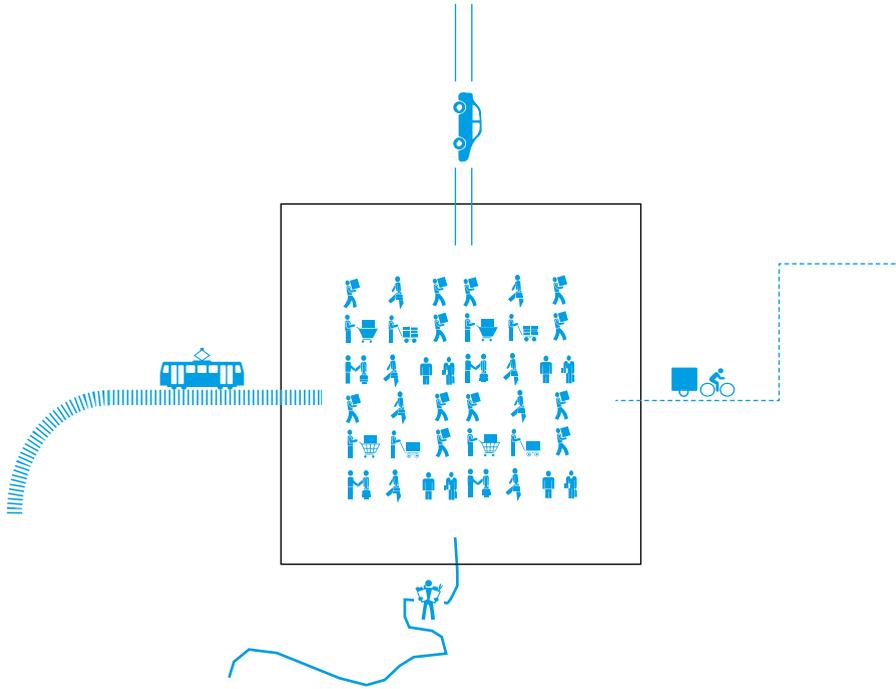
The first programmatic element in the new structure is a residents' car park. With fewer cars present, new possibilities arise for the use of public spaces in the area: space for temporary initiatives such as community gardening, markets, festivals –and even temporary car parking if necessary – on the boulevard, and increased potential for social contact and local entrepreneurship in the neighbourhood streets.

Secondly, the location within the city and the availability of tram tracks make the site a strategic spot for a local logistics distribution centre. Goods are delivered by cargo tram, then either stored, made available for pickup or dispatched to destination by bike couriers.

Third, productive spaces attached to the neighbourhood are also introduced, in order to create local job opportunities – workshops or workspaces that could be used for car and bike manufacturing and repairing, with gardening space on the roof.

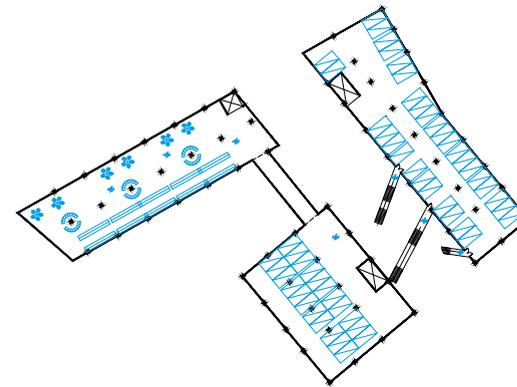
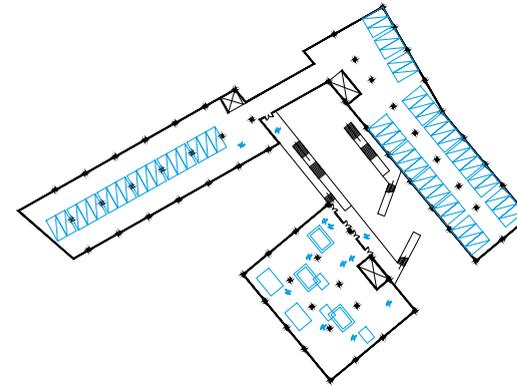
The fourth and maybe most crucial programmatic element is public space: a car-free axis, centralizing the flows of people and goods, connecting the three parts of the building as well as the two schools on either side of the site. On a larger scale, this axis shapes a neighbourhood corridor that links the different public spaces and flows between the Anneessens and Anderlechtsepoort tram stations.

This combination of reflections on mobility scale and neighbourhood scale is a repeatable experiment: strategic implementation of such facilities can reduce the number of motorized vehicles in the city centre and create more pedestrian-friendly neighbourhoods. The interaction with the surroundings through programme and public space can extend the dynamic onto the nearby streets to generate more urban activity and life.



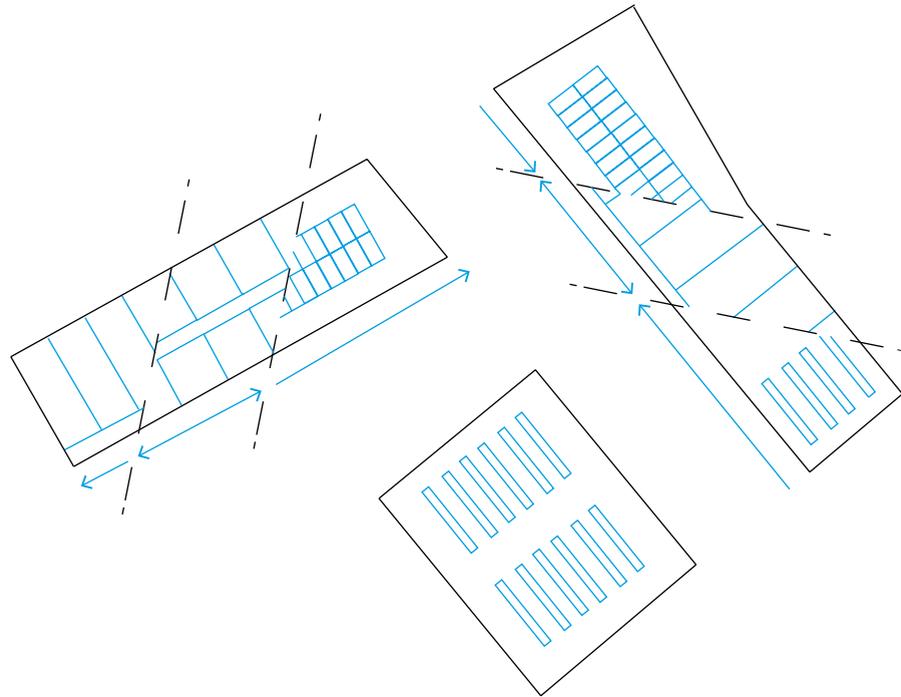
Concept scheme

Envisaging the site as a meeting point for people, goods and modes of mobility.



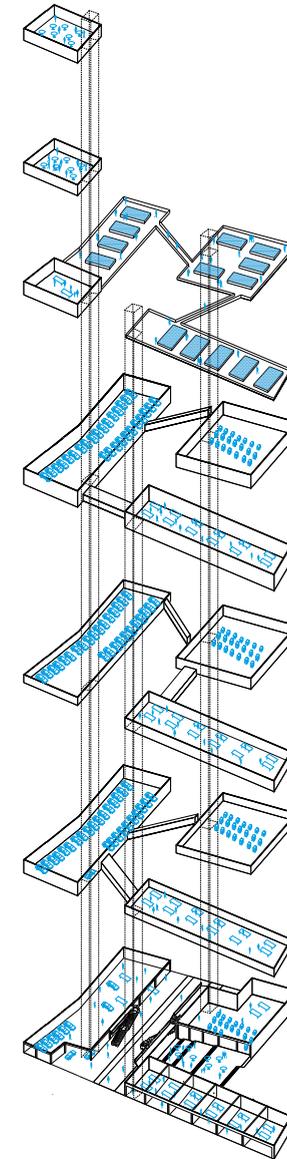
Plan

The flexible crossing machine articulates scales of concern through an unconventional stacking of mobility solutions and services. The car park is interspersed with various city functions: logistics and shops on the ground floor, offices and further shops on the higher levels, a viewpoint bar on the top floor.



Concept scheme

A simple structural system allows programmatic flexibility and shifts in proportion between the different functions.



Axonometric view

The differing levels interconnect by means of platform elevators and covered bridges, allowing complex functional interaction and continuity. The core of the project is a pedestrian street and public garden: the well-defined open space anchors the flexible indoor spaces within the surrounding fabric.



GROUP B:
REHAB

Sahar Safieddine, Emily Sevrin, Su Zongyi

Despite its central position and excellent accessibility, the neighbourhood of Rue de Cureghem has to cope with a number of issues: poor social mix, insufficient maintenance of both private and public spaces, insecurity, difficult traffic circulation and above all, a lack of vitality.

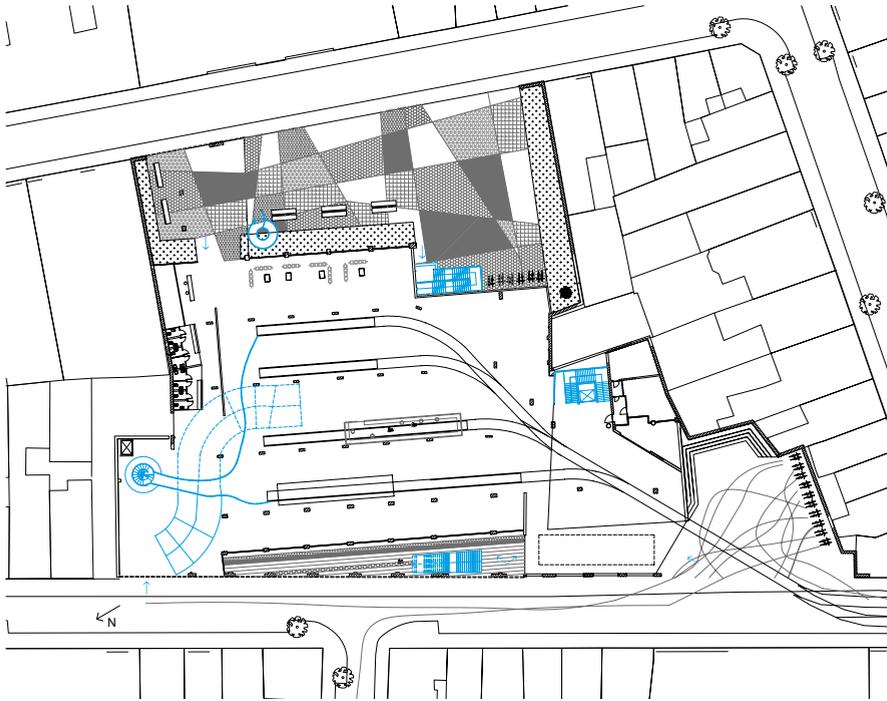
These aspects are the starting point of an essentially programmatic intervention onto the existing building, which gains three new roles. Firstly a local role, with workshops open to various sorts of activities (repair, lend and borrow, small scaled fabrication laboratories) located in unused tramways or containers on the rails, using the underground level as their own depot. There would be a social role, using part of the construction as a multi-purpose space open to the neighbourhood and the city. Finally, there would be a role as host to a business incubator for young entrepreneurs.

The building is accessed through three open spaces that – however different materially and in dimension – all offer new public space to the surroundings. The largest one, opposite the neighbouring primary school, could even function as a playground by closing off the street during school hours.

These public spaces lead to the circulation nodes in the building as well as the workshops. Parking spaces for the complex are placed on the first floor, where the structure and height allows the future addition of an intermediate floor for a larger number of cars. The second floor hosts the multi-purpose space, linked to two terraces and a covered cafeteria. Finally, the business incubator is disseminated across all floors of the existing building as well as on the four floors of a new extension to the building. This extension anticipates growing activity and acts as a signal for this new catalyst complex in the neighbourhood.

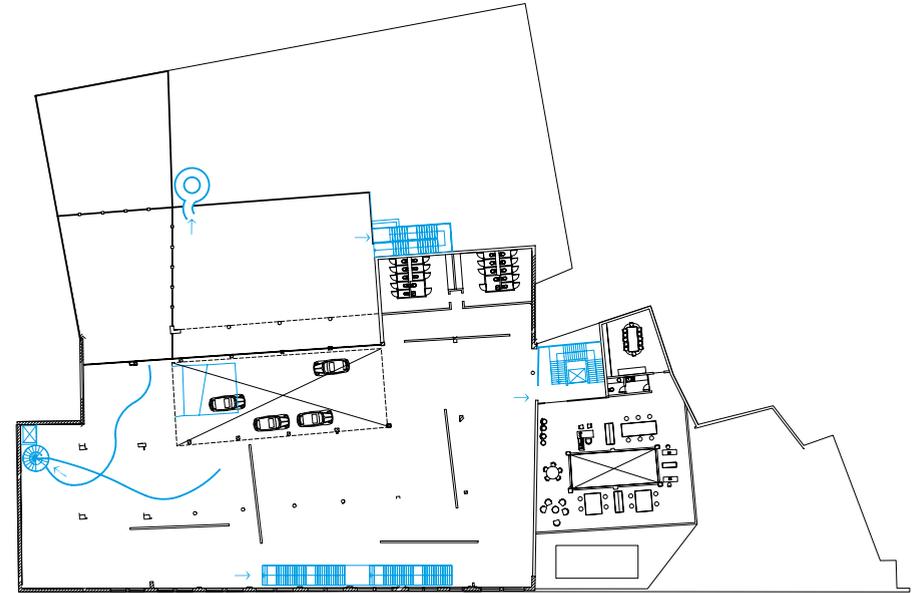
The interventions on the existing building, however minimal, are strategic and strong as they structure circulation and organization within the complex. All of these interventions are given a distinct name, creating a new toponymy within the complex.

Many buildings outlive their primary uses. This project demonstrates a possible combination of ambition and sensitivity to adapt the building stock to the changing needs of the urban environment.



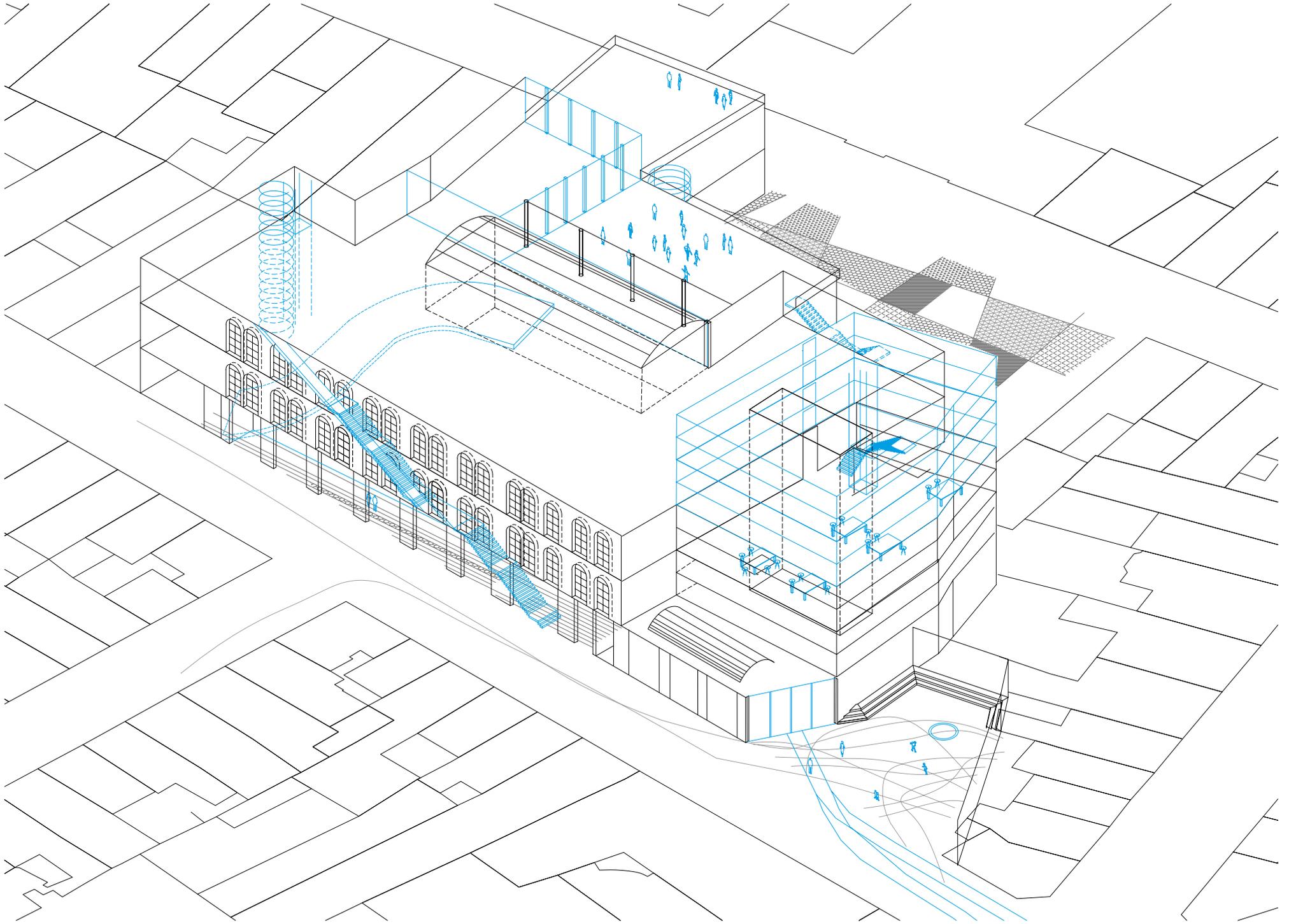
Ground floor plan (+0)

The core programme (repair and workshops, fab labs) is complemented by open spaces, including a mineral garden that faces the elementary school across the street and a covered frontage. The circulation insertions are in blue. Some of these are essential for the functioning of the building, providing vertical circulation on all sides: the 'Spiral' on the left, the 'Plaster' on the right, the 'Manhattan' in the back. Others add spatial experience and playfulness: the linear staircase 'Pompidou', the 'Monument' car access and the 'Slide' expressing the role of the public space as a playground for the neighbouring school.



Second floor plan (+2)

The multi-purpose space benefits from transversal views towards the roof terrace and the first-floor parking. On the lower left, the building is extended with a business incubator, highlighting the building's new role as a social catalyst.

**Axonometric view**

Wireframe drawing of the project, revealing circulation interventions and activities.

URBAN MICRO ECONOMY

Geoffrey Grulois & Yannick Vanhaelen

Compared to other sites, the case study of the Cureghem Depot is highly specific. It is the only site where the STIB/MIVB maintenance workshop is scheduled for complete discontinuation. Therefore, it is approached from a different starting point where both the building's future and its function were freely investigated during the Master Class. While the site has been dismissed by the STIB/MIVB as not suited for their activities, the Master Class revealed its potential to become a key element for a sustainable regeneration inside a neighbourhood still characterised by social inequalities and high unemployment.

Occupying a large plot across a city block situated in the lower part of Brussels' pentagon, in the valley that was once crossed by the Senne river, the Cureghem Depot is part of former industrial premises, mostly warehouses, that once populated the inner city blocks from the mid 20th century onwards. The STIB/MIVB maintenance workshop used to employ around two hundred workers until 20 years ago. In the last fifteen years, many of these former warehouses ceased their activities. They have been transformed into residential lofts and trendy restaurants, attesting to the gentrification process affecting the canal area. The young 'creative class' that invests in these lofts, contrasts with the poor immigrant population living in the social housing and derelict

private houses of the neighbourhood. For example, the nearby Rempart des Moines and Anneessens multi-storey social housing complexes dating from the 1960s are still stigmatised as one of the most unpleasant residential areas in Brussels. Despite the fact that the Regional Government and the municipality have invested in several 'neighbourhood contracts' to improve the area by renovating dwellings and building new public facilities, the area around the Depot still shows traces of social inequalities and economic recession.

Built just after World War II with its concrete structure and brick facades typical of Brussels' 20th century industrial architecture, the Cureghem Depot has progressively become unsuited for tram maintenance despite its central position in the city. The new rolling stock requires higher and longer spaces for efficient repair. For this reason, it has been decided to stop using this facility to concentrate all maintenance activities in Haren, at the outskirts of the city. This soon to be empty large complex in the residential city centre therefore represents an opportunity, but also a challenge: to reflect on an alternative reconversion process focusing on socio-economic micro-dynamics. A reconversion that might improve local conditions, create social interaction and economic opportunities in the neighbourhood, rather than

transforming another warehouse into trendy lofts for the wealthy.

Although the area is highly accessible to public transport, its public spaces are still defined by the predominance of car use and informal car businesses. Within the framework of the Master Class, a new type of mobility storage was proposed in the form of a neighbourhood parking-warehouse as the only mandatory element of the project. Intended as a space to decrease car pressure on adjacent public space, this multipurpose neighbourhood parking programme is envisioned as a way to allow a formal micro-economy of car maintenance, recycling and exchange to take place in a public facility. The challenge of this imposed programme resided also in its potential interaction with the surroundings dynamic businesses of cars.

A NEW HEART?

Those intertwining challenges were the basis of the analysis of both groups during the first week of the Master Class. Defining a programmatic mix able to meet those challenges was indeed their main topic of research. It eventually became clear that this mix should have more to do with proposing spaces and functions able to answer various local social-economic dynamics positively, rather than fixed programmes that would eventually reinforce an existing situation and feeling of disadvantage. Concretely, both groups were therefore concerned with the creation of a new 'heart' for the neighbourhood, one that brought the vitality currently lacking, as observed by the students both in the absence of any visible economic activities and in the poor quality of uses of the public spaces. For them, this new 'heart' should not be composed around community, cultural or representative

spaces and facilities like those usually developed in the frame of 'neighbourhood contracts', but rather around workshop and market spaces for production, interchange and ethnic economy.

This social and economic catalyst was seen as an alternative reaction to the predominance of youth and the proximity of the arts & crafts school, but also giving a higher profile to the ethnic economy, in a neighbourhood where activities are mostly informal. Business incubators for technical start-ups, workspaces for the production, maintenance and recycling of manufactured goods, cars and bikes or know-how sharing workshop demonstrations were thus the primary components of the programme. Combined with the neighbourhood multipurpose parking and the consequent change of character of the adjacent public spaces, both groups were hoping to provoke by their proposed interventions a wave of micro-dynamics in the neighbourhood, with shops in other buildings reopening and the street becoming a more 'liveable' and vibrant environment. One group went further in the mobility issues, integrating an urban distribution centre among their programmatic mix. This took advantage of the central location near shops and restaurants and the existing rail tracks, further reducing the need for trucks and cars in the streets, while offering job opportunities for low-skilled workers.

RECONVERSION VS. REHABILITATION

Translating those ambitious socio-economic programmes into design proposals was not an easy task as their programmatic needs were mainly for seemingly generic and flexible spaces. Nevertheless, this was seen as an opportunity to investigate two different scenarios that are usually opposed

when discussing possible futures for industrial heritage and critically address them: the reconversion scenario – destroying the existing complex and building anew – versus the rehabilitation scenario – keeping most of the existing buildings intact and adapting them for new uses.

The reconversion group saw the 'blank canvas' approach as an opportunity to drastically improve both the urban form of the complex and its functionality with the aim of creating a 'flexible crossing machine'. On an urban level, they advocated the creation of a new public space crossing through the site and allowing the centralisation of the different flows. Intended as the new, busy, public heart of the neighbourhood, this axis is the main focus of the organisation of the different programmes. The urban distribution centre, with its storage and pick-up spaces, occupies one side while the workshops and workspaces are on the other, as is a small public garden. Shops towards the Rue de Cureghem complete the ground floor. During the day, several activities take place on this public axis: first, the early morning delivery of goods with cargo trams and their subsequent distribution by bicycles, then an open air extension for the workshop areas that can become a small market selling the products in the late afternoon. In-between, the public axis is an interaction space, a place where people can meet, where children can play and where community life takes place. The rest of the programme takes the form of a structure dimensioned to accommodate different functions: car storage for the neighbourhood multipurpose parking, office or workshop spaces, shops, housing, etc. To ensure flexibility and that every part of the building could host the different functions in time, different access

points are envisioned, both vertically and horizontally, resulting in a rather complex crossing machine that nevertheless gives great freedom towards the buildings' uses and functions in the future, allowing it to stay in step with the neighbourhood's needs.

For the rehabilitation proposal, the group's main objective was turning an existing closed-off building into a new inviting public structure. This was achieved partly by 'cleaning' the existing structures of unnecessary encumbrances, resulting in the creation of two public spaces, one on the Rue de Cureghem and one on the Rue du Vautour. Situated directly in front of two schools, they provide for local needs while offering a 'parvis' and public interaction with the renewed complex. The other main intervention was the improvement of connectivity and public accesses to the interior and its different storeys. Those vertical connections are maybe the main iconic architectural intervention, each related to an architectural archetype. Negotiating the links between the different programmes and the public spaces, they embody the building's new purpose and dynamic. The main public stairs for example – the so-called 'Pompidou' – slices through the building and gives easy public access to every activity. On the ground floor, the group reused the existing tram maintenance area as a workshop space while the former office spaces host a business incubator. It extends vertically into the former maintenance stock, to which four new floors are added so as to anticipate growing activity and act as an urban signal. The neighbourhood parking is located on the first floor, accessible by car by a new ramp while the top floor is envisioned as a multipurpose space with an outdoor area for exhibitions, parties and presentations.

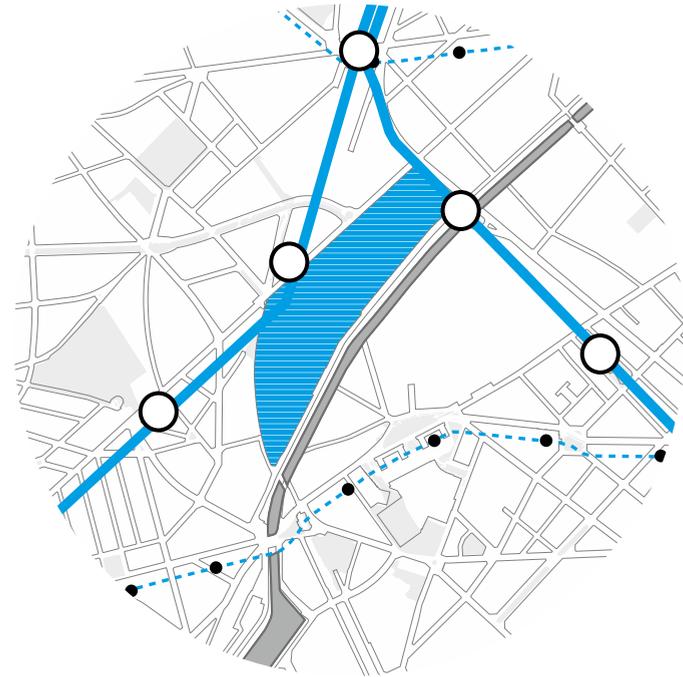
MICRO-ECONOMIC URBAN DESIGN

Although the two projects explore opposite scenarios of reconversion and rehabilitation, by taking a very different position towards the existing building, they both suggest extending current urban policies in favour of microeconomic dynamics. Both projects suggest keeping potential workshop activities on the site by taking advantage of its existing multi-modal connections, in order to enhance the socio-economic interaction inside and outside the neighbourhood.

Whilst we have to recognize the positive result of the many neighbourhood contracts applied since the 1990s in the Brussels pentagon as an improvement of housing, public space (pedestrian space) and services (school, nursery, etc.), there is an urgent necessity to stimulate the creation of businesses and jobs based on local microeconomic dynamics. Revitalisation policy of urban neighbourhoods in the Brussels Region needs to challenge the question of unemployment and multicultural identities by taking into account the existing dynamic of local ethnic and informal economies and their stakeholders.

Starting from the question of what happens to a derelict mobility infrastructure, those two projects represent positive attempts at putting such a need to the fore and investigating its urban potential.

SITE 2 CENTRAL WORKPLACE



TUTORS

NADIA CASABELLA
CATALINA CODRUTA DOBRE
WARD VERBAKEL

GROUP A

LUIS BELLERA
EVA DE FRÉ
TIZIANA MAZZOLINI
JUSTINE PIERSON
ETIENNE SCHILLERS

GROUP B

VALENTINE DAILLY
VALENTINA DE POLI
ZAKIA DOUBI
MARC SUBIRANA
STEFANO TEKER



GROUP A:
STITCHING WITH CATALYSTS

Luis Bellera, Eva De Fré, Tiziana Mazzolini, Justine Pierson, Etienne Schillers

The Central Workplace plays a key role in the public transport network of the Brussels Capital Region. Moreover, the site is also part of a bigger feature that collects similar large-scale activities: a triangular city fabric marked by the Gare de l'Ouest (West Station), subway lines 2 and 6, railway 28 and the Chaussée de Mons. Our proposal is an urban surgery that enables these interactions, by using catalysts to stitch the present fragments into a 'megaform'.

Today, the triangle is merely a morphological megaform. Besides the various public transportation hubs along the perimeter, that ensure overall accessibility, the site acts as a 'hollow core' in its surroundings. Various attractive programmes, such as the abattoirs or the cluster of churches, provoke a lot of dynamism in the area, but act as isolated destinations that are not explored to their true potential. Car-dependent retail and commercial activities give the site the character of a suburban shopping centre rather than a place to reside.

The figure of the megaform can however collect all the potential for the actual constitution of an urban centrality on both regional and local scale. A thorough analysis of the existing strata of the site exposes the often hidden specificities that constitute the foundation of this project.

By mapping the space in-between the public and private parcels, the vacant lots and the over-dimensioned spaces, strategic points appear for the insertion of catalysts: new added programmes, which answer the needs of the different users of the megaform and create places of coincidence and differentiation. As Manuel de Sola-Morales perceived "the city as successive interventions of manageable size", the urban character of the megaform is constituted by a network of catalysts and connections, interrelating present specificities and creating synergies between existing programmes. The productive character of the site is not changed but repositioned as a fundamental element in the new urban centrality.

The catalyst and the network simultaneously structure the megaform as a vital organ for the city, and connect it to its surroundings.



OLD PROGRAM

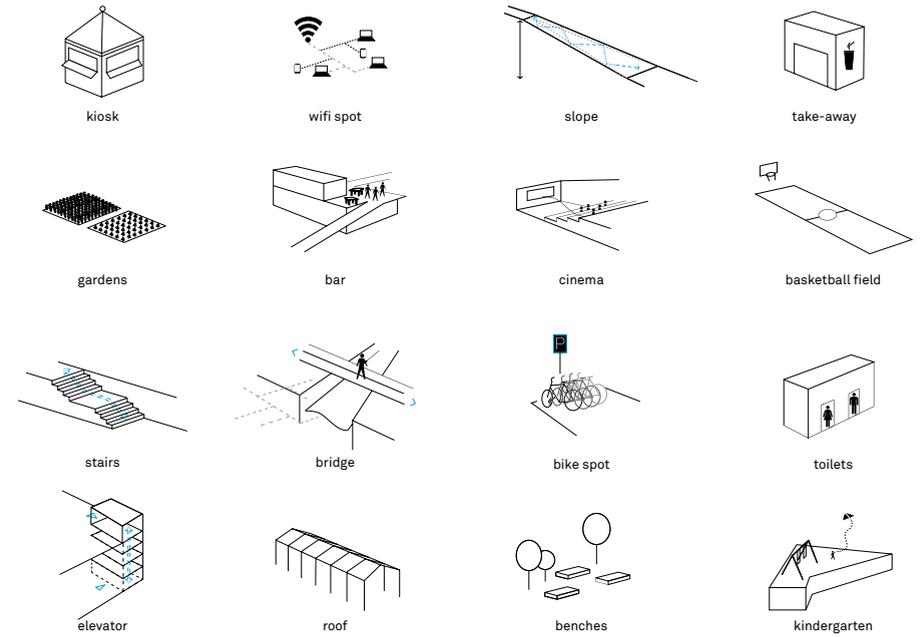
- 1. MIVB / STIB
- 2. Nescafé 1
- 3. Nescafé 2
- 3. Vivaqua
- 5. existing structure
- 6. Erasmus University
- 7. CVO adult education
- 8. slaughterhouse
- 9. bending tracks factory
- 10. packaging workshop for social & disadvantaged workers
- 11. church cluster
- 12. COOP

NEW PROGRAM

- 1. library & co-working space
- 2. basketball fields
- 3. playgrounds
- 4. free WiFi
- 5. outside cinema
- 6. public toilets
- 7. coffee take-away
- 8. bike spots
- 9. bar
- 10. kindergarten
- 11. kiosk
- 12. small garden

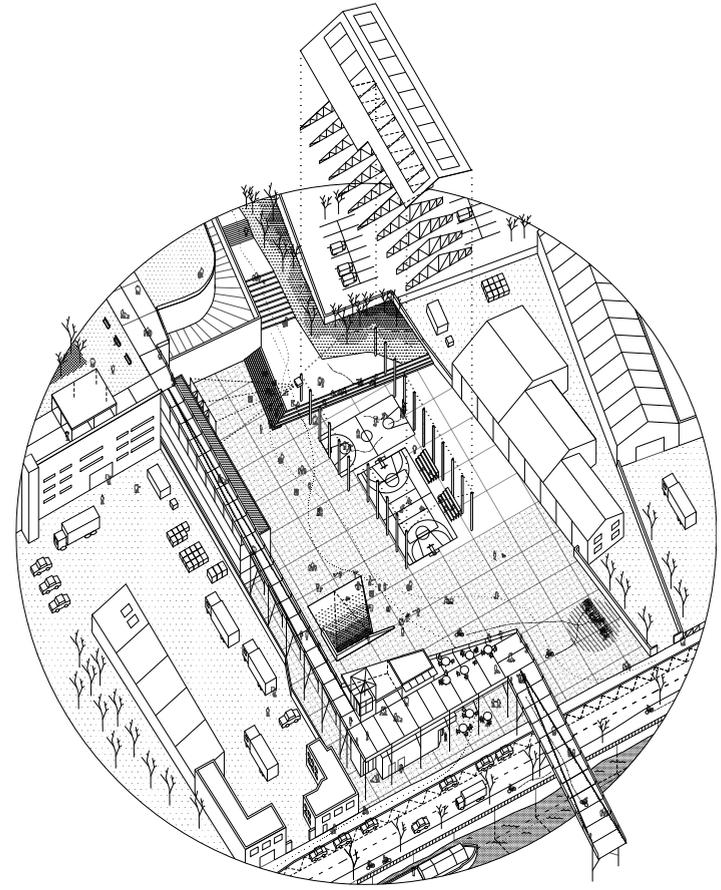
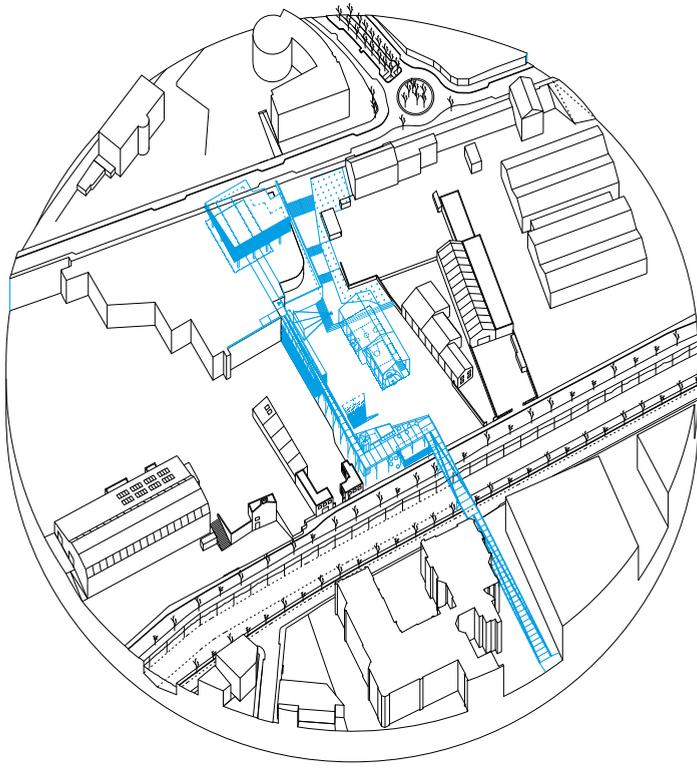
Site plan

A network of connections that interrelates the present elements, creating synergies between existing and new programmes.



Interventions

Catalysts create places of both concurrence and differentiation.



Axonometric views

The Rue de Birmingham and the abattoir site across the canal connect through a sequence of active and interdependent public spaces. This will cast current activity as an actor in this new urban centrality.



GROUP B: OVERCROSSING

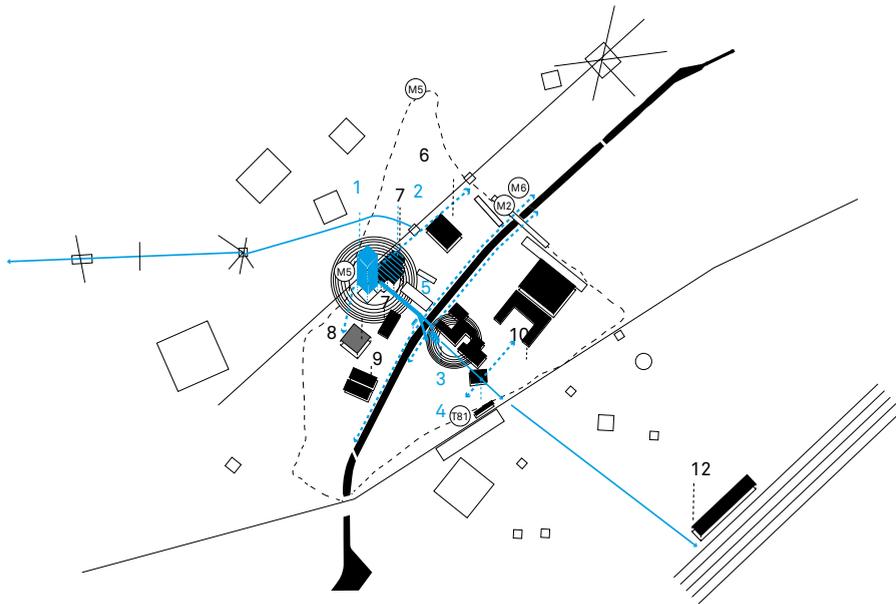
Valentine Dailly, Valentina De Poli, Zakia Douibi, Marc Subirana, Stefano Teker

The Central Workplace is situated in a particular area where three different spaces coexist: the industrial, the commercial and the cultural. It is a focal point in the city, due to the presence of essential infrastructures for Brussels. Albeit highly connected to the transport infrastructures, the area suffers from a lack of visibility of access points to the metro stations, difficult intermodality due to a bad distribution of the public space and the absence of links between the two sides of the canal and the main axis (Chaussée de Mons – Rue de Birmingham).

This project therefore aims at generating features highlighting the access to the metro stations, connecting the two sides of the canal and generating interaction between the main activities and connections located nearby.

A footbridge connects both sides of the canal, reaching the slaughterhouse and the university. Using the existing topography so as to float above the industrial site, the bridge establishes a new visual interaction that is no obstacle to the activities on site, but makes them a part of the urban landscape. On a larger scale, the bridge also creates a new axis in the city reaching the Midi Station. On the upper side of the site, a tower is built on top of the STIB/MIVB depot – which was initially designed for that purpose – hosting a restaurant, a cookery school, offices and housing on the upper levels. Next to the tower, the breathtaking view on Brussels from the roof of the STIB/MIVB depot is made available as a new public space. The tower and public space act as a new reference, a feature and focal point on both local and city scale. On the other side of the footbridge, a building hosts study rooms, linked to the university.

At street level, along the axis of the canal, a set of small-scale projects creates a space shared between the industries and the pedestrian. The limits and textures of the public spaces in front of the factories are redefined for joint activity. New programmes are generated, such as a bar area in relation to the canal and linked to the church cluster – which was located in a dead end street – through an elevated public platform and a new passage to the metro and to the tower level.

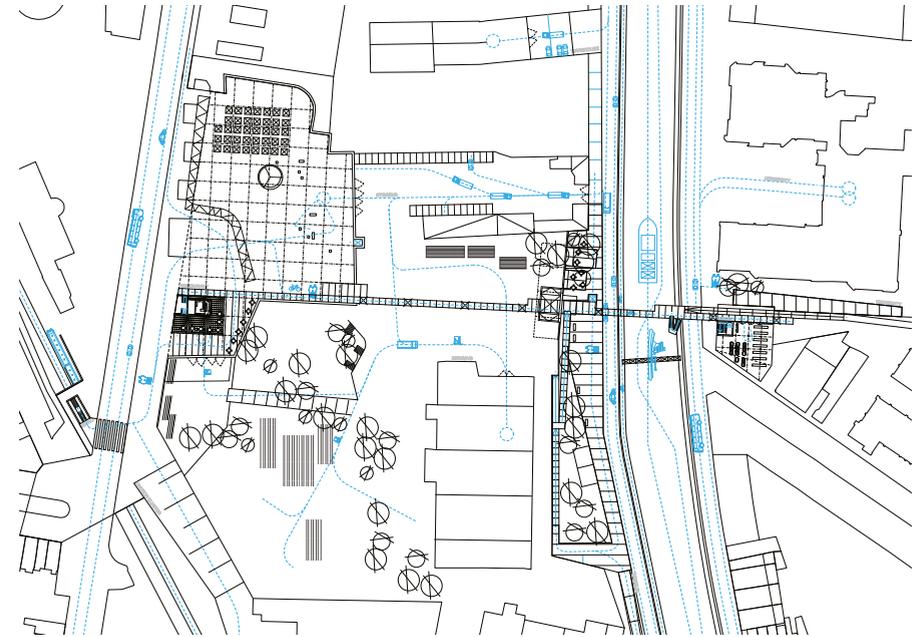


- 1. residential
offices
parking
- 2. playgrounds
- 3. study room
- 4. ephemeral market
- 5. bar

- 6. economical
- 7. industrial
- 8. church cluster
- 9. museum
- 10. market
- 11. university
- 12. Midi Station

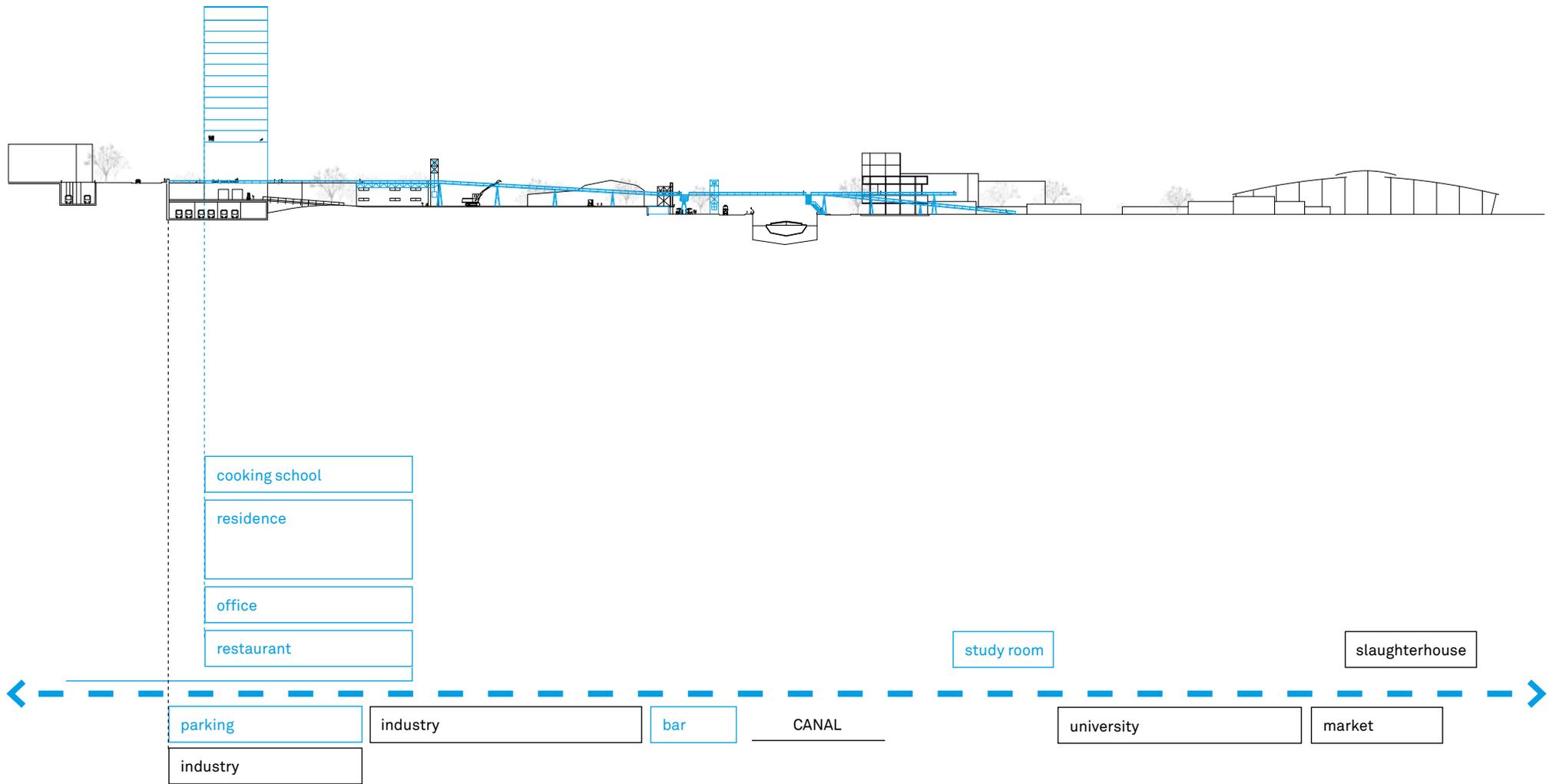
Scheme

The footbridge provides the missing component in the framework of local and supra-regional modes of transport.

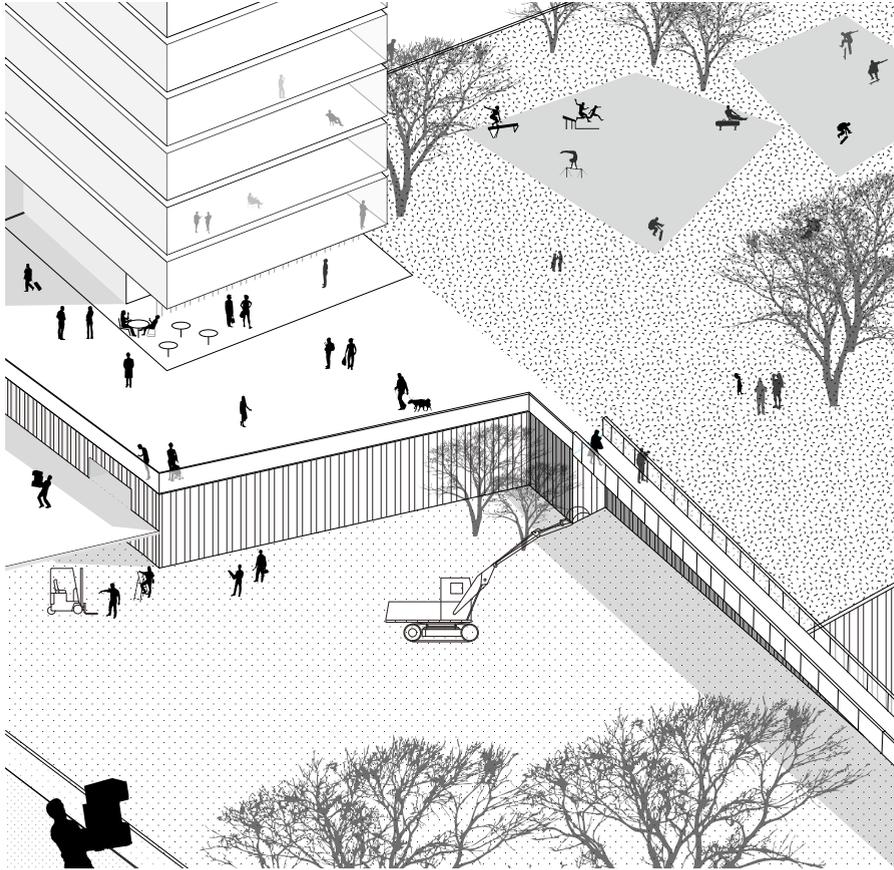


Plan

Different flows – industrial, commercial and cultural – coexist without conflict.

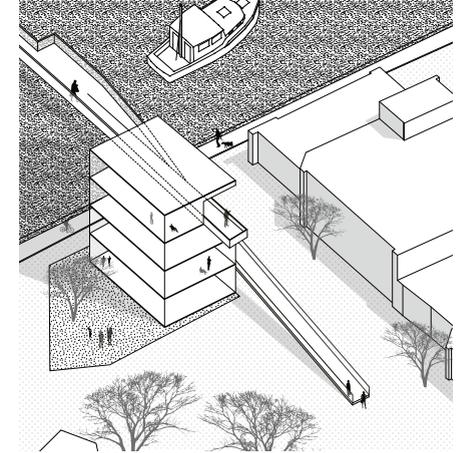
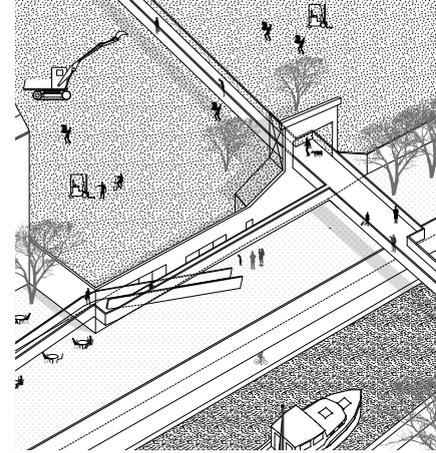


Section
 A cross-section from Rue de Birmingham to the abattoir site (top)
 and the relevant programmes (bottom).



Axonometric perspective

The new landmark building interacts with the public space, playground and cityscape, incorporating a viewpoint restaurant linked to the cooking school above.



Axonometric perspectives

The footbridge over the industrial activities of the site passes along a waterside bar (left) to reach the other side of the Canal at the Erasmushogeschool, through the new study centre (right).

JUNCTURES: OR HOW TO CHANGE A SITE'S DESTINY BY A PIECE OF ANTICIPATORY INFRASTRUCTURE

Nadia Casabella (NC) and Ward Verbakel (WV) in correspondence

SITUATIONS

Prior to the Master Class, four situations were identified as strategic for the site's development:

CORNICE

How to take advantage of the level difference between the quay and the West Station? Could a project like the Sculpture Park in Seattle (Weiss Manfredi, 2007), an artificial ground zigzagging down to the water – provide any inspiration? This project seems particularly relevant since a huge provision of storage space for the regional transit company needs to be kept at that point.

CANAL

The harbour has expressed its desire to use the canal as a hinge in the logistics chain of urban waste transport (e.g. Ecopole project) next to the site which has had a history related to energy production, recycling and cogeneration... Is it the moment to assume a more radical move in this direction, along the lines of a Barcelona Forum (2003) developed above a water deputation plant? To what extent would this identity be in conflict with a more residential orientation?

BROWNFIELD

The area appeared 'risky business' for private developers. The 'Ekla' scheme,

next to the West Station, could eventually become a catalyst of transformation for the whole area, although it seems too marginal to really make this shift. How to envisage the transformation of this area? More business as usual, mortgaging the interim use, the temporary appropriations of empty sites? Or instead, do we need a big, radical gesture that could take the area to another dimension?



The Ekla (2013), a mixed-use development by Re-Vive next to the West Station: a housing and office tower, a hotel, a school, a nursery and a collective inner square to welcome the neighbouring inhabitants and passers-by

MULTIMODAL

Even accepting that the combination of greater accessibility and a 'hollow core' can be potentially interesting as an urban figure, the fact that transport remains black-boxed, invisible, imposes too much of a dead weight to its surroundings. How to unbox transportation, tame it, and force it to cohabit with other uses, working on its interface with public space? How to address this greater accessibility in a rather multifunctional, relational perspective?

CORRESPONDENCE

NC: The site is a sort of ‘hollow core’ located on the edge between two municipalities, Anderlecht and Molenbeek. It is partly urbanized as a typical suburban shopping centre, along the canal, and partly organized as a public transport storage facility. This transit facility straddles the two sides of the Rue de Birmingham (≈12 ha), and is linked underground. The part facing the West Station was recently finished (2008) while the part alongside the canal enjoys a long history, going back to the end of the 19th century. The first electricity power centre for tram operation was built there – the remarkable building of brick and stone remains there now.

The site’s topography is characterized by a substantial difference in levels – up to 40m from the West Station down to the canal. This western bank, resulting from the river Zenne’s centuries-long erosive process, mirrors the Eastern cornice, crowned by the Courthouse. In fact, water has always been vital for this part of the city. For centuries, productive activities like spinning, tanneries and breweries made use of the Zenne’s clean water. Then, as soon as the Charleoi canal was finished (1832), coal, chalk, stone for construction, metallurgy



The site in 1953, aerial picture published in BruCiel in which we can identify both the hollowness of the site and its urbanization pattern, made of long parcels perpendicular to the canal and to the Birmingham street.

products, grains from the south as well as wood, bricks, porcelain from the north were brought plentifully to the city by water. The setting of the western railway in 1871 confirmed the area as predominantly a site of production, triggering the construction, in 1890, of the neighbouring slaughterhouse. At that point, the site was divided into long parcels running perpendicular to the canal, and then crossed by a railway line connecting the predominantly goods-related West Station to the new slaughterhouse.

WV: Throughout the Brussels canal district we find quite a few remarkable sites in terms of their historical significance that have significantly changed over time, from vital to obscure, from present in the city to hidden. The Central Workplace is both central and peripheral. It is a vital part for the maintenance and operation of the regional transportation network, containing some of the more spectacular underground spaces. The concrete column lined tram / metro cathedral is one of the most significant spaces produced by this metropolitan infrastructure, yet remains exclusively in the domain of the hidden. This is quite different from other transport systems that have produced some of the more idiosyncratic spaces in our cities (railway stations, airports or quays). However, the overall appearance of the site and the low density confront us with a rather peripheral context. We see this condition in many of the 19th and 20th century industrial fragments inside cities that have been abandoned over the last few decades and have slowly absorbed other types of urban programmes. ‘Terrain vague’ in a certain way, but often just plain and ordinary low value development for retail, storage or parking.

However, the idea of the site itself can also be questioned. Though the infrastructure to which the Central

Workplace belongs is doubtlessly regional in scale, its impact is very local. If we are to understand that ‘site’ is not necessarily the same as ‘location’, we might arrive at other strategies that not only focus at embellishment of problematic sites – problematic because they sacrificed quality on a local scale for the good of regional necessities. Rather than reconciling a regional functionalist approach with local improvements and aesthetics, these alternative strategies explore the addition of other programmes and rethink the significance and appearance of the underground spaces within the network and their monumental potential.

NC: Nowadays, the overall feeling we get of the site is one of looting: everybody seems determined to plunder the site to its last square centimetre without giving anything back to the city. Parking and storage prevail throughout: a clear sign of neglect. However, despite the initial anti-urban impression the site provokes, amazingly the programmatic mix as well as the flows of people going across, both their volume and frequency, give it, at least potentially, a very urban character: a cluster of evangelical churches, a shopping mall, manufacturing, a function hall, offices



Port Sud (2011), the new interpretation centre located along the canal, by architects Bogdan-Van Broeck, a landmark that links the site with the rest of the city.

(Nestle, MIVB / STIB, Vivaqua), a planned information centre.

Then again, this mix does not gel into a coherent experience, nor does it invite a less utilitarian and more complex, multidimensional use of the site. People turn to this location because they are looking for specific things or services, and not because they find them ‘en passant’, as in the ideal, qualitative urban condition. This is not simply due to the internal organization of the site itself, but also to its disconnection from its surroundings: its interface appears as a blind façade, preventing any form of interaction between what occurs inside and the space of the street.

WV: The idea of the location as a singular closed off destination in the city rather than an integrated urban hub might offer a base for a rather new paradigm to address the contemporary city. It is a challenge of course, but one that we do need to address. A pedestrian city is not the only model. Unfortunately it is too often the only alternative in the debate on urban change as opposed to the 60s car-based model that has drastically transformed our city centre. As a response to the topographic challenges that the site poses, many design projects start from an attempt to restore the transversal connectivity across the valley. By linking the central areas of Brussels and the canal district with the upper level of Anderlecht, a critique to the current schism in the urban fabric is made apparent. It may be simply a matter of adding crossing points over the water, but just as valid are the attempts to restructure the cognitive quality of both sides by distinct programming and complementing volumetric logics. The topography is also the solution to the seemingly opposing interests of the future occupants on the site. The weaving over and under allows for

different programmes to coexist. We could learn a great deal from the work of Manuel de Solà-Morales and his mastering of sectional complexity to incorporate both infrastructural logics and local qualities.

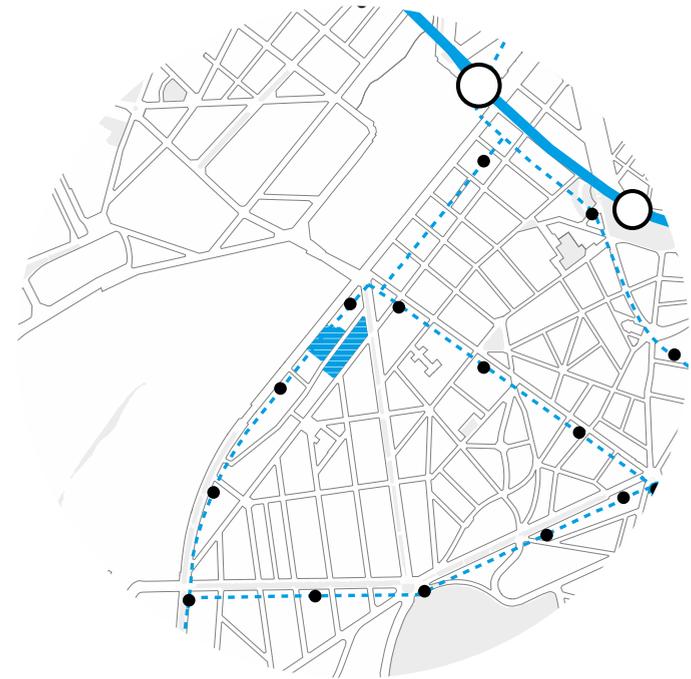
NC: Indeed, from the four strategic topics identified at the outset of the master class (i.e. cornice, canal, brownfield, multimodal) it is surprising to see that the canal does not figure prominently and appears rather as a barrier to be overcome. Both teams plead for the need to link both sides of the canal, attempting to capture flows or synergies that otherwise would seem lost because insufficiently guided. Also, both exploit the cornice as a site asset, the 'Urban Surgery' team to crawl on the slope and down to the canal by adding some missing links, the 'Overcrossing' team as major backcloth for a gracious bridge that looks for far-reaching connections. In this way the bridge becomes a sort of strategic bypass that helps to bond together flows and activities now apparently disparate but which could potentially complement each other – South station, Cureghem, Abattoirs... culminating in a built landmark that hosts vocational training and civic facilities. Then again, the 'Urban Surgery' team works predominantly within the site boundaries and in the in-between of the objects already placed there. In this sense, their design can be rather seen as a sort of lattice tying them all. All the same, they both link: one interstitially, the other as a pin.

WV: One does wonder if an interstitial or pinpoint approach is strong enough to carry a significant change for the area in general. We can't deny that the ongoing transformations the canal district is displaying the last few decades, however the changes are slow and sometimes marginal when compared to other major urban transformations in the 2000's. That

does not take away from the quality of both projects. The complexity to really tackle the space of mobility itself, and come up with new urban vocabulary is a daunting yet crucial task. As designers, we do need to create new prototypes of urban space, that are both technical and symbolic, spatial and flowing, but foremost recognizable as 'type'.

NC: The destiny of this site is at a critical juncture. Many initiatives, carried out by both private and public bodies, will change the canal zone for good in the coming years. Despite the numerous consultations and plans, the truth is that its final outlook seems enigmatic. The only certainty is that regardless of the transformation outcome, not all sites will follow at once, and surely not to the same degree. What is more, it is not so clear what we would all gain from such transformation – in terms of public space. In order to foresee or even to demonstrate what could be the consequences for the public realm, some form of anticipatory design seems urgent. In the 1990s, Cedric Price explored this through his project 'Magnet', by focusing on the question of the public realm, and of how to turn space to the public advantage.

SITE 3 AVENUE DU ROI



TUTORS

BENOIT MORITZ
JUDITH LE MAIRE
SARAH LEVY
MARIA CHIARA TOSI

GROUP A

CÉCILE BRISSEZ
MAHMOUD EL BOUJAMAI
MARINA POVEDANO
SARA VIMA
LI YANGFU

GROUP B

MURUVVET AKTAS
CÉLINE FOUBERT
DENG KAIWEN
JEROEN VANDERVELDEN



GROUP A:
THE OUTSIDE INTERIOR

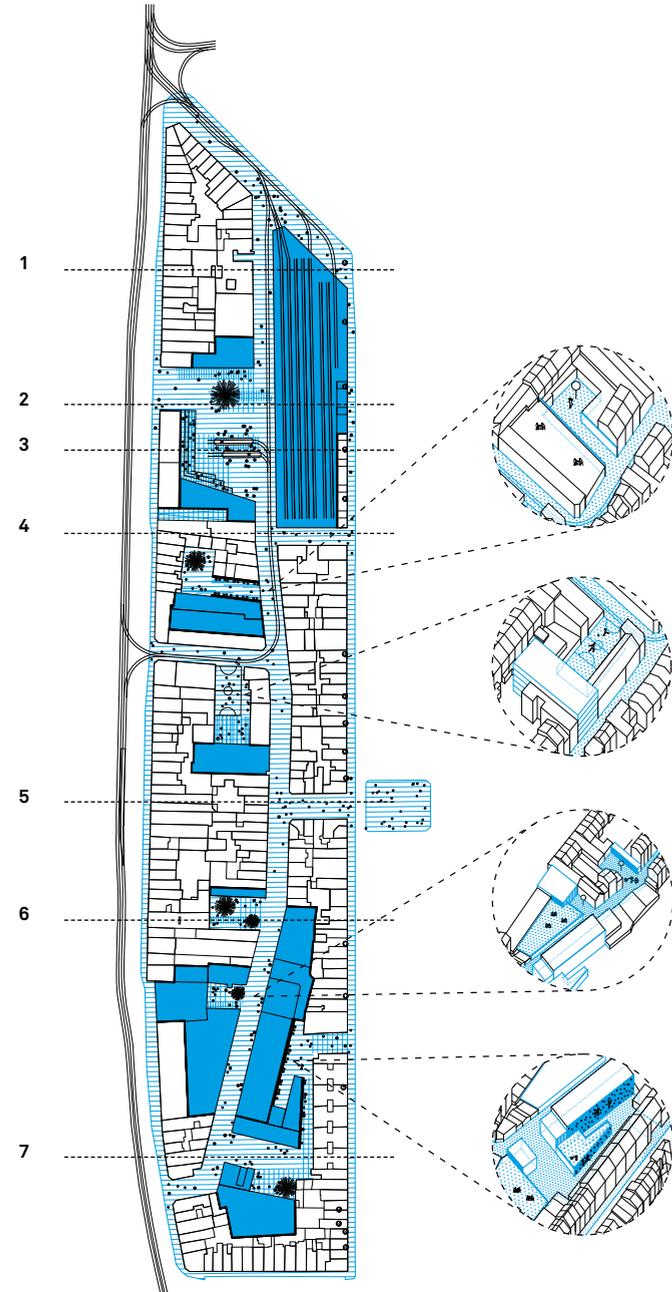
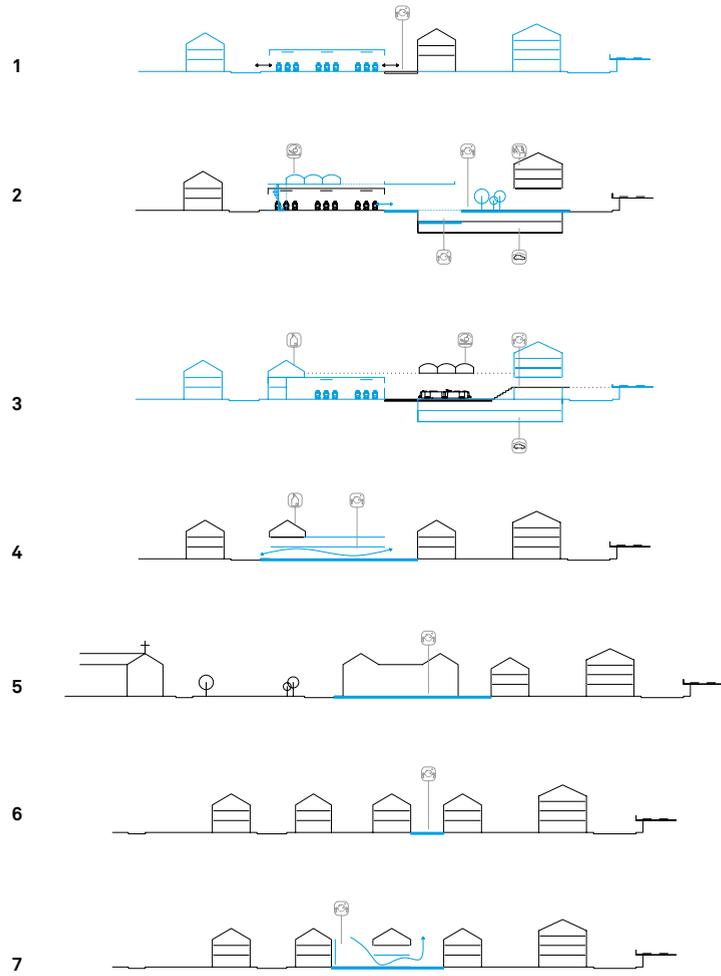
Cécile Brissez, Mahmoud El Boujamai, Marina Povedano, Sara Vima, Li Yangfu

The depot of Avenue du Roi is located near the main Belgian train station Brussels Midi. It is one of the rare infrastructures that contains both a depot and a workshop within a dense urban area. Furthermore, it is one of the last remaining active industrial sites in this very residential area of Saint-Gilles. The depot therefore becomes a transition point between large-scale transport infrastructure and the smaller scale of residential neighbourhoods. However, with little to no connection between interior space and exterior façade, the building is currently disconnected from its context.

This proposal interprets the area between Avenue du Roi, Rue de Mérode and Avenue Van Volxem as a single cluster. The housing on Rue de Mérode is extended onto the depot, which needs to be rebuilt to adapt to the length of new tram models. The Rue de Belgrade functions as a low-traffic inner passage within the cluster, able to welcome the leisure activities – especially childrens' playgrounds – lacking in the neighbourhood, along the existing industrial and productive activity. The Rue de Belgrade becomes an 'outside interior', connected to the city by opening passages that blend in with the existing street network.

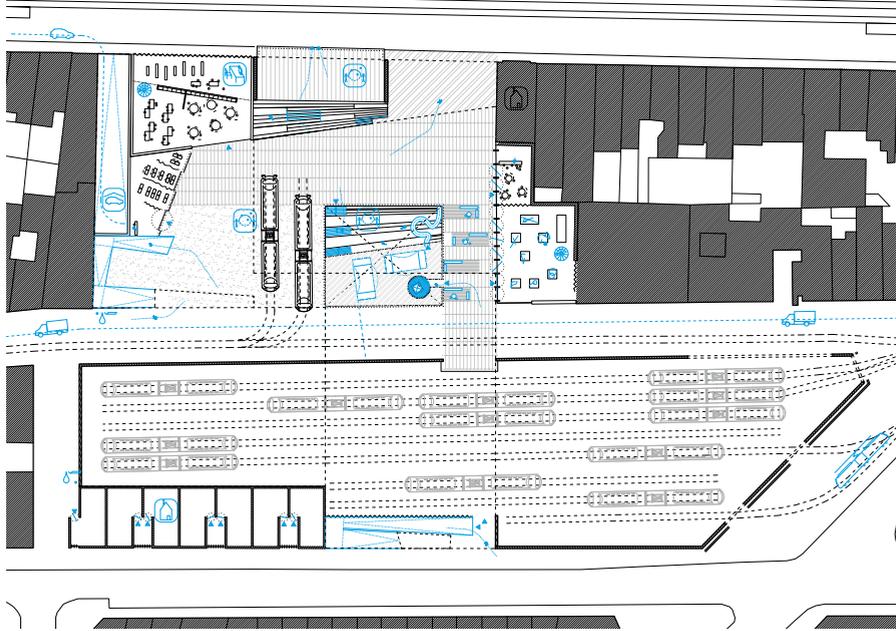
The cluster's proximity to the railway and the city centre make it a strategic spot for urban mobility. A park and ride facility is located under the workshop space, now renovated as a public space and playground. Working on this section, vertical views as well as access points create synergies between the different activities and functions.

However, some interactions are also more symbolic: the remains of the old depot structure can be reused for rooftop greenhouses, while old trams are reused as playground attractions, a historic remnant and an opportunity for interaction between the public and the depot. By combining productive transport facilities and recreational activity, this intervention could build a link with society in the widest sense.



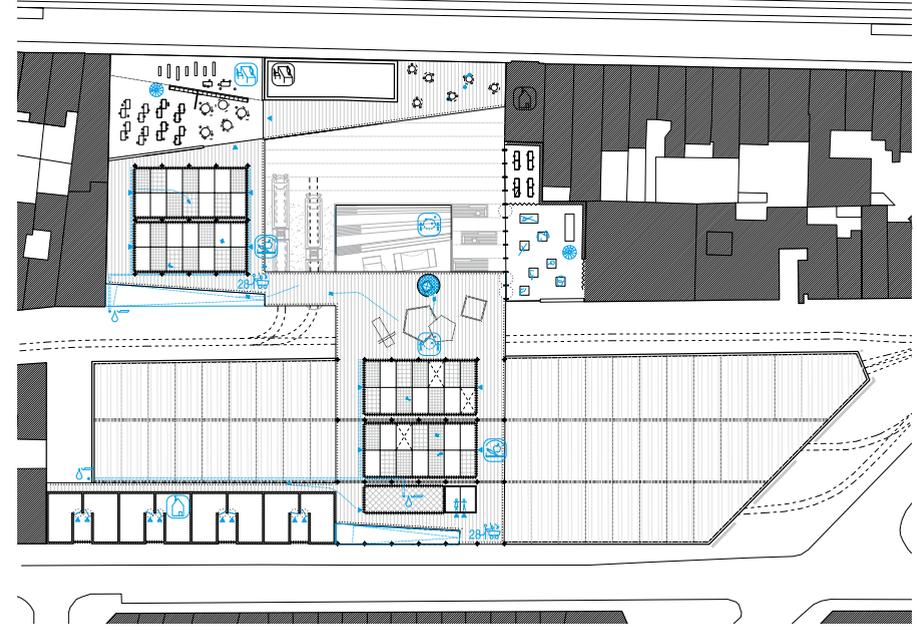
Cluster plan

Five blocks are envisioned in a single cluster, with the Rue de Belgrade as the backbone, combining public space and leisure with logistics and productive activities.



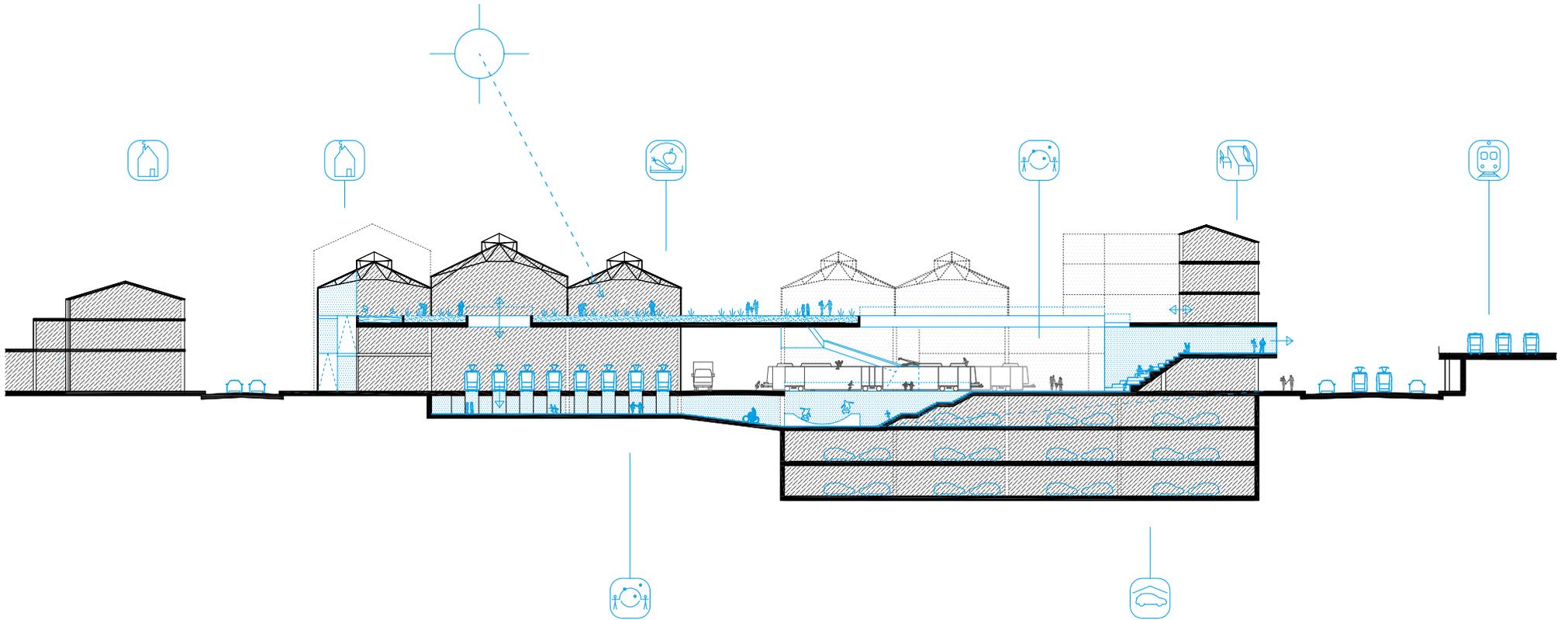
Ground floor plan

The old workshop at Avenue Fonsny is replaced by a building for recreation on top of an underground park and ride facility.



Roof plan

Community gardens and greenhouses are extended above the renovated tram depot.



Section

A multi-layered public space is created by renovating the depot, surrounding it with activities and creating diverse visual interactions. The sequence of public spaces also generates access to the underground park and ride facility.



GROUP B:
THE SHARED MILE

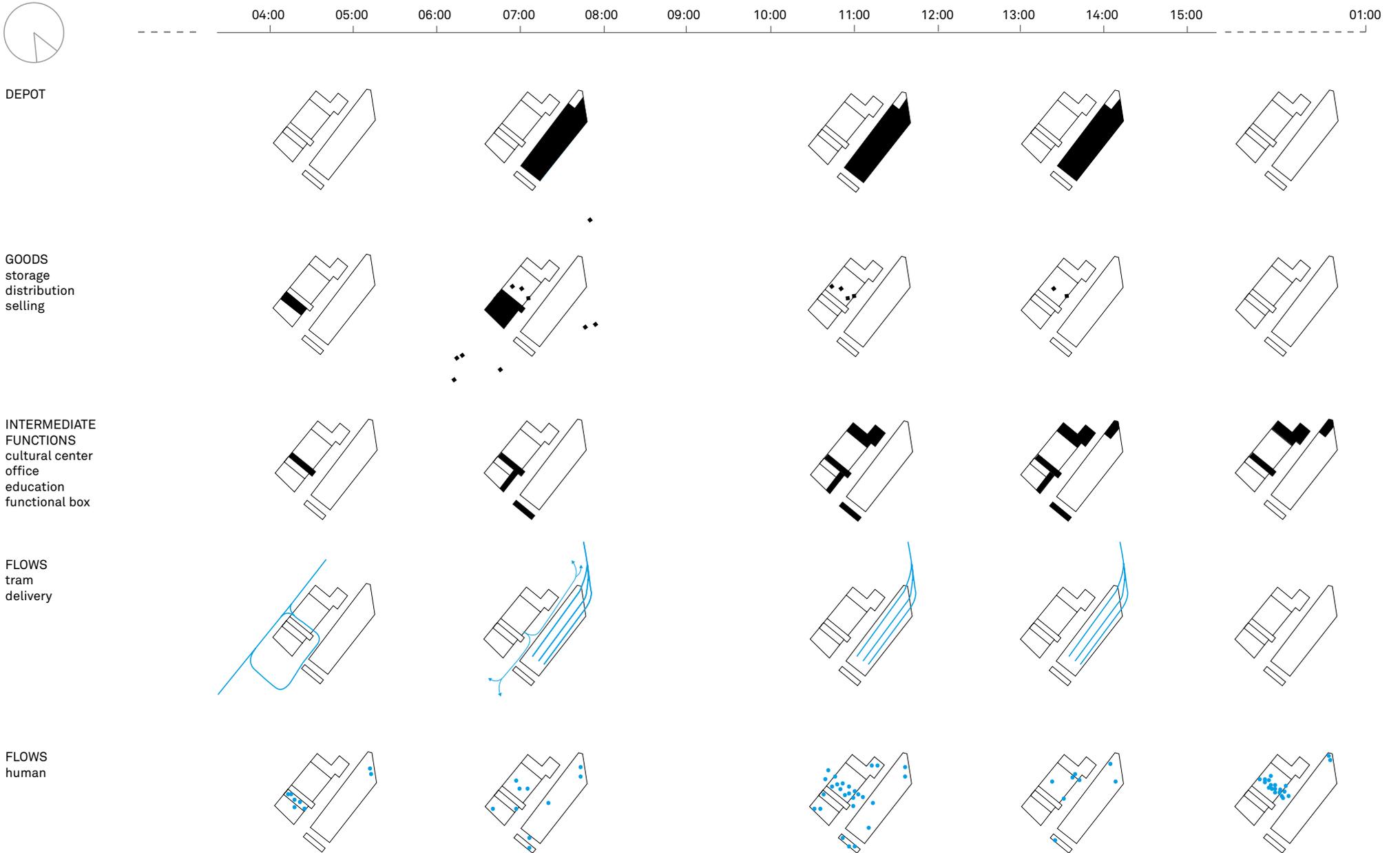
Muruvvet Aktas, Céline Foubert, Deng Kaiwen, Jeroen Vandervelden

The STIB/MIVB site Avenue du Roi is situated near the Brussels Midi Station, and consists of a tram depot and a tram workshop. A narrow street, Rue de Belgrade, separates these two entities.

The depot stands at the border in between a main traffic artery – with strong morning and evening peak – and a residential area that operates as an introverted enclave in between well-connected avenues. Within the neighbourhood, the long depot building also acts as a typological and functional transition. Further along the railway, ample, highly informal local businesses operate within out-dated or impractical spaces, in a distribution-oriented and neglected streetscape. However, the neighbourhood's entrepreneurship is one of its main assets, albeit threatened by very pressing housing demand.

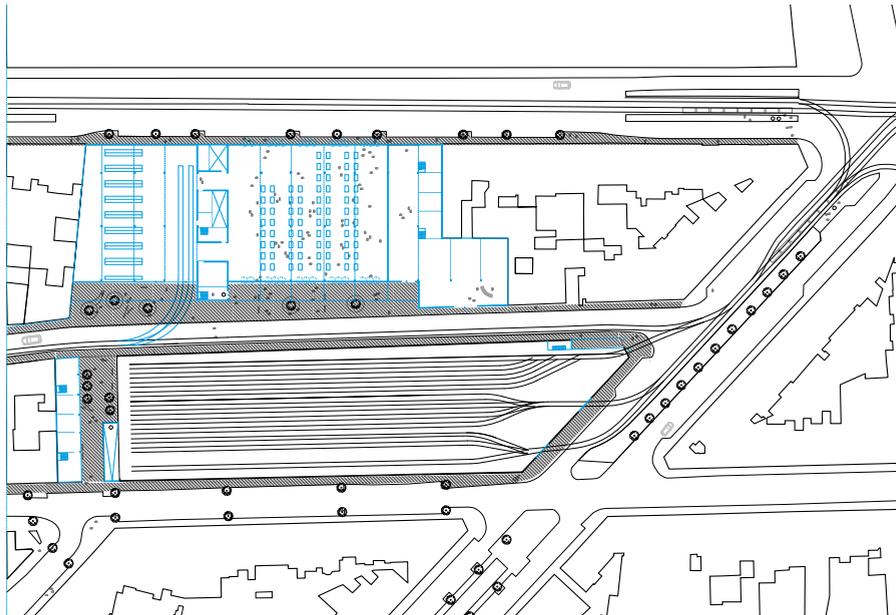
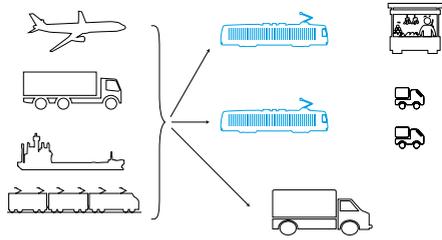
In order to define a possible strategy for redevelopment, the project was approached with a top-down mindset. Taking mobility and distribution issues into account, the workshop is reused to create a distribution centre that makes use of the existing tram network as a means of cargo transport.

The distribution centre is anchored in the neighbourhood through the integration of a multifunctional space in the complex. Physically connecting the large avenue with the back alley, it is a central public space where logistics and culture, public and utilitarian can meet. Flexibility of space and time use allows the compatibility, and potential complementarity, of these uses. The quality of public space and efficiency of economic activity are met in a common approach.



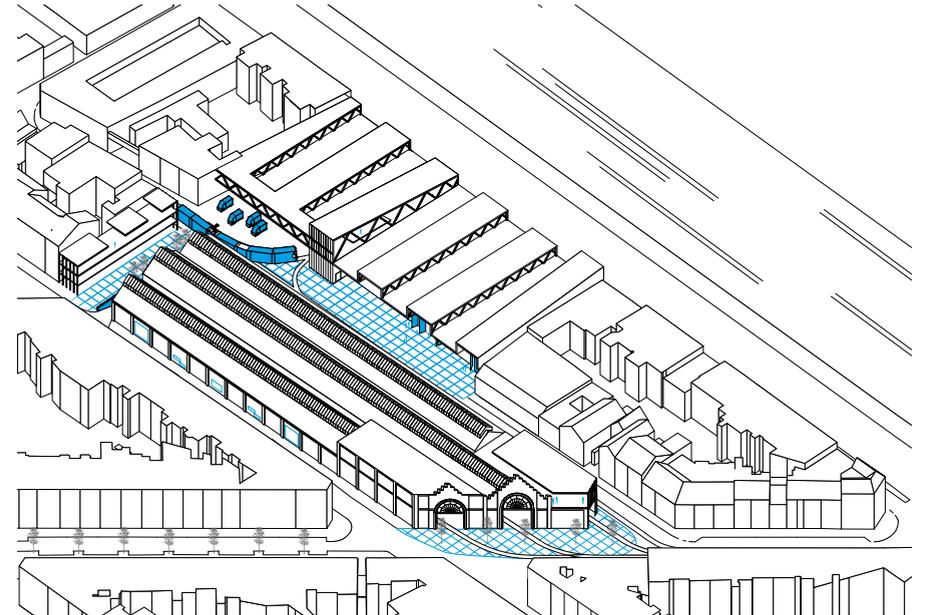
Time stretch

The facilities of the old depot and the flexibility of the new building create a highly versatile interface, remaining active throughout the day.



Plan

A distribution centre and multipurpose space, with enhanced transverse connections between the parallel streets. Cargo trams act as an intermediary link between global transport and local distribution.



Axonometric perspective

The new pedestrian friendly zones, formal accents, and interventions that open up the depot are marked in blue.

THE MIDDLE OF THE LINE

Benoit Moritz

A CHANGING URBAN CONTEXT

The starting point for this project is the necessary renovation of a tram depot designed over a century ago, at the time of this region's urbanization. The site consists of the current tram depot on Avenue du Roi, plus the maintenance and repair workshops located in another building between Rue de Belgrade and Avenue Fonsny. Historically linked to each other via railway lines, the two sites are still both in use, but changes are on the horizon.

The depot on Avenue du Roi is still home to T7700 and T7900 trams. Within a few years, however, these trams will completely disappear from the network and be entirely replaced by new T3000/T4000 trams. This change necessitates adapting the depot since the new trams are larger than the old ones, the engines are located over the vehicles, etc. The services currently based at the workshops will soon be relocating to the Haren site. The issue of this building's reuse therefore arises, whether for other STIB/MIVB activities or for entirely different ones.

Additionally, the trend in recent years has been towards a toning down of the district's industrial nature: on Rue de Belgrade, former industrial buildings have recently been converted into social housing by the Société du Logement de la Région de Bruxelles-Capitale (SLRB) or into private housing. Meanwhile the Maison des Cultures de la Commune

de Saint-Gilles has set up home in a neighbouring building. The regional authorities are currently channelling significant investment into Saint-Antoine via a Neighbourhood Contract scheme, while the STIB site itself falls within the area of a Neighbourhood Contract currently being finalised – the 'Bosnie' Sustainable Neighbourhood Contract – and including such plans as the redevelopment of Rue de Belgrade with creation of children's play areas. The issues for the STIB explained earlier therefore need to be fitted within a much wider perspective of extensive urban regeneration.

Moreover, the depot and workshop sites display the peculiarity of being located within a relatively dense inner urban environment. In other words, they are located not at the 'end of the line' but in the 'middle of the line' which, in terms of the network's operation, amounts to an optimal location, as it will serve to support a large depot which will be built at the 'end of the line' on the Marconi site in the municipality of Forest. For the STIB, therefore, maintaining and renovating the depot amounts to a near-obligation if optimum operation is to be achieved. For the workshops, however, the conversion options are wider as the continuation of STIB's activities there is not essential.

The above contextualisation permits the identification of several issues

relating to the work to be carried out at the two sites: firstly, we have the issue of the renovation of the two sites and, in particular, the question of maintaining a functional link between them. Historically, the railway has linked them in order to facilitate the maintenance and repair of the trams from the Avenue du Roi depot. Then we have the issue of the renovated depot's urban insertion and, in particular, the improvement of its environmental integration from the planning perspective. This enhancement could involve the addition of complementary urban functions and architectural work on its façades. The depot being part of a relatively long block that isolates Rue de Mérode from Rue de Belgrade, and from Rue Fonsny beyond, also constitutes an issue in terms of pedestrian accessibility and the functional and spatial opening-up of Rue de Belgrade. This last point raises the question of the functional usage of the buildings on both sides of the Rue de Belgrade. Historically, the use of these buildings has been economic and utilitarian in nature, but this tendency has declined in recent years, for the benefit of new residential and cultural programmes. Lastly, these specific issues apart, the creation of a project on the two sites offers an opportunity to consider the contribution of utilitarian schemes to the dynamic of the Saint-Antoine district. In the past, the inhabitants of this area always had jobs located in the buildings along Avenue Van Volxem and either side of Rue de Belgrade. However, with the disappearance of secondary activities, this organic location disappeared. It gave way to a general perception of the STIB depot and the utilitarian spaces on Rue de Belgrade as elements of dislocation, as bodies alien to the district's dynamic, whereas historically they were an essential part of it.

TWO INCLUSIVE VISIONS

The students' projects presented on the previous pages each take as their starting point the attempted resolution of certain of these challenges and extend the regeneration issue beyond the sites concerned. One project is based on the hypothesis of redevelopment centred on leisure and the recreational aspect of public space. This is the 'Outside Interior' project, which plans to integrate the refurbished tram depot as a new multifunctional complex comprising sporting and leisure infrastructures to meet both local and regional demand. The second project, 'The Shared Mile', is based on the revitalisation of the neighbourhood's original economic role. This project starts from the hypothesis of a possible conversion of the workshops in order to accommodate a logistics centre for trams & cargo. Inserted within a cargo tram system envisaged on a citywide scale, this system would permit the reactivation of the economic use of the buildings located on both sides of Rue de Belgrade.

'The Outside Interior' stems from the hypothesis that the renovation of the sites can offer an opportunity to envisage the future of Rue de Belgrade from the perspective of a strong functional interaction with the Saint-Antoine neighbourhood.

The project thus proposes the integration of the depot and workshops within a vision based upon the observation of a lack of sports and leisure areas within this neighbourhood. Consequently, it involves the creation of a new open-air recreational and sporting facility, which would serve both the Saint-Antoine district itself as well as adjacent ones. This starting point is taken as justification for a gradual colonisation of the privately owned areas by sports facilities, infiltrating the built environment and thereby reversing

the relationships between public and private spaces.

In terms of the depot and workshops, this perspective makes it possible to view the presence of trams as a qualitative contribution to the public space, which would be highlighted by the use of unexpected viewing points of the depot (views from both below and above) and of the trams stored there.

The workshops would be converted into play and recreational functions, developed as a complement to the services currently offered by the Maison des Cultures de Saint-Gilles. It would therefore involve designing the workshops as a large public hall, a community centre where all sorts of activities could be held.

Above the depot, accommodation would be created all along Avenue Van Volxem and areas for urban agriculture would also be developed.

The link between the depot and the old workshops is developed via the principle of a continuous public space split in sections, which would allow the area beneath the depot to be used and be gradually transformed into a podium with views over the North-South junction.

'The Shared Mile', the second vision of the future of the depot and workshops, takes as its starting point the reactivation of the economic role of the buildings located on both sides of Rue de Belgrade. It is based on the introduction of a cargo tram system, which would use the existing tram network as a point of support, and the bases of which would be systematically located at the tram depots currently in operation today.

The workshops' site would thus make way for a new utilitarian complex combining storage premises, a tram delivery point, a market hall and an extension to the adjacent Maison des Cultures. The tram depots would be renovated within its current limits.

Even limited work (opening up of a passageway between Rue de Mérode and Rue de Belgrade, creation of windows allowing the interior of the depot to be viewed, addition of a new section above the depot's main façade fronting Avenue du Roi) would improve its perception and its urban integration.

Whilst this second vision starts from the possibility of urban integration with a primarily functional basis, it still does not neglect the aesthetic approach in architectural terms. This is particularly true for the new logistics and market hall complex to be based on the workshops' location, which is given special attention in terms of architectural expression and detail. A process of reflection has also taken place on its possible uses at different times, as the space's versatility permits changing and diverse use throughout the day, thereby combining logistical and economic purposes with more recreational and cultural pursuits.

WHAT CAN WE LEARN FROM THESE TWO VISIONS?

Although not planned in advance, these two visions both highlight the tension that exists between Rue de Belgrade's two main functions. The first imagines a calmed street dedicated to leisure, sports and housing, while the second envisions a full return to the economic and utilitarian aspect of the space.

Despite these contrasts, both visions still display certain commonalities. There is the conviction that the debate on the future of the tram depot and workshop site needs to be conducted from a wider perspective, taking into account the area of the STIB's two properties but also encompassing the immediate urban setting. There is also the desire to open up the tram depot to its environment, both functionally and by means of architectural work permitting

the tram depot to be highlighted within the public space. There is the need to open up Rue de Belgrade through the creation of new links with Rue de Mérode. There is also the possibility of creating interaction between the continuation of the storage activity in the

depot's location and the new scheme to be developed on the workshops site.

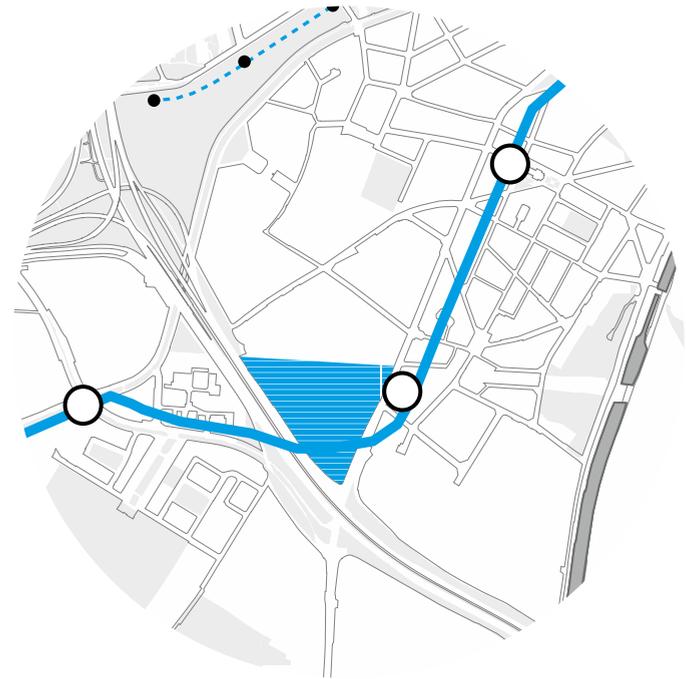
In this sense, the two visions reveal new prospects that should enrich the perspective of those who, in the future, will be in charge of the regeneration of these sites.



'The Shared Mile', section

The limit between spaces for logistic and cultural activities fluctuates over time. The structural scheme, similar for the logistic and cultural space, will make for a building with sufficient space to host a wide range of activities in the immediate and distant future. The permeability of the building, both internally and externally, emphasises this potential.

SITE 4 CERIA / COOVI



TUTORS

JENS AERTS
MICHAEL RYCKEWAERT
HAO WANG

GROUP A

ANNA LIVIA FRIEL
FEDERICO SEGAT
LAURA TAVERNIER
SU XIAORUI

GROUP B

CARLO FRASSINELLI
FERRAN IGLESIAS
CHANTAL MARFÀ
PATRICK MORGADO
LI QING



GROUP A:
PLATFORM AND CANOPY

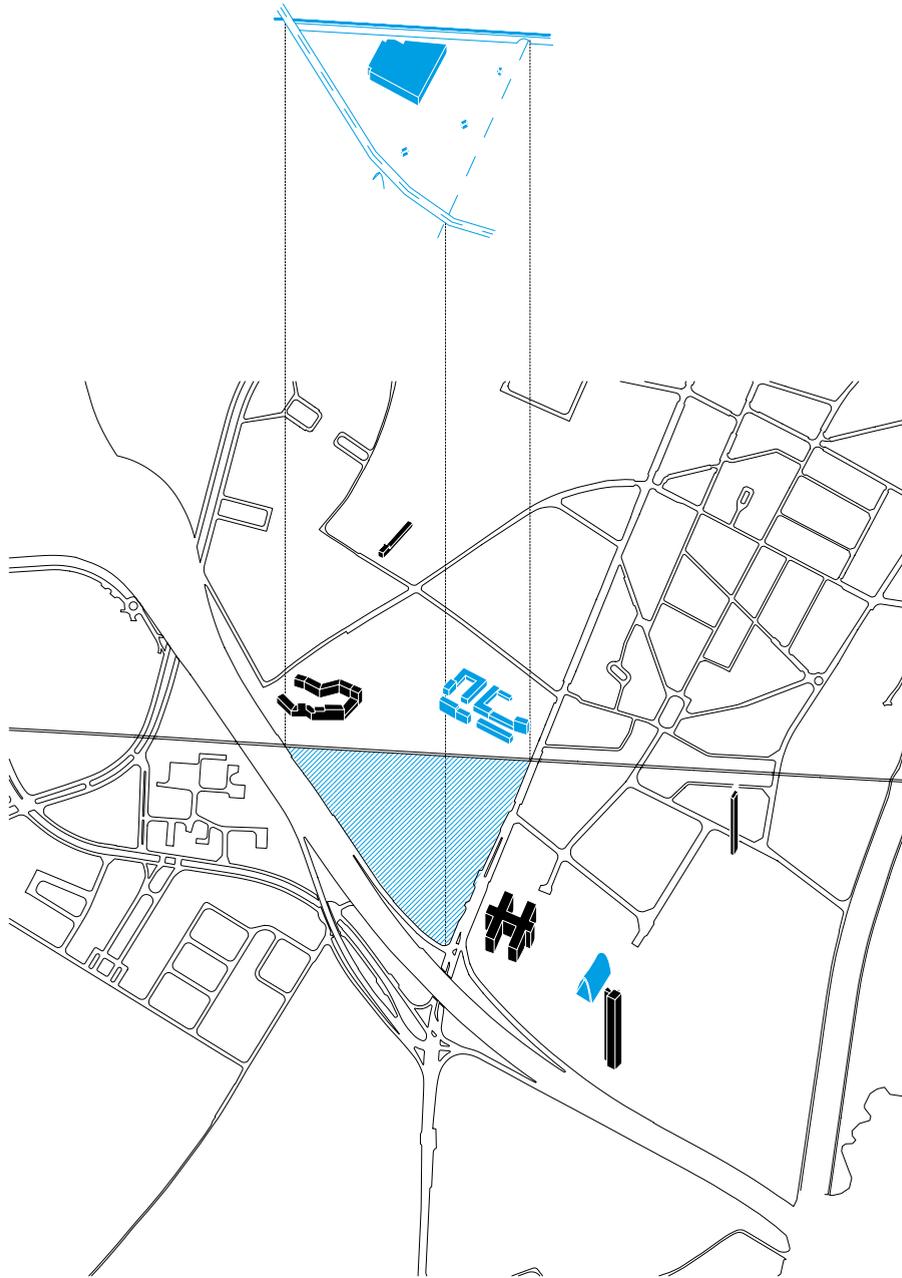
Anna Livia Friel, Federico Segat, Laura Tavernier, Su Xiaorui

The site of CERIA/COOVI is a vast open space bordered by three large-scale transport networks: the Brussels ring road, the railway connecting Ghent and Brussels, and the Chaussée de Mons. On a smaller scale, some scattered points of urban mobility services are present on the site such as bus stops, a metro stop, a shared bicycle service and a planned railway station. The only active features in this bordered area are a police station and a large, box-like DIY store. Both objects have fenced parking areas, the remaining space is used as a park and ride by the STIB/MIVB.

The condition of the site is therefore somewhat generic. The space is framed by major transport infrastructure and should be considered mainly as a node within a wider network. Some on-going projects in the neighbourhood are aimed at benefitting the residents of the area and improving the quality of the urban fabric. The focus of this project is therefore to reinforce the intermodal character of the site, whilst making it function as part of the residential fabric.

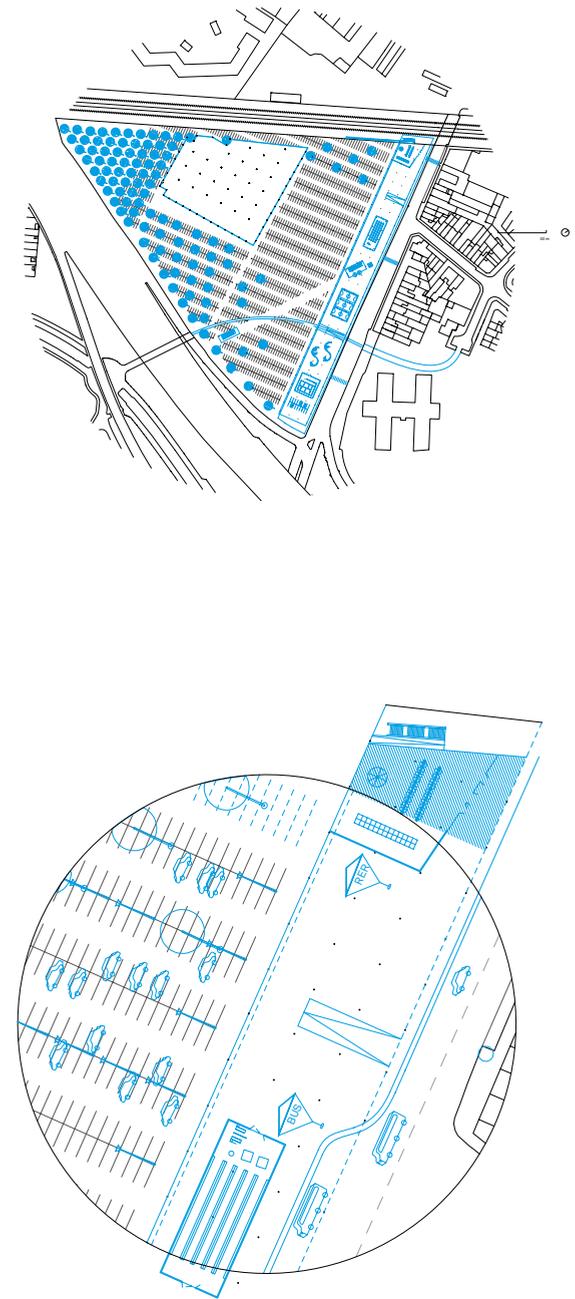
The programme of a park and ride maintains the nature of the site as a parking lot, but involves dealing with the daily activity of people. For this reason, the DIY store, which also currently functions as a materials supply store, is preserved as one of the defining elements of the site. By considering this as a large generic box and accepting the massive use of cars in this type of suburban space, the project aims to conceive a platform that can work both as a parking area and as an urban space.

The grid is used as a binding element between the street and the parking space, allowing a link to emerge instead of isolated 'parking bubbles'. A canopy, supported by a grid of pillars, borders the street and reaches the railway station from the police station. In this framework, all the mobility services are visually connected and appear as fixed entities. The covered space works as a platform that joins different types of transport, but also accommodates other temporary functions that offer the possibility to stay longer, a public place on par with the idea of a transport station.



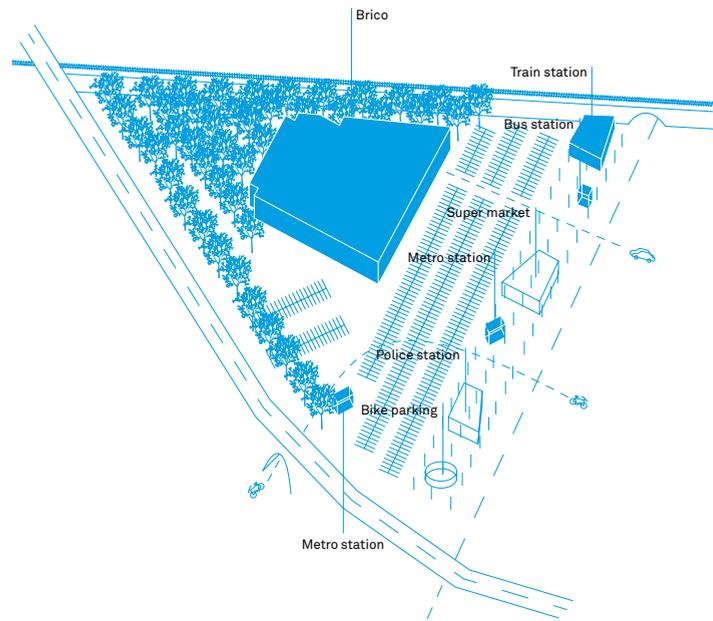
Situation Plan

The site is considered as a surface under tension between three mobility infrastructures.



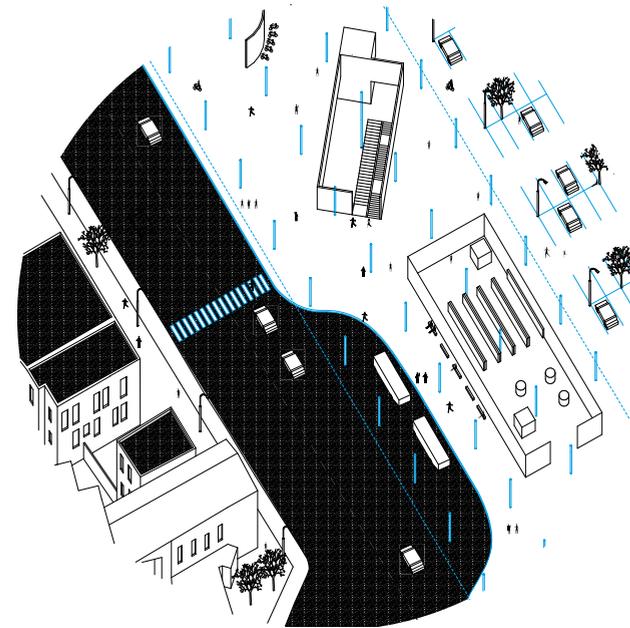
Plan

The intermodal character of the site is incorporated into the urban fabric.



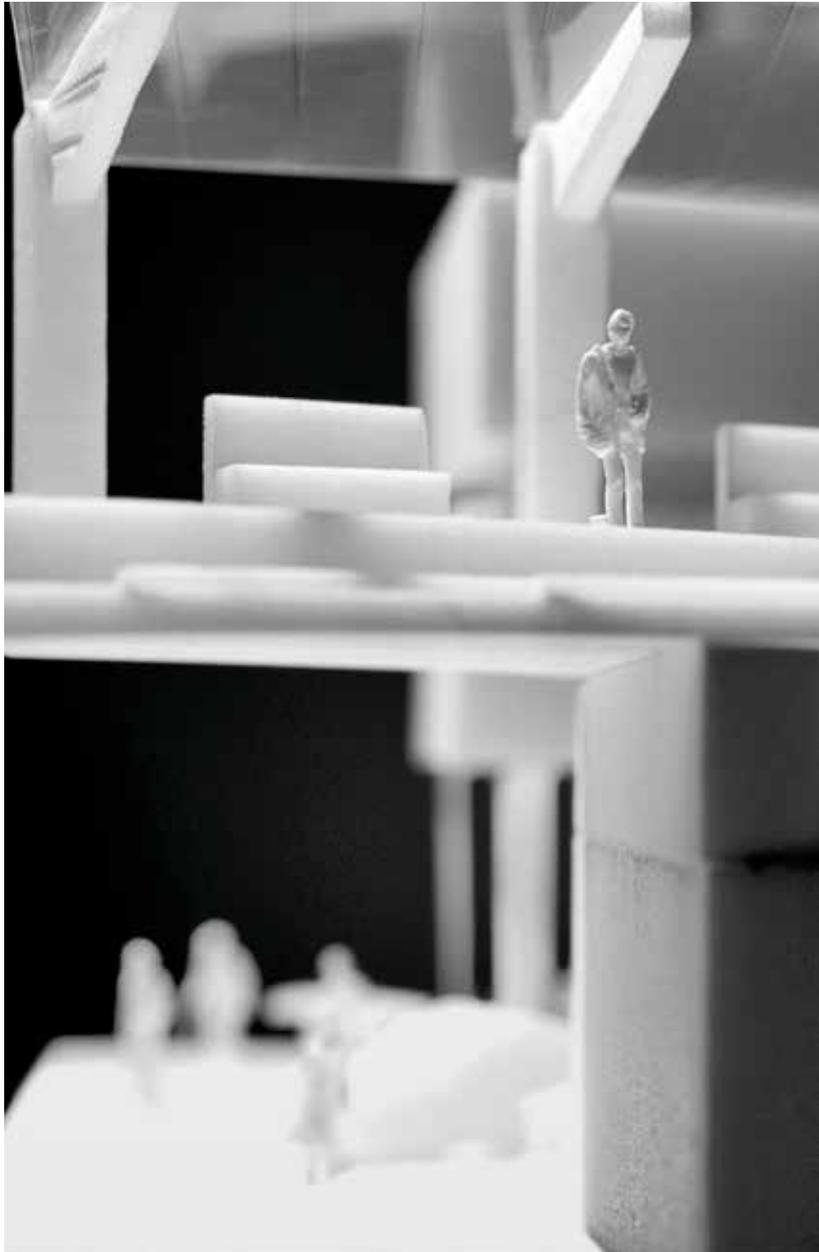
Axonometric perspective

A single large canopy hosts a wide range of services and transport connections.



Axonometric detail

The canopy, running parallel to the park and ride parking, makes use of the modal shifts to create a buffer zone of urban activity.



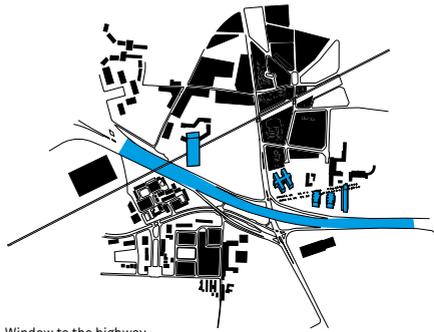
GROUP B:
FORM FOLLOWS FLOWS

Carlo Frassinelli, Ferran Iglesias, Chantal Marfà, Patrick Morgado, Li Qing

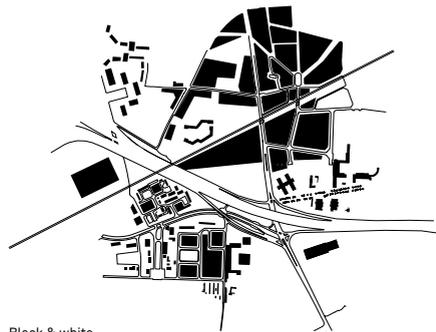
As one of the important entry points in Brussels, the site is defined by three important borders: the Chaussée de Mons, a unique border at the same level as the site, the Brussels ring road and a railway that will be served by the future RER. A metro station, a park and ride and bus stations are also present on site, in a rather chaotic arrangement. Regrouping these infrastructures could turn the site into a true focal point in Brussels' mobility.

The project therefore aims at improving both efficiency and quality of space, through a sequence of interventions. First, a multi-functional tower signals the presence of the site on a metropolitan scale, in a gesture similar to Xaveer De Geyter's Elishout tower in the vicinity. The site is then divided into a built section containing public facilities as well as housing and an unbuilt section hosting the park and ride. The built section is structured along four axes derived from the future RER station access points. Workshops and student flats are placed along the railway, whilst shops, a fitness centre and offices act as a noise buffer against the highway. In between these two borders, sheltered from noise sources, calmer functions such as public spaces and housing can be implemented.

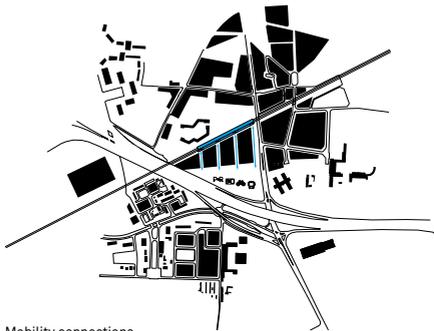
By densifying the site both physically and programmatically, the project establishes a new role for the site within the city, and signals this new role by introducing a new scale of building. It becomes a new vibrant place in the city, where intermodality meets urban activity.



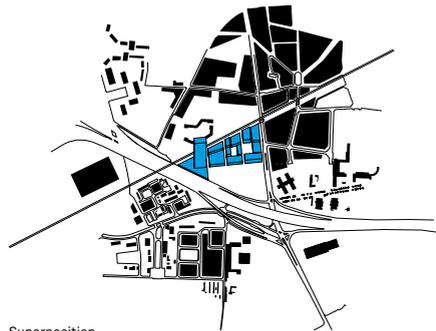
Window to the highway



Black & white



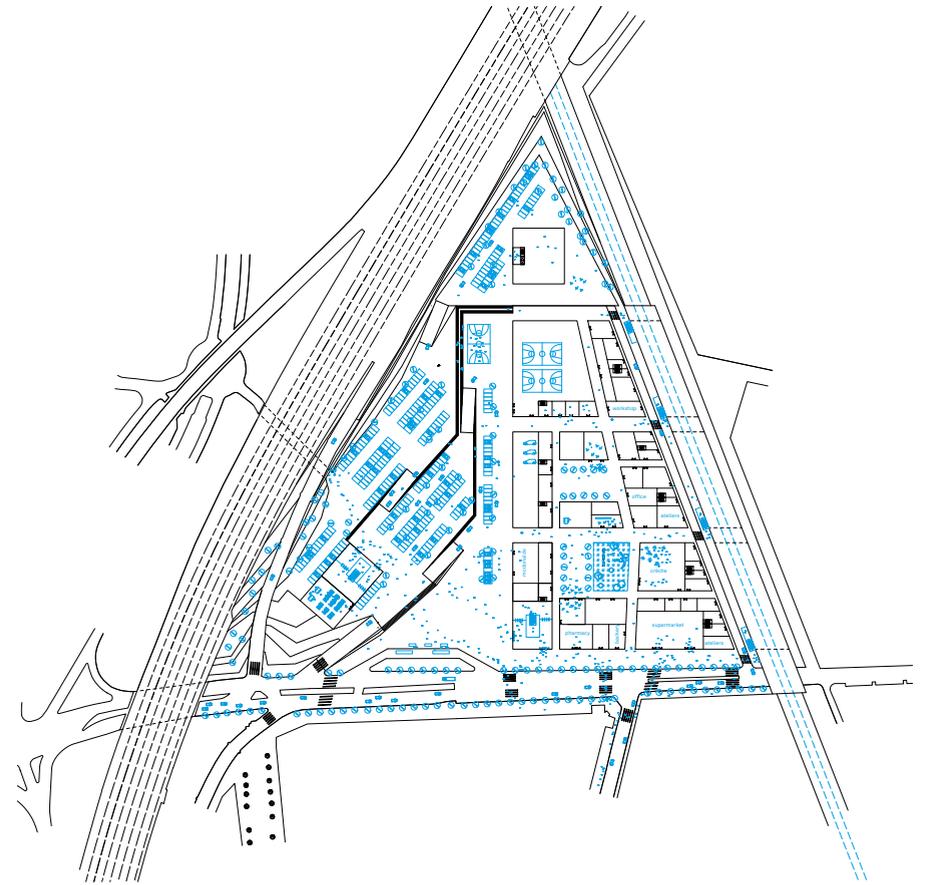
Mobility connections



Superposition

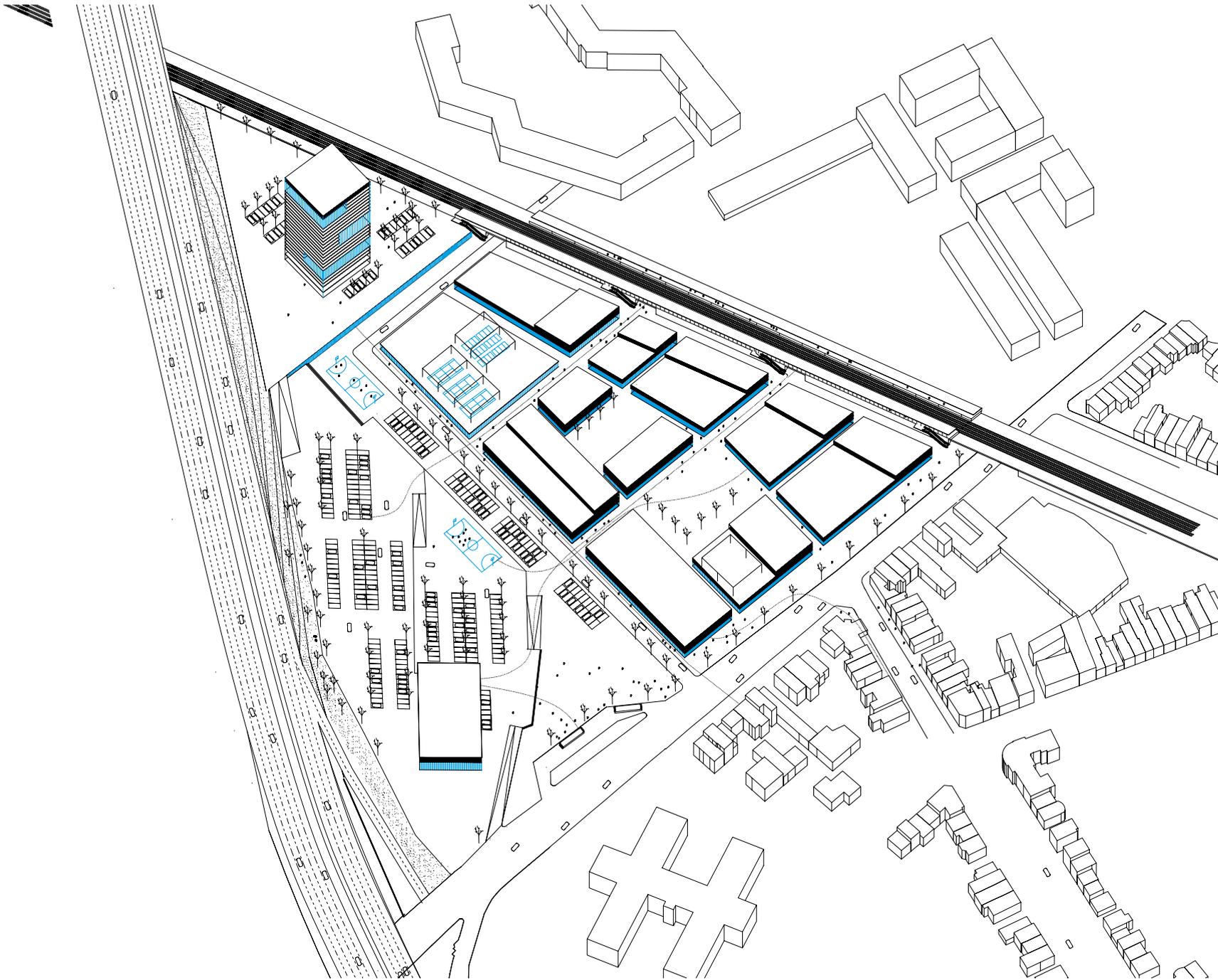
Situation plan

The characteristics of the flows along the site determine the urban morphology.



Plan

A new city area, combining housing, offices, retail and parking within a newly defined public space.



Axonometric perspective

The site integrates into the surrounding morphology and structures.

HOW CAN INTERMODALITY COMPLETE OUR URBAN LANDSCAPE?

Jens Aerts

The triangular site is situated at the outskirts of the Brussels Region, jammed between the large infrastructures of the railway to Ghent and the Brussels ring road R0. It is attached to one of the typical historic entrance roads, Chaussée de Mons, connecting Brussels with Halle in the southeast direction.

The site is dominated by a large do-it-yourself store, set back from the road, with a large parking area. In the southern corner, there is a park and ride facility, offering a smooth inter-modality thanks to the stop for metro line 5 and several bus-lines. A fenced police station, without any public functionality to the neighbourhood, adds programme but no dynamic. As a hole in the urban fabric, this non-space is anonymous, discrete, and without a proper name. Neither a crossing nor a square, its name refers to the nearby education campus CERIA/COOVI, with a split name referring to the two communities that manage parts of the campus.

Despite this continuity, the context has no clear definition of space. Open space and built space are not recognisable, due to the typical 'periphery' development of purely internally organised elements of city life, producing subdivisions of enclaves defined by its borders. These small areas have specialised functions, such as a university campus, a residential area, large retail plots, an office park, a shopping centre.

Despite its dynamics as a mobility hub, the site expresses little urban character, with a car-related logic. Obviously, the site has a context dominated by infrastructure. Interestingly, the site is part of the only segment of the ring road that has been designed in relation with the existing landscape, which consists of an important green area linking both sides of the ring road, a meandering small river 'Vogelenzang' and the canal. As a logical result of the co-design of open space and infrastructure, the ring road has been constructed as an elevated element, thereby creating a more or less continuous space underneath it.

CHALLENGES OF THE SITE

The general challenge of the site as a park and ride facility should definitely be the transformation towards an attractive place that stimulates intermodality. This means not just from car to public transport but also from car to soft transport modes such as the rental bike network and the already functional walking tracks towards other sites such as IKEA. Being strategically positioned within the city fabric, mobility hubs could also act as magnets for related facilities. The triangular site near the campuses of CERIA and COOVI is a place where one could articulate the ring road exit, parking spaces, the existing metro station

and a train stop for the future RER, Brussels' metropolitan rail transport. This combination could in turn be extended as an opportunity for the surrounding neighbourhoods, which can experience the important role played by metropolitan public spaces.

More specifically, the design for the site has known challenges. Firstly, the intermodality and hyperaccessibility of the site calls for a significant densification. The site and its surroundings have one of the lowest densities of the Brussels Region. Taking into account the massive demographic growth of the Brussels Region, one could consider a densification, due to its good public transport connection with the metro stop CERIA/COOVI and the planned RER stop at the rail line Ghent-Brussels. This should not automatically mean a densification with housing, since the area suffers from unbearable noise levels. Nevertheless, a densification with more functions and thus a more mixed nature will be a major challenge.

Secondly, the site should be integrated within the urban fabric; it is currently disconnected from other parts of the city. The intensification of enclaves with more mixed-use programmes can create a network of linking infrastructures and open spaces, producing a more coherent area. This will upgrade it from a peripheral proto-urban context to a central urban space in a polycentric metropolitan area.

Thirdly, the site should create an identity for itself and for its location. Jammed between large-scale infrastructures, the site and its context have not been able to develop a strong identity, due to its lack of composition, while its programmes have never been seen as opportunities to create identity. On one hand, the organisation of the intermodal node is hardly visible and lacks intensity. Mobility spaces thus continue to be

seen as fixed programmes that immobilize the development of the area. On the other hand, the presence of strong green spaces and districts in the larger context – characteristic of this part of the Region – are invisible. The integration process should not pretend to merge the site with other neighbourhoods and lose its own identity. On the contrary, the site should work with its own scale, its geometry and specific confrontation with large-scale infrastructures.

TACKLING THE TRIANGLE

The research by design of the participants of both groups started with the same questions.

How to cope with the scale and specific shape of the triangular site?

What programmatic densification should potentially happen?

Where could more intense connections with the surroundings happen?

Interestingly, each group developed relevant but differing proposals to tackle these questions.

In week 1, the analysis work of both groups aligned, with the same hesitations and criticisms towards possible solutions. The participants realised a choice had to be made, but only if it could be backed with clear arguments.

Group A focused on what kind of transformation could be driven by public authorities, responsible for the management of public transport and road systems. With a pragmatic view on the parcel structure, they realistically consolidated the actual situation of the private lot, with a large building in the middle of the parcel, creating a generous parking space in front. The shape and the programme of the building could change, but this does not change the actual proposal that focuses on the spaces where mobility modes interact. This approach is not only realistic, but also reflects a strategic reading

of complex spaces that acknowledge the existence of inflexible elements. Moreover, by being focused on the parts of the site that are directly produced or determined through mobility, it becomes clearer what public authorities could do to make better mobility hubs, as key players that plan and invest in transport infrastructure.

By focusing on a transport-oriented programming of the strip, the architectural research is a matter of organising the small scale in a context of large infrastructure. The reflection in sections is framed in spots where vertical circulations are needed between the different transport systems.

The research by Group B started from the potential of the large site to become integrated in the surrounding morphological logics. Most obviously, the site could be completed as a border along the highway, with large-scale open plan built elements as reference points along the large-scale infrastructures. Secondly, the scale of the site allows for a new piece of urban fabric with its own grid of streets and built typologies, as can be found in the direct surroundings on both sides of the Ring. Although densification appears to be evident, the overall noise pollution points to the need for a smart solution or a reduction of possible programmes. The project thus selected programmes such as small business units and student housing, which could be mixed vertically in a dense way, creating quiet indoor atmospheres.

Through understanding the whole site as a project area, the architectural research is enriched by a dual task: to design mobility oriented open spaces and to shape densely built areas. Sections show the relevance of using the existing topography produced by the large infrastructure, creating well-defined spaces for parking, playgrounds and streets.

LINEAR SPACE VERSUS DUAL SPACE

By creating a well-defined strip along Chaussée de Mons that hosts all existing and future mobility functions, 'Platform and Canopy' offers the site a clear identity on its most visible front. Behind this, all parking areas are reassembled in one single space, increasing the occupational efficiency. The linear nature of the strip is expressed by a grid of vertical elements and the painted frames of the parking spaces. The programme is limited to uses that function through the transit of traffic.

Whereas the grid could be criticized as a contextual and far from original approach, it underlines the generic situation of many intermodal places. They seem to lack any intention towards co-organization and the sharing of valuable urban space. Even more, the linear approach allows for extensions to develop along the boulevard in the future, thus creating the necessary relationships between neighbourhoods at the other sides of the Ring and the railroad. The presence of the grid in the project planning also encourages owners of parts of the site to think about the use of valuable space, whereas currently space is viewed as limitless and without context.

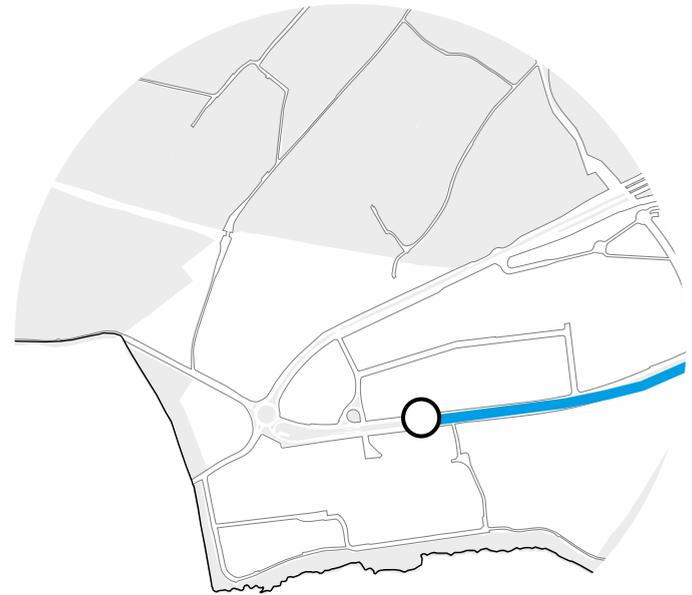
The 'Form Follows Flows' project uses the clear morphological distinction between the open space programmes and the built programmes that exist on and around the site. By bringing these two morphologies together in the triangular site, relationships with the surroundings become evident, guided by one or other element of morphology. By focusing on the entire site, the project is able to intensify the natural and infrastructure-driven topography in an interesting way. The park and ride is organized on several levels along

the high banks of the Ring, whereas the highest level in the northern tip of the site offers a high-rise building with offices and retail and could become a real icon along the highway.

The streets, defined by the mixed-use buildings, introduce the human scale to the public space. This creates physical relationships via small tunnels under the railway, towards the new and planned housing areas at the other side. By focusing on this small-scale element and the relationships created, the different neighbourhoods become interconnected, with a main centrality in the triangle itself.

In terms of the potential development strategy, both projects are completely different. 'Platform and Canopy' can be developed by the authorities that manage public transport (SNCB, STIB and de Lijn). In a way, this could be an easy partner-ship, where common interests between the public transport companies are met. 'Form Follows Flows' highlights the opportunities for the private owner of the DIY warehouse, creating higher density and new programmes. This project would require collaboration with a private partner, which increases the uncertainty of the project. On the other hand, due to this comprehensive approach, the project is very relevant to the city scale and could have a major impact on the neighbourhood. Moreover, the project seems to acknowledge the value of the land, as a central and highly accessible spot in the urban fabric of Brussels.

SITE 5 ERASMUS



TUTORS

GÉRY LELOUTRE
MARCO RANZATO
FRANÇOIS ANDRIEUX
BÉNÉDICTE GROSJEAN
PHILIPPE LOUGUET

GROUP A

SAMUEL AMORY
LUCAS BRUSCO
ALESSANDRO DE SAVI
JEROME KOCKEROLS
GUILLAUME MUNNÉ

GROUP B

ALESSANDRO BENACCHIO
FRANCESCA DELL'AGLIO
GIORGIO DE VECCHI
JEROEN KESSELS



GROUP A: **CORRIDOR AND BOARDWALK**

Samuel Amory, Lucas Brusco, Alessandro De Savi, Jerome Kockerols, Guillaume Munné

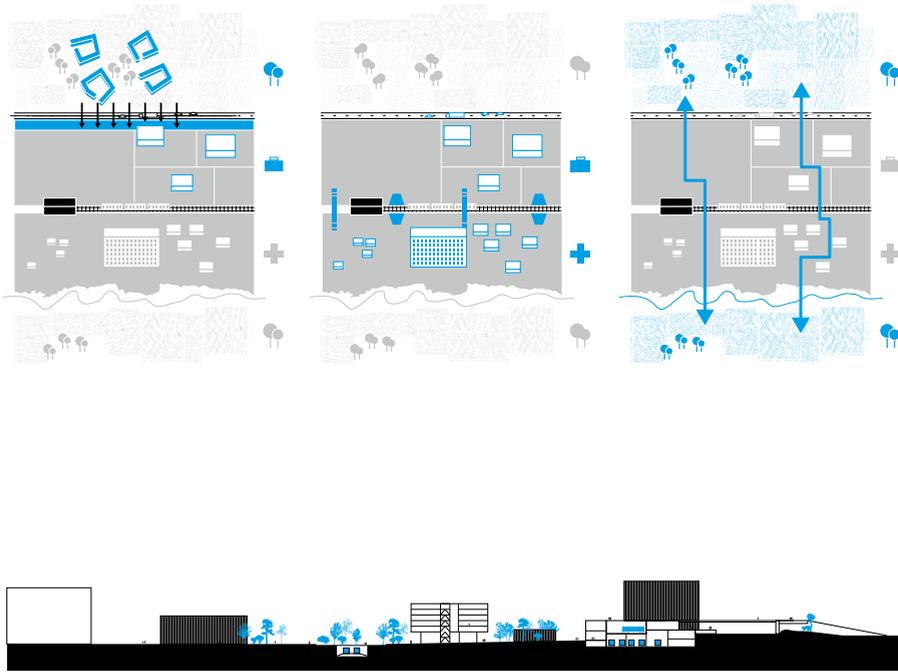
From North to South, four different areas make up the Erasmus site: a natural area also known as Pajottenland, a business environment of large boxes on even larger plots, the actual Erasmus hospital site and finally a second natural landscape. These defined zones are separated from each other by non-permeable structures – a highway, a metro line, a protected creek – and act as self-referential entities. Crossing is problematic. However, a rigid border can be porous too, allowing and impeding flows at the same time.

To give quality to this particular situation, a three-fold strategy was developed. The first approach consists of preserving the existing rural landscape around the Erasmus metro. The planned housing development and metro depot would therefore be moved to a strip along the highway, further accentuating that border. The second approach focuses on the permeability of the metro line: strategic pedestrian passageways, strengthened by a new functional mix, cross the rigid border between the two built areas. Finally, a sequence of green and urban spaces would be created as a corridor connecting the two natural areas.

The three strategies are consolidated into a boardwalk and a corridor, an approach that can later be extended to the rest of the site. While the boardwalk allows parallel movement, enhancing the existing border and separating rural and urban morphologies, the corridors allow perpendicular movements that minimize the borders while creating a diverse range of public spaces that are currently missing on the site. On an urban level, the boardwalk would serve as a metaphorical stop to further urbanization and as a connection between the metro depot and a future train station.

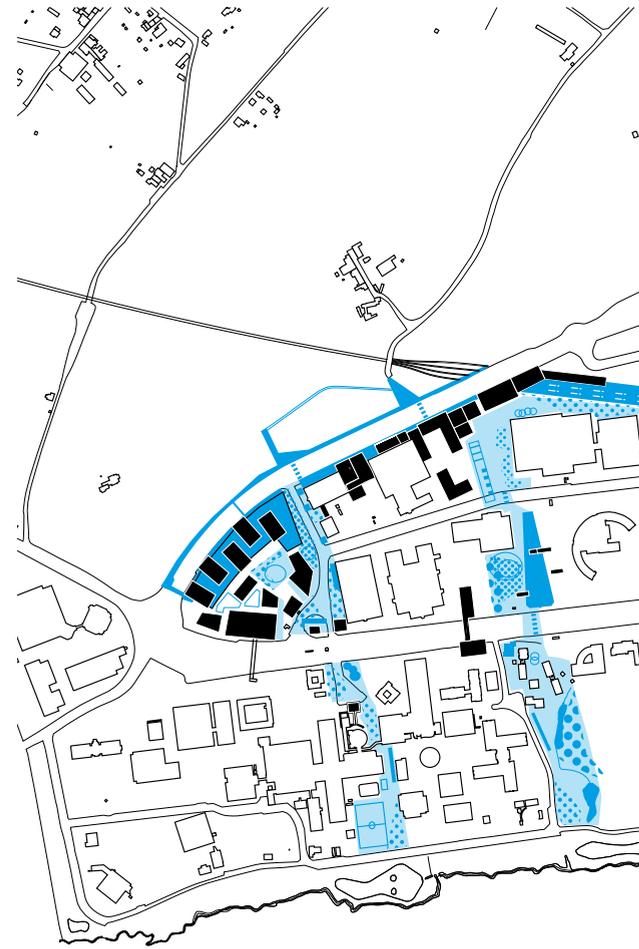
The new position of the metro depot is a key element in the transition of public and private areas. A public square would be connected to the roof of the metro depot, serving as a semi-public base platform, giving access to the private residential towers.

The preservation of the rural and natural character of the environment surrounding the Erasmus metro stop thus becomes an intrinsic quality of the new development near the metro station: the quality of life in an urban context with views on a rural landscape.



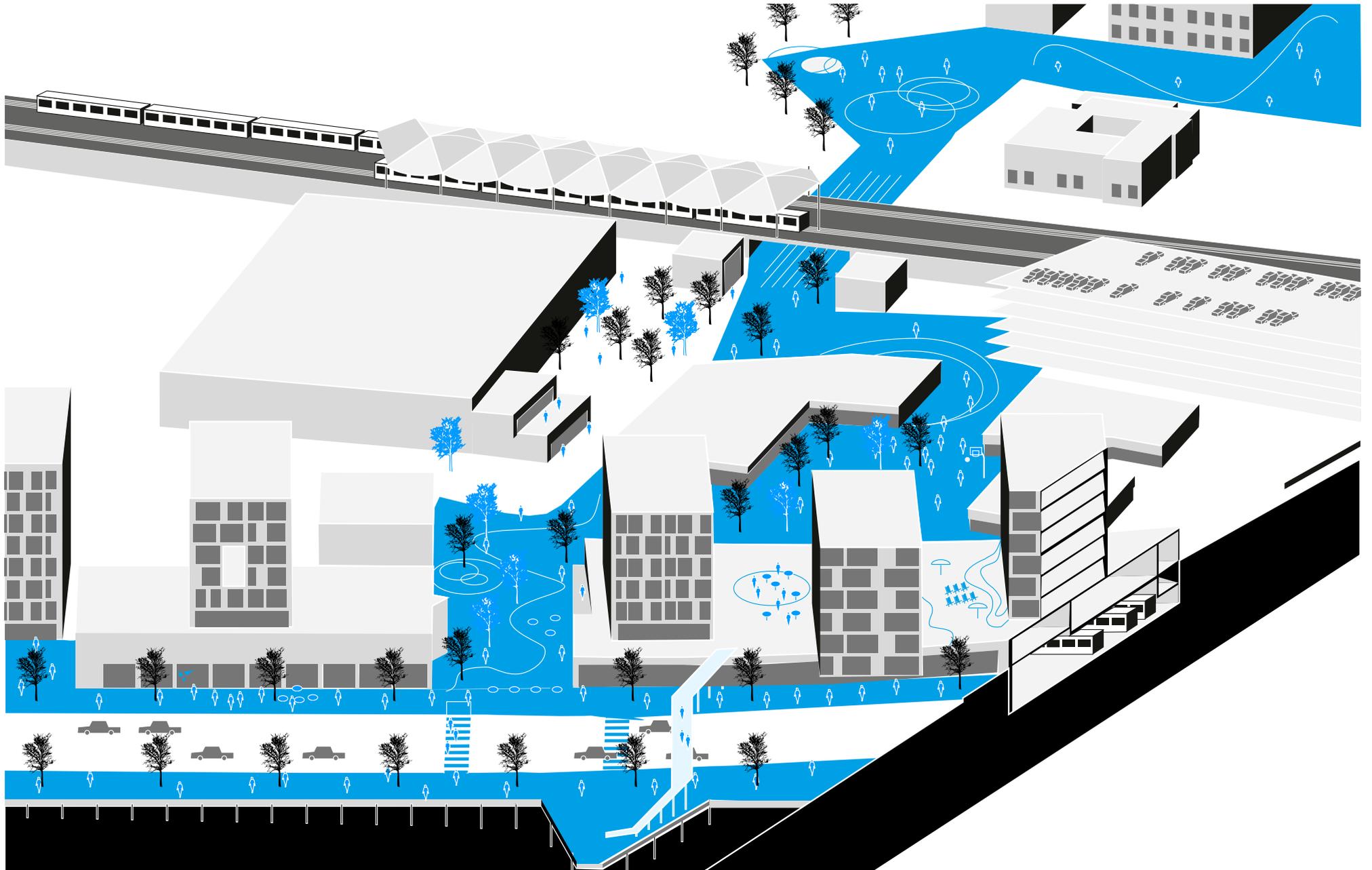
Schemes and section

A mental map of the site and its logics, showing a three-fold strategy: preserving the natural area on the northern part by moving the planned housing development to a strip which accentuates the border along the highway; perforating existing borders with strategic pedestrian passages; creating a corridor as a sequence of green and urban spaces.



Situation plan

In an explicit proposal, the boardwalk acts as a metaphorical wall to prevent urbanization of the Pajottenland, simultaneously hosting the metro depot and connecting it to the future train station. The corridors provide a series of diverse and defined public spaces that the area currently lacks.



Axonometric perspective

The boardwalk is elaborated on both sides of the existing road. The platform creates a promenade, offering views of the landscape on one side. On the other side, there is a more commercial setting. Pedestrian bridges join the boardwalk and its semi-public spaces on top of the metro depot.



GROUP B:
WELFARE LINE

Alessandro Benacchio, Francesca Dell'Aglio, Giorgio De Vecchi, Jeroen Kessels

The new spaces that want to be will emerge from the designs drawn from an order of movement. An order of movement that distinguishes staccato from go movement and includes the concept of stopping.

[...] A modern city will renew itself from its order concept of movement, which is a defense against its destruction brought by the automobile. Centre City is a place to go, not to go through.

Great vehicular harbors or municipal towers will surround the innermost centre of the city. They will be the gateways, the landmarks, the first images that will greet the visitor. [...] The main body of the tower gateways between the outer perimeter and the inner core will be the wound up street of vehicular arrival and stopping.

— Louis Kahn, taken from 'The Renewal of City' in 'Space, Order and Architecture', an address given at the Royal Architectural Institute of Canada Golden Jubilee Assembly (1957).

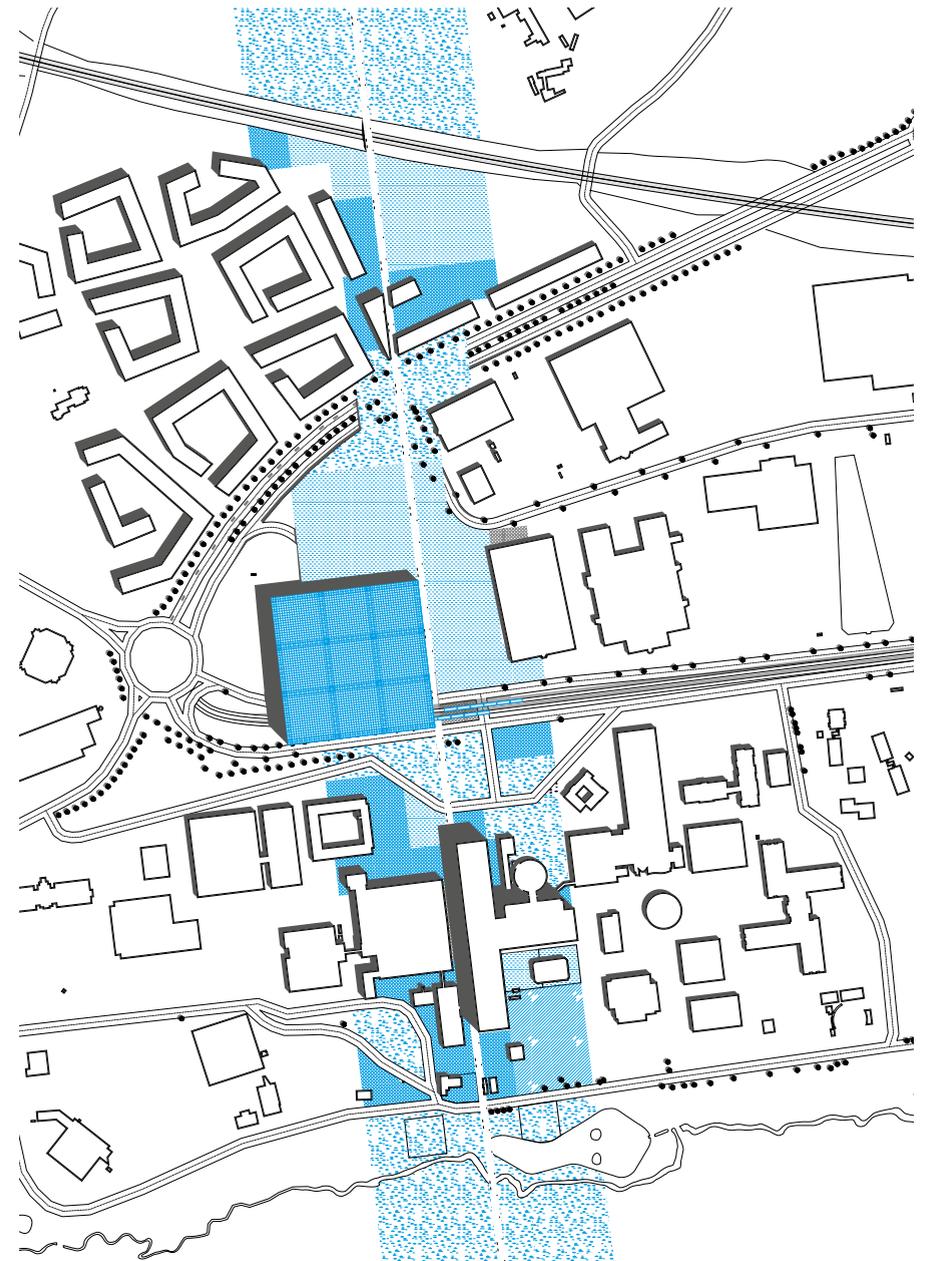
Bearing in mind these prophetic words by Louis Kahn, that seem to apply particularly well to Brussels, this proposal wants to question the fundamental precepts on which the END OF LINE Master Class is based: the issues of mobility in Brussels. At the beginning of these two weeks, the students were given a map of the city, on which everything outside the regional premises was entirely absent. Thus, as the Italians in this group pointed out, Brussels seemed more Venetian than Venice itself.

Although this political and identity border is a real presence in the minds of the people and in the DNA of the city, it is irrelevant for the hundreds of thousands that cross it every day: flows of people, goods and ideas in an increasingly international context.

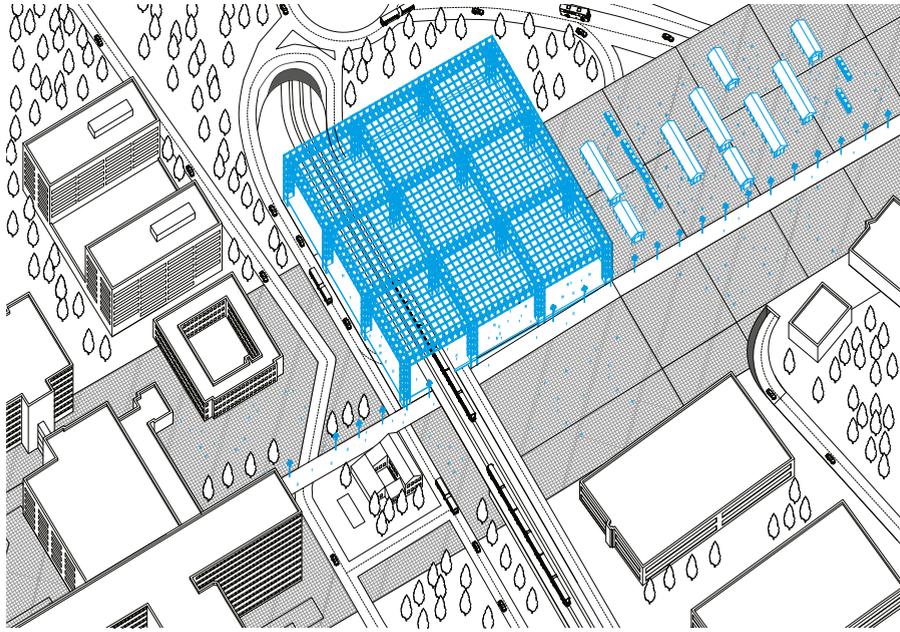
This project stems from the conviction that the dichotomy between the regions cannot be maintained. It can perhaps be envisioned as a prototype, a paradoxical open structure that simultaneously puts an end to the radio-concentric city and confirms its existence, announcing it to the 'città diffusa' that lies beyond. A structure simultaneously emphasizes and subverts the borders, and in doing so provides a much-needed contextualization to Brussels.



Photographs
Illustrations of the urban periphery condition of Erasmus.

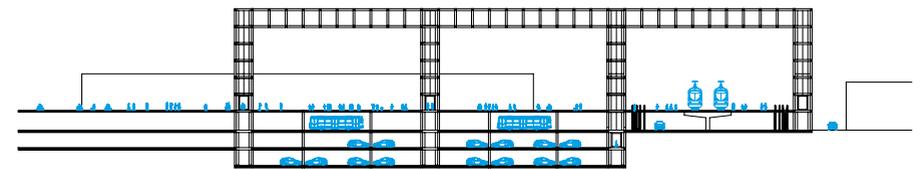
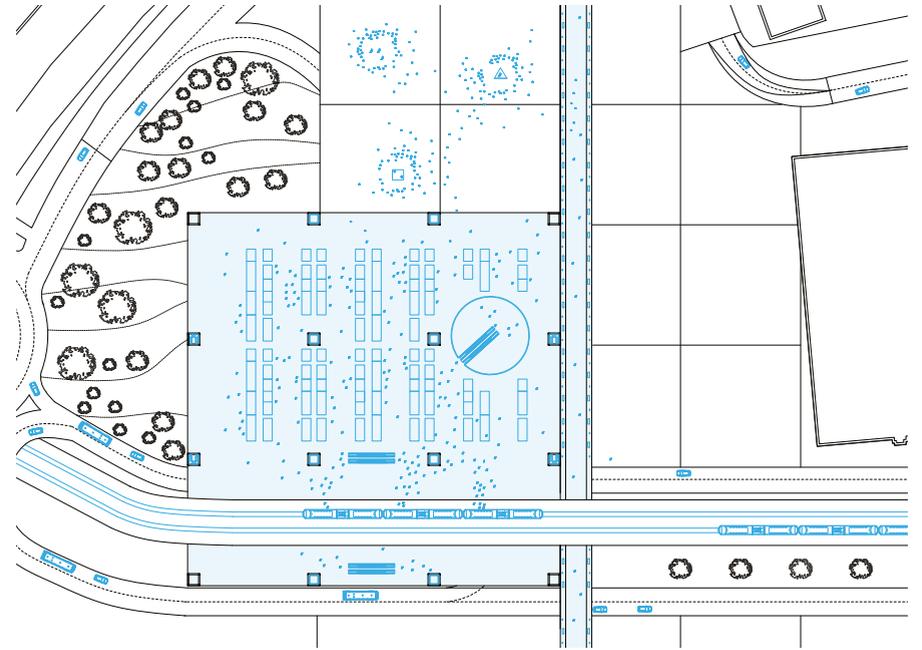


Overview plan
A metropolitan structure emphasizing and subverting the border condition. The pedestrian strip connects with the subterranean metro depot to the north.



Axonometric perspective

An oversized platform unifies the ill-defined fragments of the area, allowing for complementary activities.



Plan and section

The structure is envisioned as a peri-urban landmark, a 'great vehicular harbour', providing entry to, or exit from, the city.

THE END AS AMBIGUOUS CONDITION

Géry Leloutre & Marco Ranzato

The site of the Erasmus station, in the municipality of Anderlecht, is one of the rare peripheral areas of the city of Brussels conceived in the middle of the 20th century as a real city boundary. The zoning of the Pede Hamlet as a nature zone, the Vogelenzang as a cemetery and the surroundings as residential areas give clear evidence of this. In the formalization process of this urban limit, two important concepts emerge. The first concept relates to the value of emptiness. The nature zone was not approached as an empty space to be planned as a park, but as a culturally valuable, traditional and rural productive landscape where more metropolitan leisure facilities (sport facilities, golf, shooting gallery, etc.) are grafted. The second concept was linked to the physical means used to underline the limit. In urban planning it is normal to use infrastructures as limits. The arrival of the Brussels ring road might have provided such a barrier. On the contrary however, Anderlecht's municipal urban design department wanted to emphasise the urban limit through a bold use of housing patterns and linear parks supposed to extend the 'green' character deep into the dense city. Cutting the land or floating above it, the Ring was finally laid out around this park structure and its facilities, as well as the large buildings and sport/leisure infrastructure of the Pede. The

construction of the Ring brought about the establishment of the Erasmus University Hospital surrounded by a faculty campus with several institutes. This rather badly conceived and very heteroclitic complex is tightly closed-off from the green zone of the Pede. In particular, large retail spaces are clumsily placed along the highway access (Boulevard Henri Simonet) blocking the general permeability of the area. In reference to the open area further down this alignment of retail spaces, the construction of the Quartier Chaudron – a complex of around 400 housing units sprinkled with a 'sustainable neighbourhood' discourse – is still under discussion. The aim of this project, both for the municipality and developers, is to bring a functional equilibrium in this part of Brussels by the inclusion of new housing stock. However, this laudable intention has very few chances of succeeding if it is carried out in the same completely sectoral fashion as was used for the other parts of Erasmus described above.

Emphasising these two concepts behind the formalization of the Erasmus border helps to understand the two diverse reflections produced by the design teams who both decided to intertwine their design with the idea of an urban and regional border.

The main point pursued by the first team was to clearly determine the

shape of the city on a geographical scale. The main move consists in the decision to enclose all the new urban developments within the limit presented by the highway access. The posture is apparently classical: unambiguous, defining what is city (and built) and what is open, not urban, space (unbuilt and empty). Nevertheless, it leads to an intriguing and fascinating exercise of 'space optimization'. The concept completely challenges the Quartier Chaudron project, since it seeks to develop the same supply of housing within the limits set by the highway access. The construction of a new technical infrastructure for the metro network becomes a very profitable real estate operation able to finance the need for other new public infrastructures. Parking, housing and facilities are mixed in a diversified, intense and polarized urban project dovetailing with the topography. A new path connecting the Erasmus campus to the (very) open area of the Pede passes naturally under the Route de Lennik, crossing the new development, providing an inner public space and progressing further into the green area. The new public space offers the opportunity to reinterpret the existing shoebox industrial zoning (Allée de la Recherche) in an integral segment of an entire urban system. The presence of the depot is used as an urban basement for a high-rise building that organizes the space belonging to the public, semi-public and private spheres. The high-rise emphasises the relation between the non-urban and the built space, the green void in confrontation with the fulfilled city. The highway access road, like the typical Belgian coastal dyke, is the promenade between the two very different environments. The overall design produces a shift from the former arrangement of infrastructures

dispatched in a suburban heterogeneous area to intensification, polarization and densification. Ironically, these were – for a long time – the well-defined ingredients of the consolidated city, where the built space stood in front of an iconic blank open space.

Instead of better defining the juxtaposition between built and open space, the second team has focused on the capacity of the open space to deal with the heterogeneity. Rail and road infrastructures are not intended as a tool to order the space but rather as a means to explore it, to interconnect a number of heterogeneous detached objects. Exploring and linking are actually the assignments of what is called the welfare line, the concrete abscissa of an abstract raster supporting the infrastructure of mobility while linking the hospital to the metro, the new neighbourhood of Chaudron and the Pede green area. A huge orthogonal canopy covers a massive multiplayer basement where the metro stops. The basement accommodates parking lots, bus station and traffic of the Lennik's road. Further, the welfare line crosses the new depot, which has deliberately not been redesigned. Giving clear shape to the technical equipment of the area relying on the inner capacity of architecture is strategic to making an intelligible space that has resulted from incomprehensible additions of independent and unrelated elements. The polarization of several small elements in one dominant shape – the space under the canopy – clears up the open space from adjunctive built spaces and makes it work by unifying open surface. Exploring the city border in its transversal dimension approaches the notion of border through depth and emphasises the slow transformation of the landscape. Fundamentally, the welfare line does not refer to the

relationship between city and non-city. Instead, it concerns the generalized urban condition of the central Belgian territory, where the end of a line is always the continuation of another.

READINGS

END OF LINE OR CITY DEPARTURE?

Nadia Casabella & Géry Leloutre

To some it might seem obvious, to others naïve, but thinking about an ‘end of the line’ involves a long chain of reflection on the form of mobility in the city, the form of public space, the form of the line itself within the city, and obviously, the form of infrastructure. A line should not be a specific solution for a specific public transport problem, but be part of a sophisticated and multi-layered system, strengthening the complex structure and performance of the city.

By ‘infrastructure for mobility’ we mean all spaces devoted to public transport uses, some of which, such as depots, are kept out of sight. As a result, we sometimes lack awareness of the large spaces needed for a metropolitan public transport company to operate on a daily basis. The design of those large spaces, deemed to play a very structuring role in every spatial layout that will follow, is seen as pertaining almost solely to the capabilities of the transport engineer or transport geographer. In the framework of this International Master Class, we considered how those spaces for mobility in Brussels, whether visible or invisible, could be conceptualised and designed through the disciplines of architecture and urbanism.

BRUSSELS: END AND BOUNDARY

There is something fascinating about the fact that the depots located at the end of transit lines are also placed at the political boundaries of the Region. Beyond, Flanders lies in wait, while Brussels feels confined. This is despite both adjacent regions being well aware of the economic

interdependence on a metropolitan scale and beyond, on the scale of North-Western Europe.

The limited size of the Region obviously induces a form of tension, mostly related to the availability of space for new infrastructures. This tension is increased by the limited public investment devoted to financing such infrastructure. This increased tension invites us to think in terms of synergies. Instead of simply making transit areas and depots available, we need to think of ways to combine them with other uses, to activate the blind facades that usually enclose this kind of infrastructure. This region is too small to afford being spatially inefficient, and this is exactly what happens when whole stretches of ground are condemned because of their proximity to ‘unwanted’ land use, both in economic terms and in real estate logic. It is the public who gain when the construction of new public transport depots is financed with the development profits generated by ancillary uses, or partly because of the benefit that enhanced public space might generate in the immediate surroundings.

Transport infrastructures are high-risk investments due to frequently large uncertainty over their future use. From day one, we need to think of their flexibility and versatility. Flexibility in terms of recycling our built structures for other uses, versatility as an incremental form of adaption to new technological developments (whether in mobility, energy, water management) without having to dismantle those structures straightaway.

VALUE ADDED BEYOND REAL-ESTATE

A different way to deal with the risk of investment is to consider infrastructure not only as service provision but also as a means to create added value in the metropolis. A line can respond to a demand for connections, but also trigger new demands due to the interconnection of different programmes, which include the ends of the lines and their depots too. These specific places can play an important

role, helping generate destinations that fall outside the simplistic polarisation of centre vs. periphery. As such, peripheral locations could accommodate a broader, mixed urban programme that could open up new perspectives for sites considered unattractive today. An example is the ‘Platform and Canopy’ proposal for the CERIA/COOVI site, a smart combination of commercial parking, park and ride, landscaped park, retail and the original and generous urban lobby solution for linking the train and metro stations.

Brussels enjoys a very peculiar situation, as several regional public transport companies operate on the same territory. Alongside the Brussels’ regional public transport company (STIB/MIVB), the transit companies from the neighbouring regions (De Lijn and TEC) also run here, as does the railway company (SNCB/NMBS). If the first accentuates a rather radio-concentric logic, reinforcing the aforementioned centre vs. periphery condition, the others are less so. This is clearly expressed in the proposal for new tram-express lines by De Lijn in collaboration with STIB. These clearly break down the centre vs. periphery logic by creating a northern bypass. Such complementarity could eventually give rise to a super-sophisticated system, taking into account the criss-cross displacements that characterise any contemporary metropolis.

Both scales pose the same questions: would the bodies involved in urban renewal be willing to follow and to back those potential public transport projects with theirs? How could the various people responsible be brought together to think about the form of mobility in Brussels? Alternatively, would the Region rather develop a vision open enough to relate its own public transport infrastructural needs to the urban development proposals of other bodies? Finally, should the regional authorities impose their public transport vision by limiting, for instance, the building permits first to highly accessible areas, hence emulating the ages-old ABC Dutch policy, revamped in Brussels since its first Regional Development Plan?

THE RELATION BETWEEN INTERMODAL PASSENGER TRANSPORT AND URBANITY

One of the most thought-provoking questions raised during the two week Master Class touched on the relationship between inter-modality and urbanity. The normative view in planning has so far established a clear interdependency between density and inter-modality, making us believe that a vibrant urbanity will follow suit. In fact, all public transport nodes that were developed in recent years follow this normative view: if you wanted an animated, hence safe, station area, you just needed to pull up some thousand square meters of built office and/or residential space. International examples abound to demonstrate the spatial effects of this virtuous circle. However, the reality is that there is absolutely nothing automatic in this relationship. Furthermore, the direction of causality is also difficult to identify, as failed examples demonstrate.

Diversity can be considered far more important for urbanity than density. Densification alone does not guarantee a better environment, in fact the opposite can sometimes be the case, when density simply becomes confusing. Greater and more successful urban life flows from a coexistence of differences and the mental images that a place evokes. Manhattan and Abu-Dhabi high-rise buildings may look alike, but the mix of uses in Manhattan is what ultimately gives rise to a vibrant city, not sheer density. However, we can also mirror the reflection: diverse places alone do not make our cities. Places need the bundle of communication infrastructures (i.e. mobility) and economic interactions crisscrossing them. This is a better way to conceptualise contemporary cities: a variety of places and flows that interlock them. Any urban intervention should recognise this interdependency if it is to succeed.

A RENEWED NOTION OF THE STREET AS SHARED PUBLIC SPACE

One can identify two dominant trends in the way street space is organised and designed in contemporary cities.

On the one hand, there is the trend that enforces segregation, of users and of transport modes, as a design principle. It follows an extremely hierarchical vision of how transport and urban life at large should be arranged. From arteries down to impasses, it is the compartmentalised city, the city of exclusive, pigeonholed users. Wheelchairs cannot ride on highways for the same reason that through-traffic is not allowed in local streets. If space was infinitely elastic, everyone could be accommodated anywhere in the city: one lane for bikes, one for pedestrians, a couple for private vehicles, a couple for transit and so forth. Unfortunately, space in cities is quite the opposite: hence, after extremely long negotiation processes, the only thing we achieve is either crammed streets (space for everyone but everyone has less space) or – obviously faster and easier to do – segregation of users.

On the other hand, we can find many cities today starting to experiment with very diverse notions of 'shared space' in the design of their streets. There we encounter traffic arteries with a capacity for thousands of cars a day where the space is peacefully shared with bikes, trams and people on foot. The basic principle guiding these examples is that of dynamic adaptation: the more users there are the more they have to bargain with each other for space. This goes for 30 km/h streets. The speed limit board is also a signal: everyone is welcome on the street when cars are slow enough to adapt dynamically to changing street conditions, such as children playing, a market or traffic congestion. This implies that every one of these streets can carry all types of traffic and users with perhaps the exception of large trucks. These sorts of developments allow more space for everyone, in different allocations, according to the changing needs during the day or week. They also require almost no signals and curbs, hence less visual noise. Finally, we get the luxury of crossing the city while simultaneously understanding how the urban space is organised, transversally to the road of course!

A PROACTIVE RATHER THAN AN AD-HOC STANCE

Who decides the strategy for public transport development in Brussels? By this, we mean a series of targets that go beyond abstract, unfeasible ambitions formulated in percentages. The overall impression in Brussels is one of being in front of incredible assets nobody cares for, or if they do, in a way that often appears shortsighted.

Some five years ago, the regional public transport company invested massively to optimise its service. It happened simultaneously with the opening of the circular metro line, and the confusion surrounding this change of logic hid from view the consequences of the other (small) modifications. Not only did the STIB/MIVB manage to place some tramlines on exclusive lanes, it also shortened or subdivided bus and tramlines that were still crossing the entire city-region, sorting them out into quarters and rendering them much more efficient and reliable. Inter-modality at the metro stations was reinforced by the best performing urban transit mode to date: bike-sharing stops were installed whenever an agreement had been reached at the municipal level, and some other stops were moved closer to the intermodal hubs. Things did not end there, and nowadays we find car sharing hubs and a radically increased frequency on all popular bus and tramway lines.

There are many possible next steps. Should we start by extending the northern metro branch? Or alternatively by regionalising the railway lines crossing the north-south axis of the city-region, poor in public transportation, to create a Brussels Railway Express? Perhaps we should consider a butterfly-shaped, regional railway scheme as the Flemish Master Architect recently proposed as the closing manifesto of a series of events on Brussels' North-South railway junction? Should we instead, as the socialist party suggested in their electoral programme, reduce urban highways from two-way into one-way roads? Should we not be even more ambitious and close them to any traffic other than public transport next to two 30km/h carriageways? There is no consensus on where to go from here.

... BY WAY OF CONCLUSION

The issue of mobility infrastructure needs to be tackled using a metropolitan, integrated and integrating approach. This is particularly the case in Brussels, where space is limited. Any public transport line should reach beyond the specific solution for a specific problem, in stark contrast to what seems to be the case with the creation of the metro's northern branch in Brussels. There needs to be consciousness that these interventions will be acted out within a sophisticated and multi-layered system, and should therefore strengthen the complex city structure and its performance as a whole. Similarly, the infrastructure sustaining the operation of those lines should be designed flexibly, in terms of both use and function. Its design should be capable of integrating future mobility demands without inflicting too heavy a burden on the present ones. Above all, the construction of such infrastructure should generate a real added value both for the city and for the public authorities in charge of financing it.

The value and quality of locations, in the contemporary metropolis, derive from the combined presence of lines interconnecting them and of the flows moving through them. A focus on infrastructure (be it transport, water or simply the street) offers a powerful and dynamic way of seeing contemporary cities. Only then does urban life reveal itself as a ceaseless and mobile interplay between many different scales and across distances, mediated by networks. Mobility is too important to leave it in the exclusive hands of any expert. Public transport lines and nodes affect us all.

RESEARCH BY DESIGN **IN THE CITY OF ANTWERP**

Team Ontwerpend Onderzoek

Since its breakthrough in planning practice about a decade ago, the concept of ‘research by design’ has been subject to different interpretations. Research by design is used as a planning method at different scale levels and can serve different goals and interests. This essay aims to illustrate the development of research by design as a daily practice and a structural part of planning processes in the city of Antwerp. It focuses on the role of the city’s research by design team (‘Team Ontwerpend Onderzoek’) in complex planning processes and in facilitating communication and consensus between the actors involved.

“The design-oriented mindset enabled the designers within the city’s department for urban development to assume a more prominent role in various urban projects.”

ORIGINS OF TEAM ONTWERPEND ONDERZOEK IN ANTWERP

From the 1990s onwards, several initiatives (e.g. Stad aan de Stroom, 1989 and Antwerpen Culturele Hoofdstad, 1993) slowly but convincingly introduced design into the city’s planning practice as a way of thinking about spatial structure. In the course of the 2000s, a number of parallel developments within the city’s planning practice and policy further stimulated research by design as a planning practice.

In 2002, the city acquired federal subsidies to create a policy framework and install an expert team of designers to develop its urban block projects. These were complex building projects involving different properties and owners. The designers helped the stakeholders to find a consensus for a joint project. Research by design was thus introduced

into the planning practice as part of a specific urban development strategy.

The strategic Spatial Structure Plan for Antwerp (s-RSA 2003-2006; conceived by Studio Associato Bernardo Secchi Paola Viganò) opted for a strong design approach as well. Rather than imposing a dogmatic approach on the urban fabric, the s-RSA searched for opportunities within the existing urban fabric and encouraged designers to merge with the planning process and convey a commitment to spatial quality into the plans. The strategic and project-structured approach of the s-RSA was translated in the formation of multidisciplinary teams within the city departments. The focus on spatial quality in Antwerp's urban development policy led to the appointment of a 'chief city architect' ('stadsbouwmeester') as an independent but closely involved advisor on public and private projects. As the number of urban development projects increased and the scale range grew, the value of research by design was slowly but convincingly demonstrated and acknowledged.

"By not subscribing to the entire process, the designers can maintain a certain distance. Their perspective is cleared from prior, looming or potential difficulties and sensitivities in the processes themselves. This allows ideas to develop or strengths to arise that might otherwise have never surfaced or would have been excluded at first glance."

SPATIAL RESEARCH IN SUPPORT OF PLANNING PROCESSES

The design-oriented mindset enabled the designers within the city's department for urban development to assume a more prominent role in various urban projects. They evolved into the team for research by design as it is known today.

The five designers are approachable by project leaders of the department of spatial planning itself and of the departments for mobility, public space and planning permission, etc. Collaboration with other city departments as well as external partners (developers, architects and urban planners, companies for public transport and utility services, etc.) is established on a project basis (for example,

when public buildings, social housing, cultural centres, schools, etc. are involved). The stadsbouwmeester consults the designers on a regular basis. A critical mass of designers is required to create dynamic and interactive moments of reflection within the team itself.

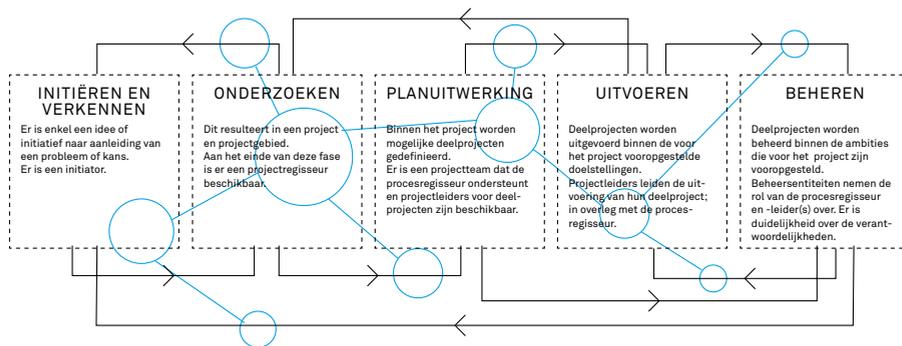
The Team Ontwerpend Onderzoek mainly carries out spatial research in support of planning processes. Through research by design, the team explores and reveals spatial potentials. The team uses scale models, drawings and sketches to translate abstract data, preliminary findings and general visions into tangible images and scenarios. Their work entails a wide variety of assignments on a wide range of scales, from explorative landscape analyses (e.g. study of the urban region of Antwerp), over concrete guidelines for new building programmes (e.g. Deurne Expo), to research into the spatial impact of infrastructure works (e.g. Masterplan 2020).

INFILTRATING PLANNING PROCESSES

The Team Ontwerpend Onderzoek does not commit entirely to the underlying planning process to which they are asked to contribute. The designers are consulted at specific points and phases in the trajectory. Sometimes their work is proactive and contributes to the exploration phase or to the elaboration of a project definition. At other times, the team is asked to tackle an unexpected problem, break through an impasse or revive a 'sleeping' planning process. By not subscribing to the entire process, the designers can maintain a certain distance. Their perspective is cleared from prior, looming or potential difficulties and sensitivities in the processes themselves. This allows ideas to develop or strengths to arise that might otherwise have never surfaced or would have been excluded at first glance.

THE RIGHT DISTANCE

However, planning processes hardly ever progress in a straight line. More often than not, different phases in the planning process have to be revisited at a later stage, for



Planning process in practice (top) / 'Schema Complexe Stadsprojecten' (bottom)

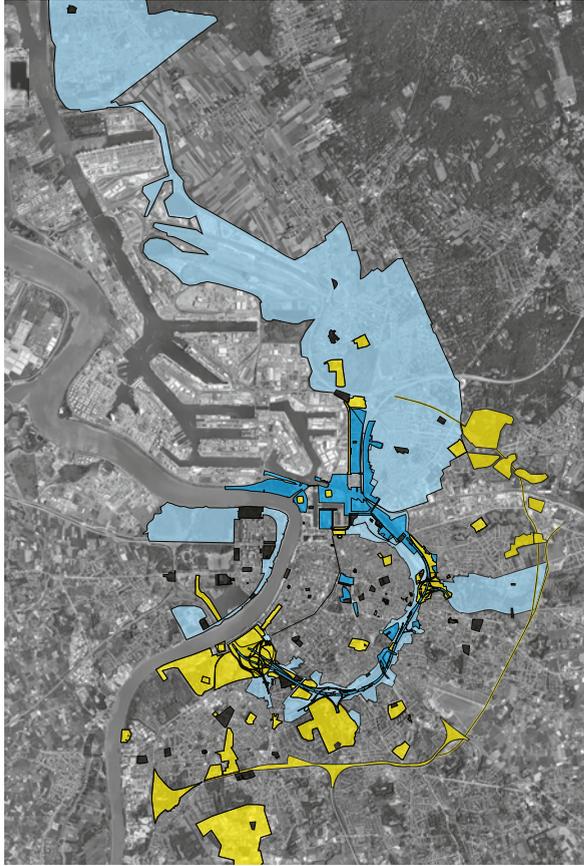
instance because spatial or budgetary conditions have changed, a policy decision has altered the ambitions or an aspect has proven not to be implementable. The 'schema complexe stadsprojecten' illustrates the dynamics and interaction between different phases in planning processes and the various moments at which the Team Ontwerpend Onderzoek can be consulted.

Almost paradoxically, the overall effect of the constant involvement in several of these iterative planning processes at once is greater continuity and coherence within and between planning processes. What is seen as fundamental in one activity will be systematically monitored in another. This experience also facilitates the translation of generic ambitions and visions into spatial design guidelines for concrete projects. In order to develop and maintain this strength, the Team Ontwerpend Onderzoek has to strike a balance between keeping the right distance from planning processes and maintaining sufficient familiarity in order to be able to step in at any given moment and respond to the questions at hand.

"There is a strong case to be made for including research by design in the initiation or exploration phase of the planning process."

STABILITY IN PROCESSES AND POLICY

Several different stakes and interests come together in urban development projects. Project promoters or developers need to realize the value in their land or investment, local residents hope for new amenities, citizens expect a contribution to a liveable city and policy makers have their general and specific policy priorities. Research by design has the potential to be an objective factor in the search for a shared vision. The public interest is the designer's frame of reference, but he or she is aware of the necessity to negotiate and compromise. In this way, research by design is a form of monitoring quality in a context of complex relationships and interactions between public and private interests and partnerships, and between policy and politics.



There is a strong case to be made for including research by design in the initiation or exploration phase of the planning process. Experience has shown that early involvement of the Team Ontwerpend Onderzoek promotes the stability of the further process. It facilitates a dialogue between the project leaders, policy makers and others involved internally and externally and enables early communication and participation trajectories. This way, early research by design allows for certain choices to be made, argued and communicated before concrete plans are elaborated, making them less likely to be subject to hasty decisions, misunderstandings between partners and stakeholders and consequential adjustments at a later stage.

An open and transparent design process can also be an advantage for external designers who will be assigned to the project later on in the process. Partners and policy makers have done their homework and there is a clear and stable framework within which the external designer can actually work more freely. The extra investment of time in the initiation or exploration phase is won back in the actual design and execution phases.

AN INTERVIEW WITH LARS LERUP AND GRAU

Philippe De Clerck, Geoffrey Grulois, Michael Ryckewaert*

Lars Lerup, designer and writer, is a Professor of Architecture at RSA. He was Dean at the Rice School of Architecture and William Ward Watkin Professor from 1993 to 2009. Previously, he taught for a number of years at the University of California at Berkeley. His work focuses on the intersection of nature and culture in the contemporary American metropolis, and Houston in particular. He is the author of several seminal works, such as *One Million Acres & No Zoning* (Architectural Association, 2011), *After the City* (MIT Press, 2000) or *Building the Unfinished* (SAGE, 1977).

GRAU is an office for architecture and urbanism based in Paris. GRAU means 'grey' in German and determines a measure of variable intensity, a metaphor for the complexity of the contemporary city in which the office operates. GRAU works on projects of various scales, ranging from regional development strategies to housing extensions. Recent projects include the development of housing in the agglomeration of Bordeaux, the urban renewal of the Claveau district in Bordeaux and the Belgian pavilion at the Venice Architecture Biennale 2012. The partners of GRAU are regular lecturers, panel members and critics at many international institutions such as the IABR in Rotterdam, the Academy of

Architecture of Mendrisio in Switzerland, the House of Culture of Japan, and Columbia University in Paris. In 2012, Susanne Eliasson and Anthony Jammes of GRAU were the master tutors of the RE:WORK Master Class.

To begin, could you quickly summarize how the Rivercity Project in Göteborg came about? How did you get involved and assemble the team? What were the questions asked?

GRAU: We saw the call for submissions and were of course attracted by the offer. Having read Lars's paper 'Toxic Ecology' on the struggle between nature and culture we immediately thought of him as a perfect partner, so we decided to contact him, somewhat out of the blue. We were convinced that we needed a strong but somewhat different team to have a chance of being selected. So we set up a group with Lars, Sébastien Duprat who is co-director of ELIOTH, a French office focusing on sustainability, and Arnold Verbeek, an economist from Idea Consult.

You begin your approach with a more global analysis, placing Gothenburg within a comparative matrix of 'Wet Network Cities'. Besides exploring the different possible attitudes in the relationship between water and city,

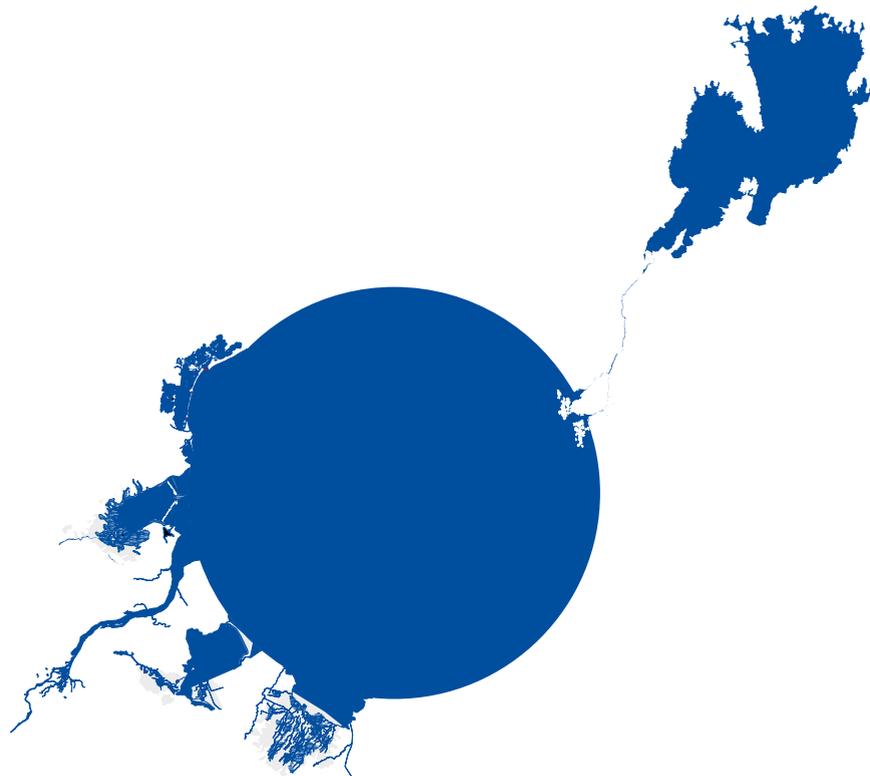
* In the scope of the colloquium 'Research by design and public policy', BOZAR 29.10.2013

how necessary was this comparison? In what way did it serve the method and influence the final proposal?

LL: To highlight Gothenburg's national role as a major export city, and to make a clear distinction between 'central cities' and 'network cities' we established an internal network of export cities gathered around an abstracted 'central' ocean. At the same time, we established – by implication – Gothenburg's role as 'a gateway to the world.' In turn this made clear that the harbour, in spite of the decline of many of its traditional industries, remains a central focus in the city and potentially therefore a central component of any plan for the future of the city. In addition, this outward attention established

Gothenburg's international character. In the end, much of the proposal is focused on the central inlet from the Atlantic, known as Gota Alv.

GRAU: In addition to its position as a gateway, it was also a way of saying that Gothenburg is not alone in dealing with the issue of rising water levels – it is a major concern for most seaside cities. It served as a comparison, but it was not a case study per se, but rather a way of showing the multiplicity of approaches and an openness towards the question, knowing that we could not solve it in a one-week workshop, nor could we do so alone. The idea was really to put it out there, on the map, expressing it loud and clear to the city. The blue circle, representing the common ocean, became a powerful expression to remind us of this.



“THE SOCIAL STRIATIONS DIVIDING THE CITY INTO WORKERS ON THE LEFT BANK AND MANAGERS ON THE RIGHT BANK CANNOT BE SOLVED BY PHYSICAL CONNECTEDNESS BUT THROUGH COOPERATION AND MUTUAL RESPECT. HERE EDUCATION AND CITIZEN PARTICIPATION ARE THE KEYS – NOT ARCHITECTURE.”

The operative part of your project starts with the acceptance of Gothenburg as a fragmented city, rejecting any utopian unification of ‘the’ Gothenburg. In today’s global context and concomitant shift on city marketing, this might seem a counter-intuitive approach. Did this decision come easily? Did the shattering of the ideal of a unified city provoke any particular reaction from policy makers?

GRAU: This is correct: Gothenburg is indeed a fragmented city. The abundant infrastructure, the topography, the very wide Göta river crossed by a number of bridges, all create a fragmented condition that is then reinforced by demographic and social fragmentation. For us, neglecting this reality seemed counterproductive, and we felt almost immediately and intuitively that the way of looking at the city through fragments could actually help solve this issue.

LL: Physical contiguity is obviously important but best resolved by infrastructure. The character and specificity of each of the four central areas, once enhanced, are seen as an opportunity to highlight the unique qualities of this harbour city. Each of the distinct parts is seen as a ‘terroir’ (territory) that when understood and enhanced will help direct future development. This way, both past and future are tied together. The social

striations dividing the city in workers on the left bank and managers on the right bank cannot be solved by physical connectedness but through cooperation and mutual respect. Here education and citizen participation are the keys – not architecture. Our use of the toolbox rather than a master plan was an attempt to create a forum for educational and participatory processes.

GRAU: Similar to the idea that as a human being, if you are comfortable in your own skin you tend to be more open, we tried to strengthen the inherent quality of each fragment, imagining that connections would then start developing between them, but in richer and multiple ways than simply through infrastructure. There is of course also an economic aspect to this point of view. Physically connecting is expensive; a more bottom-up approach, or rather the inside (of the fragment) reaching out to the outside (other fragments) by strengthening its own identity, becomes a way to accomplish transformation with less money.

How did you then identify the four fragments that make up the Rivercity Project, and determine they could be the core of your intervention? What was your approach in making them complementary to one another?

LL: The notion of a ‘terroir’, is to look at and listen carefully to what exists already. Once we did this, the four-leaf clover stood out, obviously enhanced by the discreteness and centrality of each part – a fact that all parties realized early on. The character of each made it clear that the old core will retain its importance while the three others need great enhancement. The Frihamn just across from the core takes on some new civic qualities, not fully evolved in the old core, to create a new civic centrality on the left bank – largely a gesture to

balance the civic capabilities by using both sides of the river. The other two parts were built around smart industry and downtown housing respectively. This way, the four-leaf clover represents all essential aspects of a city centre. We further enhanced and emphasized the internal dependency of the four by making each part an essential link in an interdependent energy cycle.

“WE AIM TO DEVELOP INCLUSIVE METHODOLOGIES RATHER THAN EXCLUSIVE ONES... AND THE BEAUTY OF A METHODOLOGY IS THAT, AS A DEFINED STRUCTURE, IT CAN ACTUALLY BE QUESTIONED AND OPENLY DISCUSSED TO EVOLVE OVER TIME.”

In Rivercity Gothenburg or the RE:WORK Master Class, the approach of GRAU always appears to stem from a very defined and understandable methodology, almost mathematical in its clarity. This allows ease and playfulness in manipulating complex information within the frame, but the risk seems to be that certain peripheral aspects are explicitly excluded as being ‘outside of the method’. Would you agree with that? What is gained from this approach and how do you work with what looks like self-imposed limits?

GRAU: We all make selective choices – even without knowing it, our brain does it for us. In addition, one can never address all the aspects of an issue, not in our trans-disciplinary field of operation and certainly not if on a schedule. Some elements will inevitably be left out, irrespective of the approach. For us, defining a methodology means trying to anticipate what we will look at, making the selective choices at the beginning, and thus offering more freedom during

the process. It creates a structure – a common framework allowing people to communicate, but it does not exclude intuition and creativity. We actually don’t believe it is that mathematical. Sure it’s a way to be precise, but in an open way.

Our methodology does not dictate the project – it merely provides us with the means to do it, hence working more like operating tools. We aim to develop inclusive methodologies rather than exclusive ones. Lastly, the beauty of a methodology is that, as a defined structure, it can actually be questioned and openly discussed to evolve over time (this is something that is hard to do with ideas that are just floating around).

As to your last question, our generation is being educated to work within large teams and in quite complex existing environments. This might be a reason for our comfort in working with ‘self-imposed limits’ or ‘personal rules’: it becomes a way to surround ourselves with the known in an unknown environment.

Both of your design approaches give a lot of importance to the drawing. Yet this graphic strength does not come at the expense of the flexibility of the project. How do you achieve such synthesis? Where does the drawing meet the method?

LL: Although we draw very differently, both types attempt to abstract and simplify a certain set of issues in focus. My attempt is to use a type of editing of the real, to point at the ‘power lines and contours’ of a particular issue. I further enhance these privileged readings by naming them. Thus, a vast canopy of trees in Houston becomes a Zoohemic Canopy – hinting at the zoo-like qualities of a deliberate agglomeration of a distinct pseudo-object – planted trees. In my case, it is also a reflection of me being of a pre-computer generation. GRAU has proven through their distinct drawing

style that there is a post-computer drawing life. The latter part of the question above is more difficult to answer, but suggests a self-analysis that I prefer to avoid. But I can assure you the drawing is the method.

GRAU: Drawing is definitely the method! We are inspired by Lars’ drawings because they manage, with a few simple lines or colours, to articulate a complex reality and thought. In that sense, they stimulate the imagination in a very effective way.

In our office, we are very interested in the idea of representation. Design is a means to transform chaos into form and organisation, and drawing becomes the tool not for a celebration of complexity but rather as a way for clarity. We see the drawing as a potential for clarification and in that sense, we pay particular attention to the relationship between the method, the process and the economic reality in which we operate.

“COMMON URBAN VALUES ARE ABSENT FROM THESE TERRITORIES BUT THIS DOESN’T MEAN THAT THERE ARE NONE: THERE ARE NECESSARILY NEW VALUES TO FIND, WHICH MEANS THAT IN A CERTAIN WAY THE FUTURE IS ALREADY PRESENT HERE.”

In your practice and research, you are both very interested in exploring post-urban conditions beyond the consolidated European cities. How did the post-urban experience of Los Angeles, Houston, Gary (US) or Ishinomaki (JP) affect your conception of planning and design?

GRAU: First of all, we see what you call the ‘post-urban’ experience as an urban experience of its own, just not the common model. What we find interesting in these urban examples is the

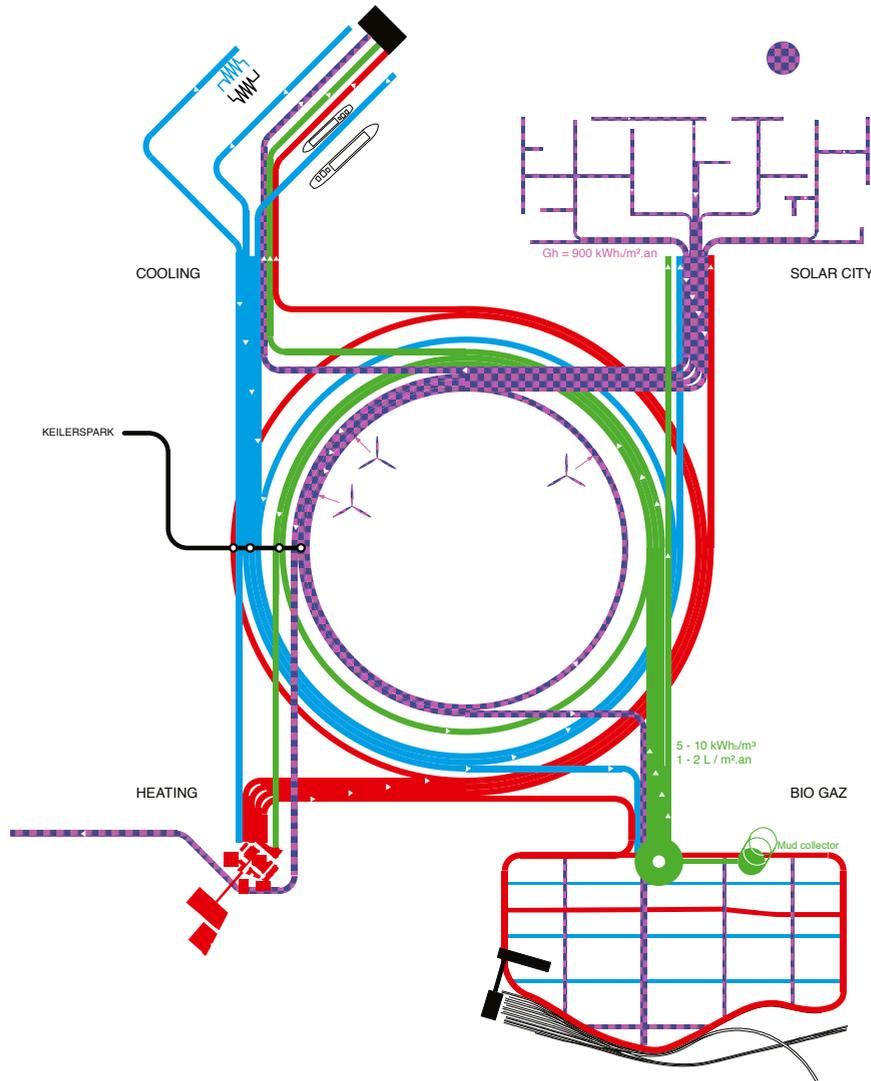
possibility to explore new values and new forms of balance. Common urban values are absent from these territories but this doesn’t mean that there are none: there are necessarily new values to find, which means that in a certain way the future is already present here. For us, the possibility of transformation in cities like Ishinomaki or Gary is at its maximum, which makes them very interesting places not only to explore in planning but also to observe in time.

LL: Architecture, when interesting, is always about the future. Combine this with the basic aversion by middlebrow architects to the sprawl of the post-urban condition and you have a storm of my liking. Since I see my role in this conversation as fundamentally contrarian, it is for me the perfect storm. This goes hand-in-hand with my aversion to Master Plans, top-down planning and the kneejerk rejection of self-organization – all central issues in the post urban city. I think this is all reflected in the very effective cooperation that I have with GRAU – and for me, it is very comforting that a much younger generation is pursuing the contrarian project – now with new tools and interests.

“IT IS THE CITY-OF-THE-REAL THAT IS OUR CONCERN, REplete WITH DEVICES, MACHINES, ENGINES, MIASMA, CRIME, LONELINESS, DESPAIR, JOY AND LOVE...”

Your work also seems to focus on spaces that fall out of what GRAU, during the previous Brussels Master Class, called the ‘friendly city’ made of housing, parks and urban living. How did this interest in devices, machines, engines, miasma, etc, arise?

LL: Indeed, the realization that we live on a spaceship that is hurtling into an unknowable future, surrounded by



miasmas both actual and mental, demands that we look and explore the dark side. Our colleagues' obsession with the 'friendly city' is pathetic. You should look at the cheerful perspectives of our competitors in Rivercity – a city that suffers from seemingly endless wind, rain and associated greyness. It is the 'city of the real' that is our concern, replete with devices, machines, engines, miasma, crime, loneliness, despair, joy and love...

GRAU: Lars just said it very well: we try to focus on the 'city of the real'. This is not the friendly city, nor is it the mean one but a city where we have to accommodate both aspects.

We've had the city of the machine, the city of architecture, the city of objects, and the city of networks. Now we look for the sustainable city but it's quite clear that this city is not the green one that serves as a poster child for all new urban developments popping up here and there.

In that sense, the initiative of the RE:WORK Master Class is very relevant, recognizing the need to bring back industry and logistics into the city centre, activities that are commonly seen as 'mean' and therefore pushed out of the city. This is the sustainable city we should look for.

“THE METABOLISM OF THE CITY REMAINS A TANTALIZING METAPHOR WHICH, IN ORDER TO HAVE ANY VALUE BEYOND A MERE METAPHOR, MUST TAKE A GIANT LEAP FORWARD.”

Besides your own work, this interest in the 'metabolism' of the city is increasingly present in today's practices. Urbanism turns to landscape, ecology, infrastructure, energy flows... to grasp and deal with the contemporary urban problems. A similar interest in the 'intestines' of the city – or its metabolism, and its expressions in gridded or networked infrastructure – occurred in the

late 1960s in what Dominique Rouillard has called Superarchitecture, the work of architects in the late 1960s such as Archigram, Superstudio, the Metabolists, Constant's New Babylon... These projects hardly ever reached beyond utopia. To what extent is urbanism's current fascination different from these rhetorical approaches?

GRAU: Well, for one thing Superarchitecture aimed to 'build' the city's metabolism whereas current urbanism merely tries to understand the existing one. There is a clear belief in our generation that the existing is already here and that we have to build from it.

That being said, we do see a return of superstructures in students work, maybe not so much as an expression of the metabolism but rather as the will to express architecture as a powerful element of the city, in a time where we are turning. This 'return of architecture' and its expression of power does raise some questions. Lars, you might have some ideas on this.

LL: The metabolism of the city remains a tantalizing metaphor which, in order to have any value beyond that, must take a giant leap forward. And this will not be easy or done by architects. The new version of a city metabolism is drawn from medicine and its understanding of the body as a metabolic system that builds (anabolic cycle) and burns energy (catabolic cycle) while attempting to stay in balance. It seems (at first) obvious that both city and its citizens build and burn energies. It also seems clear that most cities are in some imbalance. Obesity suggests that people build too much energy by eating too much, while mountains of garbage in a wealthy city suggests that we don't know how to reduce and to dispose of it – while posing the opposite in a poor city. However, to go beyond such obvious discovery requires not only the understanding of each system in a city, but

also how a myriad of complex systems operate together or in conflict. To look at just one subsystem, see the complex energy cycle developed by our energy consultant in Gothenburg.

And I have a deep suspicion that at the very best we will have a reasonable understanding of the metabolism of machine-like systems and some organic systems like the body, but will be eternally flummoxed by the impacts of proliferation of each such category and of system integration across the mechanical-organic chasm. Modest advances in bio-mimicry suggest that this will take a very long time.

“THERE IS A CLEAR BELIEF IN OUR GENERATION THAT THE EXISTING IS ALREADY HERE AND THAT WE HAVE TO BUILD FROM IT.”

Your strategies seem to deny or go beyond the ideological struggles that mark and polarize contemporary urban debates, sometimes implicitly. The approach is hard to categorize, it does not respond to the opposition between an acceptance of reality that would characterize Margareth Crawford’s ‘Everyday Urbanism’ on the one hand, or a return to ideology of what we could call ‘Critical Urbanism’ on the other. The same goes for a hypothetical opposition between neo-liberal and neo-Marxist approaches. Was it a conscious choice to avoid the possibility of being categorized, simplified, in a way politicized?

GRAU: As architects and urban planners we can never just accept the reality, pretend that everything is good the way it is, and we always have to move forward, inventing new spaces and designs. At the same time moving forward doesn’t mean that we are necessarily critical of the current situation. On the contrary we force ourselves not to be,

because for us this critical position can actually serve as a barrier for further evolution. Instead we try to be in a very proactive position, something that the current economic market is of course also forcing us to.

Having said that, what we find very interesting in our field is the openness that it brings. Of course we have our own ideals, everyone does, but the diversity of situations that we are confronted with everyday professionally, moving from the ‘friendly city’ to the ‘post-urban’ condition, from socially depleted urban neighbourhoods to wealthy suburbia etc, forces us to put those ideals to the side. In that sense we would not say that we consciously avoid being categorized, it is the job that guides us.

LL: In my case I have always held a deep suspicion of ideology – maybe a fundamental affliction of architects, which has allowed us to serve anyone red or blue without a flinch. I don’t think we ever had a discussion of this in Gothenburg, maybe because both Suzanne and I are Swedish and feel reasonably comfortable in the culture, although we are both highly suspicious of the top-down planning that dominates Swedish city planning. As an instinctive counter-reaction we submitted a bottom-up model with a vast toolbox that would allow citizens to participate in the planning of the city’s future. We now realize that this was a fundamental mistake since the City Fathers had no way of dealing with this model as they were used to being told by planners what to do. The top-down model is the central model for all planners despite ideological affiliations, thus the model is not fundamentally different for Albert Speer or Byggnadsstyrelsen (The Central Building Department) in Sweden – if it still exists in the form I knew it from the 1960s. At the same time modern planning is a very narrow band, as my colleague

Gunnar Hartman has suggested, while varying forms of self-organization dominate the majority of ‘planning decisions’ in rapidly developing cities. GRAU’s working methods suggest this when they put forward diagrammatic, although precise proposals, allowing for flexibility and adjustment. Precision and fixity dominate architecture while approximation and flexibility should – Big Data will demonstrate this. This will be reinforced by the rapidly receding welfare state that will in turn put a new burden of responsibility for the city on citizens. As the saying goes: We live in interesting times...

PROFILES

MASTER TUTORS

Yves Malysse studied Architecture at Sint-Lucas, Ghent (BE), after which he worked for Robert Winkel, MVRDV, Bart Clement and Jo Crepain. Since 2002 he is a jury member for several architecture schools and institutions in Belgium and abroad. The same year he started URA with Kiki Verbeeck. URA is located in Brussels and is characterized by a broad spectrum of projects, varied both in scale and function. URA searches for universal, basic typologies and transforms them into a contemporary and precise identity in a specific context. The universal lies within the very specific. Yves Malysse was visiting Professor at TU Delft (2006-2007) and Academie voor Bouwkunst Rotterdam (2008-2009).

Federico Parolotto is Senior Partner at MIC – Mobility in Chain, which he co-founded with Davide Boazzi and Federico Cassani in 2009. He graduated in Architecture at the Politecnico di Milano and began his career with SOM in the UK (1994-1998). He also worked with Systematica in Milan (1998-2008) where he was made partner in 2006. He has been involved as transport planner in numerous major urban planning projects worldwide. He collaborated with firms such as Foster + Partners, OMA and other renowned international design offices on several groundbreaking projects. In 2011 he co-founded Flow(n), MIC research team. He lectured in several international universities and, among various publications, his essays were published in 2011 on 'Ecological Urbanism' by Mohsen Mostafavi and Gareth Doherty and in 2012 on 'Ecological Urban Architecture: Qualitative Approaches to Sustainability' by Thomas Schroepfer. Since 2012, Federico is a member of the scientific committee for the new Milan Sustainable Transport Master Plan.

COORDINATORS

Benoit Moritz graduated as an architect at the ISACF-La Cambre and urban planner at the UPC Barcelona. In 2001, he cofounded the office MSA with Jean-Marc Simon. He additionally developed a teaching and prospective research activity at the Faculté d'Architecture de l'ULB, where he is the coordinator of the Laboratory on Urbanism, Infrastructures and Ecologies (Louise). Within MSA, Benoit Moritz is responsible for urbanism and public space projects, such as the master plan for the development of Tour et Taxis, the realisation of the sustainable district Tivoli, or the renewal of the Place de la Monnaie. Benoit Moritz is also the author of many articles related to urbanism.

Michael Ryckewaert is an engineer-architect and urban planner and holds a PhD in architecture. He is associate professor of urbanism at VUB, where he coordinates urban planning research in Cosmopolis Centre for Urban Research and heads the Master in Urban Design and Spatial Planning. He is also a postdoctoral researcher at KU Leuven. His research focuses on housing and spatial policy. Other key research interests are the history of urbanism, infrastructure, and mobility. Michael Ryckewaert has published on social housing, urban housing projects, urbanism, and mobility history.

ORGANISATIONAL STAFF

Philippe De Clerck graduated as an architect from the Faculté d'Architecture de l'ULB, and is a founding partner of the office DEVspace. Philippe has been a recurrent researcher within the Faculté d'Architecture de l'ULB since 2010, taking part in various projects regarding participation processes and in [pyblik], the antenna for a culture of quality in public space. He also has been

engaged in the cultural sector as an editorial board member for the books Building for Brussels and Changing Cultures of Planning within Architecture Workroom Brussels, and co-organizer of the Brussels Master Classes. Since 2013 he is PhD Student within Louise, investigating the relationship between the practice of spatial design and the concept of the Commons.

Philip Stessens graduated at KU Leuven as MSc Architecture, combining civil engineering and architecture, and holds a certificate of the post-graduate course on public space design and management [pyblik]. In 2009-2010 he worked at Mendes Da Rocha Arquitectos Associados. Back in Belgium he was active as project manager at Bureau Bas Smets, working on projects such as Tour&Taxis, Brussels 2040 (in collaboration with l'AUC and 51N4E) or Nieuw Zuid Antwerpen. Currently Philip Stessens is PhD Student at ULB and VUB on the topic Ecosystem Services for the Sustainable Development of the Brussels-Capital Region: towards an Ecological Approach for Urban Design and Planning.

ACADEMIC STAFF

Jens Aerts graduated as an engineer-architect at the KU Leuven in 1997. After gaining experience in offices both locally and internationally, he graduated with a Master in Urbanism in 2001 at the UPC Barcelona. He then became advisor in urbanism for the Vlaams Bouwmeester (2002-2004) and for the Ministry of Mobility and Public Works of the Brussels-Capital Region (2004-2009). He is now an associate of the office BUUR and specialises in strategic planning, master planning, project and town planning supervision. At BUUR he is mainly in charge of projects in Brussels, such as the development plan at Marco Polo, the renewal of Rue Neuve and the master plan for Biestebroek. Since 2011, he is

guest professor of the Master of Town and Territory Planning at the VUB.

François Andrieux is a licensed architect and first assistant at ENSAP Lille since September 2011 (previously at ENSA Nantes from 2003 until 2011). Currently, he is writing a PhD at EHGO, UMR Géographie-cités (CNRS/Paris I/Paris VII): 'L'urbain à l'épreuve de ses figures – L'atlas comme dispositif de visibilité et de construction de l'urbain.'

Nadia Casabella is architect (UPC Barcelona) and MSc in Regional Planning (LSE). She chooses to work rather exploratorily than problem-solving oriented, straddling across research, teaching, and practice. She is currently project assistant at the Faculté d'Architecture de l'ULB, and lecturer at the VUB (master urban design and planning SteR*). She is about to complete her PhD on the topic of regional, railway-based public transport. In 2010 she founded with Bert Gellynck the architecture and urbanism practice 1010 [ten-ten], aimed at producing architecture on the scale of the city. Among their last undertakings, the master plan for Brussels' South Station in collaboration with Güller+Güller and ZUS, runner-up in an international competition, and the Farmhouse for the Parck-design biennale exhibition in Brussels (2014).

Carles Crosas is PhD Architect (ETSA Barcelona). He has been teaching urbanism at the School of Architecture of Barcelona since 2001 and has been invited to other universities. Former collaborator and assistant teacher to Professor Manuel de Solà-Morales, he is researcher at the Laboratory of Urbanism of Barcelona where he co-edits D'UR and he presented his PhD dissertation on the urban transformation of La Havana (2009). Concurrently, he set up his own studio where he works on diverse projects

and plans of varying scale. He has participated in several urban projects competitions, being awarded on two occasions by European.

Catalina Codruta Dobre is an architect and currently a doctoral researcher within the Louise research centre of the Faculté d'Architecture de l'ULB. Based on her experience in research and urban design in cities in Europe and Asia, she started a research project in January 2013, on the topic of water management. Her thesis investigates the role of new concepts such as 'Water sensitivity' in the process of urban regeneration. She is a founding member of Risk & Architecture Workshop association (RAW). In line with these topics and interests, Catalina has organized student design workshops as well as conferences in collaboration with the Louise research centre and RAW.

Bénédict Grosjean is an engineer-architect (UCLouvain) and holds a PhD in urban design (Université de Paris 8). Her doctoral research about the territories and the concepts of diffuse cities (Urbanisation sans urbanisme, éd. Mardaga, 2010) won in France the 'Grand Prix de la Thèse sur la Ville'. She is associate professor at the École Nationale Supérieure d'architecture et de Paysage de Lille, where she co-coordinates the Urban Département, and part-time lecturer at the UCLouvain. Her recent works focus on relationships between mobility and urban form, on borderline territories issues, on bottom-up processes of urban development.

Geoffrey Grulois is an engineer-architect (FPMs). Before becoming a teacher at the ISACF La Cambre in 2004 and later on at the Faculté d'Architecture de l'ULB, he studied and worked as an urbanist in Curitiba, Barcelona, and Tokyo. He cofounded the design studio Space Speculation in 2005

and the 'Resilient Ishinomaki Workshops' in 2011. He is currently finishing a PhD on the emergence of the concept of agglomeration in Belgium in the 20th century. He is co-author of the chapters on urbanism in several monographs, including Lucien-Jacques Baucher, Jean-Pierre Blondel and Odette Filippone (ULB-FWB); Jean-Jules Eggerix (AAM) and the 'Groupe L'Equerre' (Fourretout).

Géry Leloutre is an architect (Horta Institute for Architecture, Brussels, 2002) and urban planner (KU Leuven, 2006). He combines an architectural practice with an in-depth theoretical reflection about the city. He is project teacher of the design studio 'Space Speculation', researcher and PhD candidate at the Faculté d'Architecture de l'ULB. He has been the editor-in-chief of BRU (Brussels review of urban planning) from 2006 to 2008, the moment he founded the office Karbon' with Bernard Baines, Victor Brunfaut, Matthieu Delatte, and Hubert Lionnez.

Judith le Maire is an architect, graduated from ISACF-La Cambre in 1995 and holds PhD in history of contemporary art and architecture from the University Paris I Sorbonne. She is head of the Centre des Laboratoires Associés pour la Recherche en Architecture CLARA in the Faculté d'Architecture de l'ULB. Her thesis 'Grammaire de la participation. Théories et pratiques architecturales et urbanistiques. 1904-1968' led to the publication of several articles and the book 'Lieux, biens, liens communs' in 2014 (Editions Universitaires de Bruxelles). She continues her research in the field of participation, consultation and reception of architecture. She participates in research contracts or consultancies for various Brussels or foreign bodies, especially on issues of sustainable urbanism, assistance to public project management, and public space.

Sarah Levy graduated from the faculty of Architecture La Cambre in 2006. Since 2010, she is a PhD researcher within the Laboratory on Urbanism, Infrastructure and Ecologies (Louise) of the Faculté d'Architecture de l'ULB, and Cosmopolis, the Centre of Urban Research of the VUB. Within that frame, she works on issues at stake in urban planning in Brussels.

Philippe Louguet is an architect and professor at the École Nationale Supérieure d'Architecture et de Paysage de Lille, where he has been leading the research laboratory LACTH (Laboratory for Territory, Design and History). He is responsible for the urban project in the architecture master programme and directs the Master of Architecture 'Territories and Metropolitan Changing Situation', which he created. He is the author of various books and articles on the relationship between architecture and territory.

Jorge Perea is an architect and planner. A disciple and collaborator of Manuel de Solà-Morales from 1996 until his passing away, he then opened a professional studio in 2012 to follow his theoretical discourse and reflections on the modern city. Former urban design professor at IAAC, the University of Chicago, at Barcelona (IES) and Syracuse University (EUA), he teaches since 2007 at the Department of Urban Design at the ETSA Barcelona. Currently his studio is developing Manuel de Solà's Operaplein project, the renewal of Antwerp's central area. In Barcelona, he developed the reform of the urban environment of the Sants high speed station, reflections and approaches on the transformation of the industrial port, the creation of a new urban centrality in a suburban context in Vall d'oreix in the metropolitan area of Barcelona, and the design of two Cerdà blocks in the technological quarter of 22@ in Barcelona.

Véronique Patteeuw is an engineer architect, writer and editor traveling between Brussels and Paris. She is an associate professor at the École Nationale Supérieure d'Architecture Lille and lectures at the ENSA Paris-Versailles. As co-founder of A16 – an editorial collective in Brussels – she co-curated the Belgian pavilion at the 10th Venice Biennale with the Brussels-based architecture firm Label Architecture. She is pursuing a doctoral research at the ENSA Paris-Malaquais and is the academic editor of OASE Journal for Architecture.

Marco Ranzato studied architecture at the University IUAV of Venice and holds a PhD in Environmental Engineering. During his doctoral studies he was visiting researcher at TU Delft (2008-2010). At present he is post-doctoral researcher at the Faculté d'Architecture de l'ULB. He is co-founder and director of Latitude Platform for Urban Research and Design, an interdisciplinary platform for integrated and socially inclusive projects. He is author of design research projects exhibited and debated in diverse cultural contexts as the Biennale of Rotterdam (2012) and the Biennale of Sao Paulo (2013).

Maria Chiara Tosi, urban designer, is associate professor at IUAV University of Venice. She worked on various city master plans (Brescia, Pesaro, Macerata, Ferrara, Feltre, Belluno, Venice). Her research and work is mainly focused on the processes of transformation of the territory, and the relationship between welfare policies and the construction of the city. Among her main books: *Tracce di città* (2001), *Toward an Atlas of Delta Landscape in Europe* (2013), *Welfare Space: On the Role of Welfare State Policies in the Construction of the Contemporary City* (2014).

Yannick Vanhaelen is an architect, founding member of the office DEVspace. After

his studies at La Cambre in Brussels and at the Academie van Bouwkunst in Amsterdam, he worked for several renowned offices, among them NL architects, before joining 51N4E (BE) in 2010 as project leader for the Elaboration of a territorial vision for 2040 for the Brussels Capital Region, a collaboration with l'AUC (FR) and Bureau Bas Smets (BE). He is now a PhD candidate and researcher within the Laboratory on Urbanism, Infrastructures and Ecologies (Louise) of the Faculté d'Architecture de l'ULB, where his research focuses on the cultural infrastructures of Brussels' Metropolitan Zone.

Ward Verbakel co-founded plusoffice architects in 2006, a Brussels-based practice in architecture, urbanism and design, working on a wide range of projects. Plusoffice is currently developing the masterplan for a health care campus in Torhout and a park in Kuurne and is building a passive library in Woluwe-St-Pierre. Ward teaches design studio as Adjunct Professor of urbanism at KULeuven and taught graduate design courses for GSAPP Columbia University in New York. His research was exhibited in Brooklyn and Antwerp and published under the name Breuckland. Ward is also president of the editorial board of A+, the architecture magazine of Belgium.

Hao Wang is a lecturer in College of Architecture and Urban Planning (CAUP) at Tongji University in Shanghai. He received his PhD in Architecture in 2012, from Tsinghua University in Beijing. His research focused on the urban public facilities in Beijing such as Public Toilets (2004-2007) and Mass Sport Spaces (2008-2012). During his doctoral programme, he studied at KU Leuven as an International Scholar from September 2008 to April 2009. His current research focuses on the mechanism of combining urban

public space with mass sport activities in a dense habitat in Chinese metropolises.

STUDENTS

Muruvvet Aktas (BE) is currently finishing Architectural Engineering studies at the Vrije Universiteit Brussel (VUB). In her master thesis, she studies how the Brussels city centre can change from a car-oriented city to a pedestrian-oriented city.

Samuel Amory (BE) is currently pursuing his Master degree in Architecture at the Faculté d'Architecture de l'ULB. This Master Class was his first experience with an international reflection upon the city. Fascinated by this research, he is looking forward to new, similar opportunities in Brussels or abroad.

Luis Bellera Fernandez de la Cruz (SP) started architecture in ETSA Barcelona in 2008. He has participated in several student competitions (The Possible City). In 2011 he received a scholarship to study 1 year in ETSA Madrid. During the last 2 years he has been working in New York in the architecture firm Rockwell group (summer 2012, 2013) and in the Multiplicities Studio (summer-fall 2013). Currently he is working at Jorge Perea's studio for the competition of Plaça de les Glories in Barcelona, parallel to his thesis project.

Alessandro Benacchio (IT) studied at IUAV in Venice and at ETSAB in Barcelona. He is now finishing his master thesis challenging spatial consequences of policies and land value on agricultural landscapes in the Veneto region. He attended several international workshops with, among others, Mathias Klotz and IND and has recently worked at The Why Factory as an assistant researcher.

Niels Biesemans (BE) graduated in 2009 at UHasselt with a master degree in transportation and mobility.

With an interest in the relation between urbanity and mobility he started a master of Urbanism and Spatial Planning at the VUB. He is currently working on his thesis, trying to create a new innovative logistic zone by connecting both ports of Brussels. He gained professional experience working as an engineering and mobility consultant for local governments.

Cécile Brisse (FR) is in her first year of master at the ENSAPL Lille, in the speciality territory.

Lucas Brusco (BE) is studying at the Faculté d'Architecture de l'ULB. He is interested in history and theory of architecture. He worked for the exhibition Europalia India doing the model of the Meenakshi Temple. He is also involved in the organisation of the school, working in the students' association.

Valentine Dailly (FR), graduated in february 2013, from ENSAP Lille. Fascinated by conception methods, she produced a research about this thematic during her studies. She multiplied experiences in international Workshops and Master Classes, recently in the ICS College of Arts in Tokyo. With the same interest she organises the PechaKucha Nights in Lille.

Eva De Fré (BE) graduated in 2012 at the University of Leuven. Since her collaborative master thesis 'Keeping The Fence', that elaborated on the advent of gentrification in Red Hook (NY), she increasingly engaged in Research by Design processes in different contexts and scales. The project was selected for various national and international prizes, and part of exhibitions in Brooklyn and Antwerp ('Projecties: Breuckland. De Voorstad', deSingel). Currently, she is working at TRANS architecture & urbanism.

Valentina De Polí (IT) is currently finishing architecture studies at the IUAV Venice. She participated in different

workshops with the architect Amancio Guedes Alpoim Miranda in 2008, Satoshi Okada in 2009 and with Hilde Leon in 2012. She has worked with Archi5 in Paris in 2013.

Alessandro De Savi (IT) is currently studying at IUAV University of Venice. He has been an intern at the Re-Cycle research group (Paola Viganò) and Studio Cecchetto & Associati where he worked, among others, on the competition for the Italian pavilion at EXPO2015 and the MOSE project in Venice. He also attended international workshops with De Architekten Cie (NL) and WOLFF Architects (ZA).

Giorgio De Vecchi (IT) is currently graduating at IUAV University in Venice. He has been a participant to several international workshops. For several years now, he is working as a photographer, with architects such as Salottobuono studio and Pool landscape.

Francesca Romana Dell'Aglio (IT) is studying Architecture and City at IUAV in Venice and now working on her graduation thesis. Since 2011 she's part of the editorial board of the on-line magazine 'Engramma', and of the university magazine 'The Ship', which curated the Archizines exhibition in Venice in the summer of 2013.

Zakia Douibi (IT) graduated with a bachelor's degree at the École Supérieure d'Architecture de Casablanca (EAC) and is currently finishing studies at the Faculté d'Architecture de l'ULB. He previously participated to the RE_goa workshop – Recycling Genova by the Mies van der Rohe Association, Genova University and Cataluniya.

Mahmoud El Boujamaï (MA) is finishing his architecture studies at ULB, with a year of exchange in Switzerland. He participated to international projects and workshops involving trans-disciplinary students and professionals.

His work covers different topics and scales. In his master thesis he questions the architecture practice by dealing with the slums and self-constructed habitat issues.

Céline Foubert (BE) is currently finishing architecture studies at the Faculté d'Architecture de l'ULB, with a one year German exchange programme with the RWTH University Aachen. She won a prize at the Gremiums Architektur des Kulturkreises 'Impulse für den Borsigplatz in Dortmund' with her colleague in October 2012.

Carlo Frassinelli (IT) graduated in 2013 after having studied at IUAV University of Venice. His diploma project was a collective research that dealt with modernism and rural environment, focusing on general settlement principles developed in the 1950s for the Moroccan plain of the Gharb. He's currently collaborating with Owest Architecture in Brussels.

Anna Livia Friel (IT) is finishing her Master in Architecture and City at IUAV University of Venice. She is currently working on her final project and research on the political and economic role of contemporary architecture in the ancient city as an opposite force against the creation of the myth of Venice. **Camille Gardien** (FR) is completing her first master year in architecture at the Faculté d'Architecture de l'ULB. She is interested by large scale approaches of the territory, the composition and the growth of the contemporary city and more particularly by the importance of water in the landscape. She is thinking about doing her master thesis on the link between water and urbanism.

Ferran Iglesias (ES) has been studying architecture and urbanism since 2008 at the ETSA Barcelona, currently attending the fifth year. He is focusing his thesis project on mobility infrastructure and landscape in

Madrid. One of his projects has been published recently in the book 'Barcelona Enllaços'.

Deng Kaiwen (CN) graduated in 2011 as an architect at the Zhengzhou University. After he graduated, he worked in the Planning Institute of HENAN province for one year. Now he is finishing his master of Architecture in Tongji University, focusing on a commercial complex besides a metro station in Shanghai. In parallel, he is working on a 200.000 sqm project in his hometown Kai Feng, previously the capital of China, catching the interest of the local government.

Chen Kaixiang (CN) is currently finishing his studies in architecture at Tongji University in Shanghai.

Jeroen Kessels (BE) graduated from his studies in architecture and urbanism at KU Leuven in January 2014. His master thesis focused on creating space for exchange between industry and residential functions in Brooklyn, and was part of the exhibition 'Projecties: Brueckland' in deSingel in Antwerp. He currently works at URA in Brussels.

Jérôme Kockerols (BE) graduated in 2013 from the KU Leuven with a master degree in civil engineering and architecture. His master thesis investigates the integration of productive and manufacturing businesses in Brooklyn. He has contributed to the exhibition 'Projecties: Breuckland' at deSingel in Antwerp and is currently working at Bureau Bas Smets in Brussels.

Chantal Marfà (ES) is studying architectural engineering at the ETSAB, Barcelona, currently attending the fifth year. These last years, she has focused her personal work on sustainable and social architecture.

Tiziana Mazzolini (IT) graduated in 2012, and is currently specialising in Landscape and

Sustainability at IUAV University in Venice. She shows a strong passion for innovative architecture and is eager to gain professional experience always confronting with other cultures, philosophies and working modalities. Some of her projects have been selected for a number of exhibitions and publications.

Patrick Morgado (PT) is currently finishing architecture studies at the Faculté d'Architecture de l'ULB. One of his projects was recently selected for participation in the Génération Espace Mer competition, which deals with rising waters and its direct impact on cities. He will try to deepen this reflection by inserting it into a broader questioning related to sustainable development.

Guillaume Munné (FR) graduated at the ENSAP Lille in 2013, after an initial technical training in sustainable construction. Most of his projects question the relation of architectural and urban scales. His degree in architecture and urbanism covers the 'collage city' and its multi-scale characteristics. In his master thesis he questioned and studied architecture analogue transfers.

Justine Pierson (BE), is attending her last year of Master in architecture at the Faculté d'Architecture de l'ULB. In 2011, she participated in a competition called 'La Louvière Métropole' in Belgium.

Marina Povedano Revilla (ES) graduated in 2013 from the ETSA Barcelona where she was teaching assistant until 2013. She is also studying Philosophy at the Universitat de Barcelona. In her master thesis she explored the relationship between urban design and philosophy by transforming an isolated area of the city into a sports network. She is currently working at Coll-Leclerc Architects in Barcelona.

Li Qing (CN) is currently studying at Tongji University in order to obtain a Master in Architecture after a five-years study for bachelor's degree, and is now looking for an internship in Shanghai. She hopes her background can offer a different view to solving urban problems, especially in working with mass traffic problems.

Sahar Safieddine (LB) is currently finishing her studies in architecture at the ENSAP in Lille.

Etienne Schillers (FR) is currently finishing architecture studies at ENSAP Lille, with a one-year masters exchange programme with the Warsaw Faculty of Architecture (PL). In his thesis work, he explored the citizen's place in the transformation of his living environment. He took part in the 'Grand Paris' urban reflection doing a workshop with the inhabitants of the North suburbs La Courneuve organised by Studio_13 Secchi & Viganò.

Federico Segat (IT) is currently finishing his MSC at IUAV. He took time between his undergraduate and postgraduate programmes to work for Salottobuono, Milan and Mila Studio, Berlin. Outside of architecture, his main interests revolve around graphical design and illustration, both in the personal and professional realm.

Emily Sevrin (BE) is currently in her first master year at the Faculté d'Architecture de l'ULB. With her international background (lived in Cameroun, Germany, Tunisia, Democratic Republic of Congo), she tries to understand the meanings and power of architecture through different cultures. In December 2013, she was selected as a candidate to participate in the Business of Design Week in Hong Kong to improve the exchange relations between design students (fashion, interior design, architecture, etc) from China and Belgium.

Marc Subirana (CT) is currently finishing architecture studies at the ETSA Barcelona. He has worked with Lagula Arquitectes and at present he is project assistant at Mias Arquitectes. He is also teaching assistant in Architectural Projects Department at ETSAB from 2011. In July 2011, he participated as lecturer in TEDxBarcelona.

Laura Tavernier (BE) studied engineering-architecture at the KU Leuven and graduated in 2013. For her master thesis she did intensive fieldwork in Sekondi-Takoradi (Ghana) in order to analyse the influence of government housing on urban development. In addition to her architecture degree she is currently obtaining a master in traffic, infrastructure and logistics, also at the KU Leuven.

Stefano Teker (MU) is currently finishing architecture studies at the Faculté d'Architecture de l'ULB, he is mostly attracted to the research of solutions to the growing need of housing facilities in contemporary cities. He is thinking about doing his thesis on the development of cities in emergent countries, since he was born and raised in Mauritius Island where an important urbanization process is taking place at the islands' scale.

Jeroen Vandervelden (BE) graduated magna cum laude from the KU Leuven in 2013, and currently works at WIT Architecten. His master thesis focused on the socio-economic border conditions in Brooklyn, NY, and showcased the local spatial impact of emerging virtual networks. Recently, he collaborated on the exhibition 'Projections: Breuckland. The Suburb' in deSingel, Antwerp.

Sara Vima Grau (SP) has been studying architecture and urbanism since 2008 at the ETSA Barcelona. In 2012 she took part in an exchange programme to study at the ETH Zürich for one year. She is currently completing the last year of her

studies, working as an intern at Domingo Ferré architects, and she just obtained a grant to collaborate with the research of the Building Technologies Department. She is preparing the start of her Master Thesis in Barcelona, in collaboration with the research of the Architecture & Sustainable Building Technologies at the ETH, on the integration of post-fossil energy logistics into urban design, in the renovation of a post-industrial and administrative hub in the periphery of the city of Zug, Switzerland.

Su Xiaorui (CN) graduated from the School of Architecture and Urban Planning, Shenyang Jianzhu University in 2012. In the same year she was admitted to Tongji University, the College of Architecture and Urban Planning, focusing on a master degree in architecture with the research direction for architecture design and theory. Now she is guided by professor Wang Bowei to set research on educational architecture design.

Li Yangfu (CN) is currently studying at Tongji University to obtain a Master in Architectural Design and Theory. He has practiced architecture at TJAD Architectural Design and Research Institute of Tongji University since March 2013.

Su Zongyi (CN) is currently studying at CAUP (College of Architecture and Urban Planning, Tongji University, Shanghai) to obtain a Master in Architecture. He has been an intern at Z plus and Yitong Design for 9 months in China.

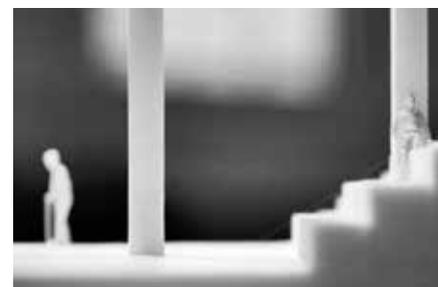
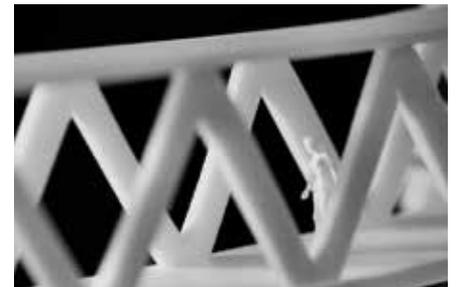
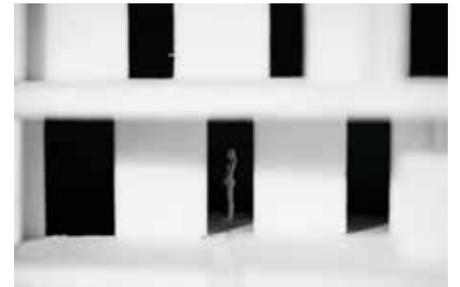
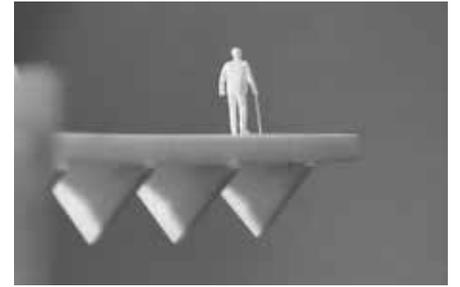
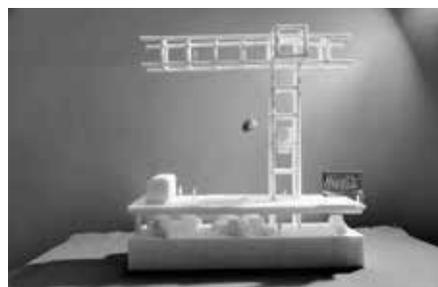
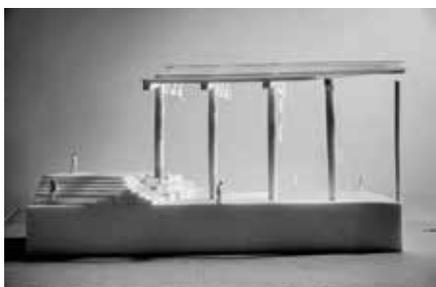
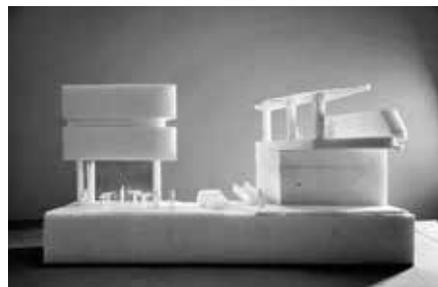
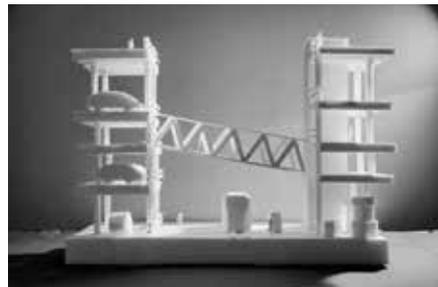
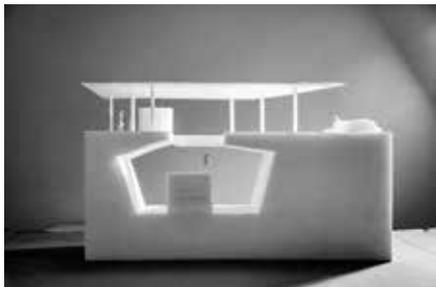
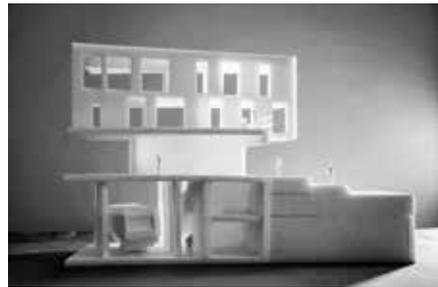
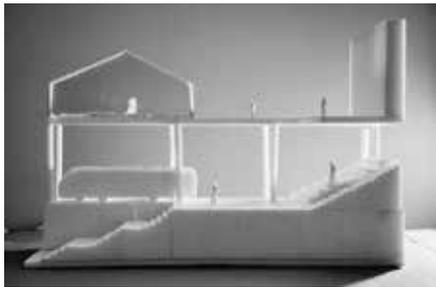
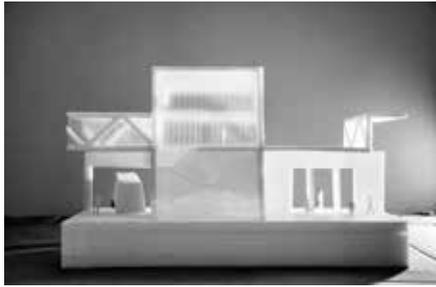


IMAGE CREDITS

End of Line

p.28-29: all images © URA

Proposals

p.36, 42, 56, 62, 78, 84, 98, 104, 118, 125: © Ine Van Coillie

p.71: © Re-Vive

p.72: © GIS Irisnet

p.73: © Bogdan Van Broeck Architects

Readings

p.145-151: © T00

p.153-161: © GRAU

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording or any information storage and retrieval system, without permission in writing from the copyright owners.

All statements contained in this research report are the sole responsibility of their authors.

The publishers have made every effort to trace copyright holders, but if any have been overlooked, we will be pleased to make the necessary accreditations at the first opportunity.

SCIENTIFIC COMMITTEE

Jens Aerts

Nadia Casabella

Philippe De Clerck

Geoffrey Grulois

Géry Leloutre

Judith le Maire

Benoit Mortiz

Marco Ranzato

Michael Ryckewaert

Philip Stessens

Yannick Vanhaelen

EDITORS

Benoit Moritz

Philippe De Clerck

Philip Stessens

GRAPHIC DESIGN

Something Els

www.somethingels.net

TRANSLATIONS

Philippe De Clerck

Government of the Brussels-Capital Region

Dynamics Translations

COPY EDITING

Brussels Writing Bureau

PREPRESS & PRODUCTION

Mistral

PRINTING

BEMA-GRAPHICS NV/SA

© 2014 Université libre de Bruxelles/

Vrije Universiteit Brussel

This publication was made possible by the Secretary of State in charge of Urbanism for the Brussels-Capital Region.

THANKS TO

Bo Aronsson

Olivier Bastin

Joachim Bergerhoff

Olivier Camus

Renaud Chaput

Eric Corijn

Stefan De Corte

Roeland Dudal

Susanne Eliasson

Eric Falier

Bert Gellynck

Virgil Grot

Marie-Cécile Guyaux

Philippe Heymans

Esther Jacobs

Anthony Jammes

Patrick Janssens

Charlotte Kokken

Valérie Lambot

Christophe Lamontre

Eric Lapierre

Lars Lerup

Béatrice Mariolle

Thierry Mercken

Jérémy Onkelinx

Véronique Patteeuw

Georges Pirson

Kris Scheerlinck

Marcel Smets

Iwan Strauven

Jean Vandamme

Lydéric Veavy

Kiki Verbeeck

As well as T&T Projects for providing the workspace

ISSN: 2294-8880

