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Integrated Planning and Design for Sustainable Urban Peripheries in Europe
Urban Landscapes from Erasmus to Bruegel: Brussels 2014

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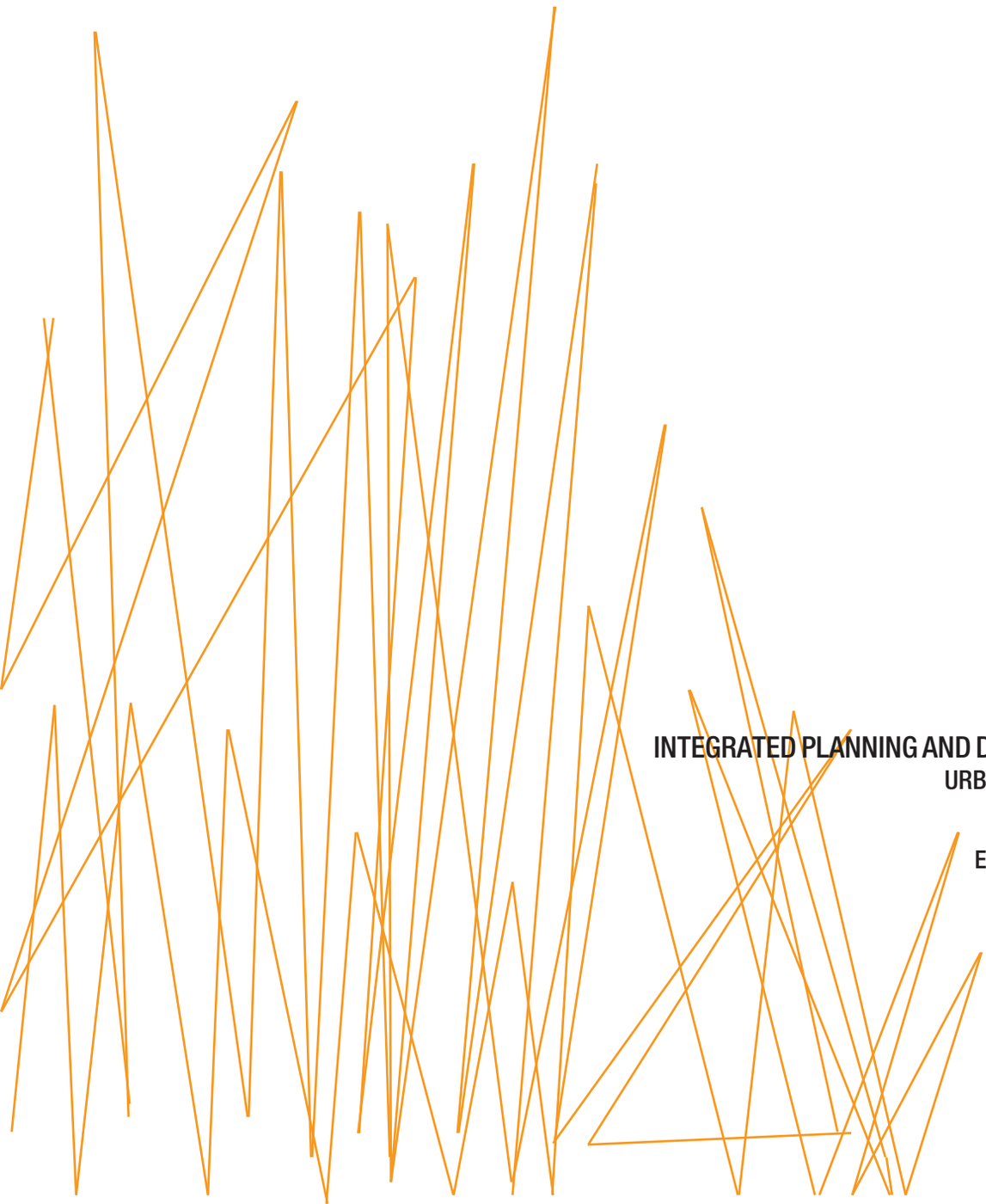

Urban Landscapes from Erasmus to Bruegel: Brussels 2014

INTEGRATED PLANNING AND DESIGN FOR SUSTAINABLE URBAN PERIPHERIES IN EUROPE

URBAN LANDSCAPES FROM ERASMUS TO BRUEGEL: BRUSSELS 2014

Editors: Kristin Faurest, Ellen Fetzer, Kinga Jánossy, Gabriel Pascariu

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Lifelong Learning Programme

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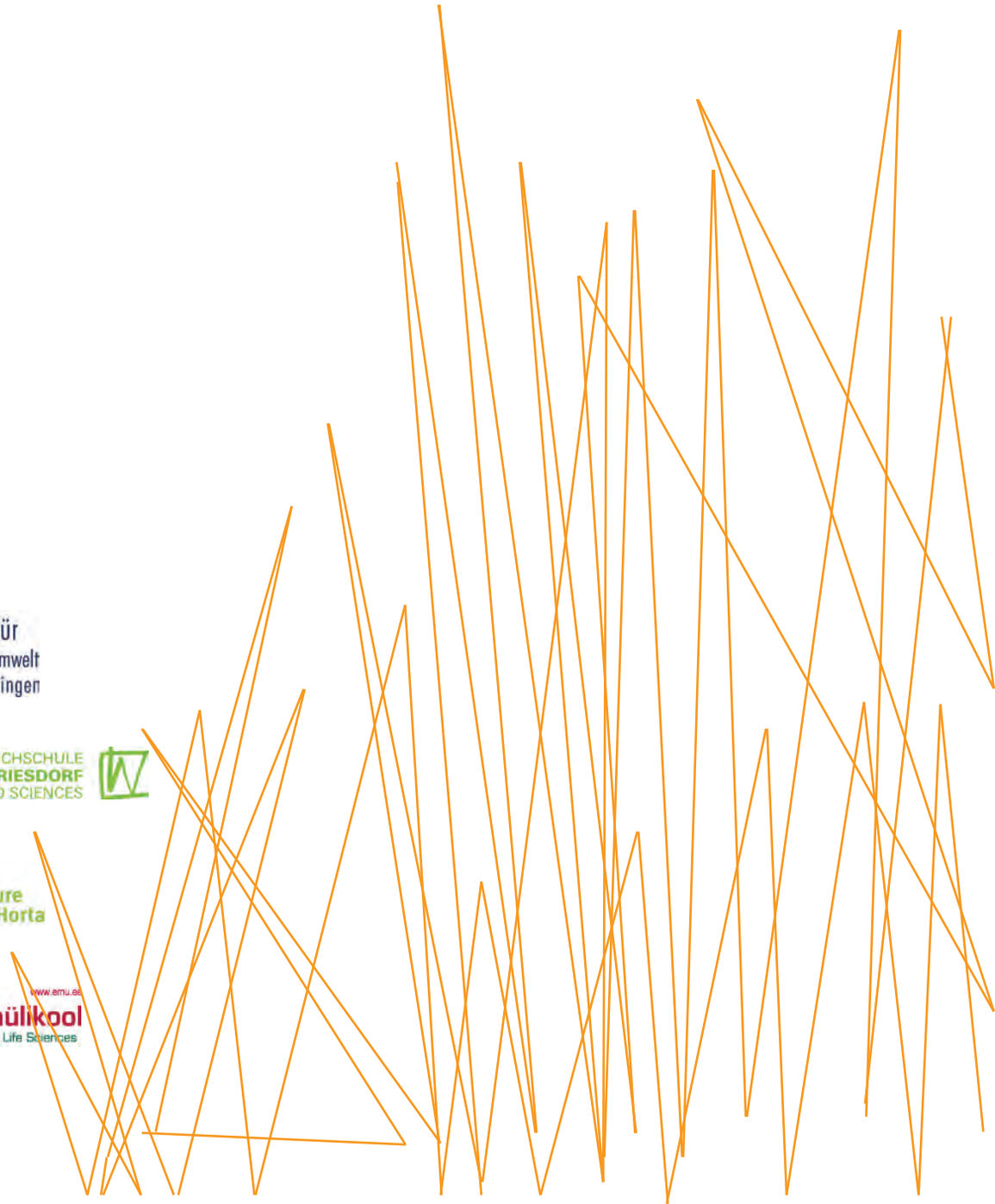


TOKO

FOREWORD //

This project is also a journey across peripheries. Last year, we went to Bucharest to see the periphery of the periphery. But did we really return to the core this year, when we studied Brussels, the so-called 'heart of Europe'? What we learned about Brussels was that it is a good metaphor for Europe. Possibly because it has no defined image. Strolling through Brussels lets one imagine anything. There is an idea of freedom in this, something we also found in the periphery of Bucharest. So is the core of Europe rather a continuous periphery, a place of ongoing discourse, disruption, imagination and compromise?

However, the relation of this nucleus to its outside is astonishing. We found an inside divided into 19 administrative units splitting the urban fabric of Brussels into a jungle of juxtaposed images. On the other hand, the watershed of the river Senne is the morphological continuum connecting Brussels with its wider landscape context. On our journey from Bruegel to Erasmus we saw the water disappearing at the edge of the city, dispersed urban patterns moving into the agricultural fields, a highway replacing the medieval city wall and a single windmill reminding us of some bucolic past. What will be the future of this landscape?

Again, we invited an international group of architects, landscape architects and urban planners to look at a peripheral situation from a holistic perspective. With the help of scenarios we tried to open our minds towards everything that might happen. Landscape responses were formulated accordingly.

This publication illustrates the results of a workshop organized from 5th to 20th of July 2014 focusing on the area around the Erasmus hospital in the west of Brussels (Anderlecht). In addition, some theoretical reflections on design approaches in a landscape context have been added. They shall help the reader to transfer lessons learnt to similar situations. This theoretical part complements with the first publication of this series, so both might be considered together. We hope that the two books will be helpful for educators, professionals and anybody else interested in urban peripheries.

Both the workshop and this publication have been generously funded by the European Union within the framework of the Lifelong Learning Programme (2007 - 2013). The event was excellently hosted by the Faculty of Architecture La Cambre-Horta at the Université Libre de Bruxelles (ULB). I want to express deep thanks on behalf of all participants to the organisational team of the ULB. Last but not least, we owe great thanks to the students. They all made tremendous efforts to master this ambitious and difficult programme. Despite the many challenges on the way all groups reached a high level of quality. We deeply respect their achievements.

Ellen Fetzer, Project Coordinator

Lifelong Learning Programme

This project has been funded with support from the European Commission within the framework of the Lifelong Learning Programme. This brochure and the website reflect the views only of the authors, and the European Commission cannot be held responsible for any use which may be made of the information contained therein.
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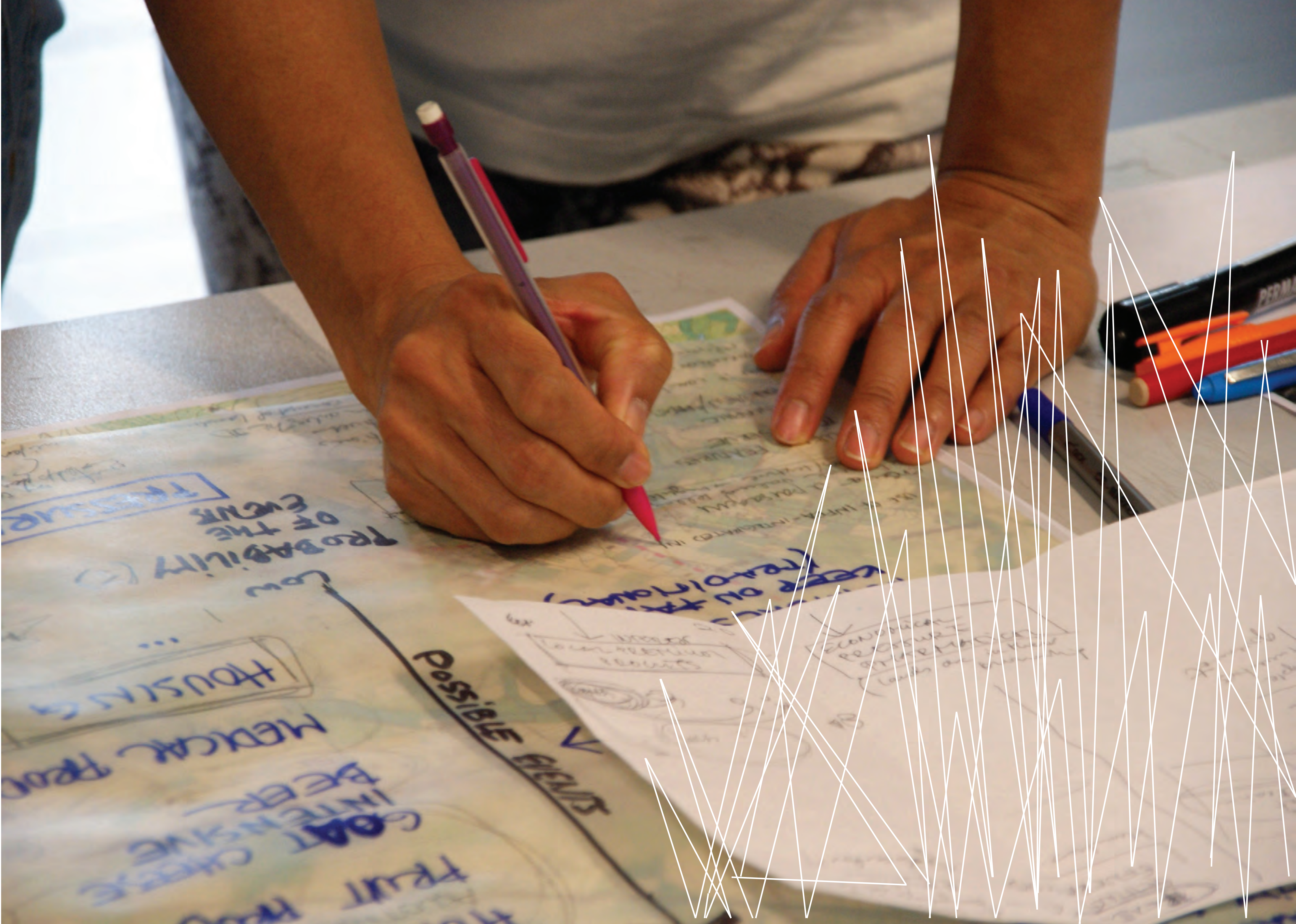

PROBABILITY
OF THE
EVENT
POSSIBLE EVENTS
HOUSING
MEDICAL

CONTENT

MAIN TOPICS

FROM ERASME TO BRUEGEL – CHALLENGES OF THE BRUSSELS PERIPHERY ////////////////////////////

According to the recent Regional Sustainable Development Plan[1], the Brussels Capital Region is facing six main challenges: fast-paced demographic growth, a transition towards a more sustainable model of urban development, increasing poverty and a spatial divide between the East and Western parts of the city, a rising unemployment rate and missed entrance into the job market among youngsters, the implementation of a more sustainable mobility and transportation system; and the development of the region's international attractiveness. As a response to such challenges, five main territorial means of action have been identified, including "building the landscape and the natural network". Within this frame, the workshop's case study area is very relevant.

The Neerpede Valley and its surroundings represent - together with the Sonian Forest to the South-West, and the Royal Palace and Domain of Laeken to the North-East - one of the three largest open and green spaces within the region's administrative boundaries, playing a critical role in terms of ecological corridor between the countryside and the urban core. The Neerpede area is also the city's largest agricultural area, producing both commercial crops and zero-mile organic food. Finally, the Neerpede River stands among the very few waterways still running openly across a city which is still experiencing important flooding issues. To be sure, this area presents exceptional landscape qualities, both in environmental and cultural terms: historically, this is where the flemish Renaissance painter Pieter Bruegel the Elder (1525-1569) staged some of his most famous rural landscape paintings.

Here, as in many other mid- to large-size cities in Europe, the city's urban periphery appears as an incoherent patchwork of modern human artefacts and activities overlapping the pre-existing traditional rural landscape. This sort of territorial palimpsest can be favourably appreciated from a landscape perspective, and is a privileged field of intervention for landscape architects, since it is often awaiting for new forms of urbanity and spatial coherence to be developed or restored, in order to improve its quality of life and sustainability.

Reference
1 http://www.prdd.be/ approved December 12th 2013.

Fig. 01. The territorial palimpsest at the periurban fringe: view overlooking the Erasme hospital campus, the Vogelzang brook, fragments of agricultural landscape, the Drogenbos power plant at the bottom of the Senne valley, and the open countryside to the South of Brussels (© Julie Martineau, 2014)

Fig. 02. The Neerpede area is easily recognizable as one of the three major green areas in the city, subject to transregional landscape cooperation (green arrow). It is bordered to the south by the Erasme university hospital health hub and the sports and leisure hube (light orange), to the East by the strategic urban renewal area of the canal (light blue), and crossed by a regional railway line. (© Brussels Capital Region, Regional Sustainable Development Plan - Map 1 : vision for the city, September 25th 2013)

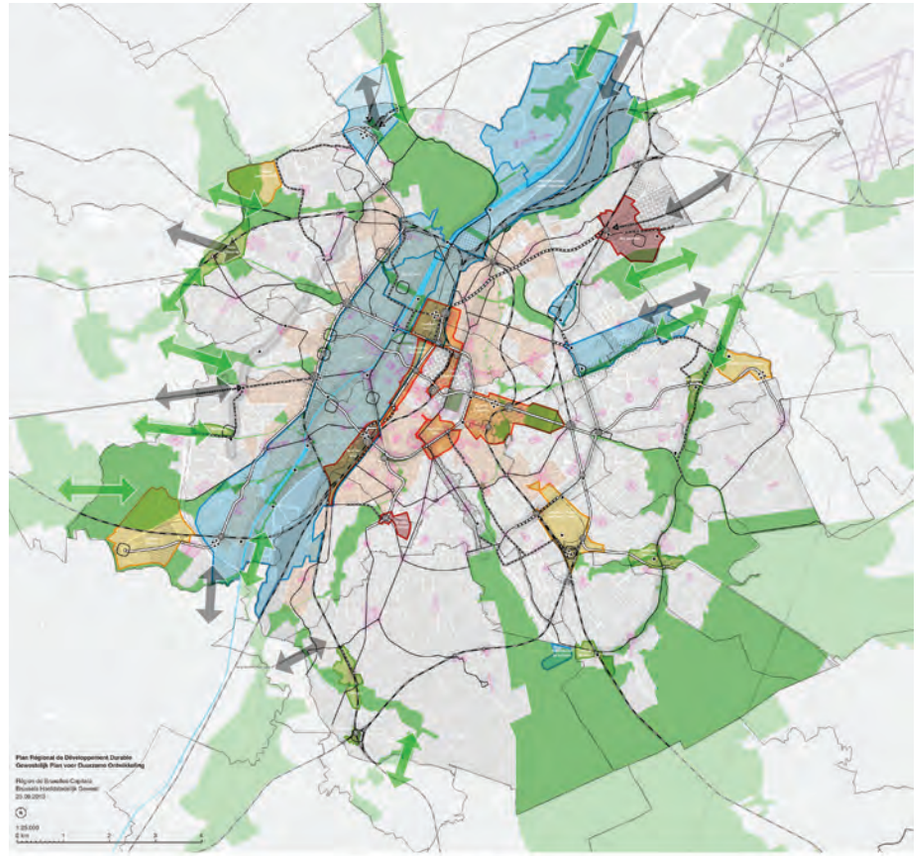
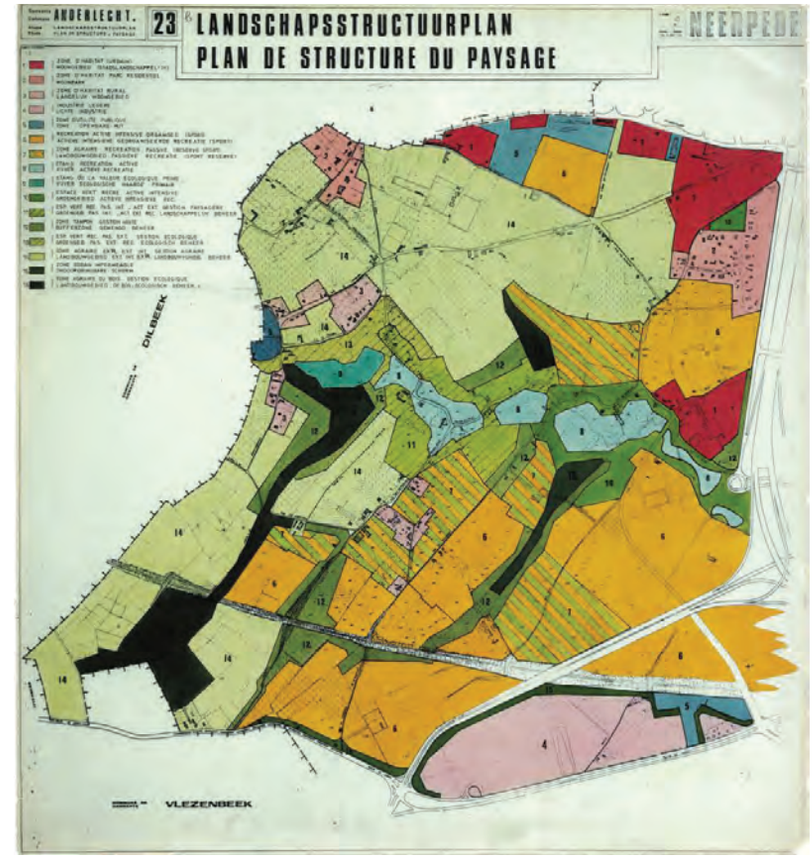


Fig. 03. An early proposal for a landscape park in the Neerpede area, which glorifies the Neerpede river and its tributary brooks as the desired framework for the area's future evolution (D+A PLANNING BVBA (JOZEF DE GRYSE & ANDRÉ ADAMS), Schéma de structure paysagère de la Zone de Neerpede – carte 23: Plan de structure du paysage, Municipality of Anderlecht, 1980).



However, the Neerpede Valley is not just a generic piece of urban periphery. In fact, the challenges at stake here, are related at once to the pressure of urbanization over the city's periurban and suburban fringe, and to a long-standing political conflict between the city and its hinterland. The term "cuve de Bruxelles" ("kuip van Brussel" in Dutch), or basin of Brussels, designated the countryside and villages around the city between the 13th and the 18th century. Political conflicts over planning issues between this natural hinterland and the city emerged regularly across the Middle Ages. Nowadays, this area is called the "Vlaamse Rand" and gathers the Flemish municipalities surrounding the city, where the Flanders Region pursues its own political agenda though the delimitation of a strategic Flemish zone around Brussels ("Vlaams Strategisch Gebied rond Brussel" - VSGB) and related planning tools. Such condition adds to the peculiarity of the chosen case study, and to the complexity of any future proposal to be implemented in this area.

Within the frame of the Regional Sustainable Development Plan, the Neerpede Valley is identified as a trans-regional area of landscape cooperation between Flanders and Brussels, where a metropolitan landscape park should be developed. Significant importance should be granted for sustainable agriculture, - for the preservation and fostering of biodiversity, and for the management of rain and polluted water. There is also the intent to confirm and increment existing activities on the site, such as the existing sporting facilities, the Erasme university hospital, the business park - all located at the area's southern part - into metropolitan hubs, respectively for sports and leisure, health, and economic activities. Besides, the area is a natural spillway for the neighbouring densely populated districts of Anderlecht, which are currently separated by an imposing elevated ring road.

To conciliate between such complex challenges is a daring task, which could be summarized in a few typical landscaping actions: fostering virtuous ecosystem cycles, connecting fragmented spaces and social groups, designing appealing margins between conflicting uses and artefacts. The workshop participants have taken up these challenges with enthusiasm and convincing insights. As an afterthought, however, one might question whether the aforementioned challenges can appropriately be tackled from a distant perspective and through comprehensive planning tools, rather than by more modest and personified interventions. The risk of missing our appointment with reality on the ground is always lying in wait for us...

Axel Fisher,
with Julie Martineau and Patrice Neirinck,
ULB Brussels

Fig. 04. The Neerpede's river bed and flood plain
(© Julie Martineau, 2014)

Fig. 05. Sportfields wedged into the picturesque Bruegel landscape (© Julie Martineau, 2014)

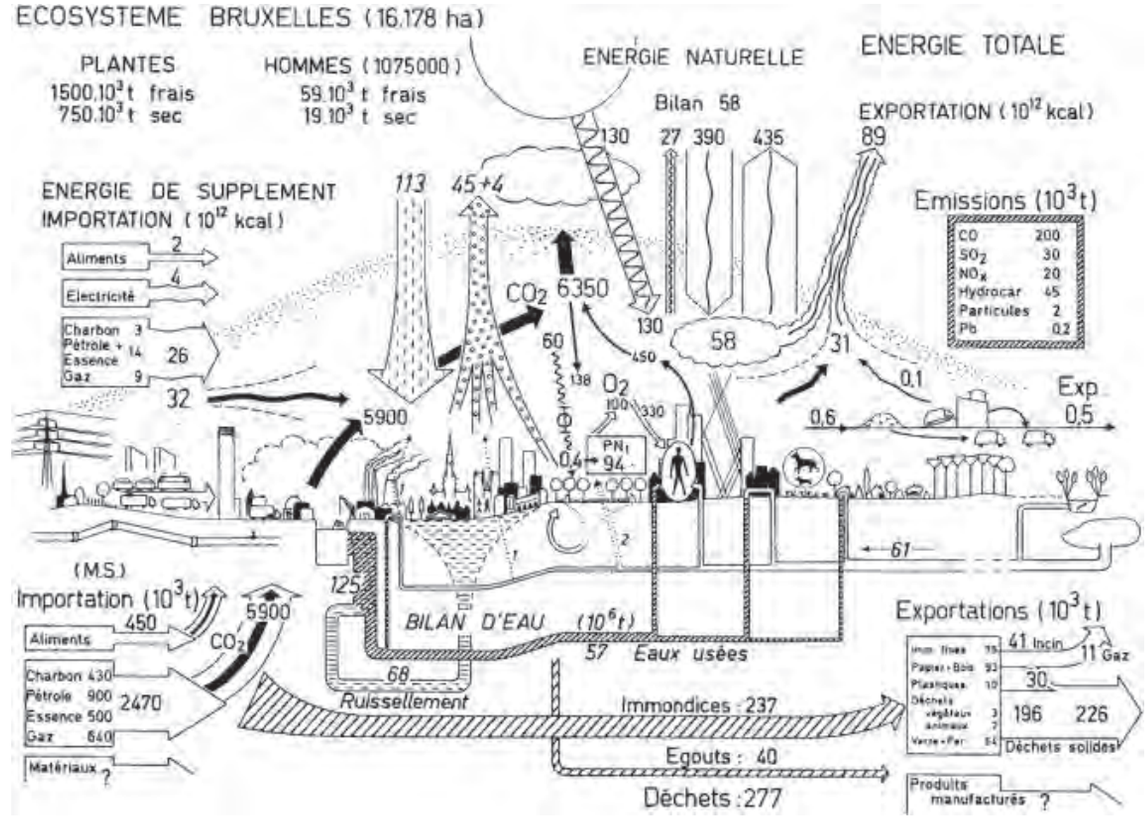


Fig. 06. The Brussels ecosystem (© PAUL DUVIGNEAUD, « L'écosystème Bruxelles », in P. HAVELANGE, P. DUVIGNEAUD & S. DENAYER-DE SMET, L'Écosystème urbain: Application à l'Agglomération bruxelloise, (International Symposium organized by the Brussels' agglomeration, 14-15 September 1974), Brussels : éd. Agglomération, 1975, pp. 45-57)

FROM LANDSCAPE TO TERRITORY - REFLECTIONS ON THE LANDSCAPE APPROACH ////////////////

It is a truism that land is owned by someone but landscape belongs to everyone - that's what we share. In the context of the European Landscape Convention where landscape is "an area as perceived by people..." the visual and experiential aspects of landscape are very significant. The extent to which the landscape and the territory coincide depends on the scale and the circumstances.

For an 18th century English landowner who had a huge estate the landscape did not necessarily only mean the park itself around the mansion house but also the view beyond encompassing more land which was still under his ownership. Designing a garden enclosed by a high wall, tall trees or a tall hedge may also mean that views are limited to the territory owned by the householder. In a national park the state-owned land might be extensive enough to encompass the entire extent of views from within the main body of the area, although there will be views from it to the non-park land beyond around the edges.

In most urban and peri-urban areas and especially in Belgium and Brussels the land is divided among

a huge number of ownerships and the right balance of private interest and public good may be difficult to achieve. If the society is very individualistic and there is no tradition of working together then the landscape can be fragmented and present a chaotic mix of different land use cultures, styles of buildings and competing advertisements. The resulting visual diversity may easily lack any sense of unity or genius loci. If we believe that the good quality visual realm matters and that the aesthetic content of landscape is important over and above functionality - the combination of beauty, utility and efficiency - then mechanisms need to be found to achieve some better balance and a greater public good. The landscape approach, encompassing all factors and endeavouring to resolve the tensions between these can potentially offer some solutions.

One of the requirements is a kind of "landscape awareness" and a level of understanding about the importance to good design in the landscape which many ordinary people seem to lack, despite being fully aware of fashion design, furniture design, interior design and to some extent garden design. This focus on the aesthetics (or perhaps more superficially style and novelty) of the personal space of the home and the image we project to others about our tribal membership (nouveau bohemians, eco-warriors, yuppies etc) says something about many people's lack of relationship to the external environment. So, with some awareness raising, some education and some public participation in decisions about the wider landscape better results may be possible (as envisaged by the ELC). This will take time but it shows a potentially greater role for landscape architects not just as cool designers of trendy places necessarily but as facilitators of public engagement with the landscape. It also requires that people become willing to give up some of their freedom as individuals in order to help the common good of the shared space.

In some places such as Estonia, where the forced communalism of the Soviet era gave way to the individualism of the post-Soviet era the idea of working together still holds negative connotations for many older people and in Poland the very word "planning" is forbidden owing to its communist associations. So, back to the urban fringe of Brussels and the possibilities for a landscape approach to

a territory where individual rights over land and property are very strong and where, it seems no two houses in any street are the same. This poses particular challenges in any case but where there are large numbers of recent immigrants from countries with no or few democratic traditions or culture of landscape planning let alone participation in this field the job is harder. Awareness raising, education and new forms of participation are going to be very important if we can move from territory to landscape.

Simon Bell, EMU TARTU

REFLEXIVE DESIGN STRATEGIES FOR LANDSCAPE TRANSFORMATIONS IN THE URBAN PERIPHERY

Exposition

The Site: Urban peripheries create hybrid shapes betweeen the city and the surrounding landscape, which are often characterised as being antithetical to each other. This fact is the precondition: The continued consumption of landscape and its eventual disappearance are not at all perceived as a problem. The aim is to give the periphery its own value.[1]

The Focus: In addition to ecological, functional, economical and social aspects design is concerned with the quality of the three-dimensional and perceivable spatial structure and its very specific aesthetic. The Euclidian space - that is, the definite space with boundaries - was completed by Henri Lefebvre´s theory of the social production of space: „We as people are part of space and at the same time we construct space by memories, perceptions and actions“.[2] On top of that, landscape can be designed even at a regional scale according to aesthetical principles.

The Object: Reflexive Design describes an integrative approach to the genesis and to the interpretation of design in architecture[3] and this includes landscape architecture. This approach looks at theory and practice in the same time. Three constants are essential for a reflexive approach: Theory as the intellectual background of design, the repertoire of possibilities for solving tasks and the understanding of roles in communicative situations. Donald Schön considered these aspects as starting points for “reflection-in-action”. His research objective was to identify forms of knowledge in practice that were not based only on rationality or on logical transparency[4]. Donald Schön introduced the following terms: Explicit knowledge in the sense of describable, definite and established knowledge. Implicit knowledge - also called silent knowledge - includes more information than any description can express and it is influenced by a continuously changing degree of awareness[5]. When people apply their silent knowledge they perceive themselves as intuitive or creative. Creative leaps - as generative moments and phases within a process - do not emerge without cause. They are part of

1 Bozcek, B.(2007) „ Transformation urbaner Landschaft“ - Ansätze zur Gestaltung in der Rhein-Main-Region (P.16 ff). Darmstadt. Verlag Müller und Busmann
2 von Seggern, H., Werner J.(2008) „Space as the integrating moment of design“ In: von Seggern H., Werner, J., Grosse-Bächle, L. (ed.) „Creating Knowledge - Innovation Strategies for Designing Urban Landscapes“ Leibniz Universität Hannover, (P. 53..) . jovis Verlag Berlin
3 Buchert, M. (2014) „Reflexive Design? - Topologies of a research field“ In: Buchert, M. (ed.) „Reflexive Design“ Leibniz Universität Hannover (P.8). jovis Verlag Berlin
4 ibid. (p.26)
5 ibid. (p.28)
6 ibid. (p.46)
7 Diedrich, L. (ed.) (2009) „Territories – from landscape to city“ (p. 179 ..) Birkhäuser Verlag
8 Crone, B. (2014) „Familienplanung“ In: Bauwelt 7 I 2014 Berlin
9 Houben, F. From Centre to Periphery: The aesthetics of Mobility (P. 102 ..) In: Charlesworth, E. City Edge (2005) Architectural Press Oxford
10 Latz, P. “Design is experimental invention” (2008) In: von Seggern, H., Werner J. Grosse-Bächle, L. (ed.) „Creating Knowledge - Innovation Strategies for Designing Urban Landscapes“ Leibniz Universität Hannover, (P. 333..). jovis Verlag Berlin
11 Diedrich, L. (ed.) (2009) „Territories – from landscape to city“ (p. 182 ..) Birkhäuser Verlag
12 Weilacher, U. (2008) „Syntax of the landscape“ (p.80)

a conceptual and combinational genesis that is based on knowledge[6]. Therefore, the study of best practice examples is essential, because this is one of the most fundamental elements of professional knowledge. In each case, the individual attitude of the designer interacts with the cir¬cumstances.

Design strategies - Approaches starting with thematic topics and typologies

Landscape: A geological stratum creates a green metropolis. In a region between Germany, Belgium and the Netherlands, the common identity is built up by a layer of coal. The landscape architects of Agence Ter decided that this feature would define the extent of the new scattered metropolis. The layer of coal will arrange unite a patchwork of small communities. The geological layer thus becomes a real landscape vector that is able to trigger the development of a regional metropolis[7].

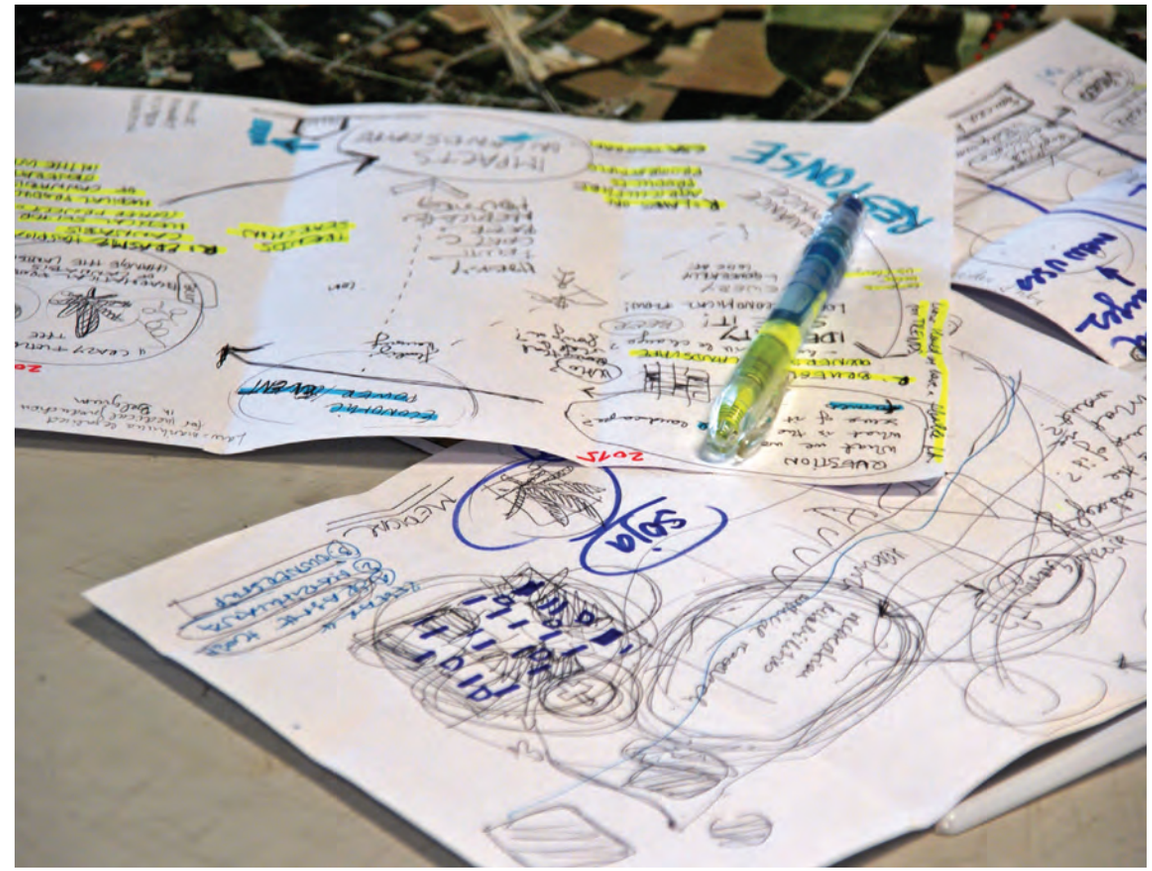
Time / Fields / Networth: Metropolitan Region Ruhr_ Regional development plan by bgmr landscape architects (Becker, Giesecke, Mohren, Richards). Three “cities“ create the Metropolis: The City of Time, the City of Fields, the City of Sponges. With each theme, the planners enhance the potentials of the region, which were insufficiently utilized until then. In the interplay among the three thematic cities arises the Net Worth city, which joins elements that have been disconnected so far.[8]

Mobility - A room with a view: People have a sensory experience during their everyday mobility. Trains and cars are rooms with a view. Francine Houben proposed to see the motorway as a design task. Randstad, the densely built urban conglomeration in the Netherlands, was the object of investigation. In this case, the landscape architect’s approach must reveal as a central theme that mobility routes are public spaces with a culture and an own aesthetics.[9]

Design approaches starting with typologies: The application of typologies is probably the most important strategy in professional practice, at least from a quantitative point of view. These are solutions that are based on clearly defined principles but also allow for a multitude of differentiated forms. This is definitely a learnable methodology[10]. Examples are shown in the book “River. Space. Design. Planning Strategies, Methods and Projects for Urban Rivers” by Prominski, Stokmann et al. and the study „The Périphérique as the Centre of Greater Paris“ by Agence Ter[11] .

Abstract Design method: This is relevant for landscape architecture and urban planning and is based on Rittel´s motto: “Planning problems are wicked problems,“ that is, tricky problems. Other planning and design models have been developed for more complex processes[12].

Performance Model and cyclic specification (according to Horst Rittel): Horst Rittel tried to schematize the iterative process of planning and designing in order to show a transferable systematic. The essence of planning procedures is a process of continuous decision-making between alternative solutions. The “principle of cyclic specification” is summarized by the term “performance”. Peter Latz adapted this method to landscape architecture.



13 Latz, P. “Design is experimental invention” (2008) In: von Seggern, H., Werner J. Grosse-Bächle, L. (ed.) „Creating Knowledge - Innovation Strategies for Designing Urban Landscapes“ Leibniz Universität Hannover, (P. 343..). jovis Verlag Berlin
14 ibid. (p.345..)
15 Janson, A., Wolfrum, S. (2005) „Masterplan Pferdelandpark“ (p. 32, ...) , Karlsruhe
16 Lampugnani, V. , Noell, M. (2007) „Handbuch zum Stadtrand“
17 Schwarz, U. (2014) „Reflexive modernity and architecture-revisited“ In: Buchert, M. (ed.) „Reflexive Design“ Leibniz Universität Hannover (P.8). jovis Verlag Berlin

Starting with the context of a problem, the designer develops a range of solutions, which are then reduced to a few workable suggestions. The analysis is not separated from the design process in terms of methodology or time. Methodological breaks can thus be avoided. On the other hand, the creative part of the design process can begin with the first available information about the project and its context[13].

Design strategies based on special theories of urbanism and landscape architecture

Theory of cognition and perception: An approach to design tasks via theory of perception and information "starts with the assumption, that design ... is linked to the formulation of design languages... a firm canon of communicable information can be ... expanded with new notions"[10]. Design has therefore components of experiments and components of inventions. Design is a process aimed at manipulating layers of information and the elements embedded in them. With the help of a syntactic approach to design, a specific grammar can be developed in order to associate individual elements with each other and to combine them to form a new structure[14]. Duisburg North Landscape Park is the example par excellence for this approach.

Performative Urbanism or landscape in motion: The perception of landscape as a picture plays a key role in the planning and design process. While the beholder of a picture perceives it as another aesthetic reality, a user in the landscape interacts directly with reality. It is a specific characteristic of both urban and rural landscapes to offer possibilities for viewing and also for moving and acting in space[15]. The Pferdelandpark is a very sophisticated example for this approach.

Urban sprawl as a creative task: The theory of Lampugnani complements with the findings of Kevin Lynch: What can a planner do to make the city's image more vivid and memorable to the people? The urban periphery must have the same value as the city centre, but in a complementary and new way. Lampugnani indentified seven suburban space categories: nodes, relicts, settlement islands, leftovers, splinter developments, spaces of transit and super complexes. He further proposed five design strategies for those: to produce spaces of identification, to clarify the borders, to connect the isolated qualities, to create coherence and to strengthen the public space[16].

Résumé: Planning and design show potentials that are „lying dormant in any given situation". Horst Rittel pointed out that "...all plans should be accompanied by a counter-plan. This could systematically enhance a debate that reveals the pros and cons of both viewpoints and shows the outcome of these concepts. It is not always about resolving conflicts, but also about creating them."[17]

Uta Stock-Gruber,
Weihenstephan-Triesdorf University

Fig. 01. Traditional infrastructure landscape: Cultural landscape, twisting roads and retaining walls in South Tyrol, Northern Italy
Fig. 02. Contemporary layered infrastructure landscape: Suburban part of the project area in Brussels
Fig. 03. Constructed for performance: Via Appia Antica, one of the most important radial streets of ancient Rome

LANDSCAPE AND INFRASTRUCTURE: OPEN SPACES BETWEEN PERFORMANCE AND IDENTITY

Landscapes influenced and formed by infrastructure elements like traffic buildings or energy structures are a challenging issue in contemporary landscape architecture. The aim of the following contribution is to describe the development and typology of these infrastructure landscapes and present different design approaches. In terms of the project area, the focus will be on transport infrastructure.

Dimensions of Infrastructure:
Power and Performance

Transport infrastructures can be characterised by two main dimensions: the representation of different types of power and the effect of functional performance. The relation between traffic structures like streets and power can be clarified by the strongly simplified model of the historical, traditional city. The ancient and medieval city, bordered by a closed city wall ring, represented the centre of political and economic power in the middle of a rural landscape. The connecting streets between both, city and landscape, urban and rural space, left the city like sunrays through different gates into different directions, representing 'power of action':

„The potential power of action, or the power to be able to hurt someone... is ... embedded within the construction and implementation of infrastructure built against the preferences of the local residents and inhabitants." (Kühne, 2013, pg.2)

An obvious example for this correlation between power and infrastructure - which is originally a military term - is the city map of ancient Rome. The Roman streets formed a radial system built to conquer and capture the whole European continent. There is no doubt that this type of infrastructure was strongly correlated to action and power. The design and construction of the radials, the Roman streets, were strictly standardised according to the requirements of high performance.

Fig. 04. The radial model of the historical city

During the growth of the cities particularly in the 19th and 20th century with the technical development of railways and cars as well as increasing traffic, the city walls disappeared. The radials were connected step by step and ring structures were built. The result was a high-performance radial and ring system with different zones of urban character. The ring zones became more and more important, also for settlements, and defined a sub-urban and/or peri-urban zone. The former city edges were dissolved and in this way the "edgeless cities", described by Lang in 2003, were born.

Fig. 05. The ray-ring-model of the (post-) modern city

Also this city-model represents structures of power, in this case authoritative power:

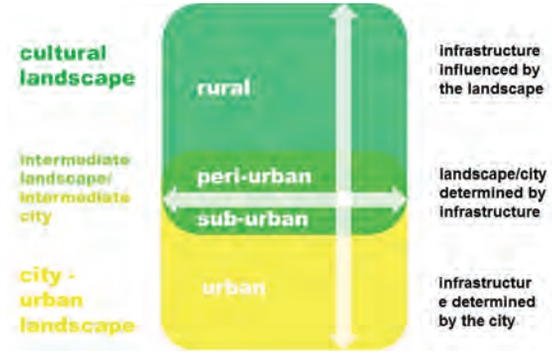


Fig. 06. Edgeless city: the sub-urban/per-urban ring-zone

"Regarding the development of transport infrastructure, this can lead to the tendency of the society to accept rationally presented arguments in favour of the construction of a highway rather than the emotional needs of displaced inhabitants for a home... During modernisation, technical infrastructures seem to be effective mechanisms for the domestication of space relating to economic and political power. Such infrastructures can thus be described as physical representations of authoritative power... They reduce social complexity and contingency because the possible uses of technical infrastructures (...) restrict the possible uses of physical space..." (Kühne, 2013, pg. 3)

Performance versus identity:
Mobility versus locality

The peri-urban zone formed by the ring of transport infrastructure with its nodes and crossroads attracts additional structures and elements like hypermarkets, petrol stations, fast food chains, parking slots, installations of sales promotion and advertising. These areas characterised by Olaf Kühne as "Spam-Space" (Kühne, 2013, pg. 9) are looking similar in the whole world. With the standardised functionality and scales they are developed for mass mobility and service. The consequence is a significant loss of local identity.

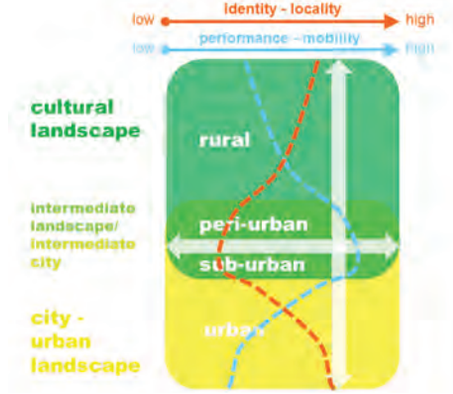


Fig. 07. High performance and low identity in peri-urban zones

Fig. 08. Spam-Space (project area)
Fig. 09. Spam-Space (project area)
Fig. 10. Separation: Highway A4 close to Jena, Germany; the noise protection embankments constructed with dry stone walls try some harmonisation

These sub- and peri-urban zones represent an important field of activity for landscape architects requiring intelligent design solutions and offering potentials for innovations. Regine Keller and Thomas Hauck express it like this:

Even though there is a necessity for good design of big infrastructure, the options are limited. The reasons for this are conflicting interests between the rationally justified requirement for large-scale infrastructures to reach social objectives like mobility and the need to experience the identity and individuality of landscapes or urban spaces on site. Inside of the area of conflict between mobility and locality there are three traditional design positions:

1. *design of the technical structure as an artwork*
2. *identification and protection of landscapes as spaces of individual beauty and diversity*
3. *the conciliation of both, 1 and 2, as integrated infrastructure and synthesis of social and spatial mobility and local identity.*

(Hauck, Keller, 2011, pg. 26, rough translation)

Landscape infrastructure:
Different approaches and examples

There are two generally different solutions for working with infrastructure in landscape architecture: the concept of separation and the concept of integration. Separation means that mobility and locality are separated as far as possible (Hauck, Keller, 2011, pg. 27). The traffic building exists as an isolated technical artwork with its own functional performance and its own context-less identity. The concept of integration creates landscape infrastructure, which is defined by the American planning team of the SWA Group as a tool “that expands the performance parameters of a designed landscape to a multi-functional, high performance system, including those systems originally ascribed to traditional infrastructure”.
Under the rubric of integrated landscape infrastructure, three different design approaches can be identified:

The first one, the “harmonisation”, attempts the integration of the infrastructure elements into the modernised cultural landscape. The problem of this

approach is that the possibilities for individualised traffic structures with a local identity are rather limited (Hauck, Keller, 2011, pg. 28). The second, the transformation, can be realised if the function of the infrastructure elements is changed and offers potentials for conversion. This approach translates traffic performance into landscape performance and creates new functions and a new kind of post-infrastructural identity. Finally, the third one, the "hybridisation", works with the edges between mobility spaces and locality. These conflict zones are designed as hybrid spaces between fast and slow networks "without completely placating the conflict but to make it tolerable and perceivable" (Hauck, Keller, 2011, pg. 28, rough translation).

The design of hybrid landscape infrastructure with its own kind of identity can be estimated as the most challenging approach with a lot of interesting potentials for innovative public spaces with urban movements and uses. We are just at the beginning of this development.

Ingrid Schegk,
Weihenstephan-Triesdorf University

Fig. 11. Post-infrastructural landscape of the former railway area in the Gleisdreieck-Park, Berlin, Germany
Fig. 12. Post-infrastructural landscape of the former railway area in the Park Spoor Noord, Antwerpen, Belgium
Fig. 13. Spontaneous appropriation and uses of the former airport Berlin-Tempelhof, Germany

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Fig. 14. Harmonisation: Interdisciplinary design competition for the resting facility "Lange Berge", Bavaria, Germany

PERIPHERIES AND HOUSING – IDEALS AND REALITIES

Understanding the balance between urban development and natural landscape preservation, for a more sustainable vision of western periphery of Brussels, was one of the main challenges of our intensive programme in Brussels. But how precisely can housing ideals and the periphery's realities be reflected in a more sustainable vision for Brussels?

When they are less controlled, utopian housing development ideals - such as living in the countryside, enjoying the diversity of the landscape or living in areas with low density and good accessibility - often materialize in aggressive, unchecked forms of development that usually end up destroying the main reasons for relocating to the periphery: the diverse and valuable landscape.

This is why the realities of the urban periphery, which include competing interests exerting different land use demands and space consumption - housing development, industry, retail, agriculture, leisure, water management, nature protection - should be carefully balanced in order to preserve this valuable landscape.

The western periphery of Brussels is not unstructured nor is it looking for a stronger identity. Rather, the objective is a well-structured peripheral area, with an impressive and diverse natural landscape. Nevertheless, visible signs of pressure exerted by retail development, agricultural land uses, transport infrastructure or housing developments are easily perceived. All these strengths and weaknesses inspired some thoughtful scenarios that developed into creative solutions.

In their search for some more sustainable answers, almost all of the workshop teams considered the valuable features of the territory (the very peculiar topography determining the way settlements developed along the valleys, with concentrations of buildings at the bottom of the hills and with small farms spread over the top) and sought to find the right balance between present and future land use demands. This process led to some very creative scenarios. In order to mitigate both housing ideals and periphery realities, preserving the natural landscape as much as possible seemed to be a commonly agreed solution for the future of the periphery and a main reason for finding housing typologies adapted to local constraints.

As a whole, the Erasmus Intensive Programme created the opportunity to reflect upon the challenges of developing urban peripheries and consider different cultural and professional perspectives in a fruitful international exchange.

Claudiu Runceanu, UAUIM Bucharest

IP ERASMUS – A BENEFICIAL EXPERIENCE FOR ALL

Within an ever globalizing world, education in spatial planning needs to adapt to the increasing diversity and complexity of interconnected societies, cities and territories. The training of future professionals in the field needs new approaches, experiences and instruments in order to successfully face these challenges. The format adopted by the IP Erasmus project, which brings together students from several European countries as well as from other continents and teachers with various experience and background from a number of European universities seems to be a perfect laboratory for forging the next generation of professionals.

The second IP Erasmus workshop on Urban Peripheries, taking place in Brussels this summer responded in a perfect way to these challenges and confirmed the expectations, especially considering the multi-diversity of social, economic, geographical, physical and cultural aspects which had to be considered and handled within a complex landscape suffering from intensive transformations. The 53 students and 19 teachers were plunged into a vast area at the outskirts of central Brussels and asked to imagine how this will and should change under certain circumstances and hypotheses. The students were encouraged to think broadly and on a long term perspective, to take into account major trends and global issues of the present, whether it be related to demographics or migration, to climate change and natural hazards, to economic trends or cultural / behavioral transformations and others. The interaction between global and local, the various sectorial evolutions, the physical features of the area, its natural assets and its human interventions were all elements that had to be analyzed, understood and explained from a landscape planning perspective by the 10 teams of average 5-6 students each.

The interaction among the students coming from different schools and environments proved that their training was quite solid and enabled them to use common methods and elements of technical language and express themselves through suggestive graphic expressions. The students proved highly capable of absorbing and processing information and data and making use of the concepts, models, theories presented by the tutors. The group of teachers represented a good selection of different and complementary specialties and expertise. Through organized lectures and advice given during the studio hours, they provided inputs about many topics, including the site itself with its history, infrastructure and environmental, social, cultural and economic issues. Topics also included methods for approaching and understanding the site in order to be able to elaborate a diagnosis and develop rational scenarios, as well as general principles of planning and various related issues like strategic planning, participation, the European context, housing development etc. There were presentations of relevant projects of landscape intervention types at various levels and territorial scales.

Besides the working and teaching schedule, the workshop included a number of social and other educational activities, common presentation sessions of the results and site visits along the main water axis of the Belgian capital. All in all, the IP-Erasmus project revealed on the one hand the importance of an integrated approach to the topic of urban peripheries, the complexity of their landscapes and their huge potential and on the other hand the sensitivity, creativity and innovative landscape planning capacities of the students when facing difficult challenges.

Gabriel Pascariu, UAUIM Bucharest

Fig. 01. The position of Belgium in Europe

Fig. 02. Within Belgium the region of Brussels is entirely embedded in the region of Flanders

Fig. 03. The project area stretches across the Western regional boundary of Brussels into Flanders

EXPERIENCING THE CORE AND THE PERIPHERY OF BRUSSELS

The intensive design studio hosted this year in Brussels was a challenging and positive experience for those involved. It was an opportunity for students and faculty of diverse academic, geographic and cultural backgrounds to meet and exchange while simultaneously enjoying the unique urban (and periphery) environments of a European city. We learned via interesting group work dynamics, to conduct diverse analysis and design work, and finally to practice the art of both spontaneous and developed presentation.

During the first week of the workshop groups met for the first time in person, using the comparatively open initial days to share stories and backgrounds, talk about their personal studies and begin to explore the city together during evenings and free time. Both hostels organized for student housing were centrally located near the historic Brussels core, allowing quick access to notable works of architectural importance such as the Botanical gardens and St. Catherine's Cathedral, as well as (equally) important cultural monuments like the Delirium Tremens Brewery, Grand Plaza and numerous waffle and ice cream parlors.

The theme of the first week was Scenario development. After finding our way through the city by Brussels' public transit system each morning, and more challengingly through the enormous, convoluted halls and stairwells of the host ULB university, we would get to work on imagining radical futures for the city. The DPSIR model was very present and emphasized at this time, and groups struggled to refine their understanding of the drivers and various stages of their proposed scenarios, taking time to work and rework the rationale behind these initial cases. We also got to know several new professors the daily afternoon lecture series, in which they would deliver presentations of their work to a sweating audience of coffee-sipping, fan-waving students and staff.

Several excursions and site visits also added flavor to the first week experience. We made an outing to the focus site on the southwest periphery of Brussels in the district of Anderlecht, taking time to learn about local river drainages and the city's green trail. The day was filled with short descriptions of local monuments, mouthfuls of hand-picked fruit, sketches and photographs. Later excursions would approach urban gardening spaces, large rezoned park space under construction, and even a boat tour of the important barrier canal that runs through the urban fabric.

In the final week, the earlier scenarios were refined and developed into serious potential futures for Brussels. Each group chose their best and went with it, putting many hours and effort into fleshing out their designs and logic until the final presentations. This week met the "intensive" modifier in the workshop title with flying colors. However, after the final work was done, the whole group met together for a fine local dinner in the old city, complete with regional cuisine and traditional beers. The spirit was high, good times were had by all, and an opportunity for saying goodbye to the city and new peers through an enjoyable evening ended the workshop nicely.

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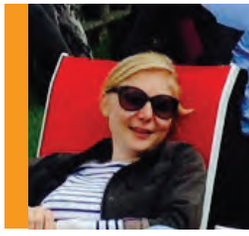

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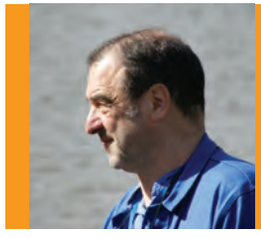

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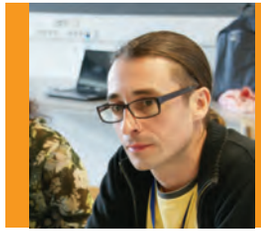

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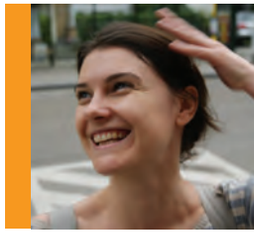

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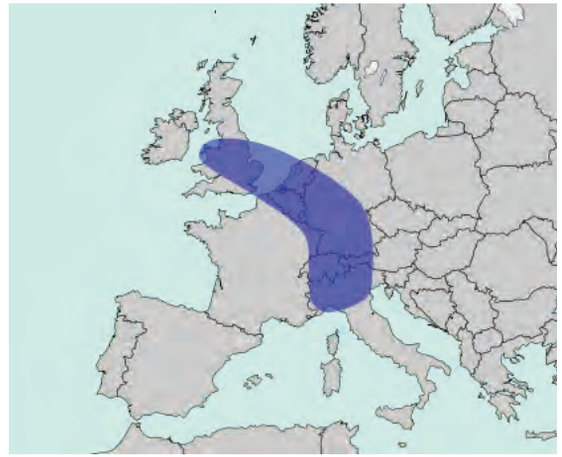
THEMATIC ANALYSIS



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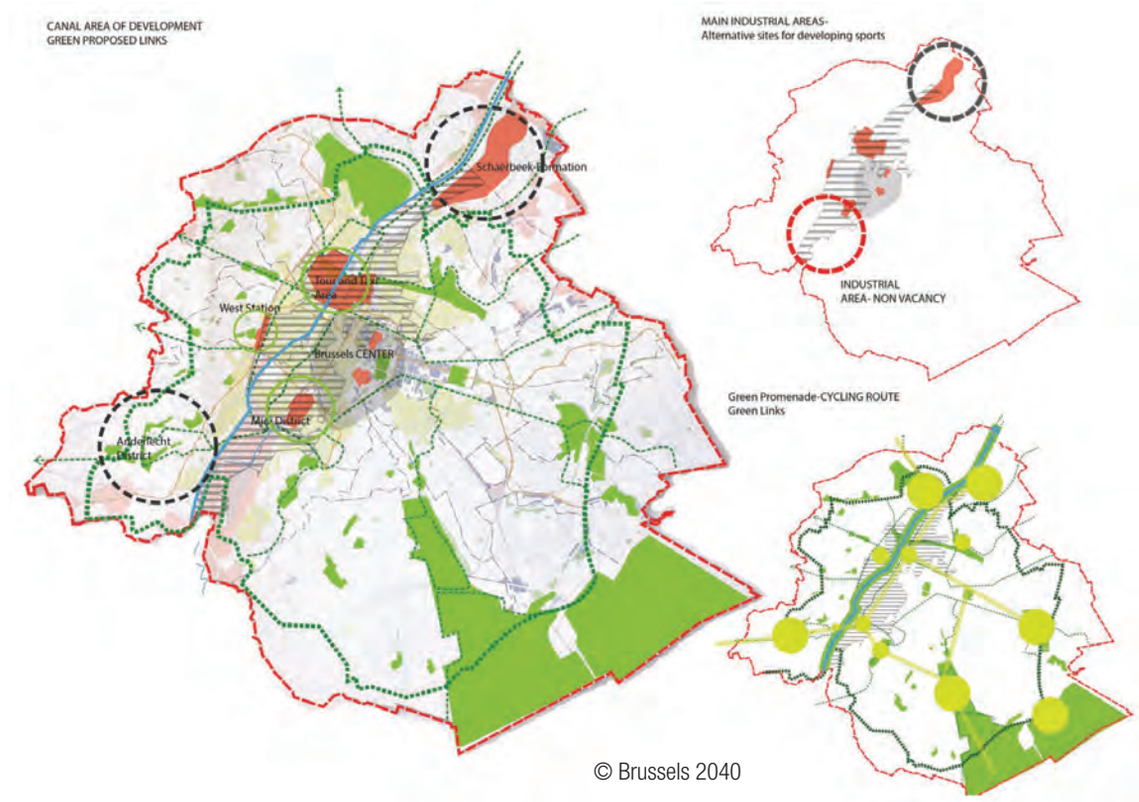

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The Wider Context, Landscape Units, Peri-Urban Patterns and Transition Zone

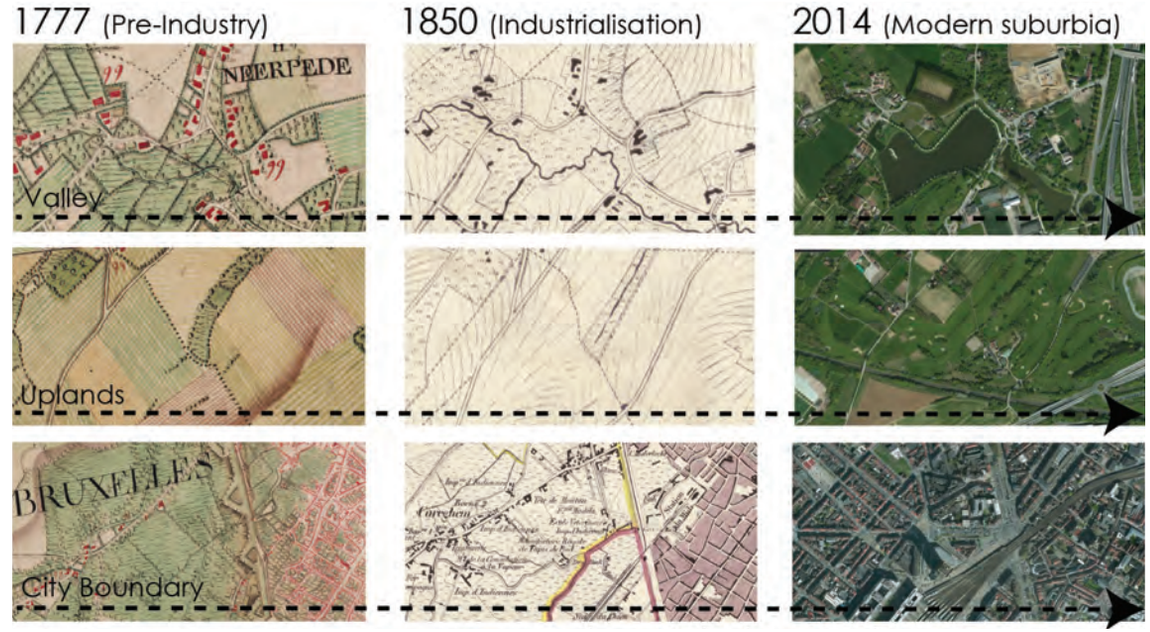
//(group2)

The so-called “blue banana” covers the densest parts of Europe, from London via the BENELUX states to Northern Italy. So Belgium, especially Brussels, is one of the most populous regions in Europe. Similar to the population, the transportation system in Belgium is one of the densest in Europe and it is very well connected, especially to London and Paris. If we take a look at Brussels from the air by night, we can see that the BENELUX states are more an area with a lot of smaller spots, whereas cities like London or Paris are a compact dot. Reasons for that might be the legal framework, the lighting of the motorways by night and the social housing developments. Within Belgium, we find three main units, outlined by topography. These three main units are flatland, agriculture and the hilly regions from north to south. The river Maas divides Belgium also in two regions. Another challenge is the language boundary dividing Belgium into three linguistic regions: Flemish in the North, French in the South and German in a small eastern part of the country. If we take a look at the map of landscape units in Belgium, we can see that the area around Brussels is characterised by arable land, permanent crops and heterogeneous agriculture.

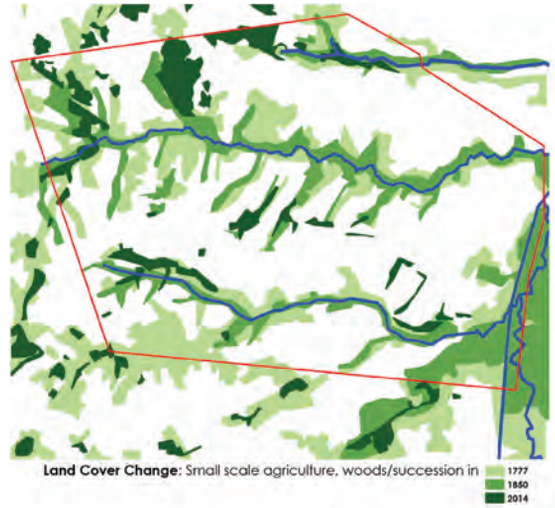
Historical Evolution

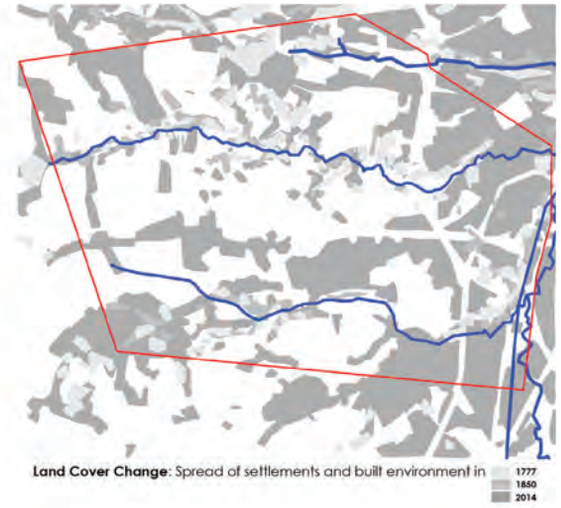
// (group 10)

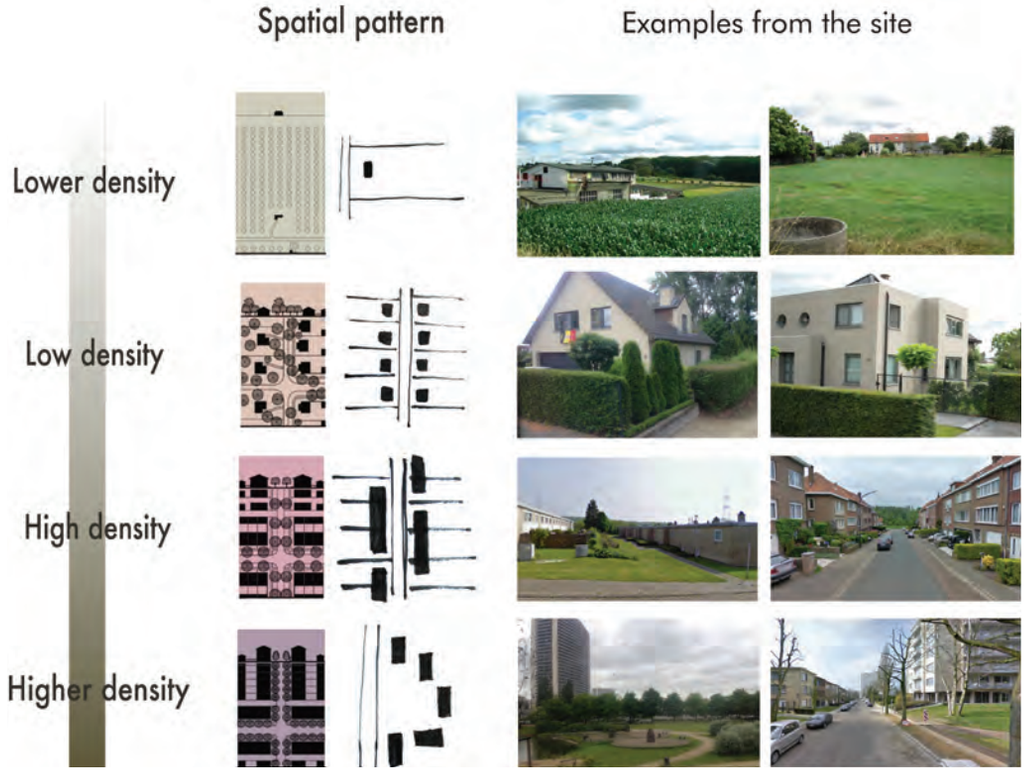
Since the 1200s, a significant amount of agricultural land has existed on the site, established from forest-clearing and valley development. Anderlecht soil is excellent both for growing cereals and vegetables. Anderlecht and Brussels had a strong rural-city symbiotic relationship, where Anderlecht supplied food, and Brussels provided the fertilisers. The two areas overlapped: agricultural fields flowed into the city compound; likewise light industries appeared outside the city wall. Heritage elements that should be highlighted on site are: Saint Anna-Pede church, Erasme House, old wind mill, and the annual Anderlecht fair, which has existed since 1826. The characteristic image of the area: that is, intensive and productive small gardens with operating facilities, remained until the 19th/20th century. Urbanisation was initiated by both light and heavy industrial growth (textile production, equipment manufacturing etc.), spurred on by canal extension and railway development. The slaughterhouse of Cureghem had especially brought wealth to Anderlecht, creating a bourgeoisie image of the area. The Garden City of Moortenbeek (1920s) was built to house newcomers, emphasising green/ recreational spaces. Following WW II, the economic and social landscape changed profoundly. Food-based industries (meat trade, dairies and breweries) laid a foundation for setting up the food research institutes-CERIA/COOVI. Economic expansion grew westwards of Brussels city with highways, ring roads and suburban hypermarkets shaped by the American model of oil-automobile-real estate, stimulating urban sprawl.

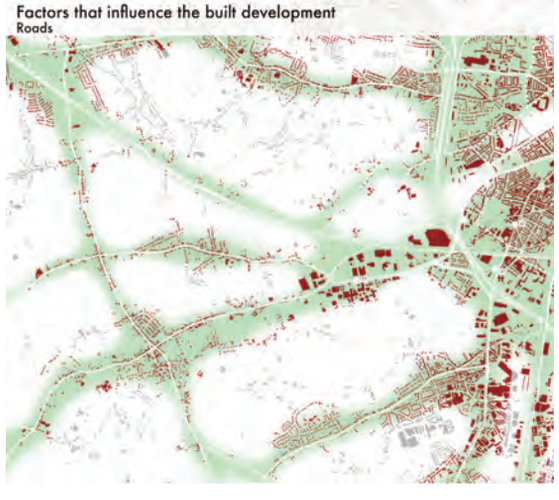


changes in landscape typology across cca. 250 years









The Built Environment

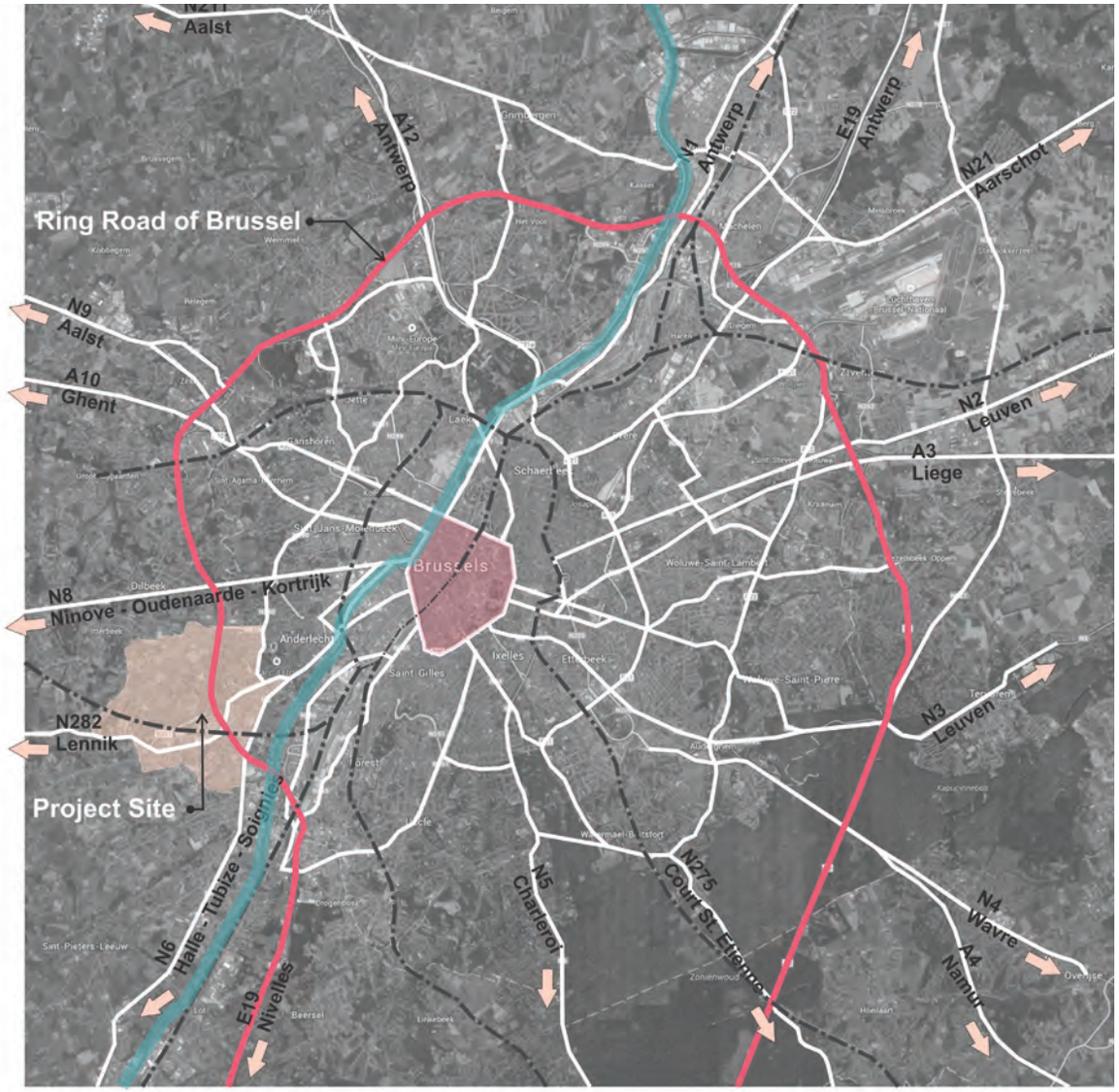
//(group9)

In the analysis, we emphasized the main events that influenced the area, the relation between urban and rural and the relation between buildings and environment. Regarding the first aspect, we explored the main historic events that had a great influence on the built environment. Furthermore, the establishment of the EU quarters led to a growth of population, causing urban sprawl. Regarding the relation between the buildings and the environment, there are a series of factors that influenced the built development, like topography, water system, services, facilities, and means of communication and transportation. The density in this area, the municipality of Anderlecht, is higher in the western side of the site, but lower compared to the Flemish areas. This fact is reflected in the spatial and built patterns. The density decreases from east to west, as can be seen in the transition from high housing blocks and three-level row houses in the Anderlecht area, to individual ground level houses in Flanders. The clear housing shortage can be resolved using the available space identified in the study area. We conclude with the DPSIR analysis. The main drivers that we have identified are: commuter tradition, different administrations, high demographic growth and passive housing regulations. The pressures are high comfort housing, different community regulations and sustainable housing conditions. The negative impacts include increased commuting time, identity loss, reduced energy, water consumption, as well as loss of image and legibility of the space.

Traffic and Movement

//(group8)

We initially viewed traffic as a complex and dauntingly intricate theme for analysis. However, our group's constellation of native French speakers, good researchers and easy exchange of information between one another led to good presentable analysis. For example, we found out that Brussels has coincidentally already undertaken revision plans to their traffic situation, which resulted in several interesting research and discussion points for later presentation. Helpful statistics about the diverse public transit network in Brussels painted a history of citizen use and participation, whether the form be automobile, tram, trainline or rented bicycle. Brussels is ranked as one of the most congested cities in Europe, a very bad reputation from which any improvements in traffic and public transit could potentially create positive change. New plans for regional train connections (RER), rentable electronic car systems, and an ever-expanding bicycle rental and subscription program have created opportunities for adapted patterns of urban mobility. An additionally important point for consideration in the analysis of traffic in Brussels is the fact that it is a multipolar city. Closer examination of this fact led our group to identify existing traffic nodes and points for potential development in the future. The inner city canal and periphery high-speed ring road also stand as potential vessels for improved traffic infrastructure in Brussels. These were focal points for analysis and would prove influential in later stages of the intensive workshop.



basemap © Google Maps - Brussels in 2014

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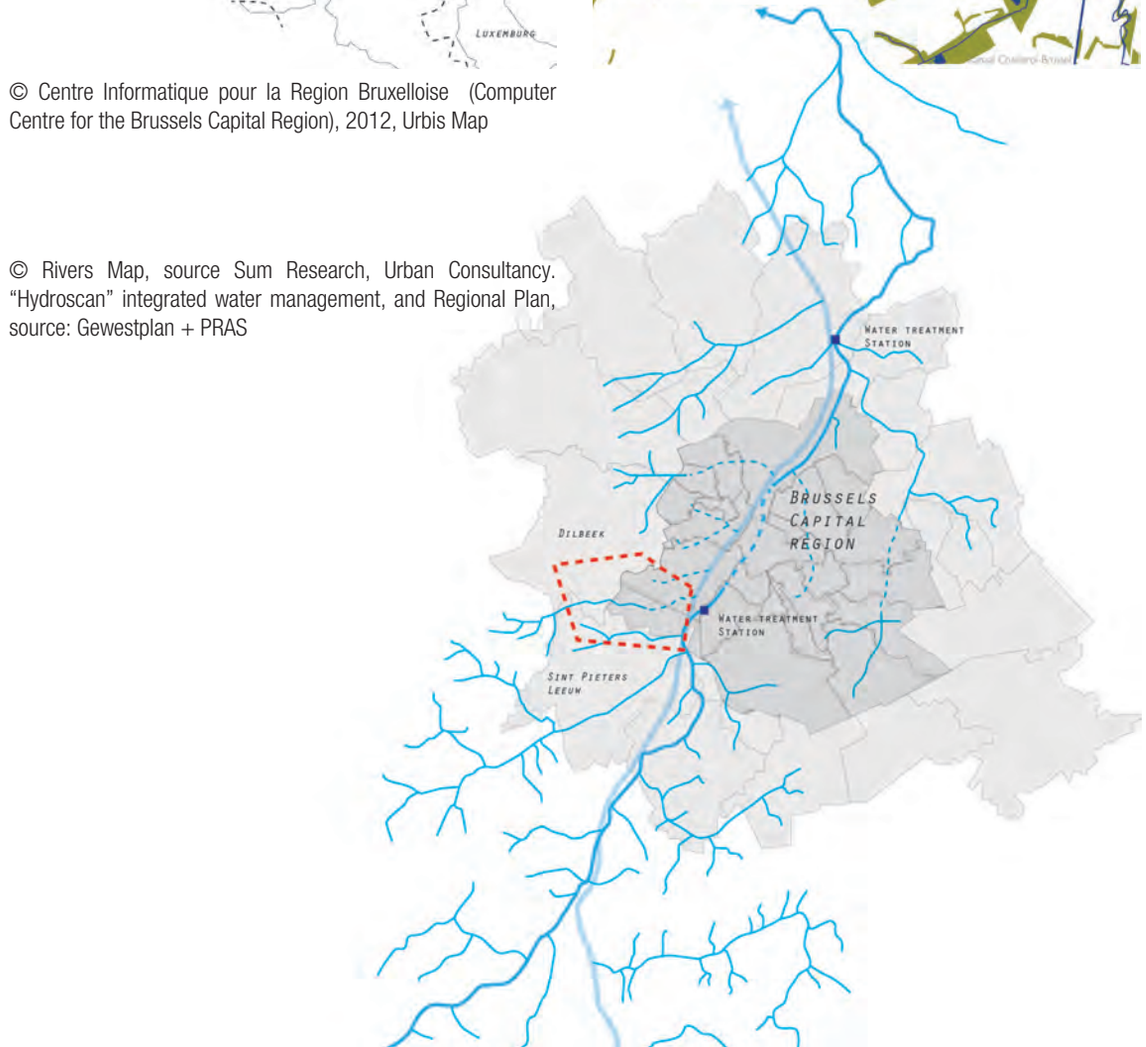


© Rivers Map, source Sum Research, Urban Consultancy. "Hydroscan" integrated water management, and Regional Plan, source: Gewestplan + PRAS

Water Bodies and Water System

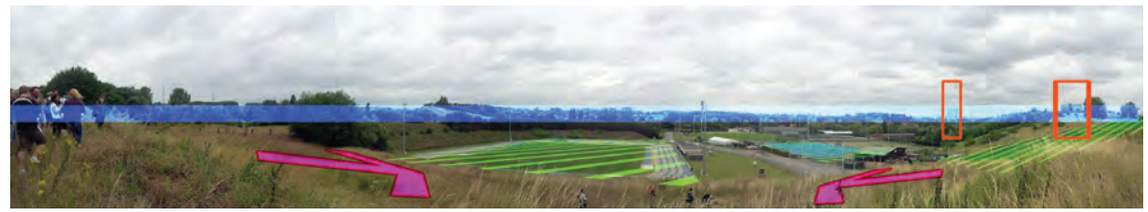
//(group4)

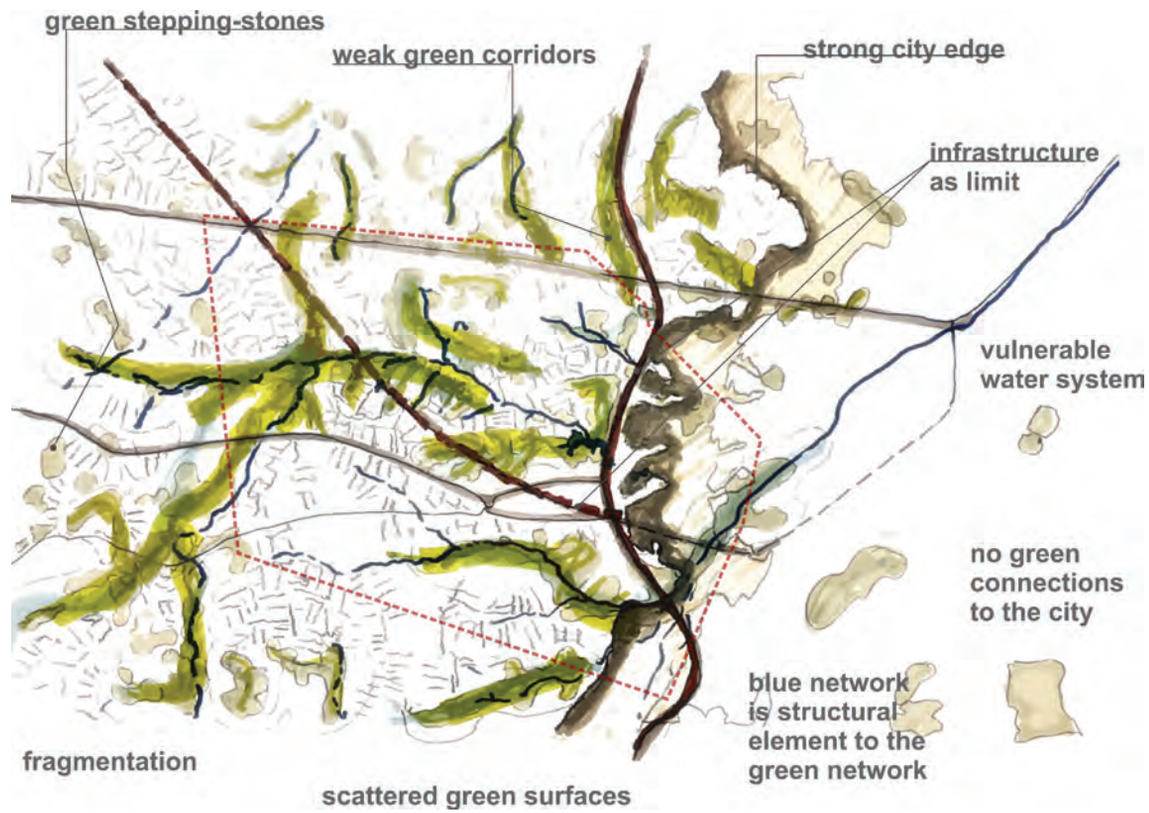
To investigate the relation between water and the peripheries of Brussels we had to start from a broader context analyzing how Brussels was inserted into the Senne System. It was also imperative to understand its historical and economical importance regarding the canals as transportation means between industrial areas. We also tried to focus on the current situation of abandonment and negligence that the water elements in the periphery are facing. The Neerpedebeek and the Volgelzangbeek are the principal tributaries of the Senne River, crossing the area of study. The Senne itself is a tributary of the Escaut River, which disembogues in the North Sea. Agricultural use and some riparian areas surround these two tributaries. The Charleroi-Brussels Channel is also crossing our area of study and has historically served as a transportation mean between Charleroi and Brussels and later with the incorporation of the Brussels–Scheldt Maritime Canal, with Antwerp. Most of the streams and tributaries are carrying polluted water since some houses in the neighbor communities of Brussels do not have enough water treatment plants and the sewage goes directly into the subsoil and the phreatic levels. This lack of quality in water and the absence of an integrated development that features water into the urban growth as a key source of life and aesthetics has caused people to ignore the streams, rivers and the canal. Most of the water in Brussels was directed underground because of the housing pressure on the land use, making the water elements almost invisible.

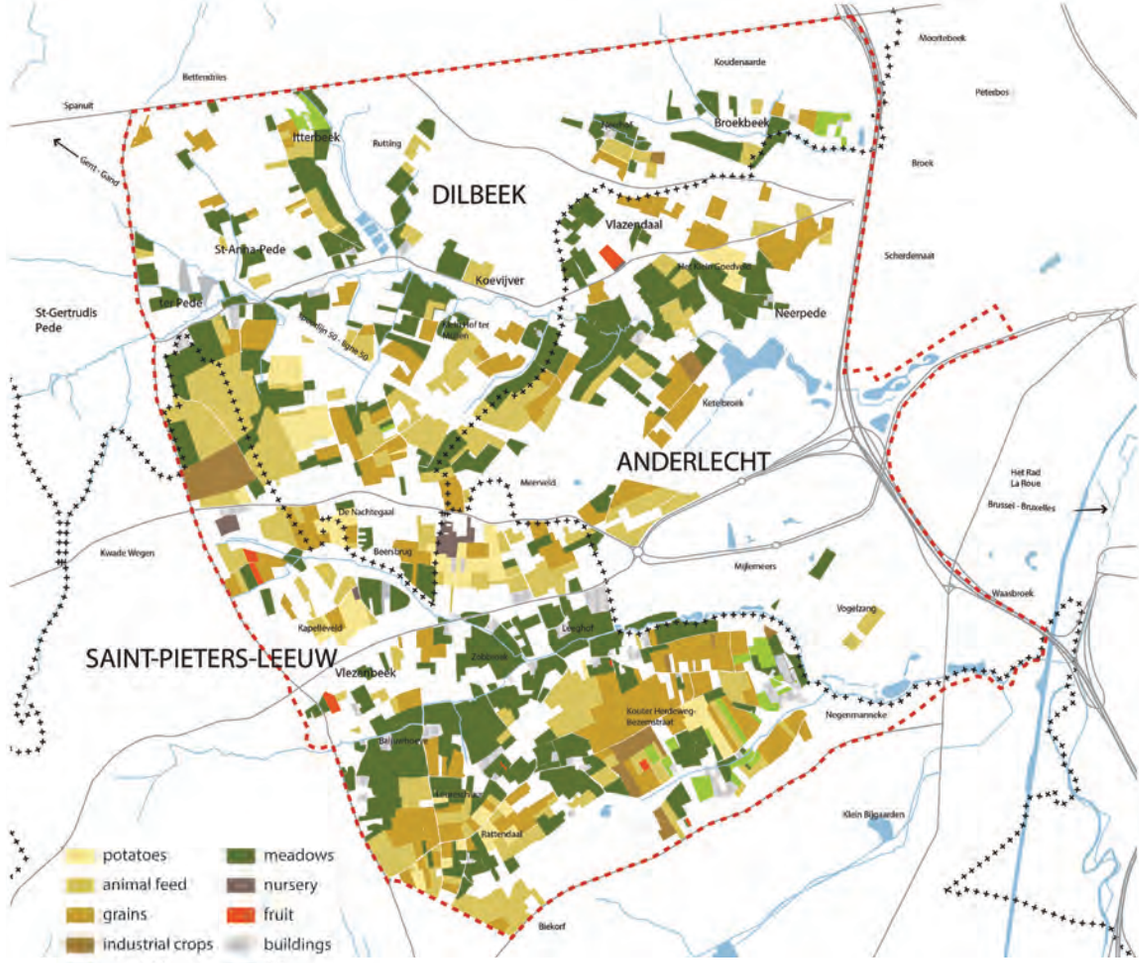
Biodiversity

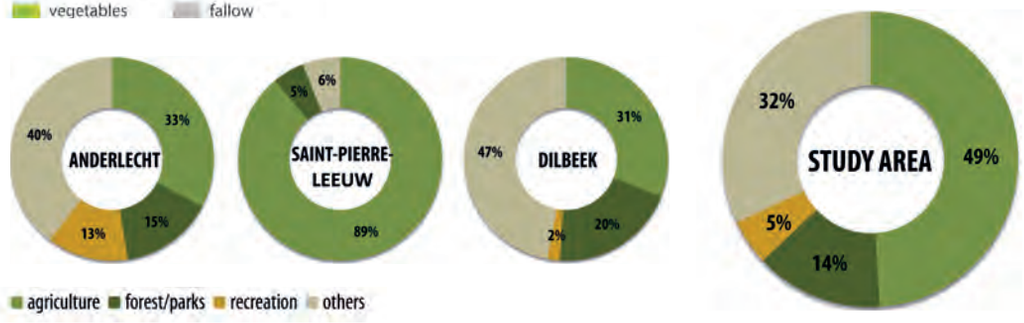
//(group3)

The site followed the different patterns of topography and variety of land use (50% agriculture field, pastures, orchards, farms). The primary crops are corn and wheat, which are cultivated in small plots. The landscape consists of small and scattered areas with high natural values visually structured by different colors, textures and heights. Populus Nigra is a frequently found species, which forms green boundaries and is also used for paper production. The other species found are Salix, Betula, and Walnut. Around the site, there is a green line used by pedestrians which links the green and recreational spaces such as sport complexes, golf course and horse riding field. The existing railway line forms a boundary that breaks the continuity of the landscape. Some parts of the site consist of traditional dwellings. The hospital building and the windmill act as landmarks in the landscape. The blue network serves as a structural element for the green network. The Neerpedebeek river has poor water quality and is used as a collector for grey water.









Agriculture

//(group7)

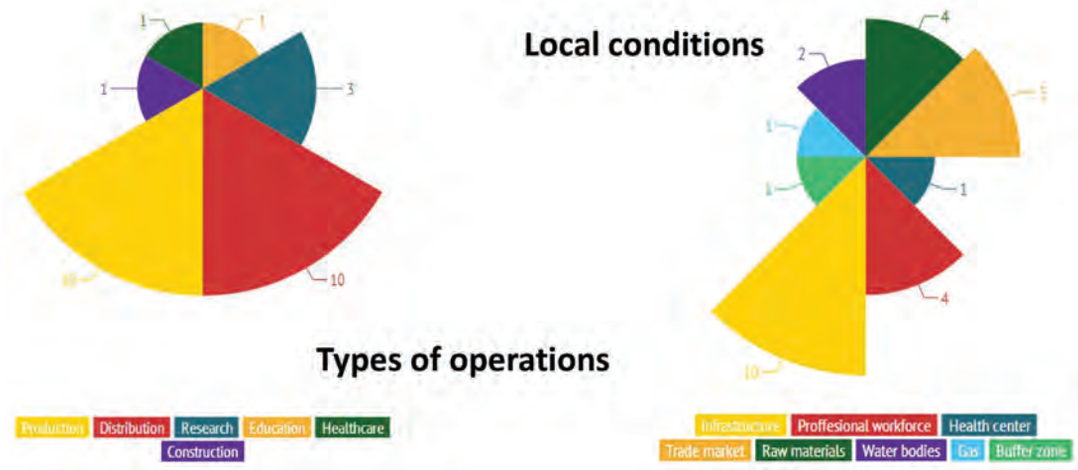
Since the eleventh century agriculture has played an important role in Anderlecht region regarding mainly cultural and economic aspects. A special feature is the closeness between fields and city, resulted from the urban expantion of Brussels and development of new settlements towards rural areas. Today the periphery is characterized by clear spatial fragmentation, where the study area comprises three communities – Anderlecht, Saint Pieters Leew and Dilbeek. The area has developed mainly along the three rivers tributaries of the Seine: Broek in the north part, Neerpede in the central part and Vogelzang in the South. The production is quite diverse: potatoes, forage crops, grains, industrial crops, vegetables, meadows, nursery, fruit crops, and fallow. Besides the traditional agriculture, new ways of production can be observed, such as hobby farming, urban farming, bio-gardening, family properties producing vegetables in small scale for private use and the local market. Livestock and milk production are predominant. Still according to the report, a large number of farmers (23.2%) are above the age of retirement.

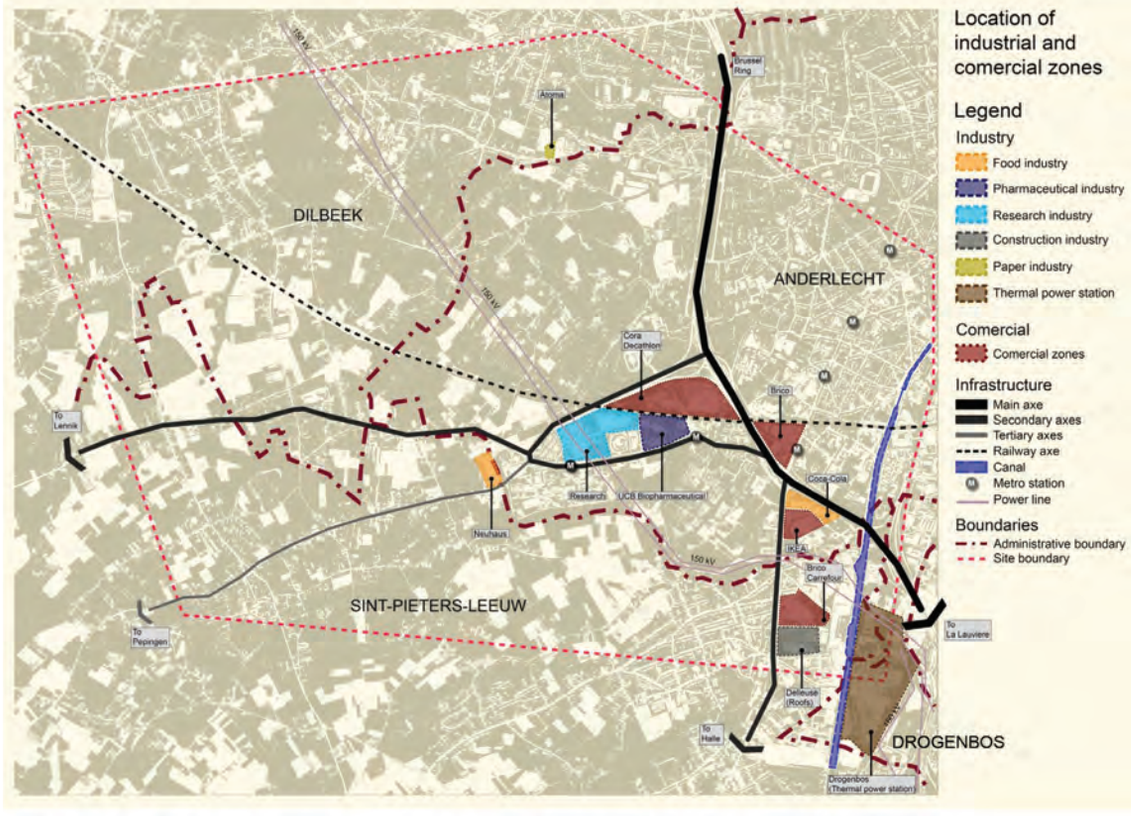
Behaviour Patterns

//(group6)

We chose to focus on people, so our aim was to study the people in and around our site. With a list to guide us, we arranged an overview of requirements like human behaviour patterns, demographic growth, social and cultural differences, etc. After reviewing the general demographic numbers, which were easily available online, we decided to categorize the different segments of our site under different categories for better understanding of the social segments, lifestyle and the quality of living space in these segments. For example, a security map marked with good, moderate and bad reflects the quality of life, being safe or not safe, and at the same time it also shows areas where upper class society resides or a lower income group takes shelter. Other maps made for such analysis were for the following criteria:

- Noise pollution
- Kind of building structure
- Density of built structure
- Hard and Soft recreation
- Activity and Facility





Industry

//(group1)

Brussels was the center of trade between the cities of Bruges, Ghent and Cologne. Brussels exported luxury items such as fabrics and tapestries to Paris and Venice, at the height of economic development. In recent 10-15 years, great industrial advances have been made over the European industry such as:

- Increased sustainable productivity
- Strong innovation
- Improvement in environmental performance
- Accomplished a considerable re-orientation of its workforce and capital investment
- Develop new products and markets
- Change the environment for industries

Brussels' rank among world cities is basically higher to what could be expected from the size of the city and the Belgian economy, but it developed an important place in European economy.

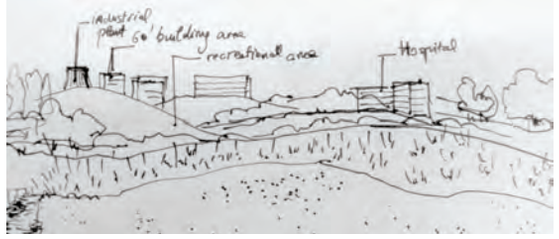
Main challenges for industrial regional policy:

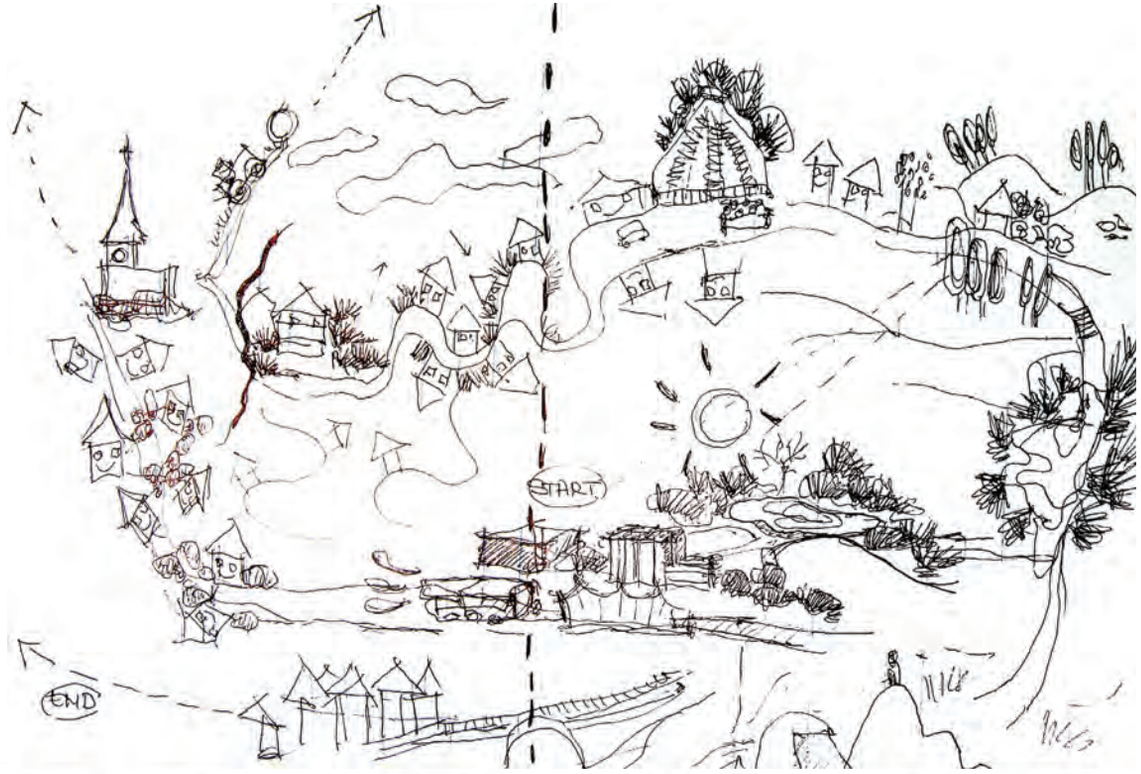
- Physical regeneration of land
- Regeneration of housing and social infrastructure
- Renewal of infrastructure, oriented to the needs of new industries
- The adaptation of existing skills and the development of new forms of human capital that are not focused on old industries
- Building up of RTDI (Research, Technology, Development and Innovation) activities
- Changes in institutional networks and cultural factors, to allow the mobilization of local resources and their use to develop new industries.

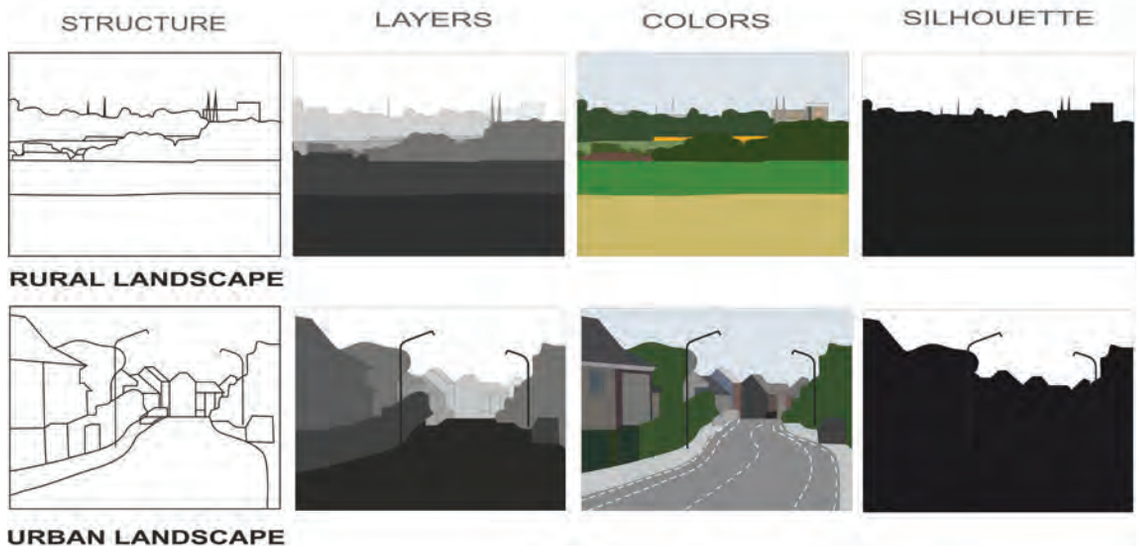
Visual Appearance

//(group5)

As a very first impression, the planning area evokes images from the landscape paintings of Pieter Bruegel the Elder. Even if they are from a different century, their feeling can be adapted to the present situation. The analysis showed that the hills interrupt connections with the views in the area. At the same time, the hills offer a good view to the skyline of Brussels. Infrastructure elements such as the train connection to Brussels or the motorway connect the periphery with the city center. However, in the area, these elements are also a kind of border in the landscape. Different landmarks like churches or the windmill help to provide orientation to the visitor in the area. The structural analysis offered a different perspective. The 'rural landsape' series shows typically how the horizontal lines and multiple layers become visible. A flat silhouette becomes more dynamic through colors and textures from the fields.







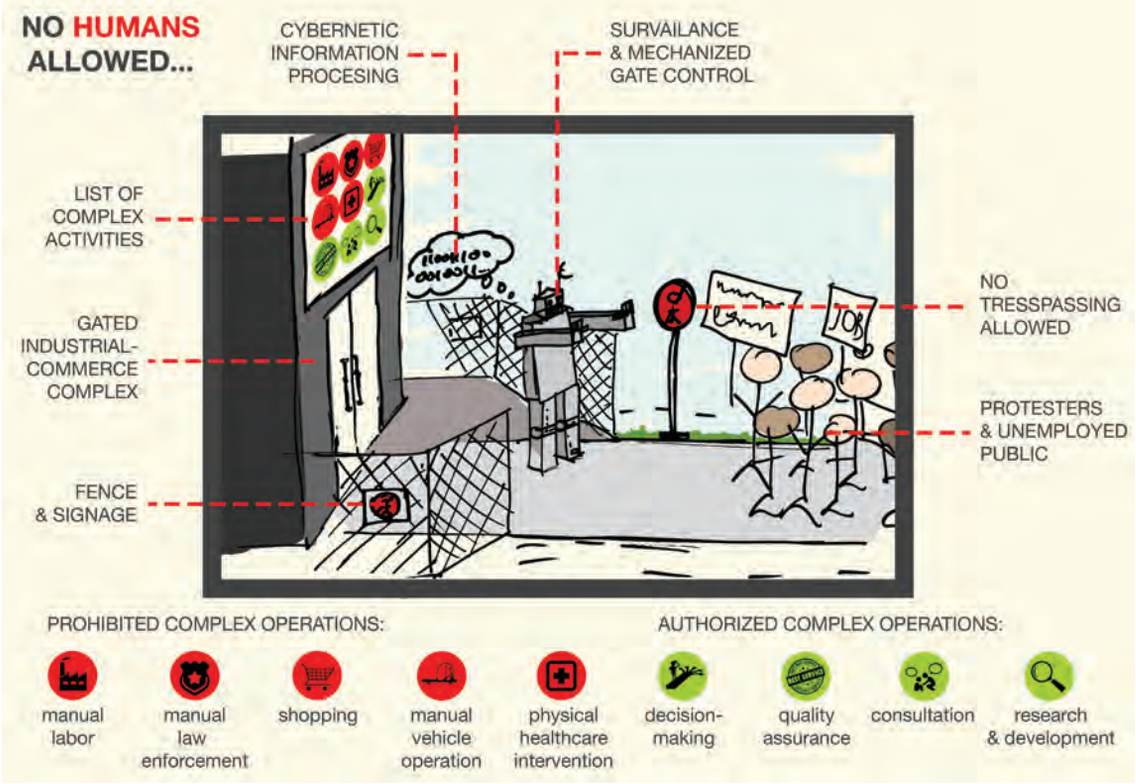

ASUS

SCENARIOS AND DETAILING

GROUP 1

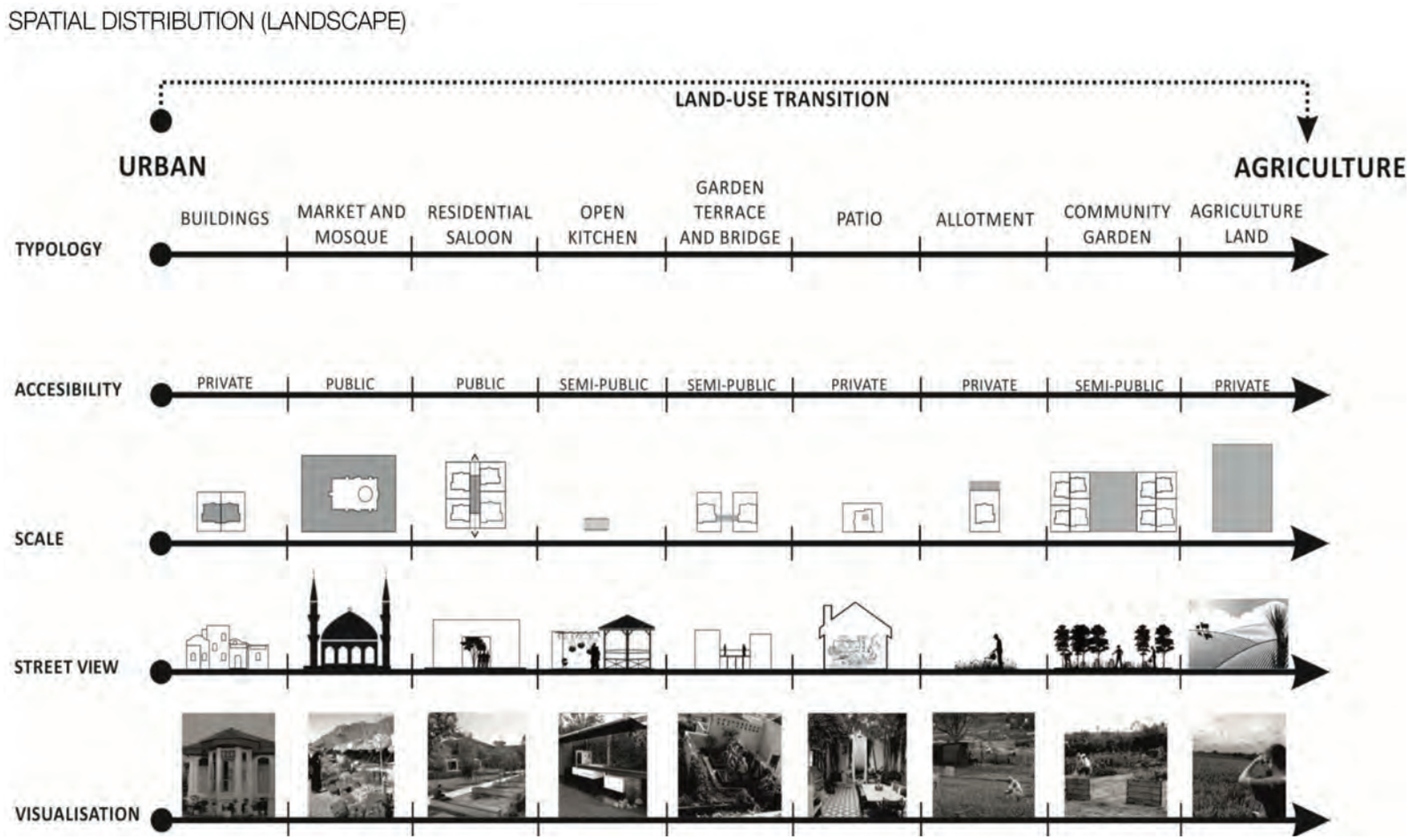
ISLAMIC INTEGRATION

Anna Szilágyi-Nagy
Azadeh Soltan Ahmadi
Mihai Dan Pavel
Rasha Aboodi
Elisabetta Fiorenza
Miruna Draghia



Scenario

The four scenarios presented during the workshop can be summarized as follows: 1. No Humans Allowed: The drivers for such a scenario are technological innovations, leading to the rise of robotic humanoids and replacing manpower as labor. These drivers would result in pressures like robots dominating manual labor, service facilities and transportation. This would lead to an increase in unemployment, affecting the lower class, causing various riots all over Brussels. 2. The Rising Caliphate: The drivers for this scenario are the occupation of Europe by Muslim populations, declaring Brussels as the capital of the Muslim caliphate. The resulting pressure is the declaration of Islam as official religion. This scenario would manifest in various ways, such as the removal of human representations in public art. 3. Solar Storm: The drivers here are unprecedented solar explosion within the upcoming 11-year solar cycle, which will happen in 2020, and having power grids at full capacity. The will result in explosions of power grids, and a need for alternative power to operate electrical appliances. 4. Yummy Insects: Drivers



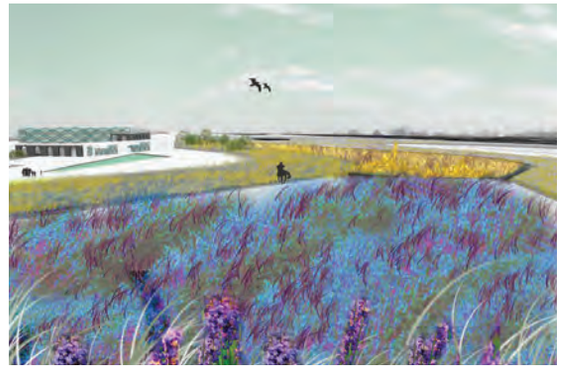
such as bioengineered viruses that first infect mammals and birds and then spread to humans causing major health crises such as dementia and death, influence the final scenario. Pressures that rise include changes in agricultural fields land-use and new technological inventions counteracting the viral spread. This will impact food production in multiple ways.

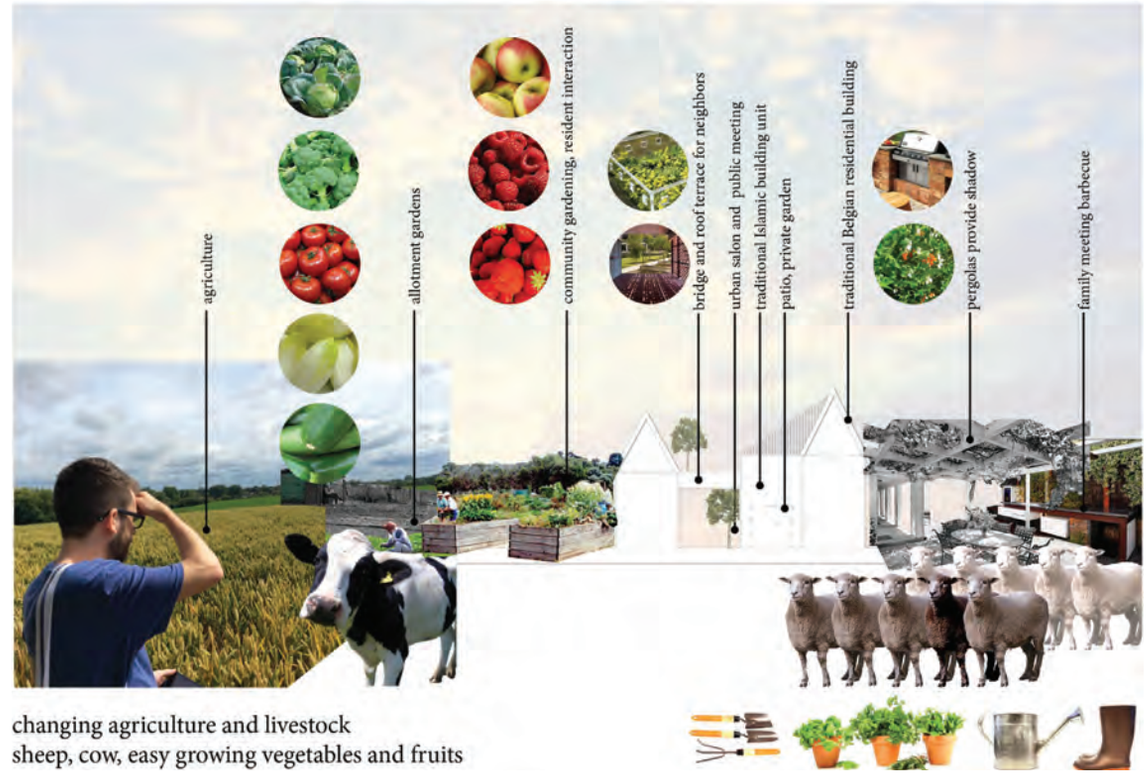
Master plan //

After choosing our scenario the next step was to define our design target group, therefore we visited locations where Muslim population shows higher density and tried to collect information from the inhabitants themselves. Despite the strong identity of Brussels, the conservative and traditionally thinking Belgians are afraid of losing their culture. Muslim religion demands a more scheduled time for praying in everyday life and especially during Ramadan. “I have the same demands as any other people have” - We want to avoid the situation of producing segregation by pushing Muslims to the periphery. We want to:

- Develop and spread design modules
- Implement public participation
- Reach a mixture of nationalities and religions
- Mix nationalities already on micro/ building level and add interaction spaces.
- Create possibilities to maintain the culture and language of the Muslims
- Define identity of new urbanism while preserving values of the two cultures
- Choose mutually-important values
- Create a flexible framework for living.

"We are more integrated than the Belgians consider us, we don't live in districts"



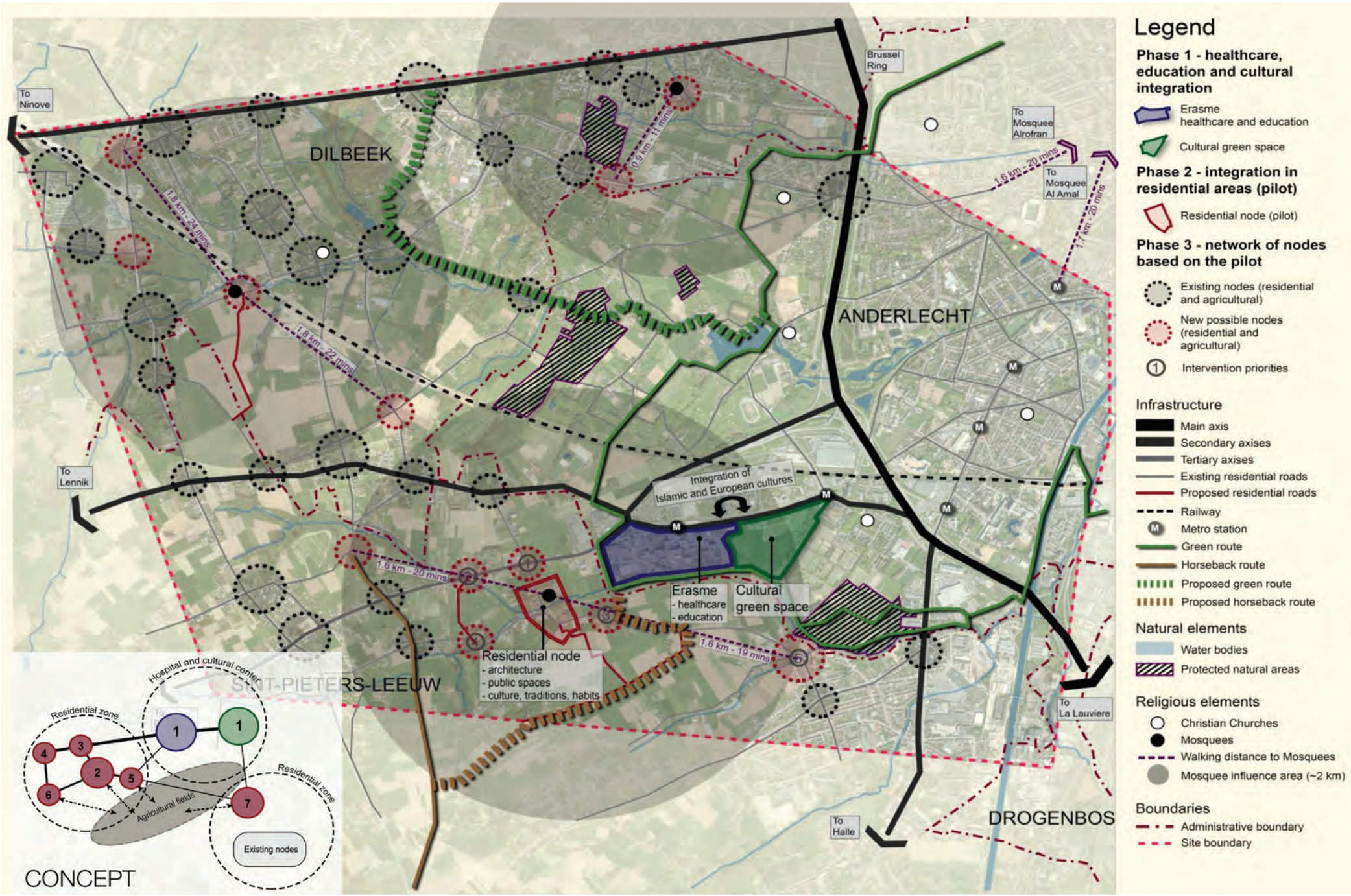


changing agriculture and livestock
sheep, cow, easy growing vegetables and fruits

The brownfield next to Erasme hospital was chosen as the core of the new development using that as a center of our network. Building on existing urban development nodes and traffic network we created a web system with punctual intervention sites of new housing areas and focused on the densification of the existing nodes. Religious services are available within walking distances. Proposed green routes lead through various areas and connect back to the center of Brussels.The cultural center hosts the following activities and functions in order to maintain cultural values, balance among physical, metaphysical and two cultures:

- Health care and research, therapy garden,
- Instruction in Arabic language
- Cultural programs and education,
- Library and conference center,
- Mosque

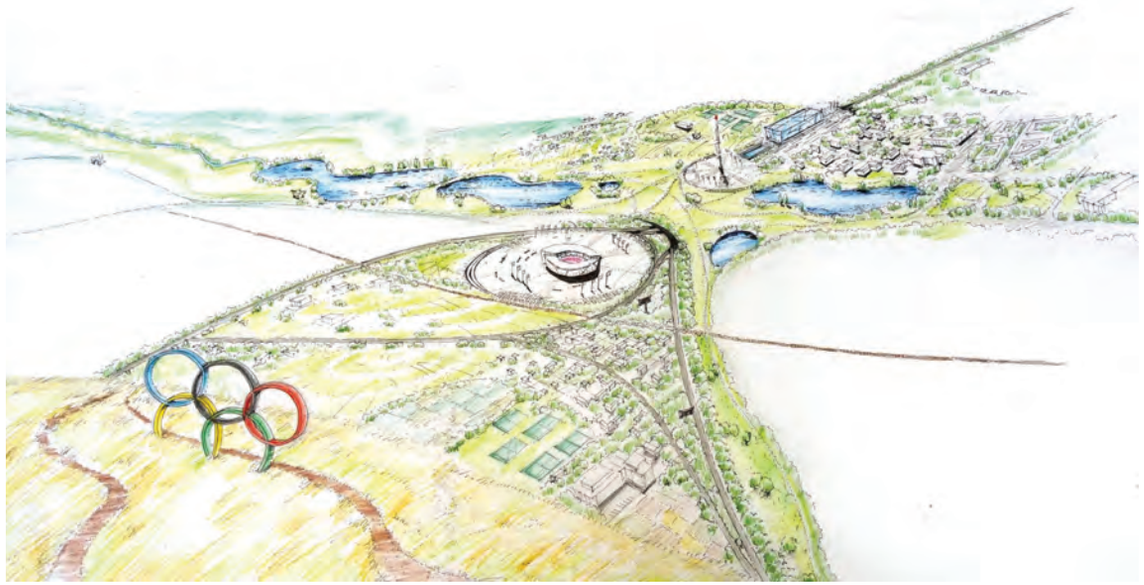
Taking the Moroccan building structure with its cubic form and patio we combined it with the typical building structure of the periphery with its steep roof system and added one more floor to intensify urban life. The frames of the houses are left for owners from various nationalities to finish and suit to their own demands.


To Ninove
DILBEEK
Brussel Ring
To Mosquee Alrofran
To Mosquee Al Amal
0.9 km - 11 mins
1.8 km - 24 mins
1.6 km - 20 mins
1.7 km - 20 mins
ANDERLECHT
1.8 km - 22 mins
To Lennik
Integration of Islamic and European cultures
1.6 km - 20 mins
Erasme
- healthcare
- education
Cultural green space
Residential node
- architecture
- public spaces
- culture, traditions, habits
1.6 km - 19 mins
SINT-PIETERS-LEEUW
To La Lauviere
To Halle
DROGENBOS
Hospital and cultural center
Residential zone
Residential zone
Agricultural fields
Existing nodes
CONCEPT
Legend
Phase 1 - healthcare, education and cultural integration
Erasme healthcare and education
Cultural green space
Phase 2 - integration in residential areas (pilot)
Residential node (pilot)
Phase 3 - network of nodes based on the pilot
Existing nodes (residential and agricultural)
New possible nodes (residential and agricultural)
Intervention priorities
Infrastructure
Main axis
Secondary axises
Tertiary axises
Existing residential roads
Proposed residential roads
Railway
Metro station
Green route
Horseback route
Proposed green route
Proposed horseback route
Natural elements
Water bodies
Protected natural areas
Religious elements
Christian Churches
Mosquees
Walking distance to Mosquees
Mosquee influence area (~2 km)
Boundaries
Administrative boundary
Site boundary

GROUP 2

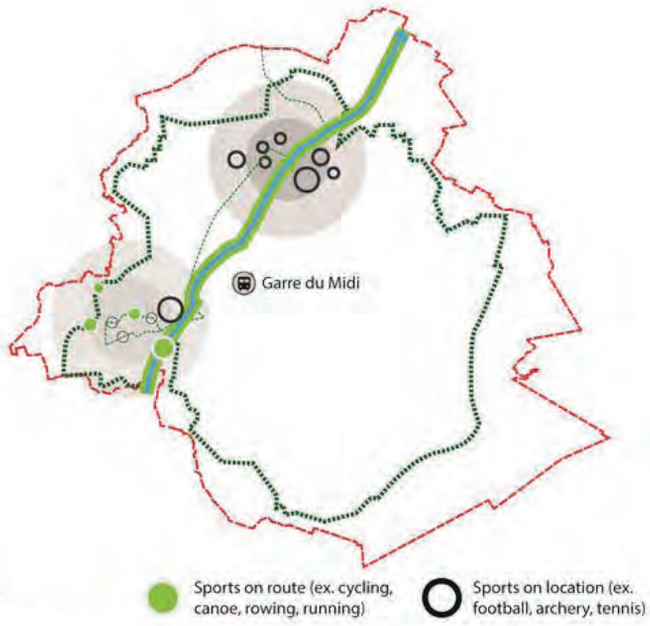
THE MOVING LANDSCAPE

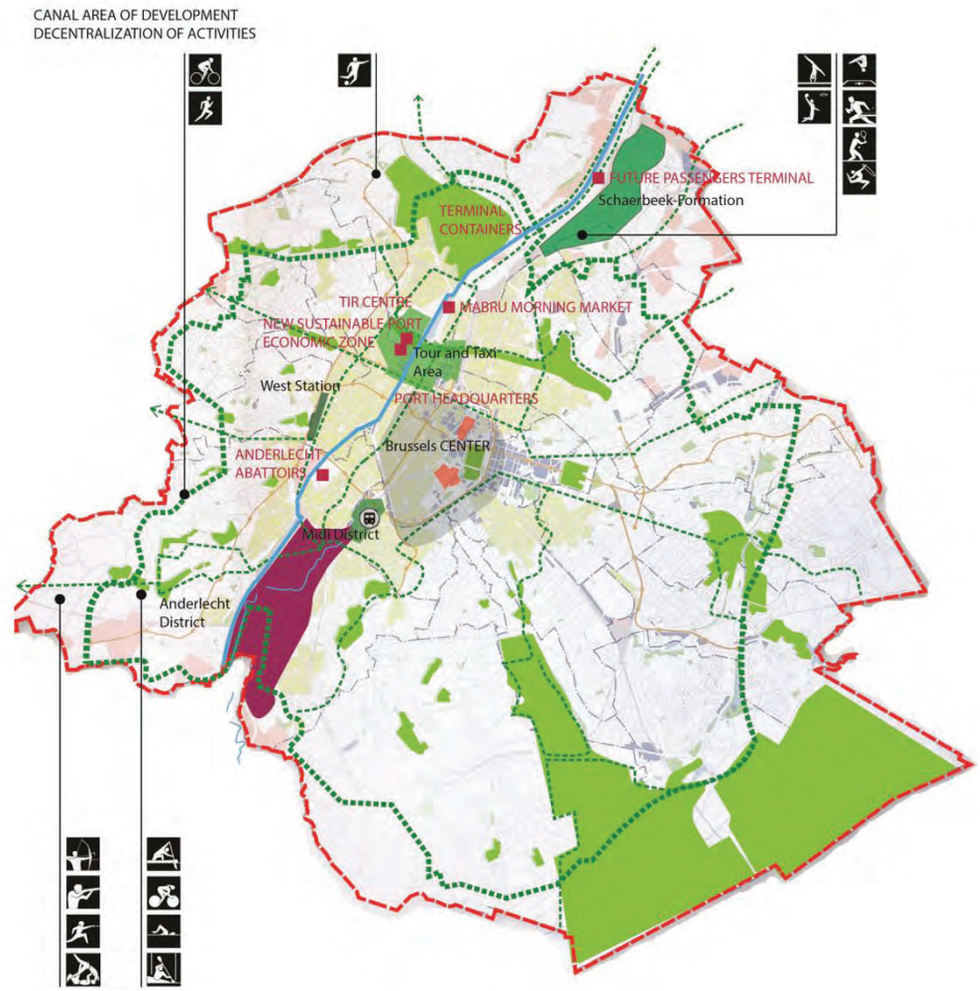
Adina Matroz
Stephanie Janke
Le Trang Nguyen
Anika Binder
Antonia Ivancu



Scenario //

In scenario number one, we imagine Brussels is hosting the Olympic Games. In order to assure a highly successful course of events, it is decided to develop the South-Western side of the city. The scenario focuses on what happens when the games are gone. In scenario number two, a bacterial invasion is developing out of the contaminated water from Brussel's canal. The people get sick and die, whereas the animals and plants survive. Scenario number three imagines a radical population growth due to African immigration during the oncoming years. The consequence will hence be the doubling of the population, which requires a fast development of social housing, infrastructure and new facilities. Scenario number four deals with the European Union. The Euro becomes the international currency and the European economy booms. Unemployment diminishes and salary rises, but social welfare also diminishes and a pool of cheap labor force without rights is created. Eastward expansion is delayed because member states want to hold onto a strong Europe. Thus we expect a European stability, while Brussels cultural diversity increases as a source of creativity.

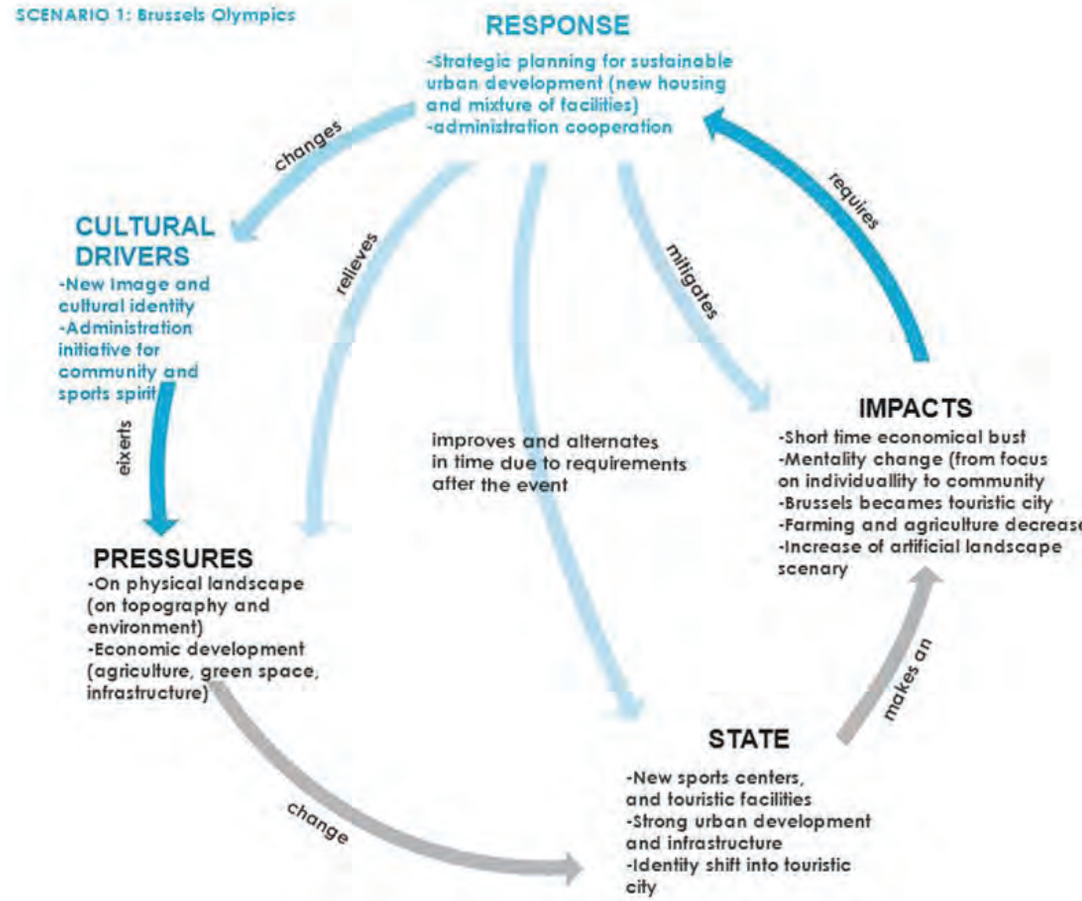


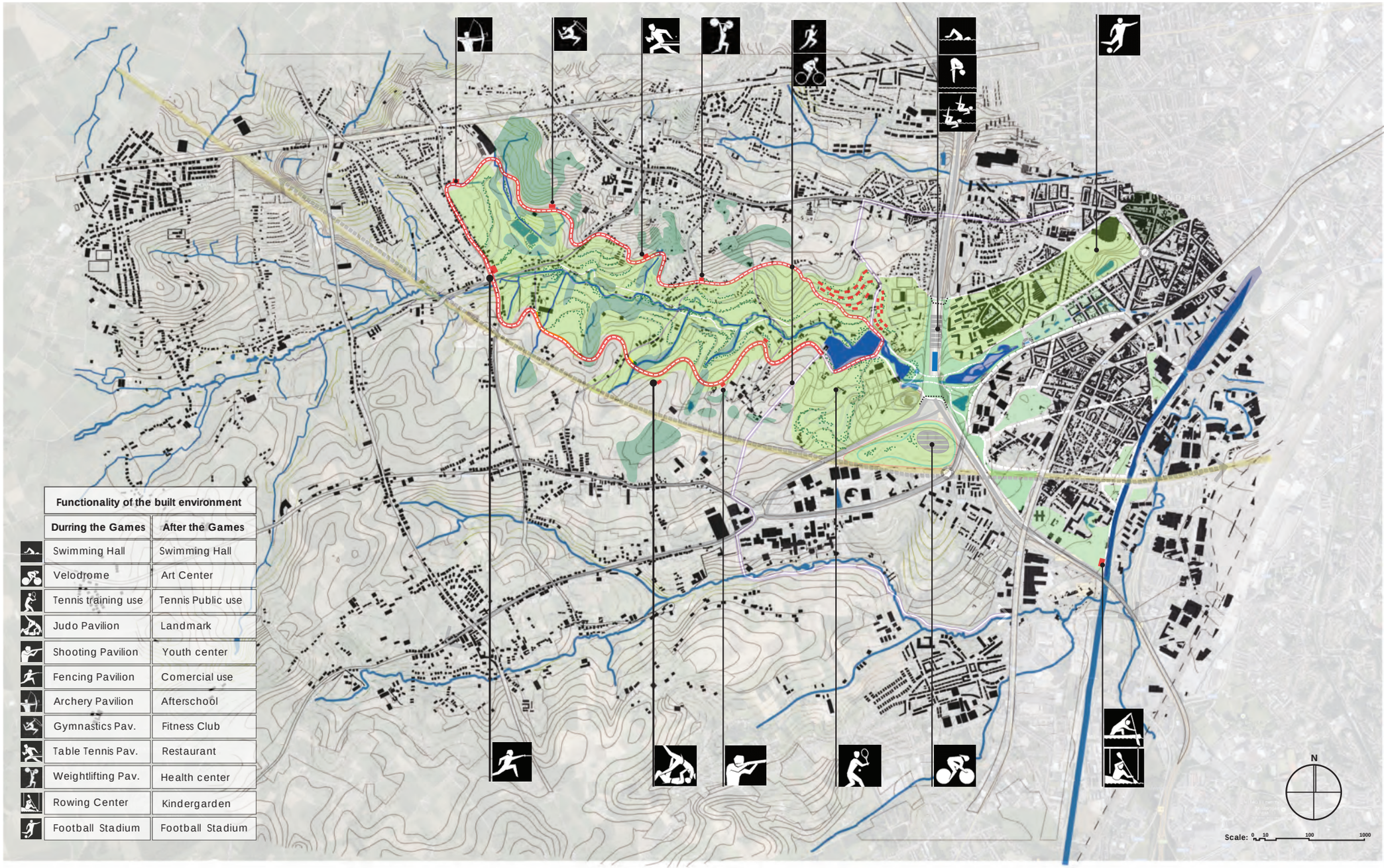


Master plan //

The scenario we have focused on in the last part of the workshop was closely linked to the image of Brussels Capital Region, a young and dense city featuring an international, colorful palette, and, above all else, a vibrant city of European culture. In our study, we noticed there is a need for an integrated policy plan that focuses on the many facets of education, employment, housing, the living environment, health. The landscape of the Olympic Games, though being a potential for global preeminence, is structured around human needs, serving the city as a whole. As the event requires a lot of space to be available within the city, a new concept has emerged: “The Decentralized Games,”, meaning that the distribution of the games is made throughout the country. Within the city, our proposal focuses on two main areas: the North, where there is land vacancy, and the South, an industrial zone with lack of green spaces. The Olympic Games facilitate a connection between the North and the South through existing green-blue systems and new green ones. We divided our sports categories into “sports on location” and

"sports on routes" in order to apply the concept of decentralized games further into the city. By doing so, the proposal provides a new image in the North through a new built environment for sports on location, and reinforces the South with recreational public areas and new green spaces, by bringing the infrastructure necessary for the sports on routes. The core area of our implementation includes significant buildings such as the new velodrom, the swimming hall built on a green surface above the highway, the new housing buildings which fill a gap in an existing settlement, and the new Olympic Village. This core area is also the junction to the existing green promenade of the city. We enhance this green connection by adding more green areas along the route, and propose a new Olympic promenade for on-track sports. Different sport pavilions are located along the route, which will later be given new functions. This intervention aims to attract people from the city move to the site, also from the site to the city, forming the concept of a moving landscape.





Functionality of the built environment	
Durring the Games	**After the Games**
Swimming Hall	Swimming Hall
Velodrome	Art Center
Tennis training use	Tennis Public use
Judo Pavilion	Landmark
Shooting Pavilion	Youth center
Fencing Pavilion	Comercial use
Archery Pavilion	Afterschool
Gymnastics Pav.	Fitness Club
Table Tennis Pav.	Restaurant
Weightlifting Pav.	Health center
Rowing Center	Kindergarden
Football Stadium	Football Stadium

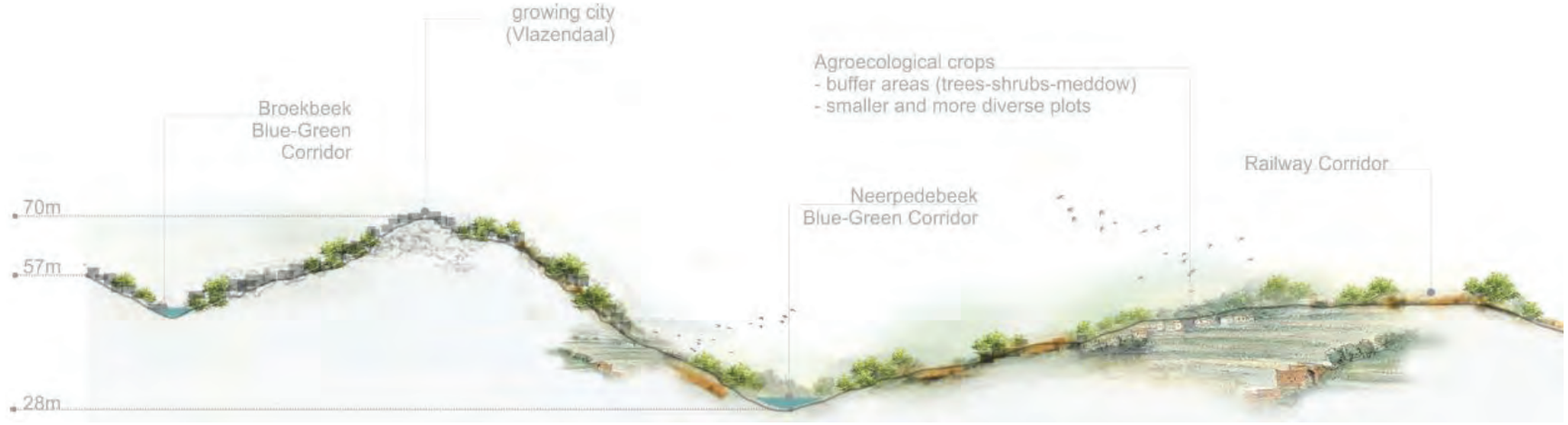
GROUP 3

ECOSYSTEM RECOVERY

Negar Mehryar
Victor Moldoveanu
Neha Shrestha
Chiara De Santis
Loredana Micu

Scenario

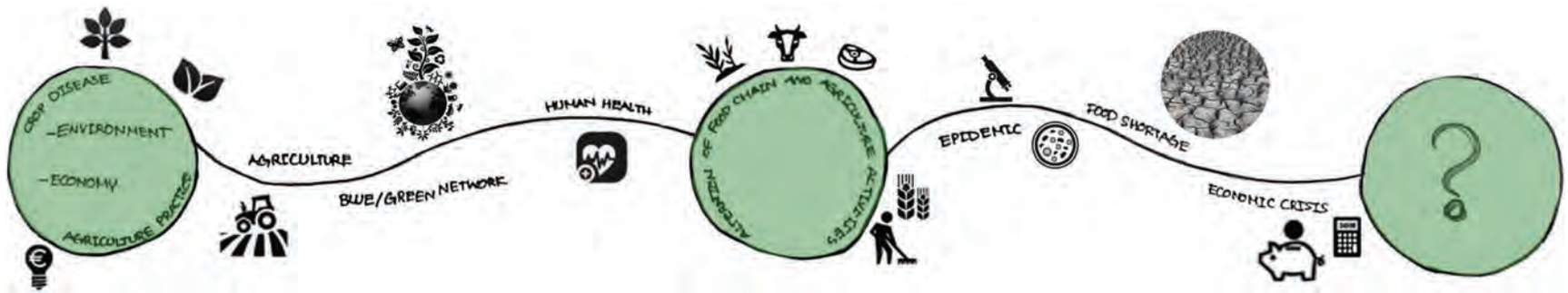
Developing four different scenarios began with using the DPSIR model. For each scenario two driving forces were chosen, more specifically: environment (climate change) and economy (intensive agriculture) for the first one; social (population migration) and economy (economic discrepancy) for the second; economy (production growth) and legal (agricultural policy - CAP) for the third; and finally, environment (crop disease) and economy (agricultural practice) for the fourth scenario. We focused on the last one. Looking at the global context and current situation of practicing agriculture with Genetically Modified Organisms (GMO) we further developed our scenario (Ecosystem Recovery) based on three driving forces: political (CAP), technology (GMO agriculture) and economy (low costs), all of which exert pressure on the blue and green network (water, flora, fauna). Furthermore, agriculture is part of the state of change in terms of alteration of food chain and agricultural activities. This state leads to impacts including health problems, loss of biodiversity and economic crisis. The Ecosystem

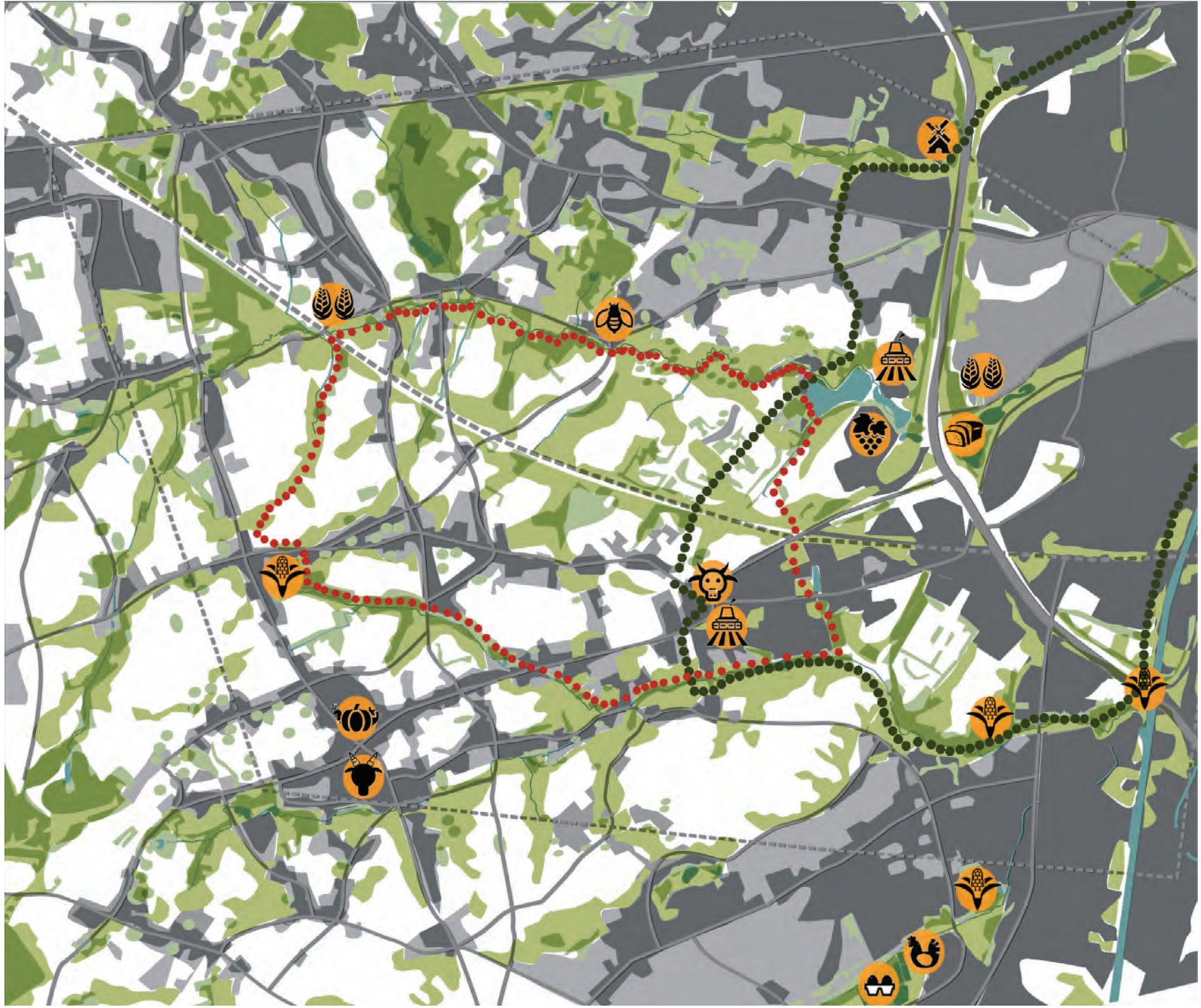


Recovery scenario starts when the CAP (Common Agriculture Policy) approves GMO seeds/crops in Europe. Because of plant mutation, pest development resistance causes environmental impacts particularly in the areas of biodiversity, soil and water, as well as economical problems due to the high price of seeds so that in around five years it causes crops failure. As response to this crisis, farmers decide to adopt agro ecological methods. This includes government observation on how agro ecology works, which entails significant government support and a self governance association for farmers to promote sustainability and participation of farmers, administration and locals. The agro ecological farming practices follow the conventional system, utilizing best management and soil conservation practices and reduced use of chemicals. With the help of the state, farmers follow a traditional knowledge and become part of a sustainable system.

Master plan //

In Ecosystem Recovery, agriculture is practiced in an ecological, environmentally-friendly way. The green corridor develops and the green system grows stronger and connects with and within the city. In the meanwhile the railway path becomes a green corridor connecting the existing forests and habitats. In addition the water system gets cleaner and more stable. The blue corridor acts not as a structural element but also as a connection of habitats through stepping stones and vegetated paths and patches. The urban tissue is developed in the northern and southern part of the site but the central area remains rural with few new developments. Priority is placed on providing new green pathways for walking and biking in addition to enhancing the existing pathways to improve the accessibility for the public at different focal points and activities along the green route to a network of farms and their products. The green corridor provides a broad diversity of heights, colors and textures. The restoration of the environment happens through the development of a new type of agriculture and the definition of a new relation between urban and rural. The areas with different species of trees, shrubs and meadows alternate and assure a gradual transition into and from the agricultural plots, farms and built areas. The agricultural plots become smaller and more diverse, and their boundaries are established through natural borders and layers of mixed vegetation. Corridors and a buffer area appear alongside infrastructure (railway, highway) but also alongside the river body. New developments and agriculture practices follow topography. Therefore, the site becomes socially, economically and environmentally efficient through the overlapping and connection of the green and blue agricultural and built network. The practice of agro-ecological farming follows many different layers and patterns. This type of agriculture increases the biodiversity and the ecological health of farmland. Extensive farming with natural techniques increases the biological diversity of plants and creates habitat for animals. The plan integrates the network of native species hedgerows with agro forestry areas. Agro forestry combines intensive farming with natural woodland structure. Tree and bush are planted in specific arrangements and existing pasture and cropland. Production crops can be fruits, nut trees, timber or biomass. Biodiversity include buffer zones, connecting landscape elements and rhythms of open and close space. Grass margins and woods are vital for biodiversity. Hedgerows on property boundaries establish diverse habitats as well as increase the natural beauty of agricultural landscape.

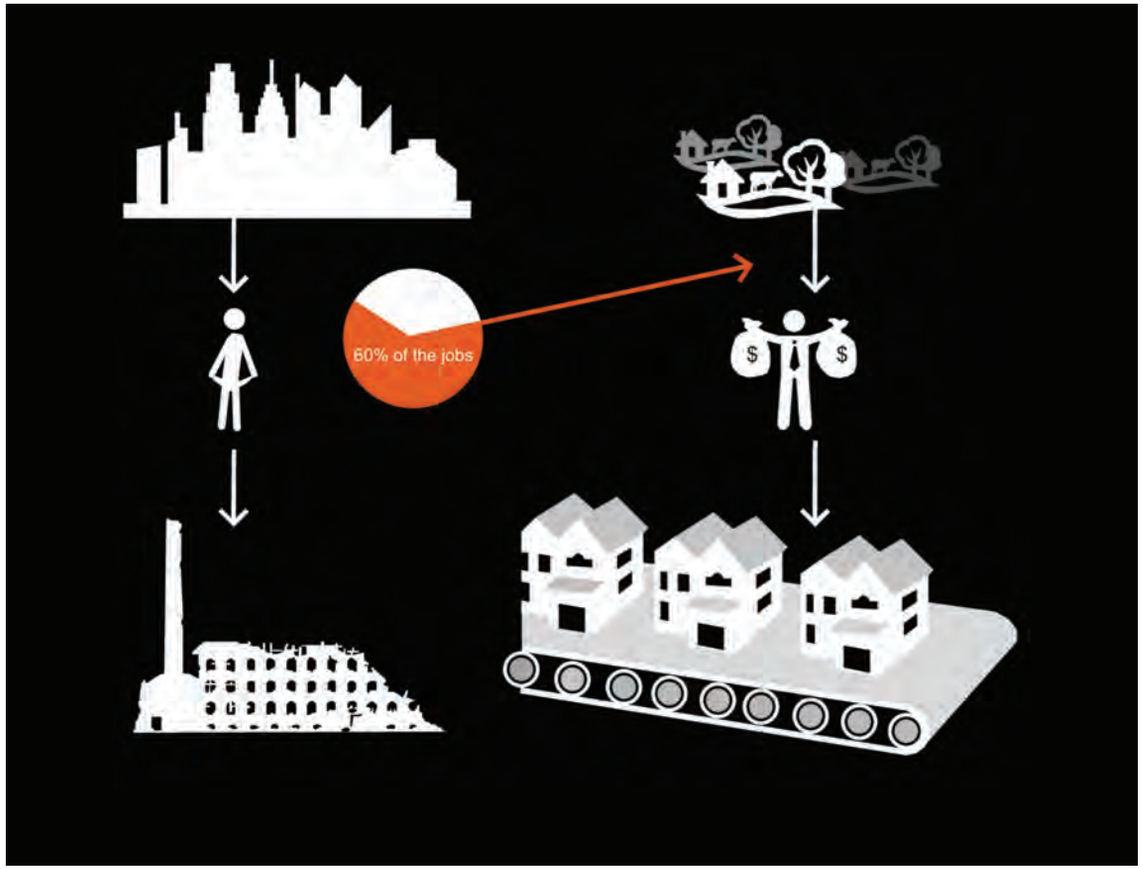




GROUP 4

BELGIAN FAVELA

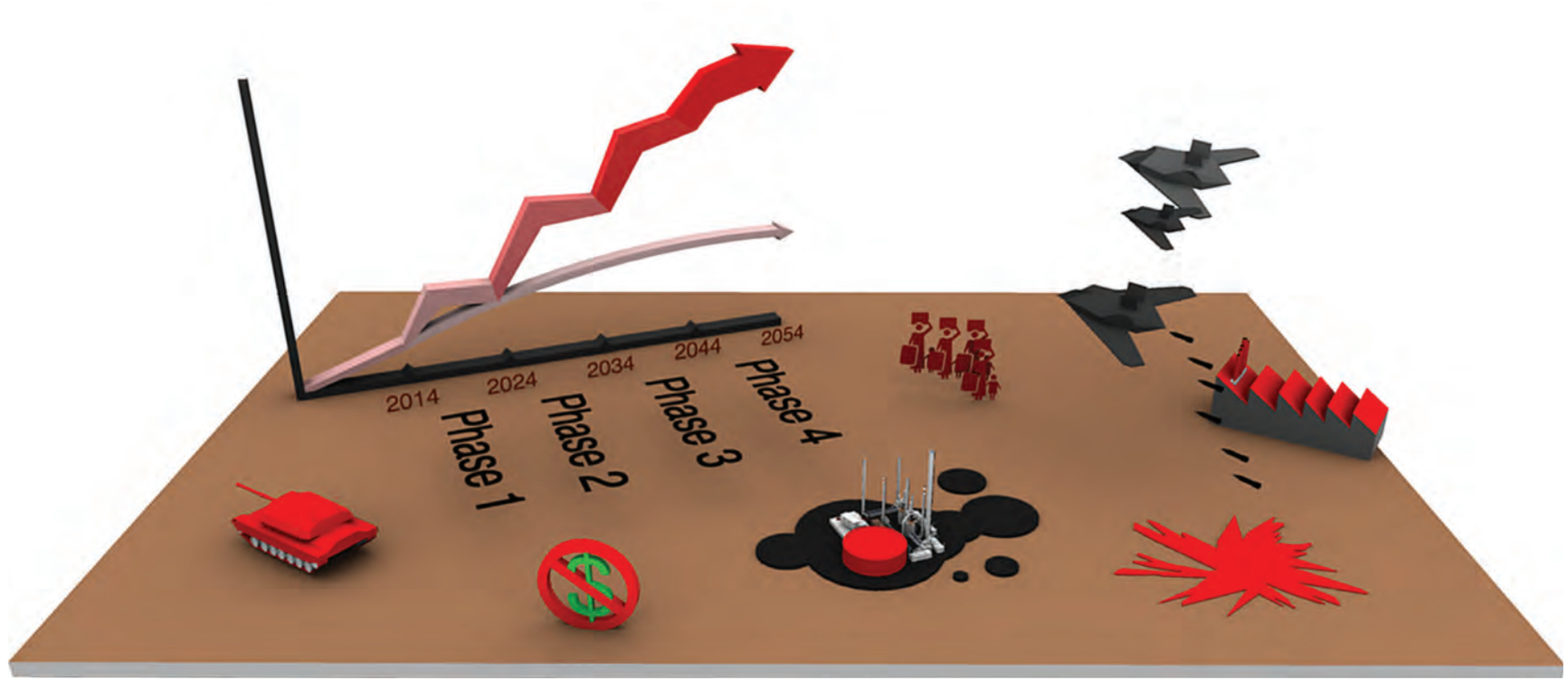
Gabriel Tănase
Miguel Magalhaes
Bartosz Ukarma-Malaga
Ioana Tomescu
Mario Matamoros



Scenario //

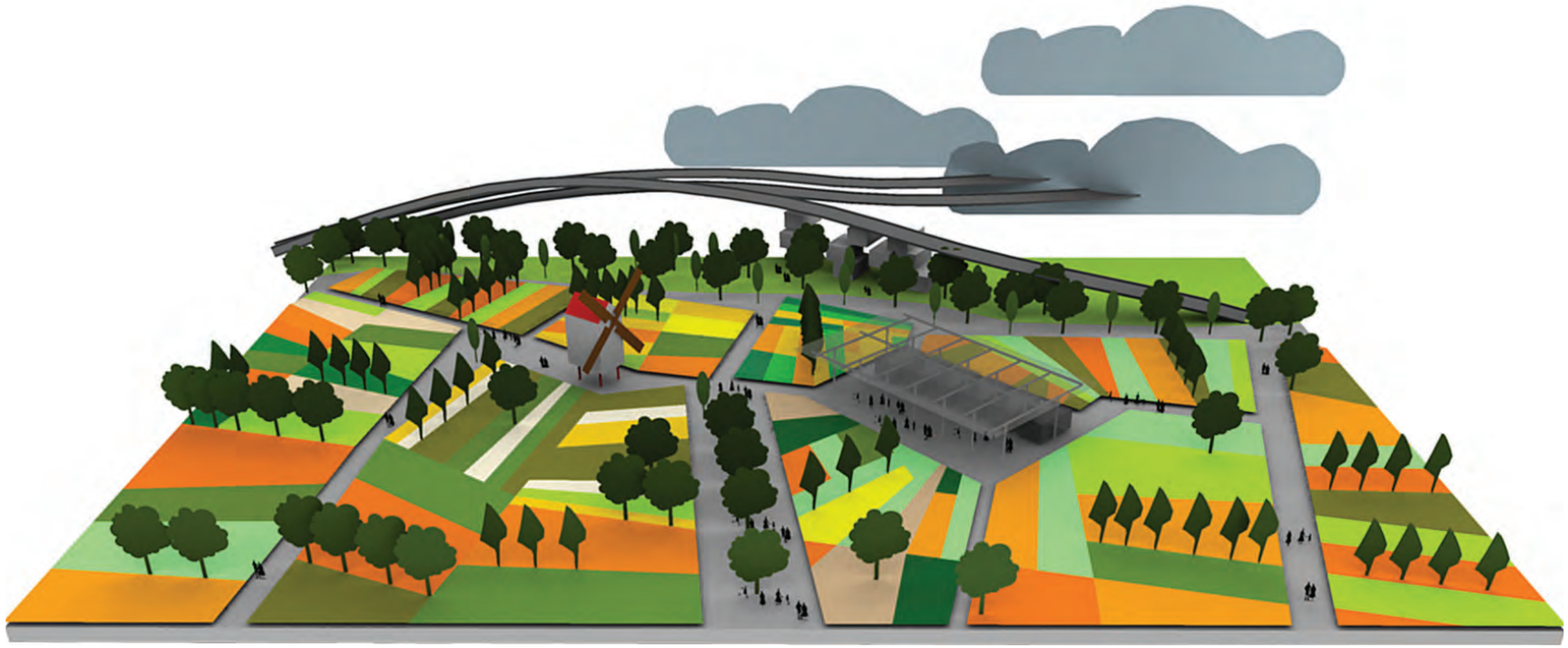
After brainstorming possible scenarios and develop its respective DPSIR, we agreed on four preliminary ones. One aim was to cover every driver field: economical, social, political, environmental and technological. The second aim was to develop at least one black swan scenario and one predictable scenario. Belgian Favela: Currently, Brussels is a city of social contrasts. In this scenario a highly impulse of unqualified immigration towards Brussels leads the capital of Europe to a social disintegration and a dehumanization of the living conditions of migrants and refugees. This scenario predicts the extinction of the middle class, leading to a society composed only by poor and rich. Tax the Source, not the Pillow: 60% of the commuters in Brussels live outside of the city, paying taxes to the outer districts and leading Brussels to an unfortunate economic situation. This tax flow transforms the Brussels periphery into a unique one: dominated by the high-income people. A tax policy is then introduced to force people to pay in the place where they work rather than in the place where they sleep, causing a fragmentation of the population who is forced to move back to

the city, while another part tries to work at home through virtual Jobs. Dealing with the PoiSenne: Like any other capital, Brussels is expanding. This scenario focuses on a population growth of more than 100,000 people, and the demand for more food which leads to impoverishment in the quality of soil and endangerment of the environment because of increased chemical and pesticide use that damages the water supply. Pollution of the two main tributaries means the Senne's water basin will be contaminated; causing a major loss of the biodiversity, landscape and land value of Brussels's periphery. The predicted outcome of this scenario is the abandonment of the periphery with land use changes and land use models. An Alien District: The importance of the EU in Brussels is constantly increasing. The driver of this scenario is a political decision to leave Brussels as a district of all consolidated European Union institutions affecting the citizens. This creates a wave of migration as a consequence of all the business and jobs related to the European union that cannot longer be in the Belgian capital and therefore, leads to a massive unemployment and slow down of the economy.



Master plan

Observing the global situation of immigration, (most of it illegal) and the constant exodus of refugees around the globe because of civil wars and growing insecurity, we decided that the „Belgian Favela“ was the most feasible scenario to imagine. We also understood the Belgian openness to receive immigrants as a key factor to determine the fate of this uncontrolled wave of people trying to move to this part of Europe as a result of any of several events that we deemed possible to occur in the near future. It was clear that the main driver was illegal immigration, but the pressures and the states could vary depending on the global events strengthening monopolistic economies and impoverishing countries with poor technological capacity and education. It was also a major challenge for us to determine the possible impacts that economic factors, poverty and military conflicts could have in Brussels, the epicenter of the scenario. The Belgian Favela is the image we don’t want to happen in Brussels. Therefore, before starting our strategy, to avoid it we had to imagine all the possible outcomes if nothing was

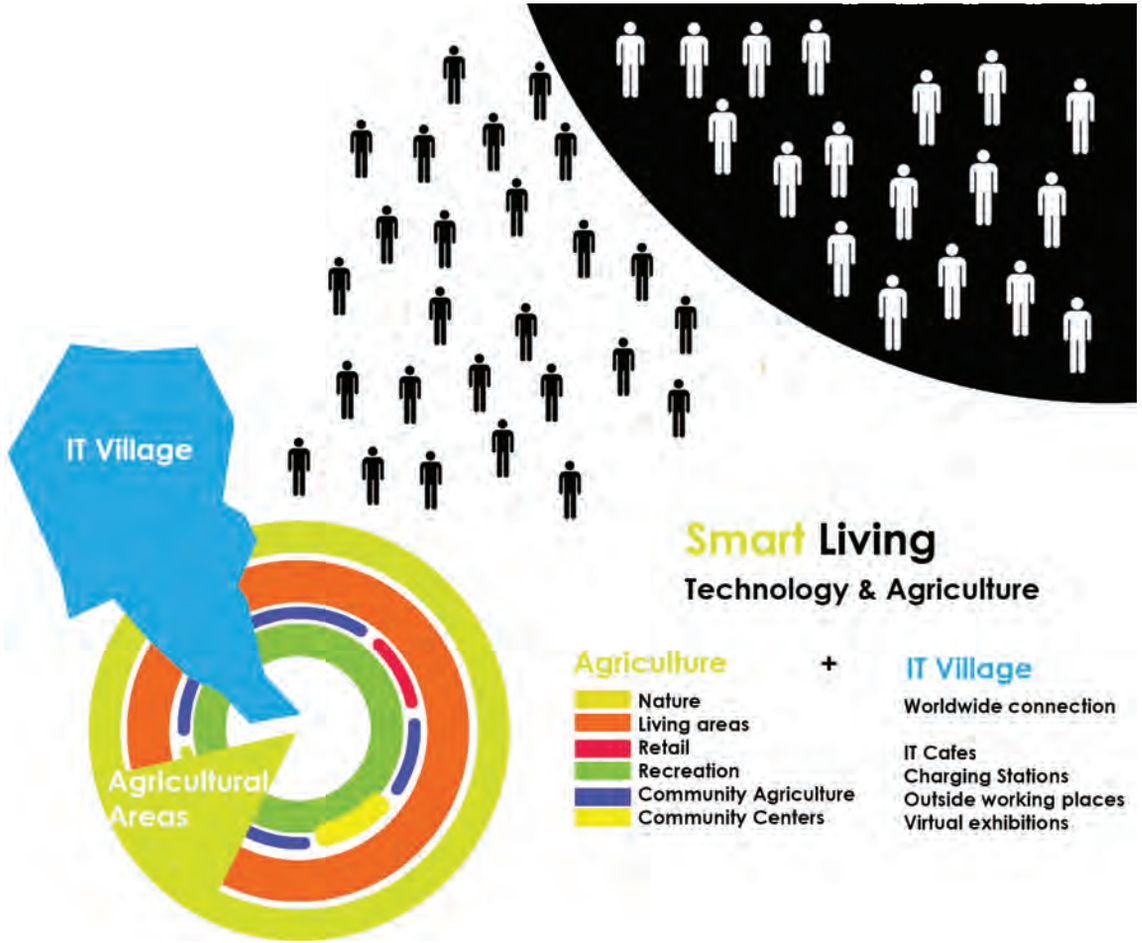


done by the authorities and civilians to stop this fragmented, no man's land. Our strategy consisted of dividing the action plan into phases that could prevent negative impacts of the assumed events in periods of 10 years. Determining which impact could happen in the timeline was crucial for us to determine the landscape architecture responses we could develop. The question was then; can you do a master plan for a favela? The answer was definitely "no," but we can indeed determine what areas of the periphery are more vulnerable to uncontrolled waves of immigration, insecurity and invasion. Hence, we defined a plan of temporary land uses, a plan to protect the agricultural value of the land and the measures to integrate the people, assure social cohesion and improve the living conditions of the future inhabitants. Our aim was to bring the best out of the worst future possible. These plans and measures follow a logical chronology to avoid the unwanted "Belgian Favela" and to reinforce the agriculture identity of the peripheries.

GROUP 5

SMART LIVING

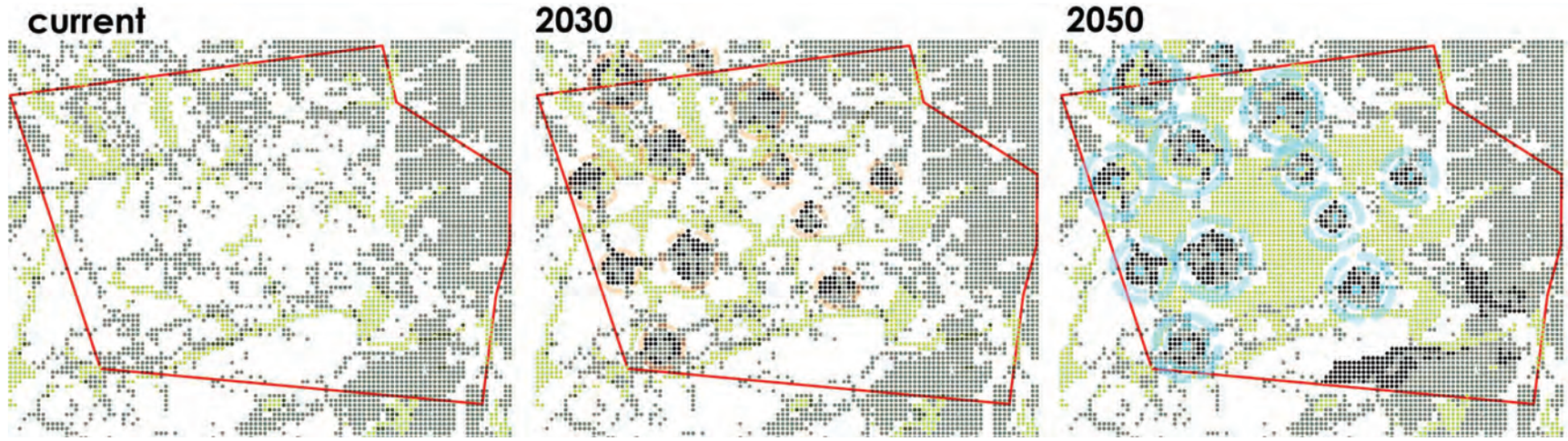
Evelina Knyzelyte
Ana Sanchez Puerta
Lorena Pitulicu
Diana Halmaghi
Julia Ramler
not on the image: Signe Kangur



Scenario //

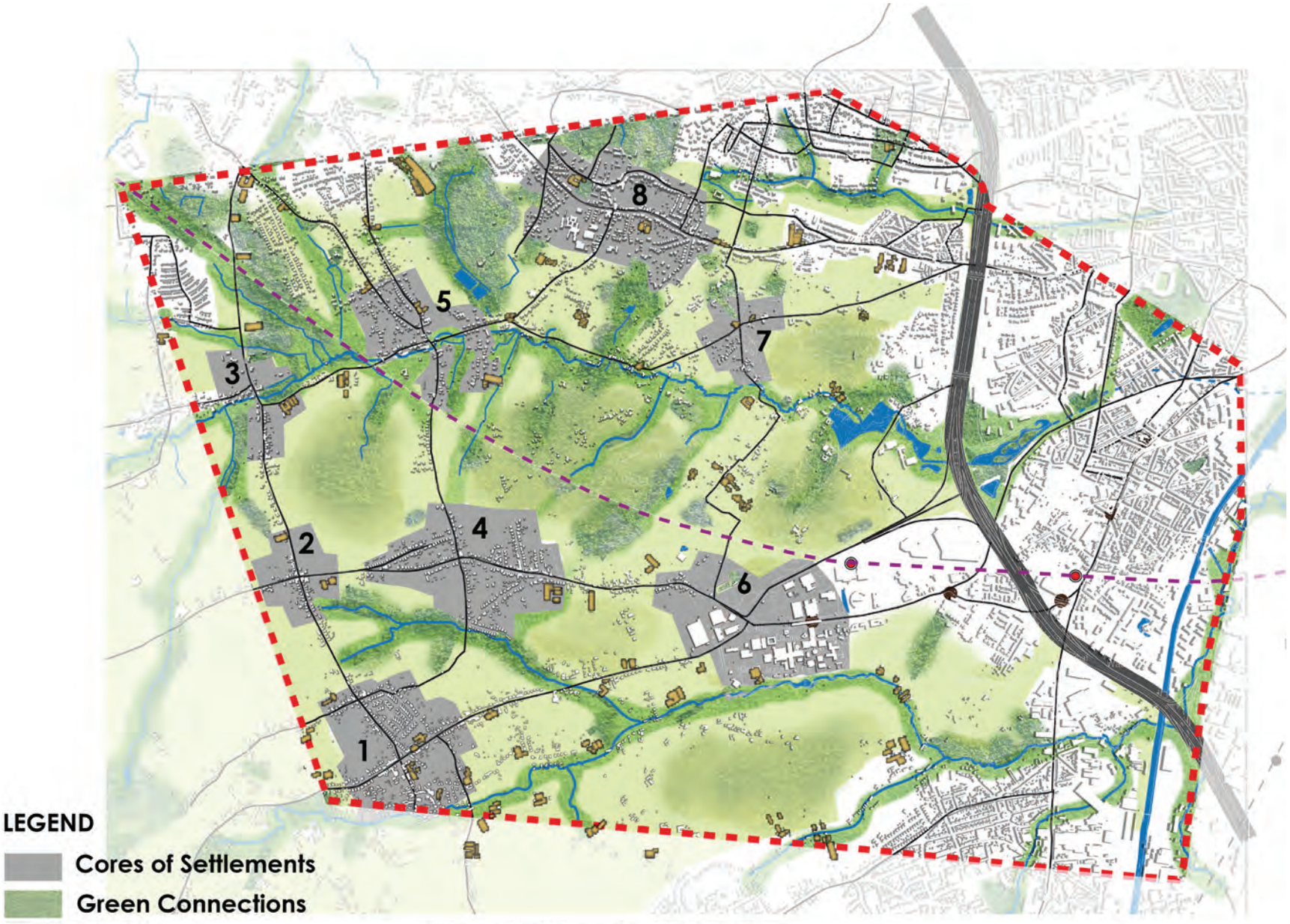
The process of the scenario-building phase started by creating a DPSIR-model based upon the following drivers: economy, technology, environmental policies, population and governance. From this we developed four different scenarios. For the first one we worked with the idea of a "market crash," based on the assumption that repetitive financial and economic crises are the reasons why people do not trust in the system any more. As a result of this scenario many people want to grow their own products or buy at local markets. The value of money is decreasing and at the same time the value of land is increasing. Other plausible scenarios we developed include the "agricultural catastrophe," which is based on an accidental overuse of chemicals on the fields or the "militarize Brussels" scenario, in which security issues and NATO Level decisions are drivers. We asked ourselves, which scenario is based on the current planning area? With which scenario can we develop the area further,

based on existing tendencies? So we imagined a fast development of the technological sector. This would include fast and cheap Wi-Fi, for example, as well as a progress in the delivery system of food. At the same time that these factors are improving, the costs for commuting and building ground are increasing. Therefore, there is no need to travel every day to the city-center to work. Office workers have the possibility to work at home and enjoy their recreation time in their new villages in the periphery of Brussels. In this scenario agriculture has a high value. In contrast to the fast development of technology, the open cultural-nature area becomes important to offer recreational services.



Master plan //

The development of our concept for the Brussels periphery focuses on the scenario of technological change. Fast growing new technologies are the main driving force for social and environmental change. We predict that spreading Wi-Fi networks will create new living models: virtual communicating will decrease physical distances, more office workers will have the possibility to work at home, consequently, the necessity for everyday transport to the city will decrease, new systems for food delivery will come forward. People will need more facilities in their neighborhoods for recreation, sports, food catering, and physical and virtual communication. The role of nature must increase, as people will have an aspiration to live in an attractive green environment while spending more time at home. The new model of smart housing will suggest the possibility of home gardening and eco-living with usage of renewable energy. The question we bring up in our concept revolves around the upcoming changes in the structure of periphery. What environmental changes will be brought in the peripheral landscape within new patterns of living stimulated by the Wi-Fi network? The current shape of the settlements represents dispersal and uncontrolled development along the roads. The developed concept defines new relationships between the settlements and communities. The definition of the main cores inside the settlements helps to create more compact peripheral development with the system of clusters. Each cluster has public spaces with community centers, leisure time activities and Wi-Fi services. The development of settlement cores seeks to protect valuable agricultural landscape with the concept of growing islands. The agricultural island starts growing from center, keeping it untouched, while expanding green areas to the edges of clusters. In this case, agricultural land has a high value, the high demand of ecological production close to the neighborhoods seeks to discover new technologies for agricultural services. The supported green network draws the limits for further urban growth and provides recreational facilities for 3-4 clusters. These green islands have community gardens, active and passive recreation areas, local markets, community spaces with free Wi-Fi connections adapted for working, living and entertainment. The vision of the technological scenario gives the possibility to the office workers to work at home and enjoy leisure time in the new green villages with the developed IT network in the periphery of Brussels.



LEGEND

- Cores of Settlements
- Green Connections
- Forest
- Agriculture Fields
- Farmers

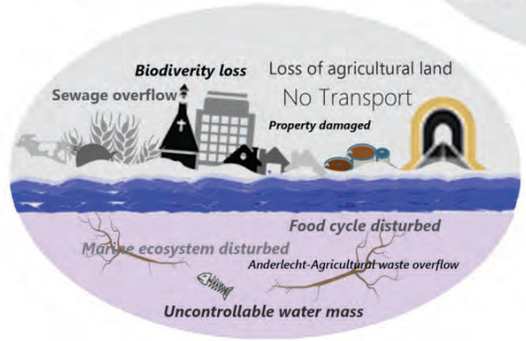
Characteristics of urban cores:

1. Village in castle
2. Eco-core
3. River Valley core
4. Transitional core
5. Religious heritage
6. Industrial core
7. Windmill core
8. Village on the hill

GROUP 6

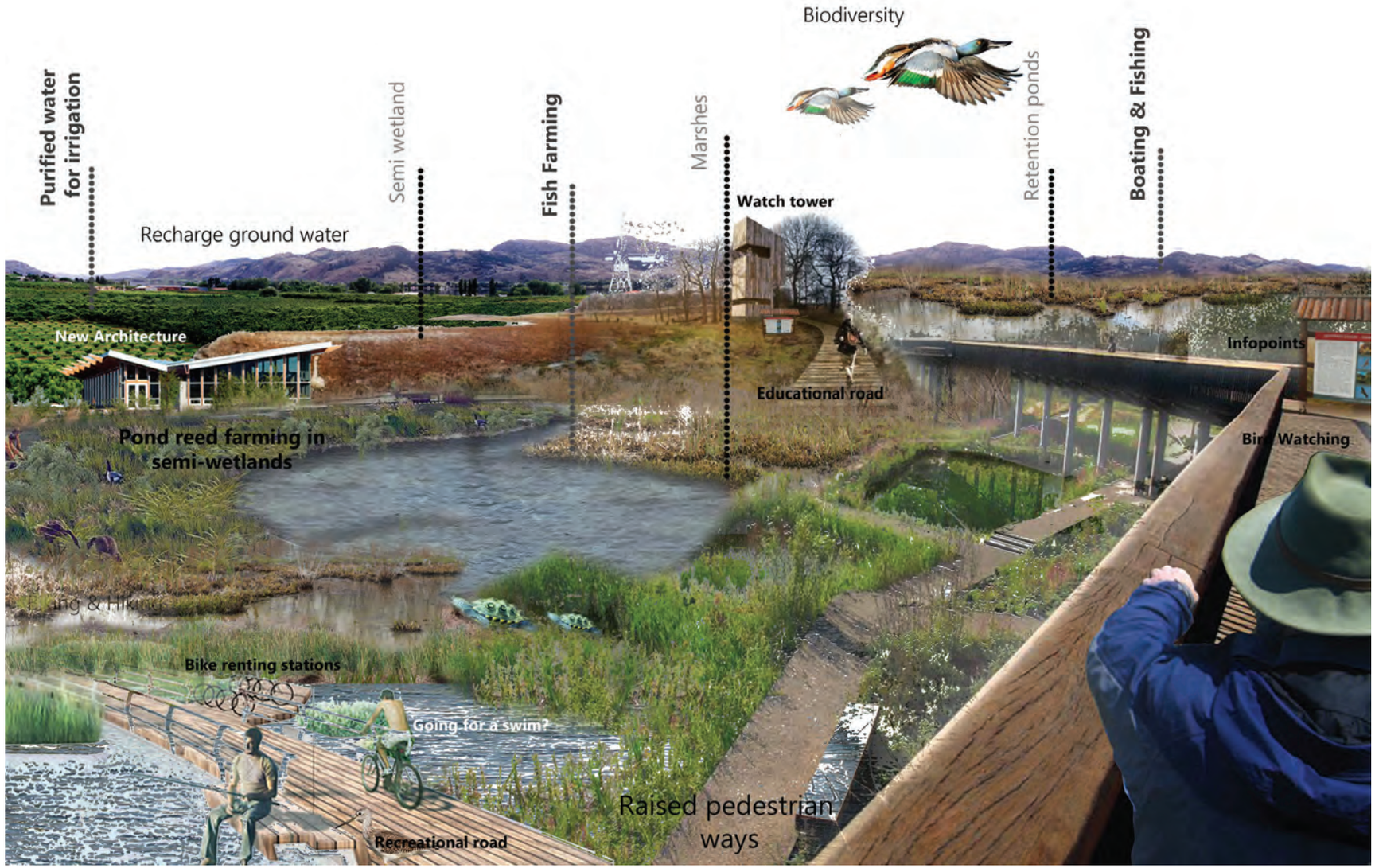
BRUXCELLS

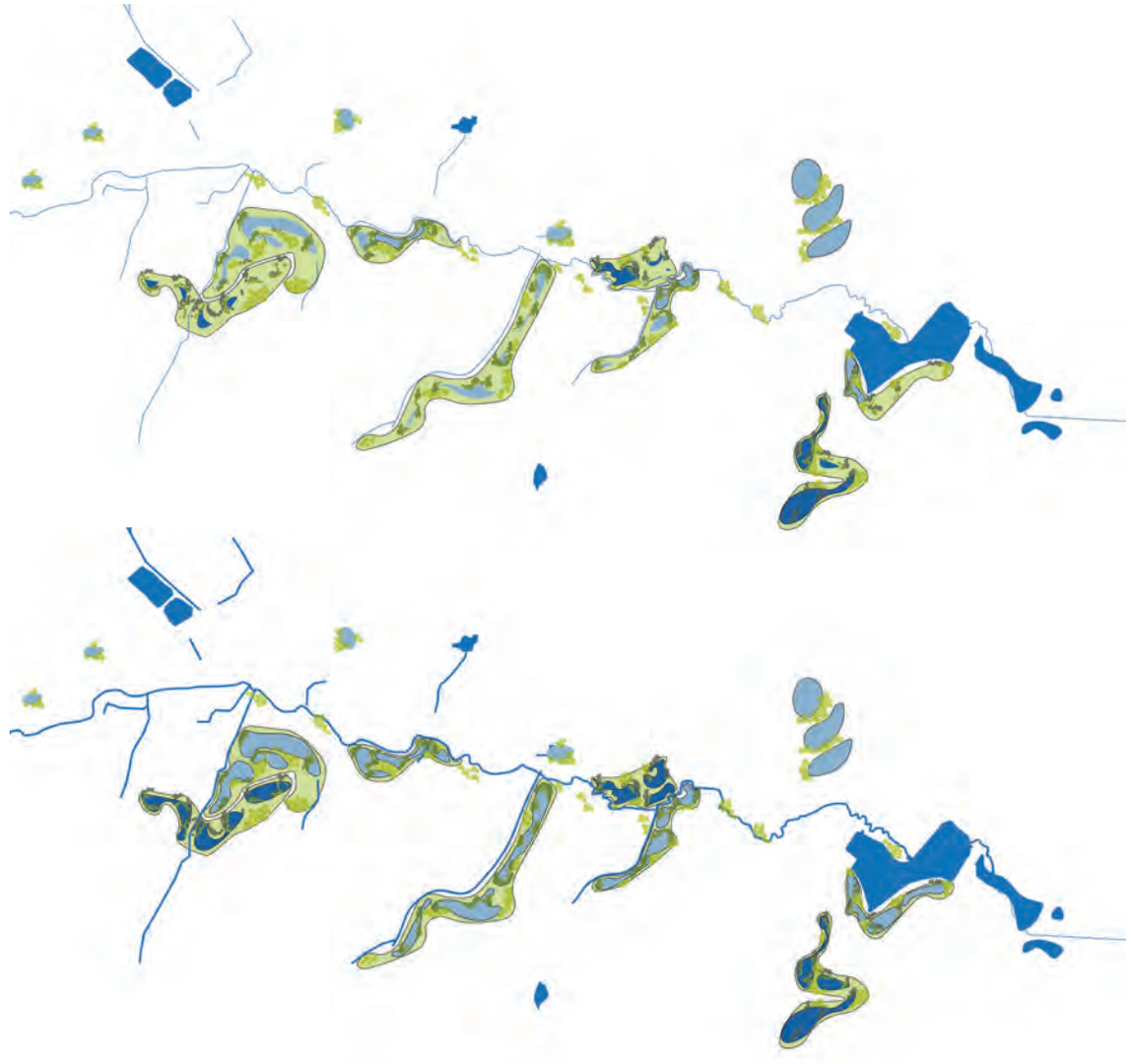
Alexandra Pîslaru
Tina Vetter
Laura Milanini
Gagan Keith
not on the image: Mihkel Lilleberg



Scenario

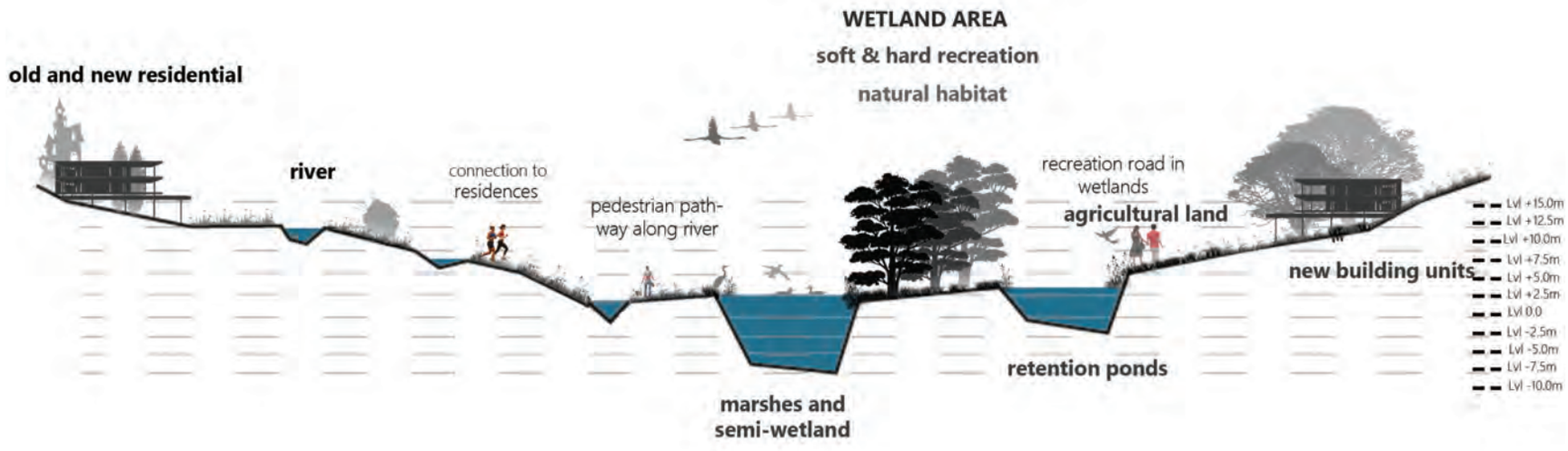
The scenario we chose was based on actual prediction and recent events in Europe like the disastrous floods in Denmark and in Germany. The future predictions suggest the trend of rainfall in Belgium will change and sudden precipitation events will occur with greater frequency over the years. Taking this as our starting point, we concluded in our site there are already risk zones that were flooded recently, without proper measures to prepare for such an event. It would damage not just the economic and urban sector but most of the agricultural land in our site. In such a scenario the localised impact will be in the lake in Parc de la Pede, originally made as a retention pond for preventing flooding in rivers and attendant damage to residential quarters and most of all the agricultural land in the vicinity. This will cut off the majority of the direct food supply to Brussels from Anderlecht, and exert pressure on the residential, health and industrial segments in this part of the city periphery to shift elsewhere. The regional effect will be the destruction of property and huge economic loss.

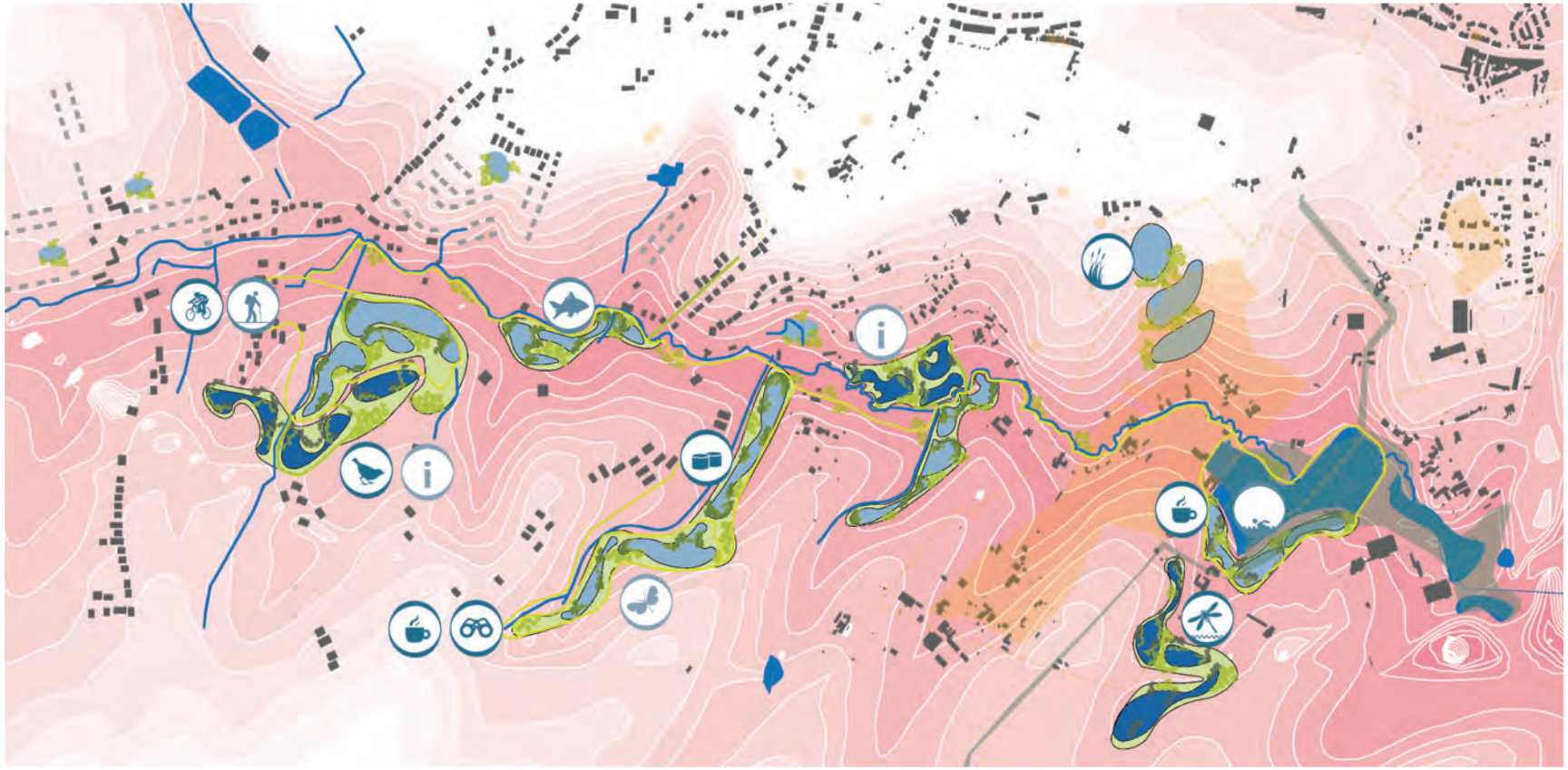

Biodiversity
Purified water for irrigation
Semi wetland
Fish Farming
Marshes
Retention ponds
Boating & Fishing
Recharge ground water
Watch tower
New Architecture
Infopoints
Educational road
Pond reed farming in semi-wetlands
Bike renting stations
Going for a swim?
Raised pedestrian ways
Recreational road



Master plan //

Wetlands: A common solution to the current and possible future problems. Due to the topography and the sensitive topic, we chose a site that would be affected the most in case of flooding events: the surrounding areas of the river Neerpedebeek in the northern part of our site that do not meet the canal. First of all, the river is in desperate need of cleansing because it is heavily polluted by the agricultural waste and domestic waste dumped into it. Secondly, there is a problem of the possible future event of heavy floods. A common solution for these problems is to create wetlands that can retain water and naturally clean or treat the water before discharging it into the river. This design was made easier due to the topography as the river is between a valley with residential units on one side and agricultural plots on the other. Wetlands designed between these areas and the river act as a buffer and change the spatial qualities by adding ecological values, ecosystem services, providing natural habitats like bird sanctuary and incorporating human activities like hiking trails, education and information zones. This gives the opportunity for some commercial activity and a mixed use area function as a natural reserve and green zone for locals and residents of Brussels.


WETLAND AREA
soft & hard recreation
natural habitat
old and new residential
river
connection to residences
pedestrian path-way along river
recreation road in wetlands
agricultural land
new building units
retention ponds
marshes and semi-wetland
Lvl +15.0m
Lvl +12.5m
Lvl +10.0m
Lvl +7.5m
Lvl +5.0m
Lvl +2.5m
Lvl 0.0
Lvl -2.5m
Lvl -5.0m
Lvl -7.5m
Lvl -10.0m



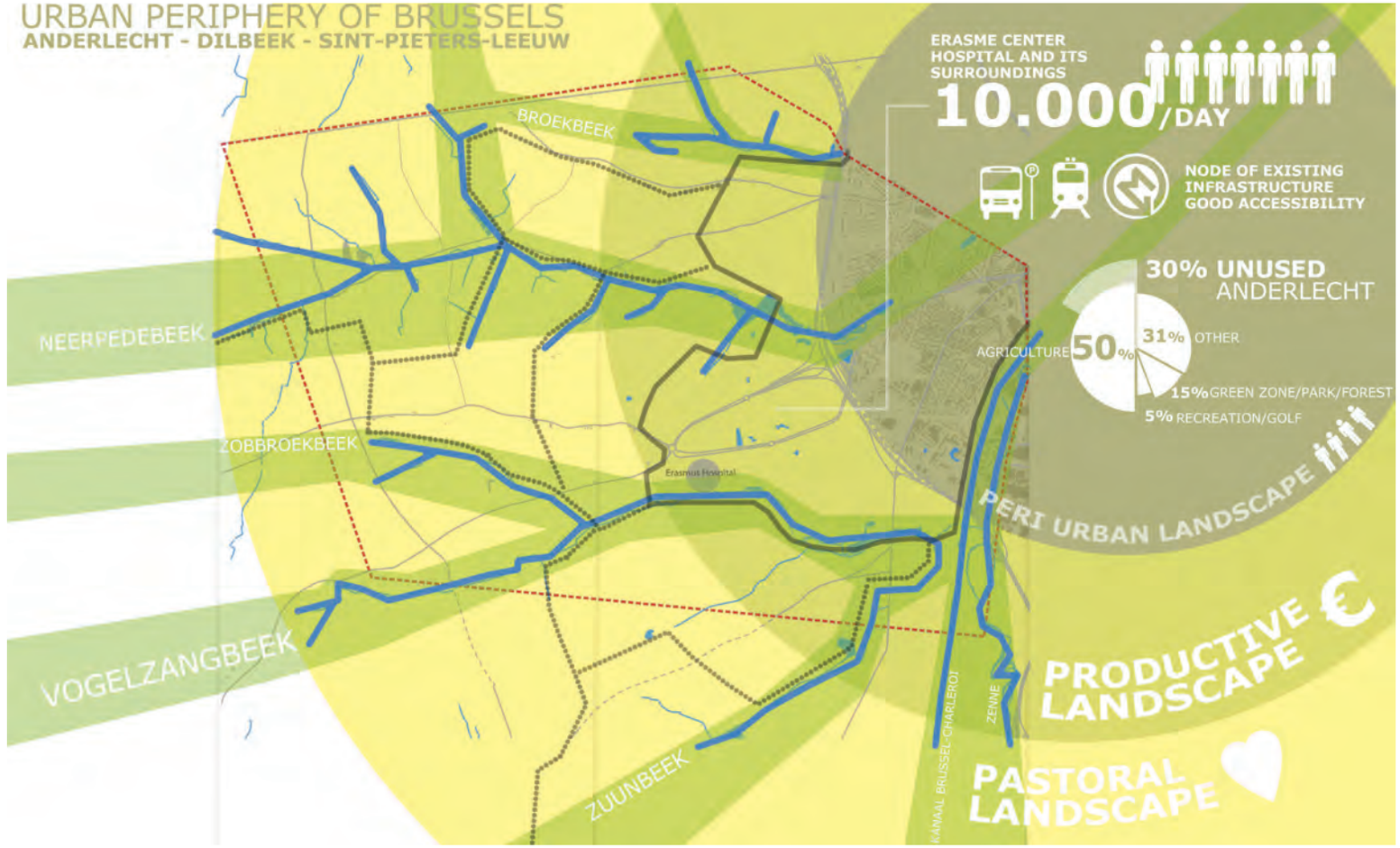
GROUP 7

BRUSSELS TRANSCAPE

Masoumeh Rajabi
Vivien Harmati
Andreia Oshiro
Irina Slobozeanu
Teodor Manea

Scenario //

"Mr. Flanders was a farmer who loved his piece of land in Anderlecht, but he became old and could not run his small business any longer. His young son lives in Paris with his family and has no interest on farming. Mr. Flanders decided to sell his property and made good money for retiring as many of his neighbors have done." The scenario reflects a threatening future, when the traditional agriculture activities disappear or/and change dramatically in future, due to uncertain possible new uses on the land. Our reflection on the historical pastoral landscape and the transformations occurred so far leads us to imagine a loss of local identity we titled, after the famous landscape painter: "Fading Bruegel." The increasing demand for housing together with the lack of interest in farming attracts investments on new settlements around existing infrastructure. Fallow areas are occupied by unemployed and homelesses, immigrants and unskilled people. The local market will no longer be able to supply the local increasing demand, which relies on external/global markets, making the region dependent on external factors and players.



Master plan //

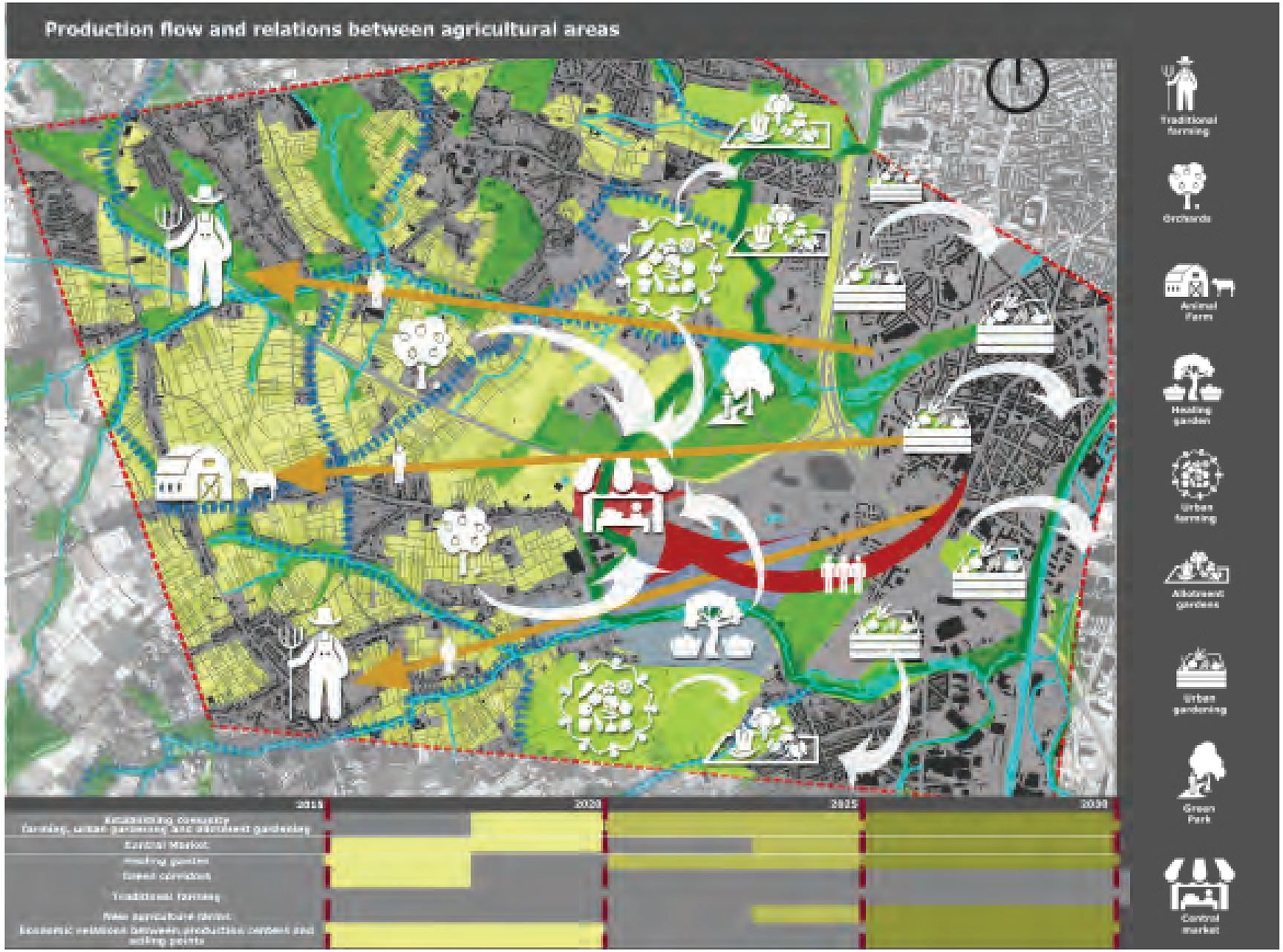
In the scenario context the lack of interest and support to agricultural practices together with high rates of population grow increase the demand for food and housing, which consequently lead to changes on land use, fragmentation and vulnerability of the landscape. As an important boundary of Flanders, Brussels and Wallonia, near the city center, it is important to preserve and enhance the perception of different features, activities and its historical transformations. The schematic graphic shows the transition from traditional rural landscape to the dense urban environment of Brussels, the west-east development corridors along the three main river basins and potential network of existing green and transport infrastructure. The concept defines three main radial zones around the core area. In this central zone ativities and places for urban gardening and new food production modes, such as community gardens, pop-up gardens, roof gardens, community kitchen and also a healing garden are planned for easy access by locals and commuters every day. In the second zone we propose a combination of urban farmimg and small

food production. Here we find orchards, allotment gardens and small animal farms. A food hub is located in a middle point, next to the new station with easy access for commuters and drivers. The last zone includes the traditional farms where the Bruegel landscape aesthetic is preserved. Here we find professional farming in extensive production and crop rotation system. Spaces for events, sport/recreation and tourism work also as public catalyst, which, together with a connected green infrastructure, provide higher perception of the landscape and its values: economic, social, ecologic, historic/educational and others.

Adaptive measures for sustainable development:

- innovative production in small scale
- diversity of entrepreneur models, from horticulture to education service
- diversity of services and products
- professional and non-professional activities
- marketing and supportive actions to attract participation of all stakeholders
- partnership between producers and local markets, restaurants, schools.

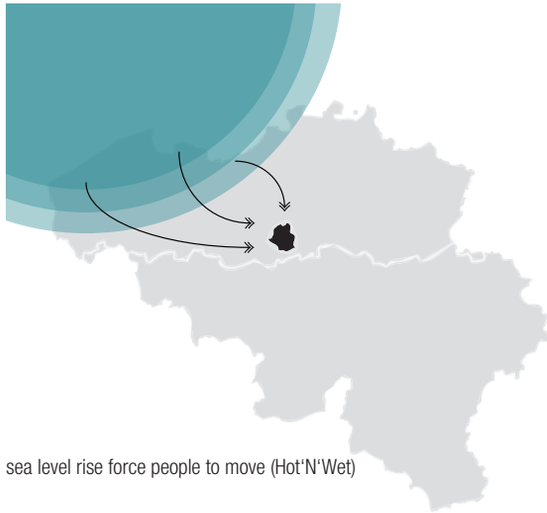
This agricultural park is located in the second ring of the study area and offers possibilities for urban farming, pick up farm, hobby garden, urban garden and allotment garden along the peri-urban landscape. Accessibility to the waterfront is essential to make people aware of water quality issues, helping them to read, understand and care about their landscapes.


Production flow and relations between agricultural areas
Traditional farming
Orchards
Animal Farm
Heating garden
Urban farming
Allotment gardens
Urban gardening
Green Park
Control market
2015
2020
2025
2030
Embedding community farming, urban gardening and allotment gardening
Control Market
Heating garden
Green corridors
Traditional farming
New agriculture market
Economic relations between production centers and selling points

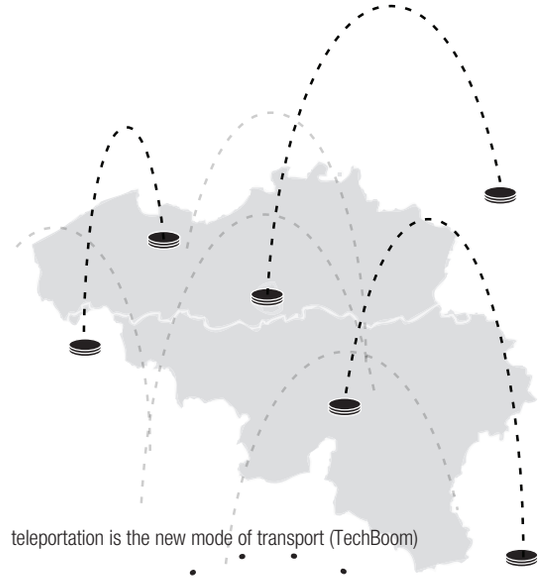
GROUP 8

CAR FREE CORE

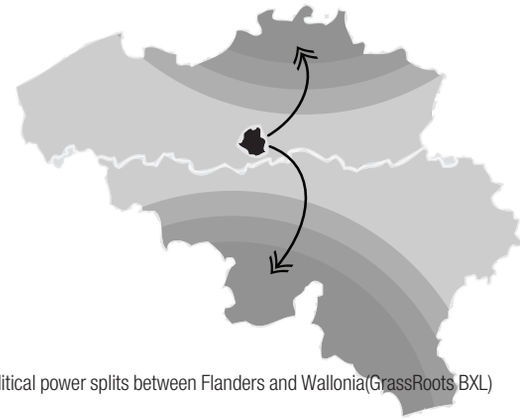
Laura Andla
Agnieszka Palmowska
Fanny Wattier
Kinga Janossy
Christopher Boone
Odette Ilisoi



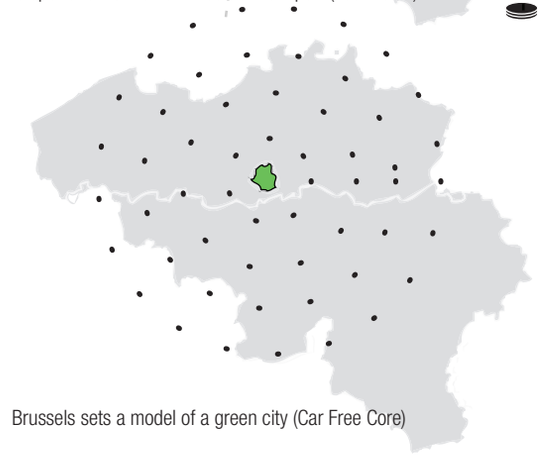
sea level rise force people to move (Hot'N'Wet)



teleportation is the new mode of transport (TechBoom)



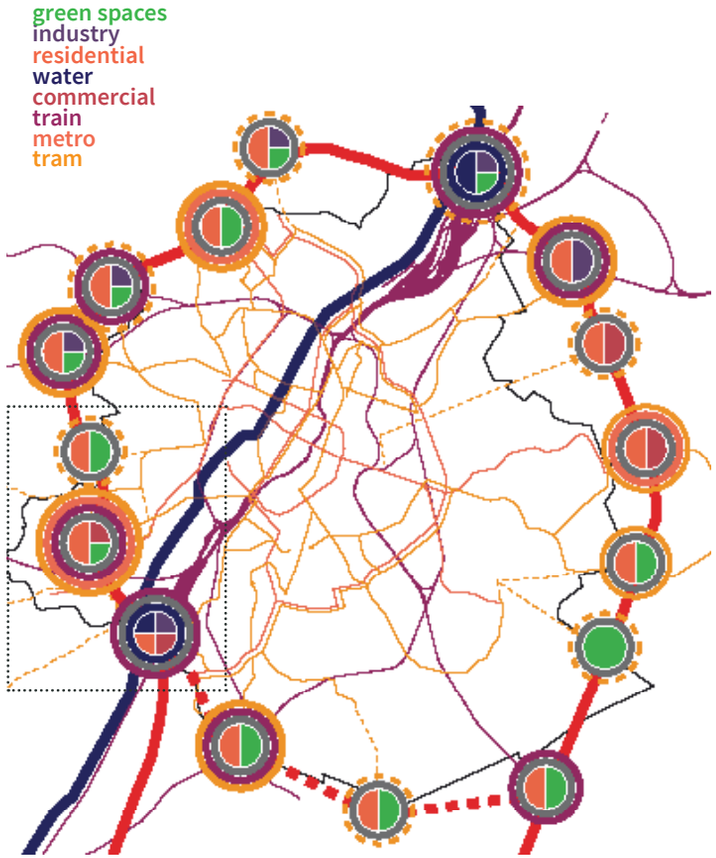
political power splits between Flanders and Wallonia(GrassRoots BXL)



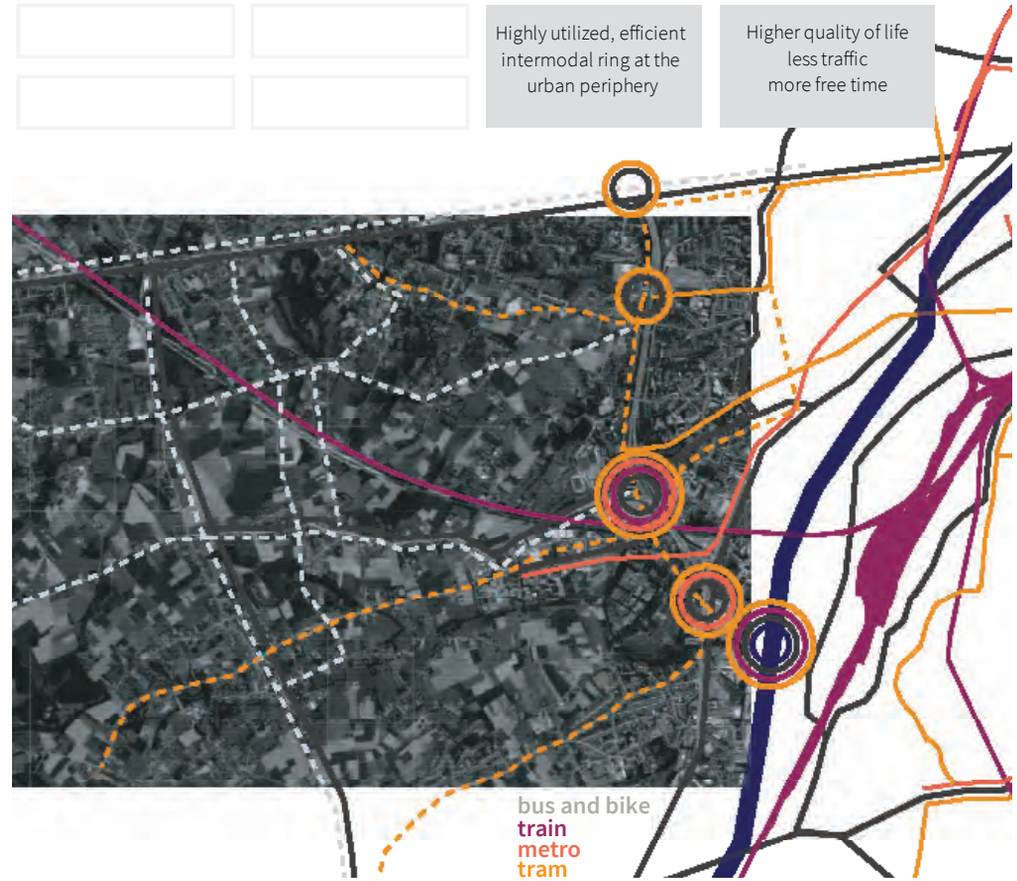
Brussels sets a model of a green city (Car Free Core)

Scenario //

We followed the instruction to compose short, catchy titles for several feasible scenarios for the future and came up with Hot'N'Wet, TechBoom, GrassRoots BXL and Car Free Core. In combination of developing the logical course leading to each of these scenarios, as well as in preparation for the required DPSIR diagram for each, we searched initially for the simplified drivers of each of our four Car Free Core, for example, evolved from a political driver. We assumed that in search for Europe's Greenest City status, the city management might decide to limit all or almost all automobile traffic from the urban core, and later developed this scenario to discover how it might function. GrassRootsBXL had community as a driver, assuming that in an abandoned urban shell of Brussels, small self-sufficient communities within the city ruins may work together to maintain some sort of life on the site. Working through the challenge of this DPSI model actually helped us to better understand the chain of events that would provoke different scenarios, which was undoubtedly the point. Additional research was conducted to flesh out



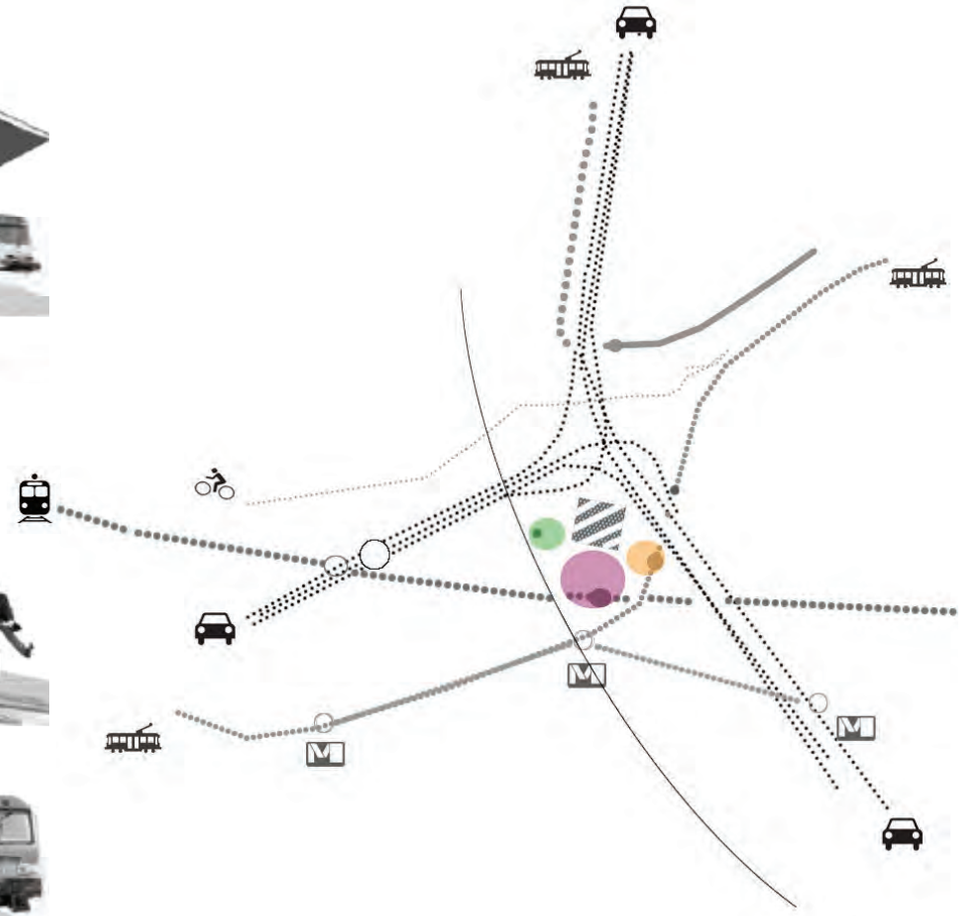
Drivers →	Pressures →	States →	Impacts
(PESTLE)	(human activities)	(of the landscape)	(on ecology and human quality of life)
Legal	Commuting	A cleaner, quieter, less crowded urbanity	Higher ecological quality lower emissions lower fuel consumption
Environment			
		Highly utilized, efficient intermodal ring at the urban periphery	Higher quality of life less traffic more free time

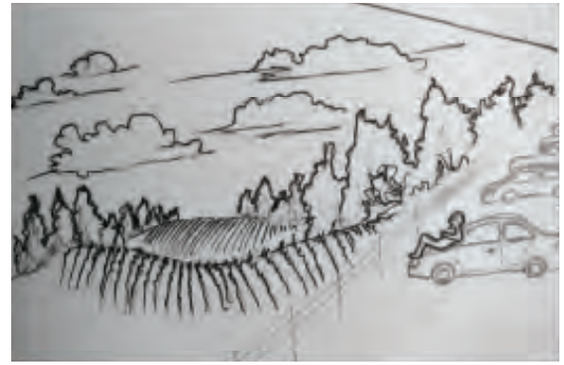


the presentations of each scenario, especially in order to meet the criteria of feasibility; we had to find reasons within the existing state or mentality of Brussels that would support the possibility of our suggested far-fetched future states.

Master plan //

The intensive second week of the Brussels design workshop found our group focusing on the development of the Car Free Core scenario imagined earlier. We would work with multiple scales, focusing on designing and understanding the multi-functional nature of a single large transit hub located within the project site, but also with a larger overview scale that encompassed the entirety of the Brussels urban area. The concept was to develop a modular solution combining social space, landscape and transit intermodality all into a single site, providing an attractive human experience and simultaneously a functional transportation solution for the inner city/periphery exchange, keeping cars out of the city and turning inner roads over to other uses. Once we set the city's peripheral road as the edge for auto traffic approaching Brussels' core, the locations of further transit interchange sites became located as identifiable activity nodes along this ring. The wider scale showed these locations and each node was designated according to the types of transit included there, and the land use types affected. This approach was reflected in the actual contents of our final presentation. Although the best method for describing our design had evolved during the process, we eventually took a good suggestion and composed our slides in a reverse zoom, beginning with a final site render of the transit hub found in our designated case study area, and stepping back into ever greater scale. Realizing that we might confuse or lose members of the audience with such an approach, we made use of sketches and storyboards to emphasize the human element within our design, guiding the audience from the single structure scale to that of the entire urban area. These animations met with anticipated laughter and positive reception, which helped to maintain the collective interest during final presentation, despite the heat.





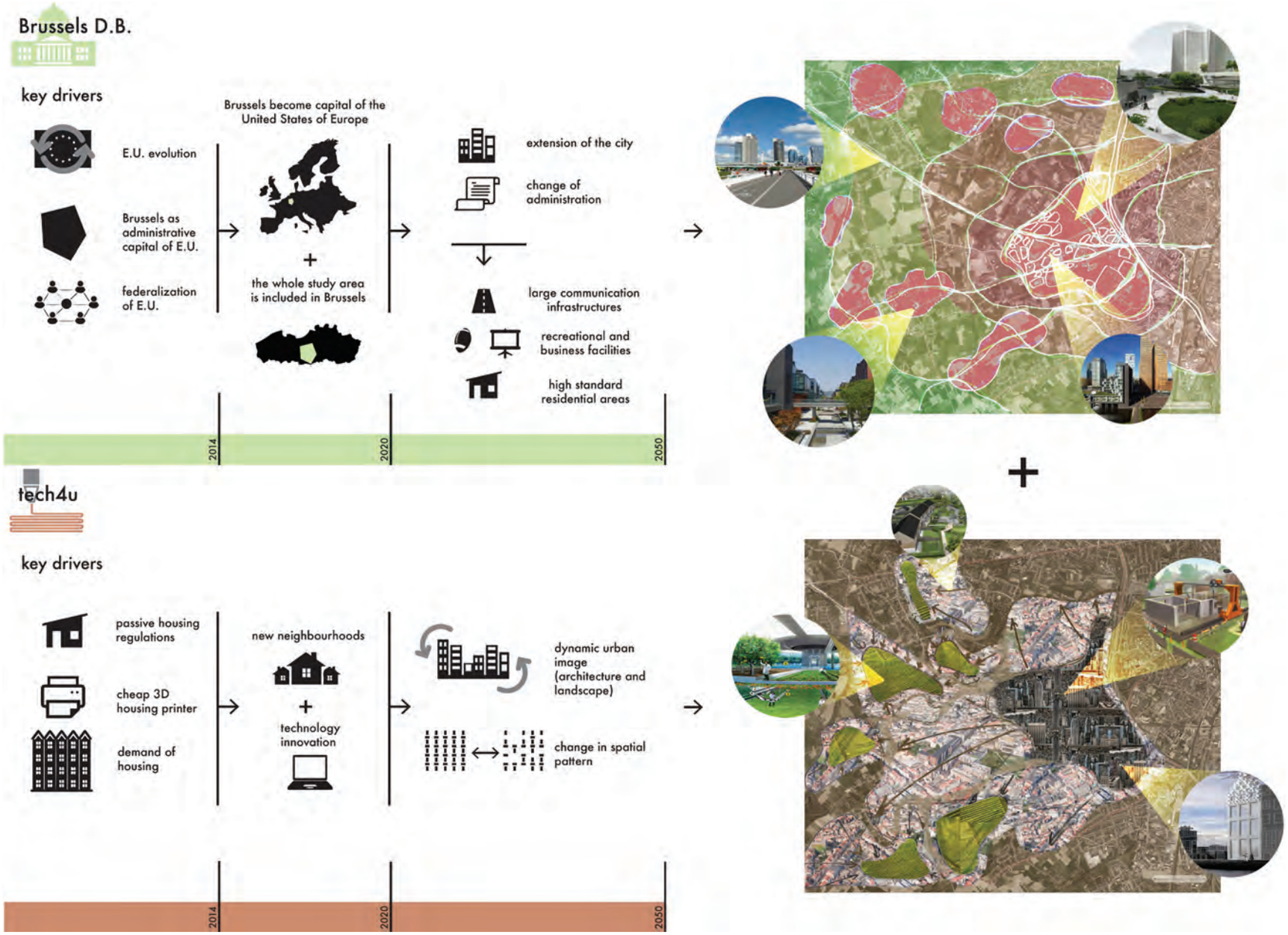
GROUP 9

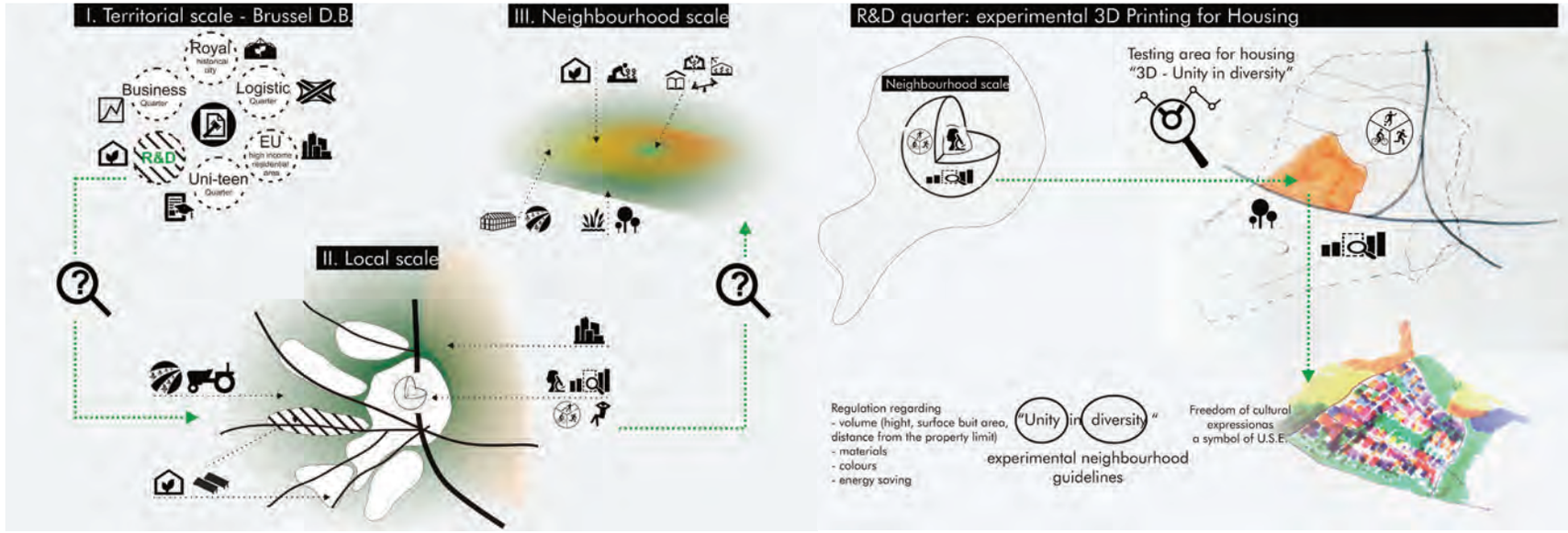
LANDSCAPE PRINTING

Gianluca Francescato
Ioana Nenciu
Miruna Blejan
Yanjing Zhang
Melissa Abas

Scenario //

Our group combines two scenarios. BRUSSELS D.B., a capital city of United States of Europe, where the EU members decide to unite and form a federal state, United States of Europe, choosing Brussels as the administrative centre and the expansion of Brussels city to the surrounding peripheral Flemish region. The impact on the site is the intense urbanization and a single administration controlling the whole area. Urban land use with large communication infrastructure, recreational and business facilities combined with high standard residential areas are the elements that dominates the landscape. The scenario TECH4U centers on a rapid economic growth of future Brussels as the center of 3D printing innovations and the rapid spread of more efficient technologies that peaks at the beginning of the century. The impact is the dynamics of the landscape and the built environment that turns into passive houses, green roofs, vertical gardens and housing regulations. A new neighborhood arises, characterized by a melting pot of architectural styles, horizontal and vertical development due to 3D printing.


Brussels D.B.
key drivers
E.U. evolution
Brussels as administrative capital of E.U.
federalization of E.U.
Brussels become capital of the United States of Europe
+
the whole study area is included in Brussels
extension of the city
change of administration
large communication infrastructures
recreational and business facilities
high standard residential areas
2014
2020
2050
tech4u
key drivers
passive housing regulations
cheap 3D housing printer
demand of housing
new neighbourhoods
+
technology innovation
dynamic urban image (architecture and landscape)
change in spatial pattern
2014
2020
2050

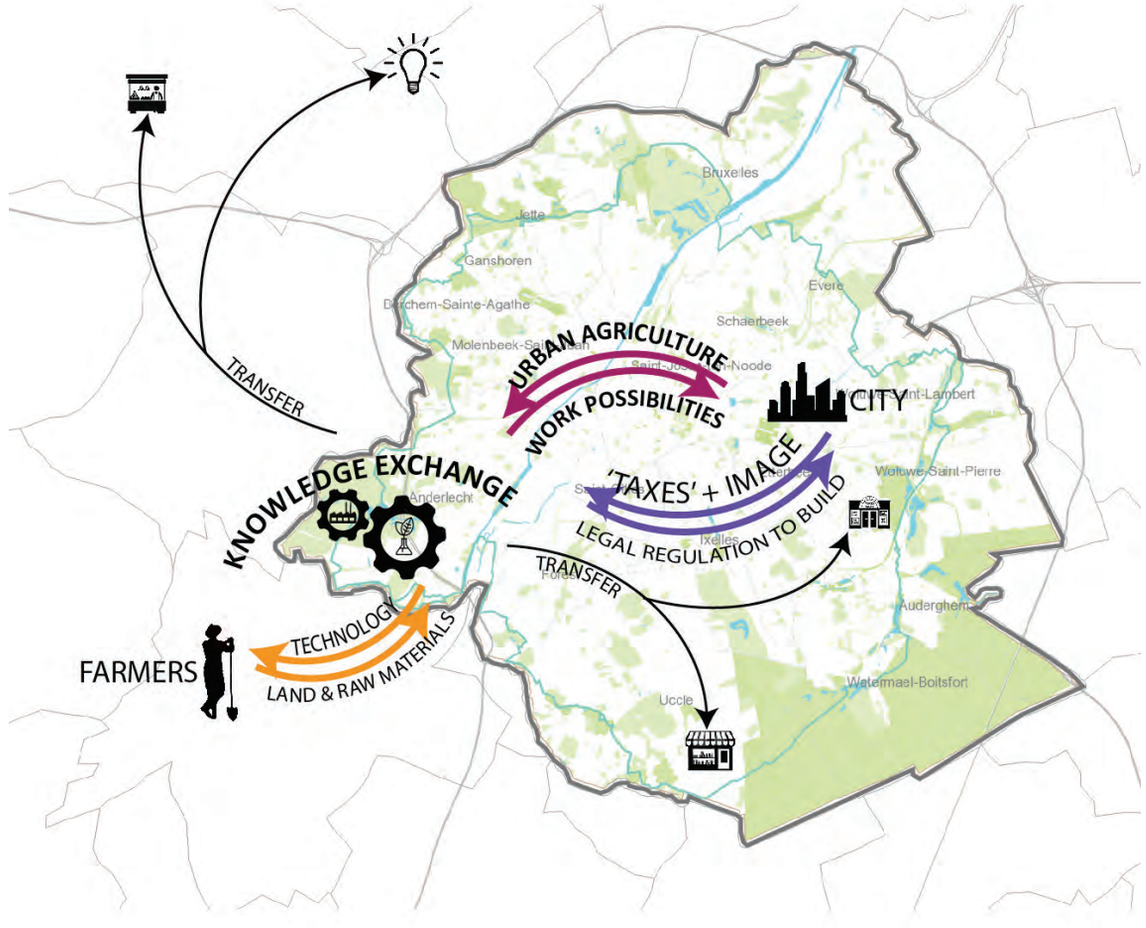


Master plan //

The team chose to develop a combination of two scenarios with main key drivers of politics and technology. The unification of the European countries as United States of Europe (USE) means Brussels becomes the capital of USE and faces a great increase of immigration. In the same time, the 3D printing technology reaches a revolutionary level of development that becomes more accessible and affordable for everyday use products. In a capital city with several specialized areas, the site is known for the research and development industry, which now focus on developing a low-cost sustainable living environment. The site area is evolving around this research and becomes a development core (R&D) with industry and leisure facilities in the surrounding area composed of the new and existing built environment and combined with natural infrastructure. An experimental neighborhood is set up. As its name suggests, the Unity in Diversity neighborhood aims to host freedom of cultural expression but also retain unity, which at the landscape and image level is established by certain regulations. The master plan of our site area will develop in several phases. In the first phase, the 3D printing research center is being built and the metropolitan municipality launches the pilot project for testing the new techniques. This area is an experimental area where prototypes are being tested and where projects of the future neighborhood are being discussed with the public. Afterwards, the social neighborhood is going to be built. This project uses the first 3D printing prototype and it involves the implication of immigrants and people with low income as further inhabitants. Furthermore, as the 3D printing technologies evolves, new residential areas being. The wheel of participation and governance is used for local projects, like community spaces and neighborhood, and a series of thematic meetings will take place to carry out the design process. In conclusion, we emphasize a set of impacts that our project has in the area, regarding the landscape, environment, economy, and society. The 3D printing prototypes have a great effect on the environment, because of the reduced energy consumption and no pollution. There will be a series of economical impacts like increasing value of land, low construction material prices leading to low building costs, new job offers in the field of 3D printing and development, and affordable technology for building a passive house. The consequences on the society are increasing community sense of belonging, which emphasizes the local identity and lowers cultural barriers.

Existing buildings
Water
Natural areas
Agriculture around residential areas
Agriculture combined community gardens
Agriculture combined community gardens
Community centers
3D printing Residential areas

City center
Water
Community centers
Residential areas
Natural areas
Agricultural areas
Existing buildings



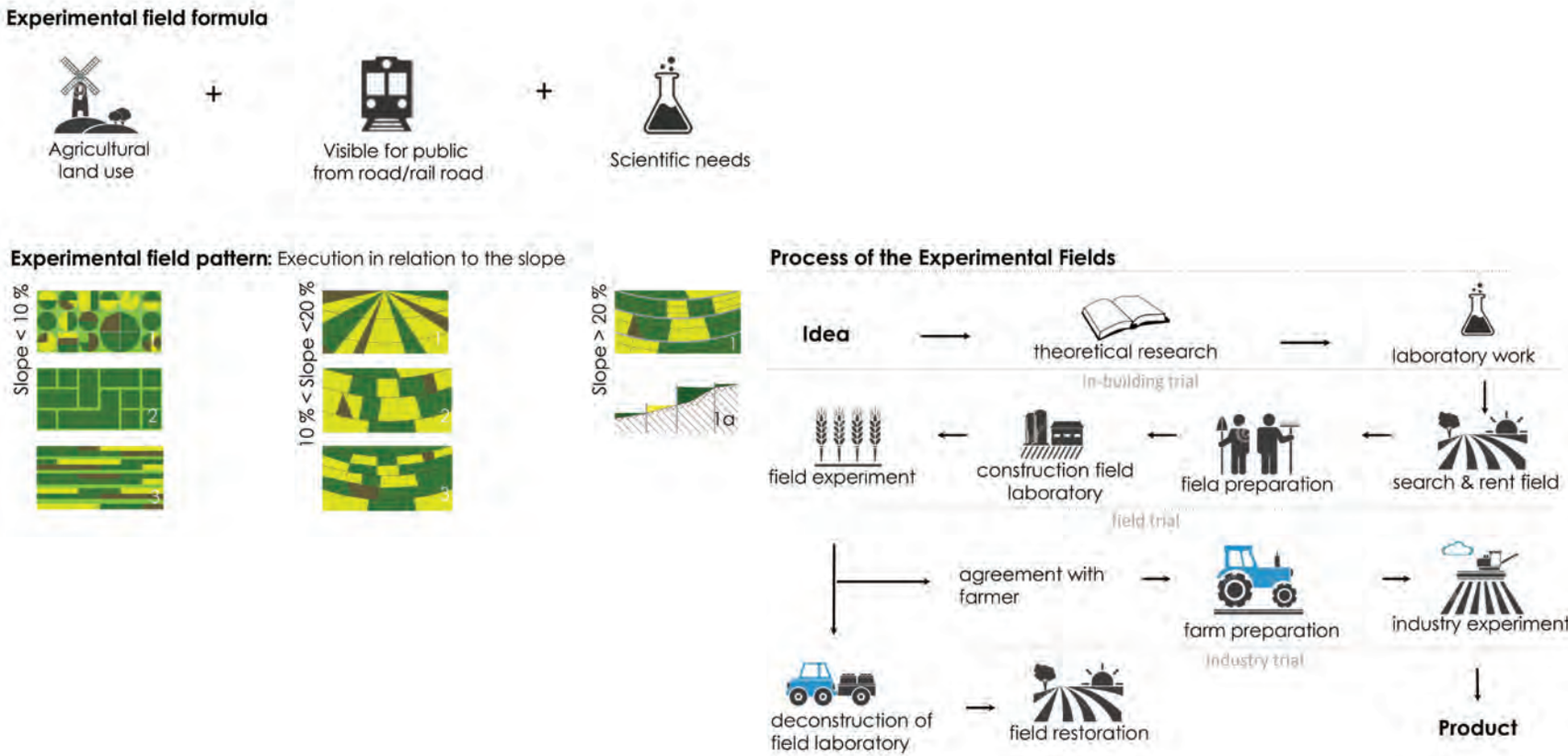
GROUP 10

BLUE TOMATO

Janice Thien
Ekaterina Meltsova
Matthias Klauser
Siim Riisenberg
Oana Caterina Năstase

Scenario //

The development of four scenarios addresses one main driver each - economical, ecological, technological and political. The choice fell on these scenarios because of their critical impact on the future of the corresponding area. Several DPSIR-models map the impact of the drivers. In “City of Decay” an economic collapse in Brussels triggers a massive movement of the population from the city center towards more profitable work-places in Belgium because of high unemployment rates. The outskirts, on the other hand, gain importance due to their productivity in the agricultural fields. “Retreat Belgium” deals with the scenario of a fast rising of the sea level from five to ten meters and the attendant flooding of large parts in the Belgian north. A wave of refugees moves to the dry lands in Flanders as well as to Brussels. Planners have to approach a higher densification in the cities and ecological changes. In “Jetlag-less Food” a technological development in the campus CERIA/COOVI makes agricultural products from other climates possible to grow in local fields. The implementation of greenhouses has a visual impact



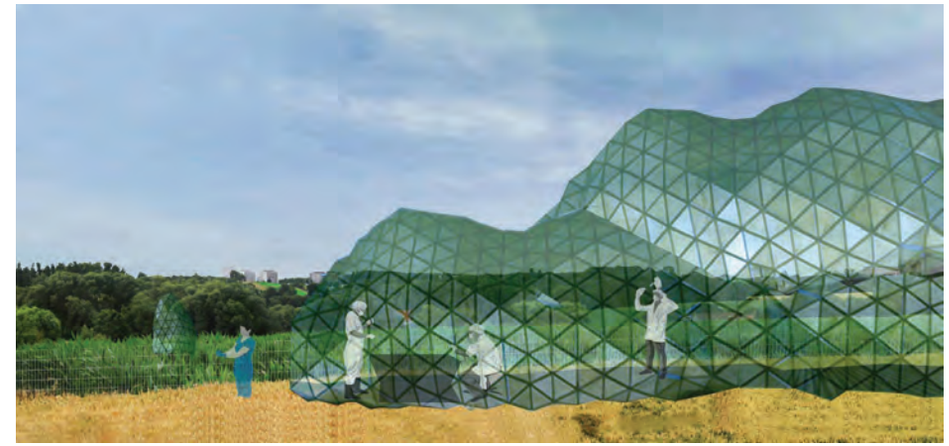
on the landscape. “The Island” deals with a political split of Wallonia and Flanders and their economic and political independence while Brussels stays an independent city in the heart of Europe. The city itself would shrink because Flanders would include some quarters - like Anderlecht - into its territory.

Master plan //

“Blue Tomato” is developed as a result of the “Jetlagless Food” scenario, as a possible future illustration of non-conventional food-growing practices. The underlying story is the resolution of the EU to invest more in food technology research to cope with the predicted food crisis resulting from the globally growing population. Anderlecht is one of the areas of intervention for its agricultural background and existing research facilities, including the CERIA/COOVI and ULB campuses. After research/laboratory tests, operations proceed as field experiments. These initiatives will eventually be in collaboration with local farmers and carried on to industrial scale production. This urban periphery not only becomes a driving wheel for

economic vitality, but is also an attractive place for living and leisure, with new housing of controlled built footprint and recreational route highlighting landmarks/heritage points. Emphasis will be on more than meeting the needs of feeding the population healthy food, but also extend to include sensory experiences - introducing healing gardens, thematic trails and overall, an inviting experimental landscape. The development takes into account its impact on landscape, working with existing topographical variation, aesthetic sceneries, and significant nodes. The experimental fields are allocated with an eye towards emphasizing visibility from streets/train to create visual interests.

Structural stability and spatial interest are ensured by adhering to predefined field pattern guidelines according to slope degree, further enhanced by plots rotation across the site. There will be new infrastructures such as mobile laboratories with innovative materials, a flexible approach in line with the experimental nature of the project, and a food processing/logistic/visitors information complex directly linked to the existing and proposed (RER) transport network. Regionally, this nucleus will be a model for an urban peripheral system that functions in resources exchange (food, knowledge skills, workforces) with its immediate surroundings and the city for mutually-beneficial relationships.




Wind mill
Urban farming
St. Anna pede
Roseliere
Parc de la Pede
Railway station
Industrial area
New housing
CERIA/ COOVI
Erasme Hospital
Cemetery
Food processing
Healing garden
Recreational path
Promenade verde
Temporary experimental field
Landmark

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A good compendium of various types of research about the impact of community gardens and similar small-scale, bottom-up initiatives in disadvantaged/blighted/brownfield areas:
http://communitygarden.org/learn/resources/research.php

SPECIAL THANKS

Further guest lecturers and panel participants
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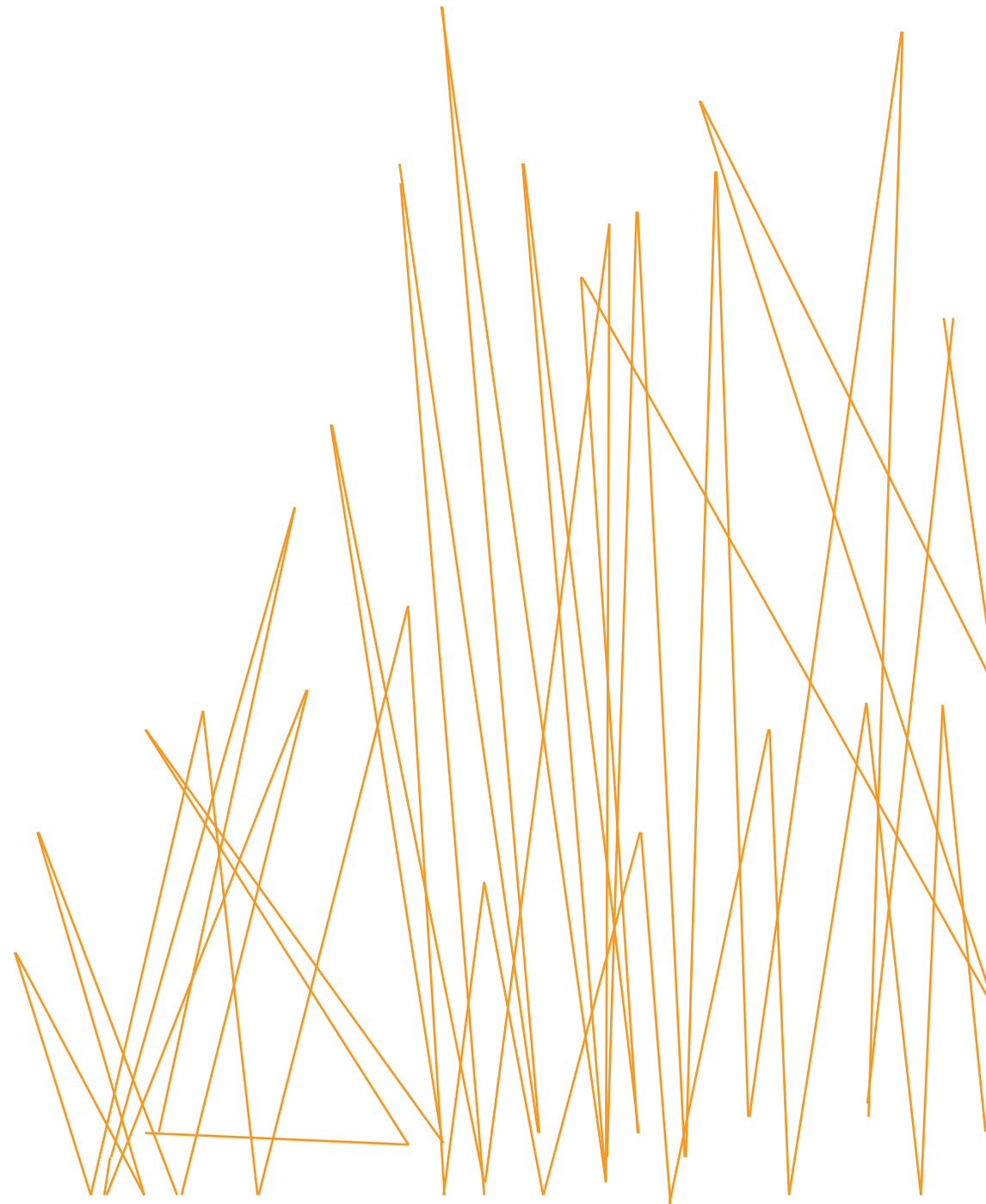

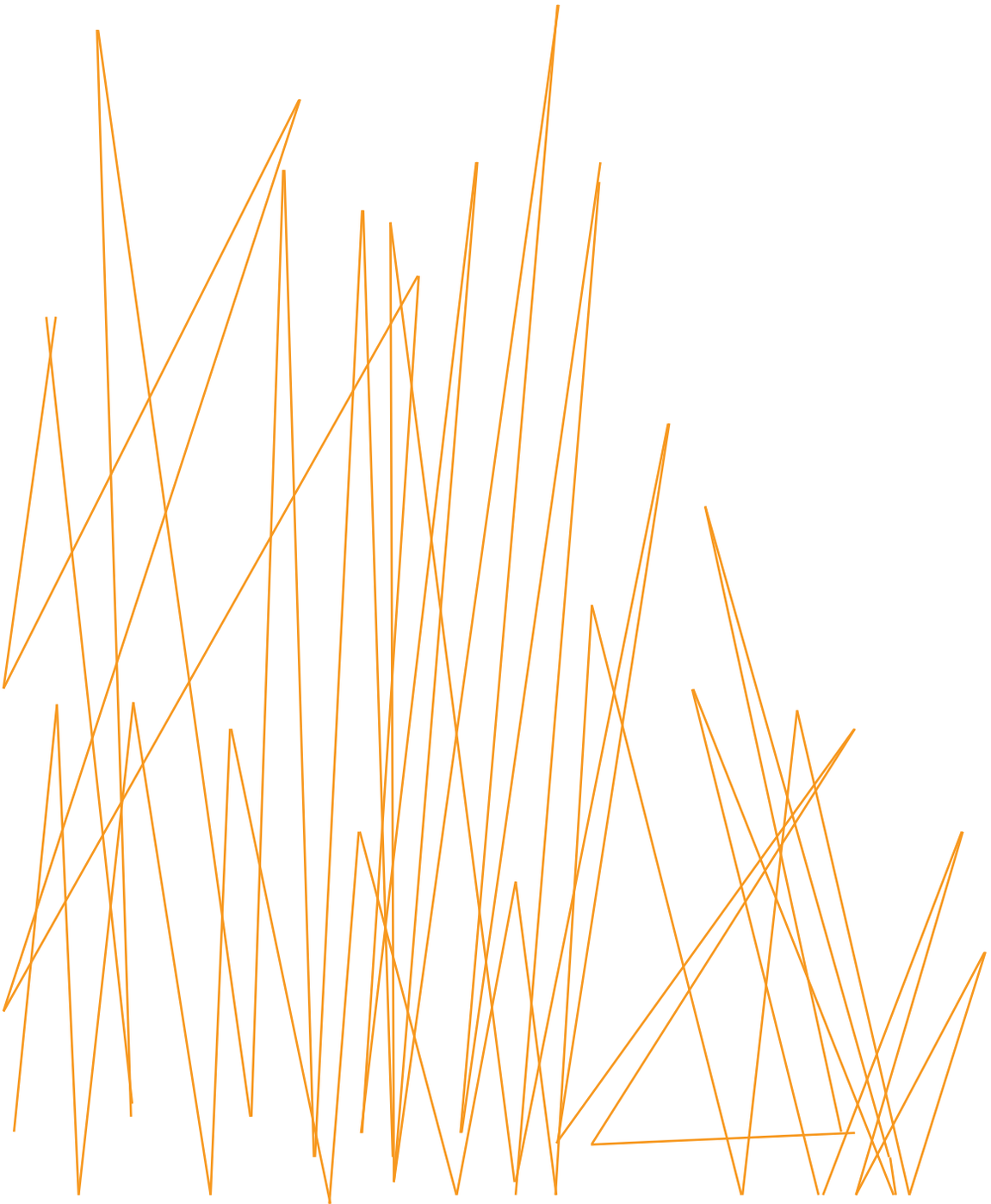

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