

THE HEYSEL PLATEAU AND THE STADIUM AREA

QUESTING THE EVENT-BASED CITY AND ITS
INTEGRATION IN THE SUSTAINABLE URBAN
REGENERATION OF BRUSSELS CAPITAL REGION.

SUSTAINABLE URBAN DESIGN STUDIO, MA-1
BRUFACE - ULB + VUB - 2019/2020

SUDS-I PROJECT 2019-20

THE HEYSEL PLATEAU AND THE STADIUM AREA.

**QUESTING THE EVENT-BASED CITY AND ITS INTEGRATION IN THE SUSTAINABLE URBAN
REGENERATION OF BRUSSELS CAPITAL REGION.**

TEACHING TEAM:

AHMED Z. KHAN (COORDINATOR), CAROLE ASPESLAGH & GIULIA CATERINA VERGA (ULB)

HERA VAN SANDE & GEERT PAUWELS (VUB)

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INTRO

Sustainable Urban Project for Heysel Plateau and the Stadium Area: HIGH DENSITY MIXED-USE.

Questioning the Event-based City and its integration in the Sustainable Urban Regeneration of Brussels Capital Region.

The project for this year's Sustainable Urban Design Studio (SUDS) is focused on the theme of "high density mixed-use" with the objective of sustainable development of the Heysel Plateau and the Stadium Area in Brussels. During the 1st Semester, students work in groups to develop a sustainable urban design framework in the form of a master plan and program. Students work individually in the 2nd semester on a building or cluster within their master plan to develop a sustainable architectural project.

The Heysel Plateau is part of the Brussel City Municipality and covers around 120 hectares, at the border with the Flemish Region (Wemmel municipality). This site is housing a large set of Regional attractions: the expo area, the atomium, an amusements park, a large cinema, a stadium, providing also large surfaces of public spaces and open-air parking. The site is now composed by series of 'islands' which are not integrated with the context (at the local scale) and do not help a clear reading of the area. Public spaces and green infrastructures shall be enhanced and redesigned as one system. The ownership of the site is public (the city of Brussels) and is now undergoing a series of development to valorize part of the Plateau, called Neo.

This operation is divided in a series of operations, which have been scheduled. Last summer the Region decided to promote a larger study and masterplan for the area (PAD, Plan d'Aménagement Directeur) to answer to all regional

ambition for the site in a more coherent manner. Given its location, the potential redevelopment of this Plateau is also a pilot project for interregional consultation, as part of the Noordrand territorial development program. The urban question or the sustainability problematic for the SDS is "How to redevelop an event-based city within the Sustainable Urban Regeneration of Brussels Capital Region? Starting from landscape and public infrastructures, how to envision and re-structure a renewed identity, sustainable and qualitative urban space? What functions can be integrated?"

In both semesters, the students design work is / will be guided by this problematic and a set of questions to be addressed at the scale of both the urban / master plan and building scale: What is the right density and scale? What degree of environmental sustainability? What is the right mix of uses? What should be the ambition of mobility reconfiguration? What about co-production? Addressing these problematic and questions, distinct visions of urban design based scenarios will be developed in the form of Master Plans (1st Sem), and Sustainable Architectural Projects (2nd Sem). The aim is to provide concretely illustrated and coherent set of innovative ideas as the stepping-stones for creatively defining the urban project for Heysel Plateau and the Stadium Area and deliberating a more inclusive vision for sustainable urban development of the area.

GREEN GATE NORTH

TEAM:

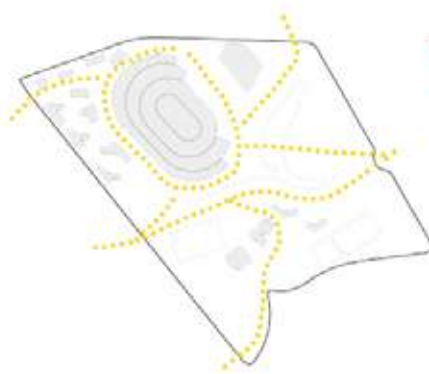
VINNY ELZEWIJCK, JEANNE THITEUX, EVA VANGANSBEKE, FRANCESCO
GRAZIOLI, TIMMY VAN DEN PANHUYZEN



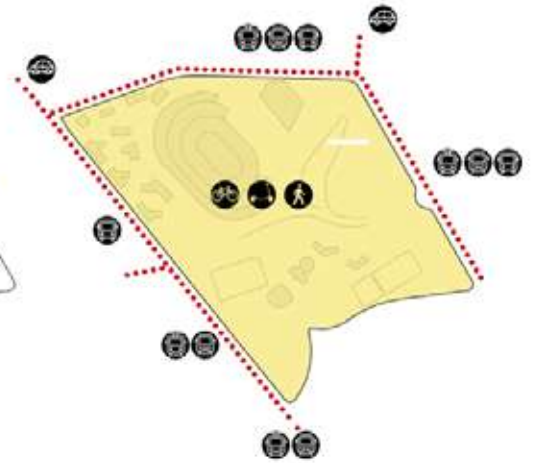
ACCESSIBILITY
(event day)



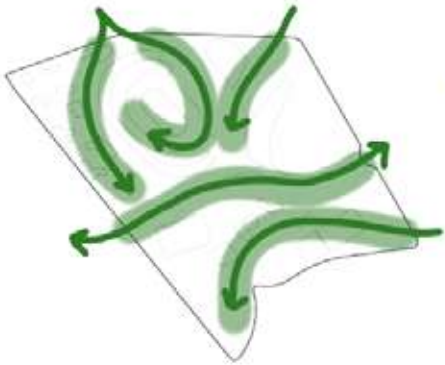
ACCESSIBILITY
(daily)



SOFT MOBILITY



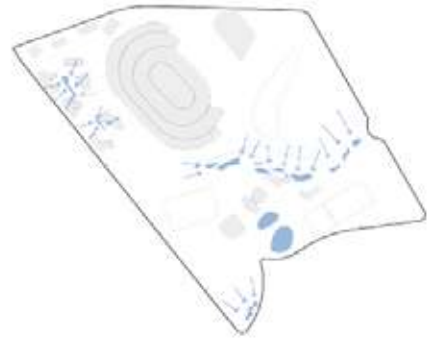
GREEN



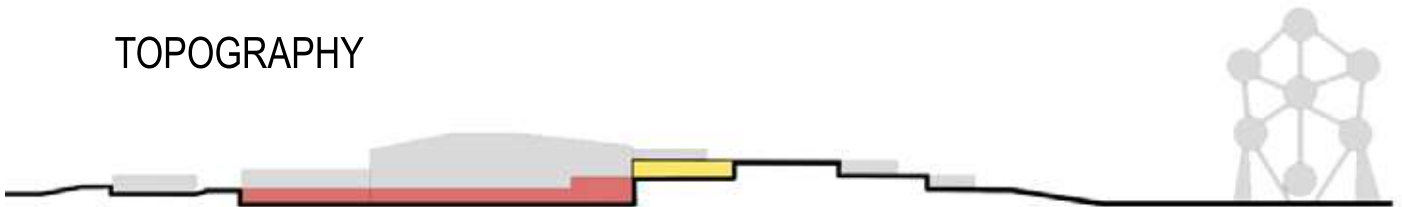
DENSITY



WATER CONTROL



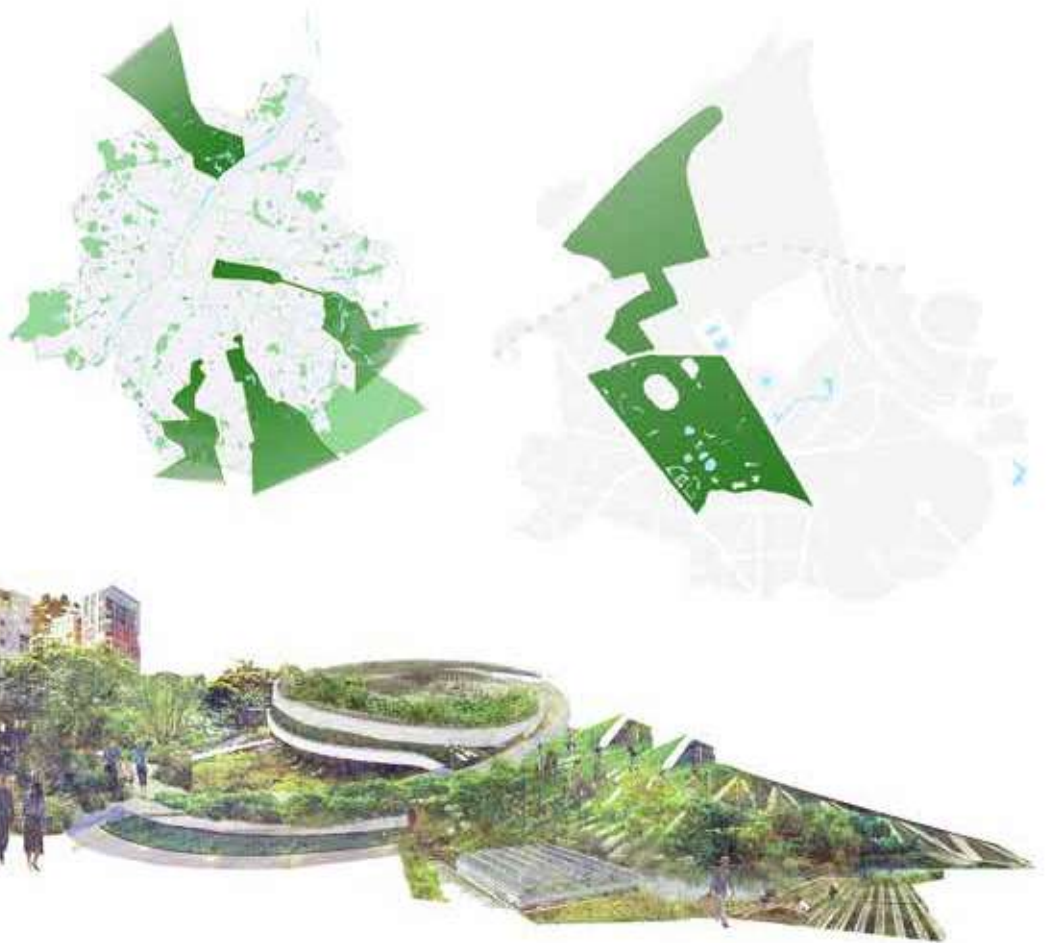
TOPOGRAPHY



STADIUM



GREEN GATE NORTH



The city of Brussels is accessible through four main green accesses, the Heysel site is located at the northern gate. Being the place of World's Expo and being served by many means of transportation, the Heysel site is a strategic place in the development of the city.

However, there exist a discontinuity between Flanders and the capital, partially due to the presence of the transit parking C, a wide paved area.

In order to reconnect the whole project from Flanders, to Heysel and to the rest of Brussels, Parking C has been turned into a wide green area with harvestable crops, as a continuity of the Flemish fields. Parking buildings have been placed there so that people can leave their cars when getting out of the Ring and explore the city thanks to public transportation and soft mobility.

The masterplan plan has been developed as a green continuity, through buildings that enhance the landscape. The project is composed of multiple atmospheres, all outlined by sustainable aspects, whether ecological or social. Among these different parts composing the site, there is the Valley, a green mix-used area; the Sports park housing, a sustainable neighborhood, organised around

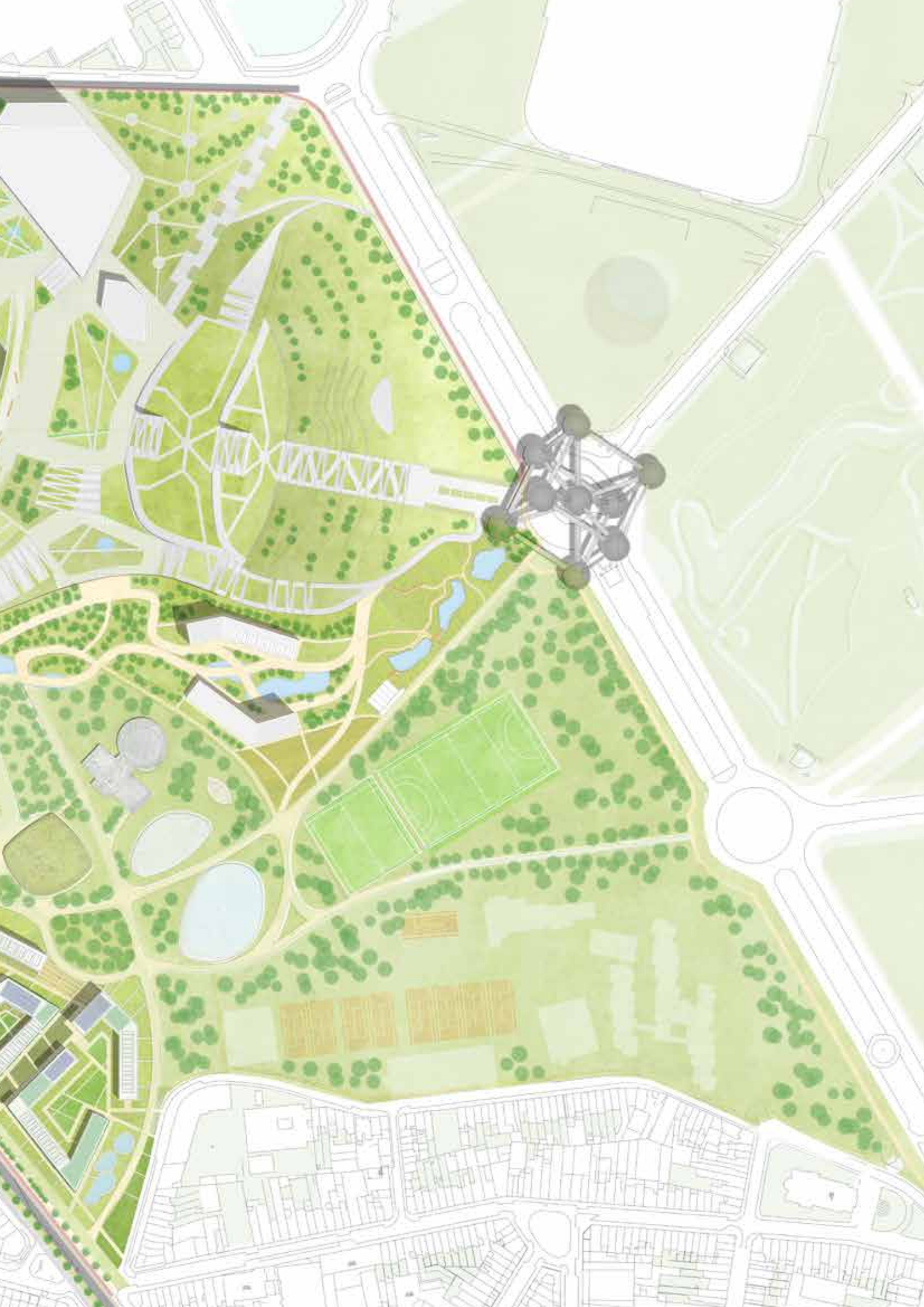
shared gardens; a monumental royal park, with a wide view on Atomium and access to cinema and shops hidden in the slope; the art park where one can wander, surrounded by different sculptures and artworks. All these areas are structured around the Stadium. It was thought to fit with the idea of a continuous landscape: the green belts around the stadium make it accessible to everyone and provide a unique view on the Atomium.

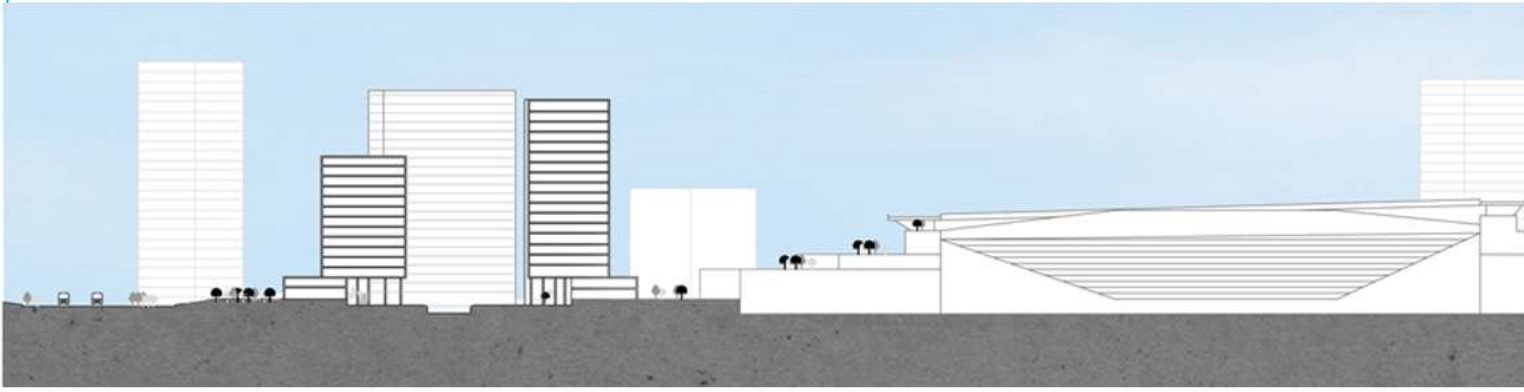
Green Gate North is a project aiming at reconnecting the city and the greens. This is made possible, by using the natural slope of the site to enhance the landscape as well as through the implementation of sustainable aspects. The soft mobility is furthermore promoted, thanks to new bike trails and better connection to public transports, allowing people coming from anywhere to enjoy the Heysel and the city, in an enjoyable green atmosphere.

making the development dense and mixed, brings character and activity, while ensuring breathability and intimacy for the individual.

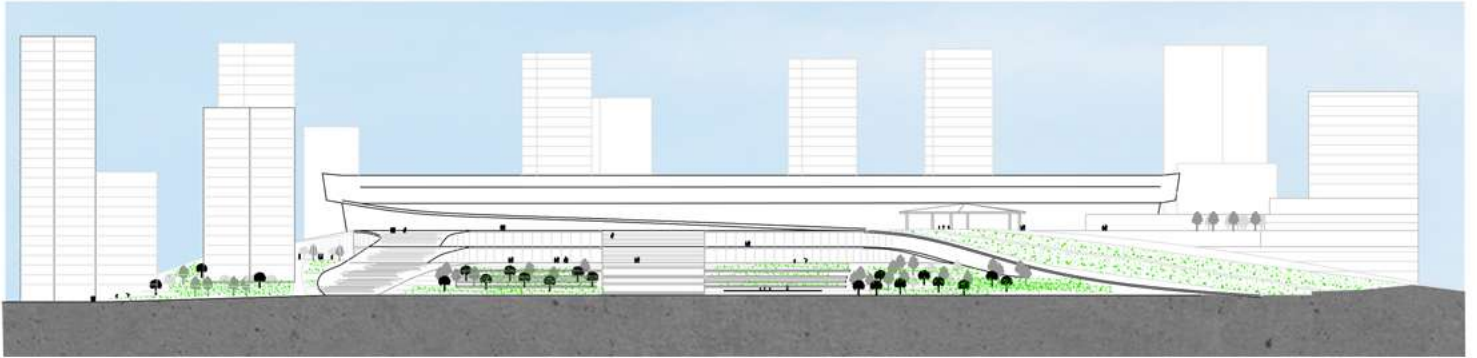
The project is thus marked by a dense and mixed redevelopment of the DaVinci-site, while taking the specific context of the boulevard into account, but most importantly







Section A,



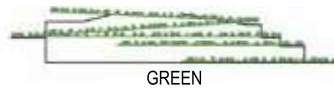
Section B,



PUBLIC USE



CONNECTION



GREEN



PLAN: level 0



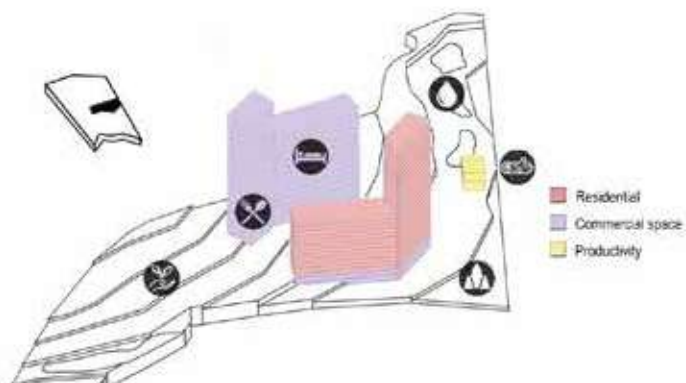
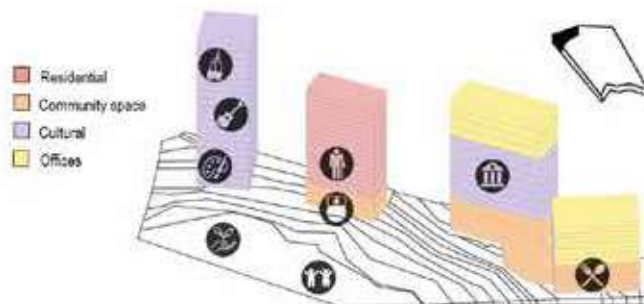
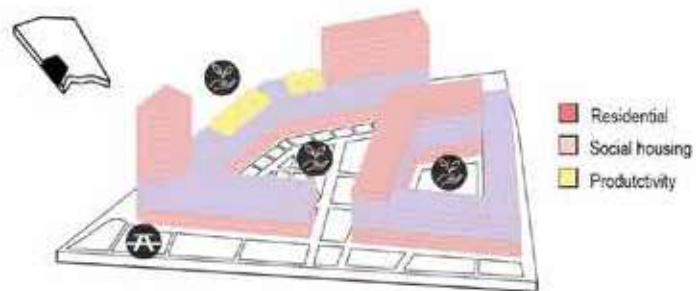
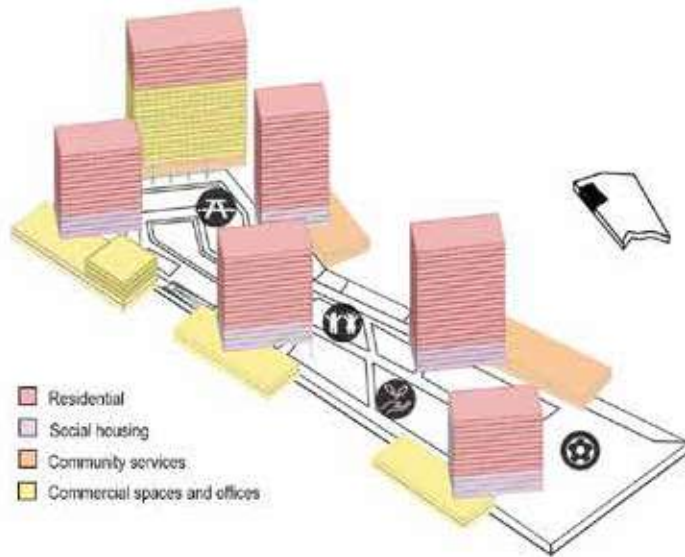
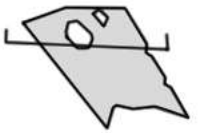
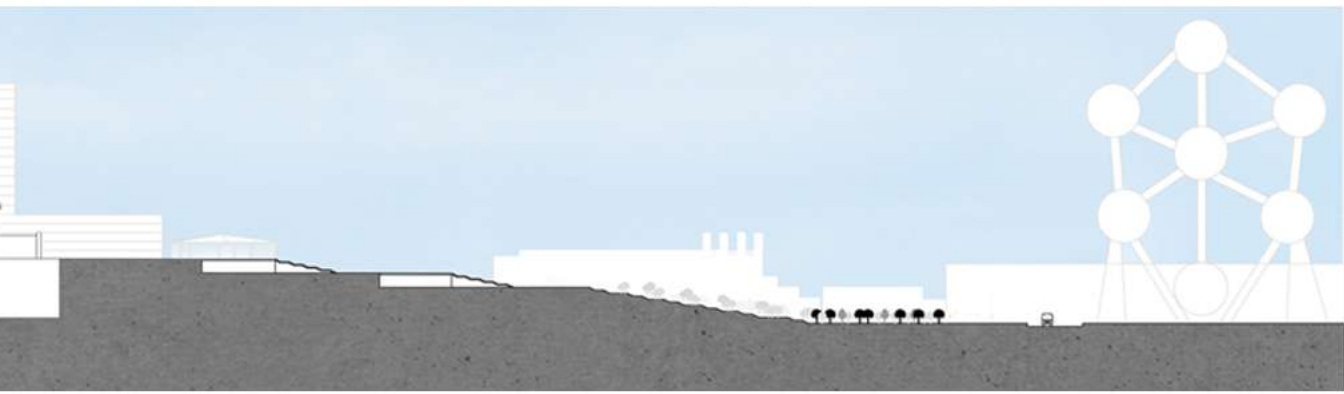
PLAN: level 1

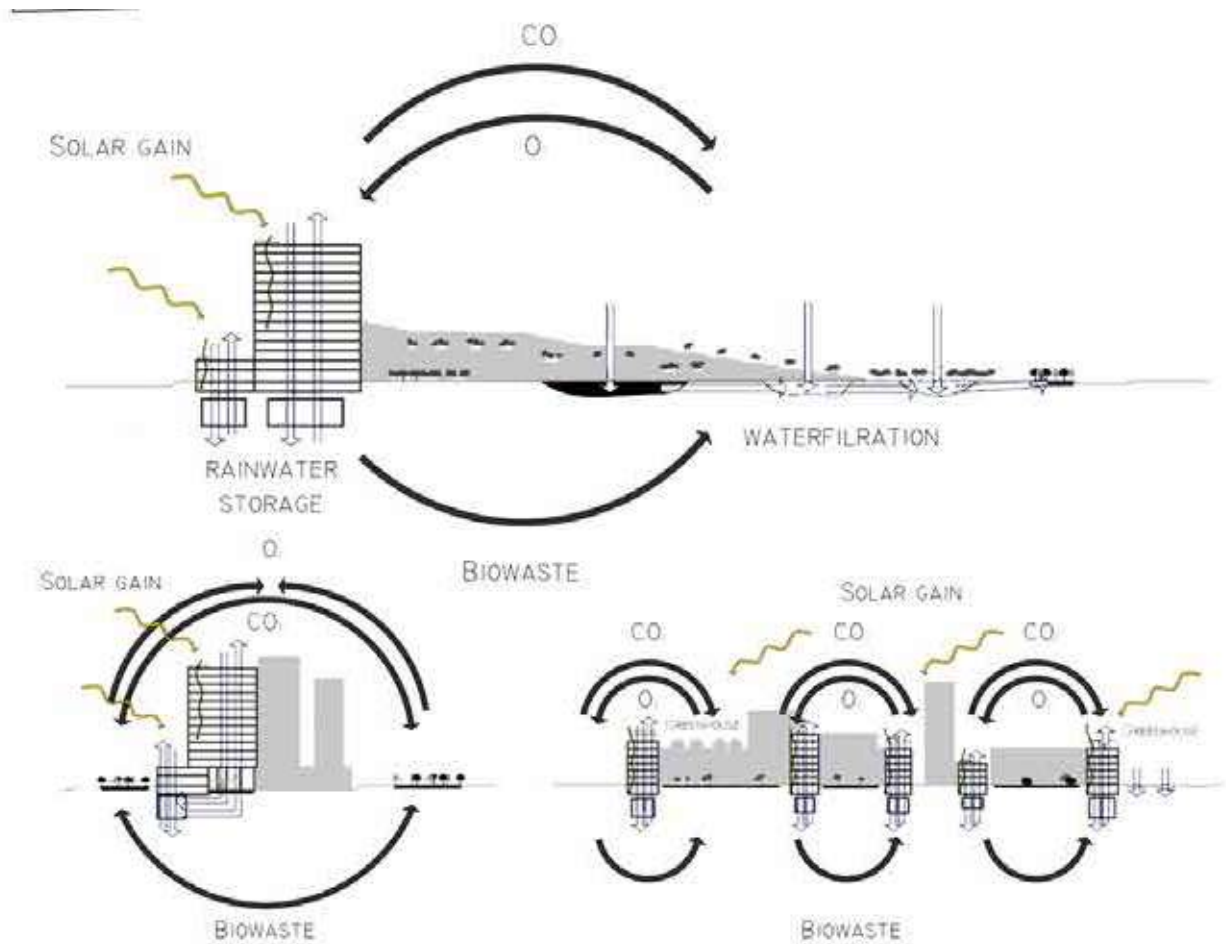


PLAN: level 2



PLAN: level 3





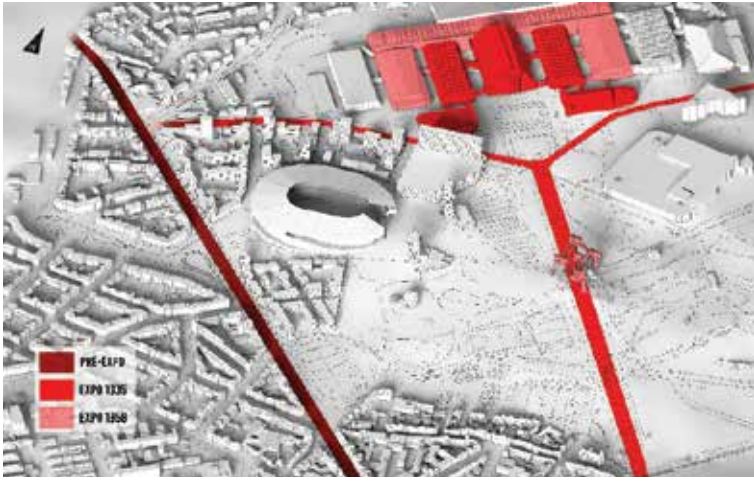


GREEN GENERATION

TEAM:

CYRIL DE RAEYMAEKER, LEONARDO STEFANI, LEOPOLD SEPULCHRE, MARIE-LOUISE GIRAUD, PAOLO DELL'ORO, TRACY OHENEWAA ASARE

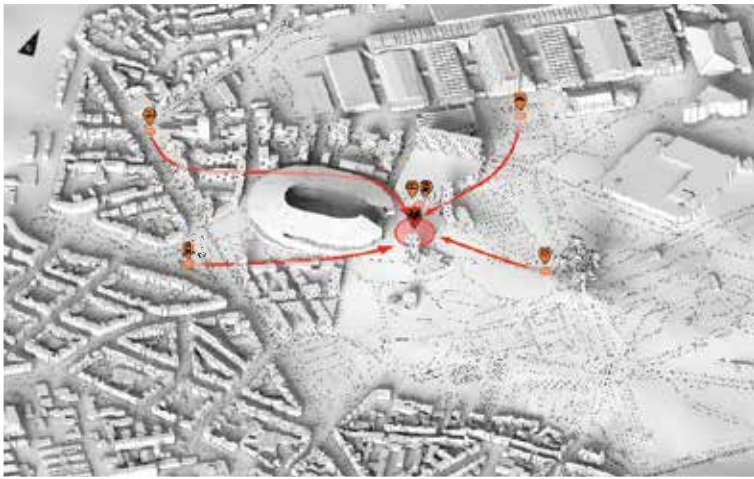




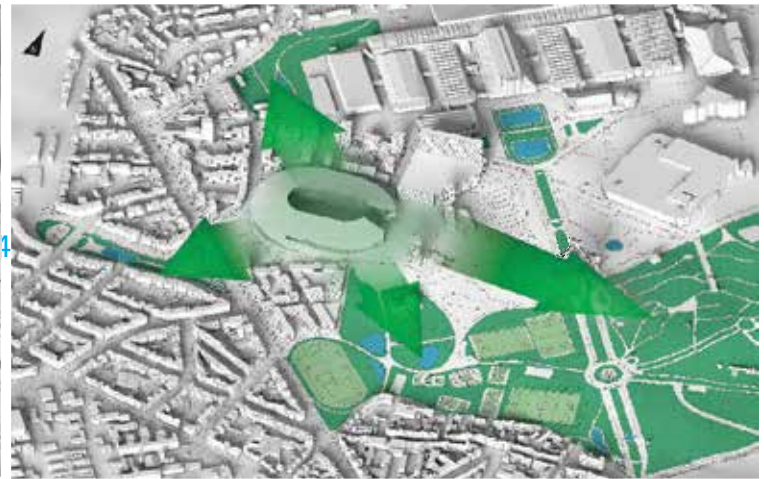
SITE HISTORY



STRENGTHEN THE LANDMARKS



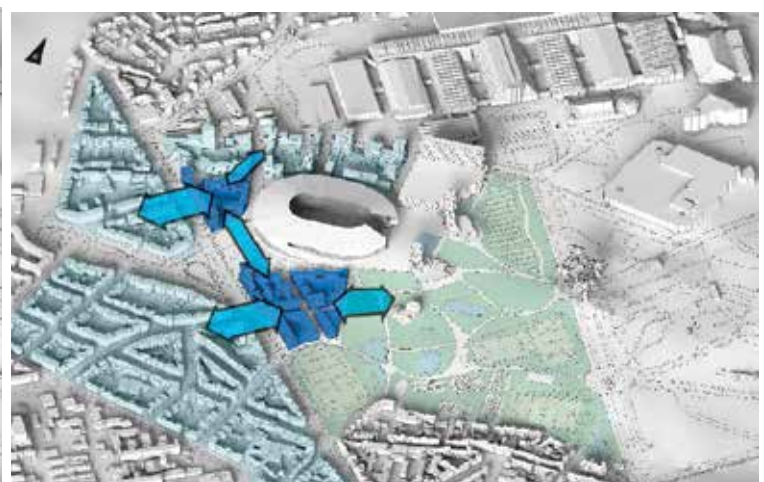
OPEN AREAS AND STRATEGIC MOBILITY



GREEN NETWORK



LOCAL EVENT INDUSTRY



SOCIAL MIXITY AND SERVICES



Equinox has mesmerized us in all cultures across time and places : day and night are at equilibrium, spring starts, life is reborn, it is a special sunrise for a renaissance.

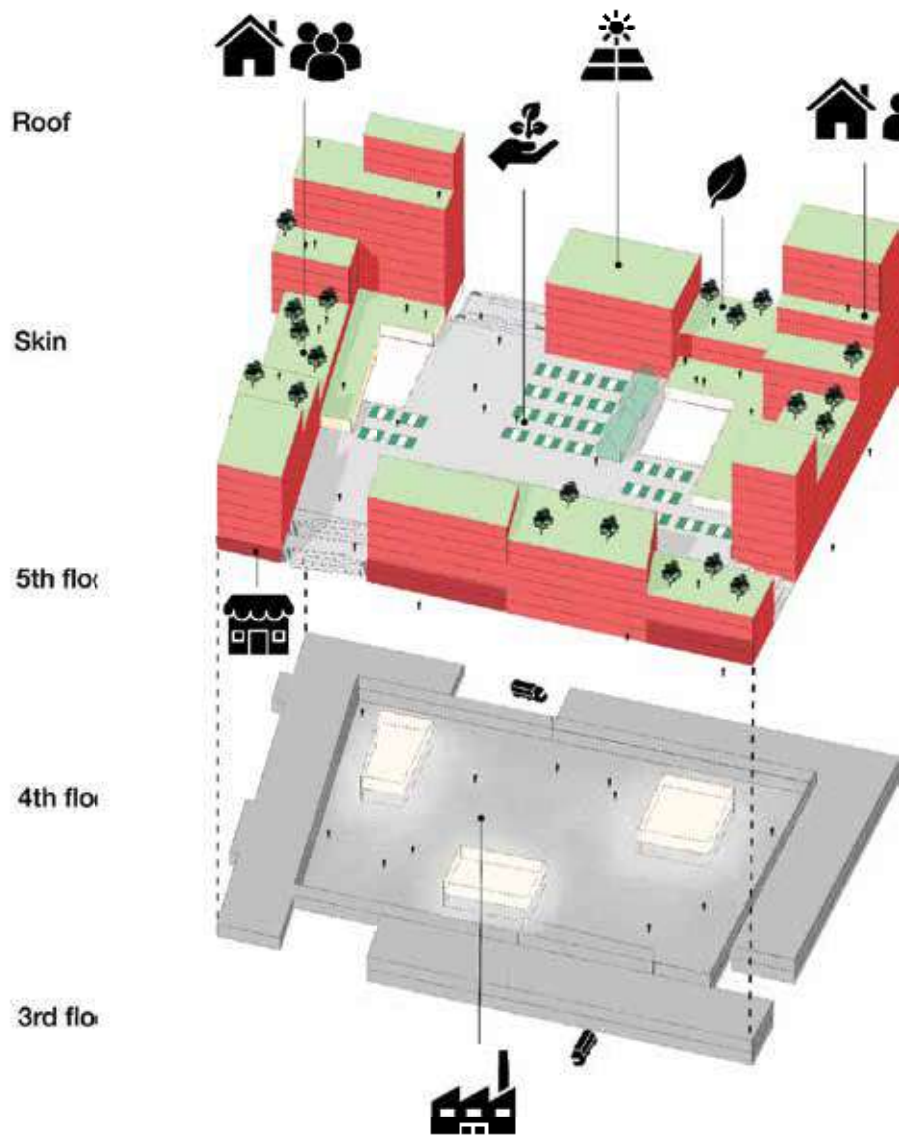
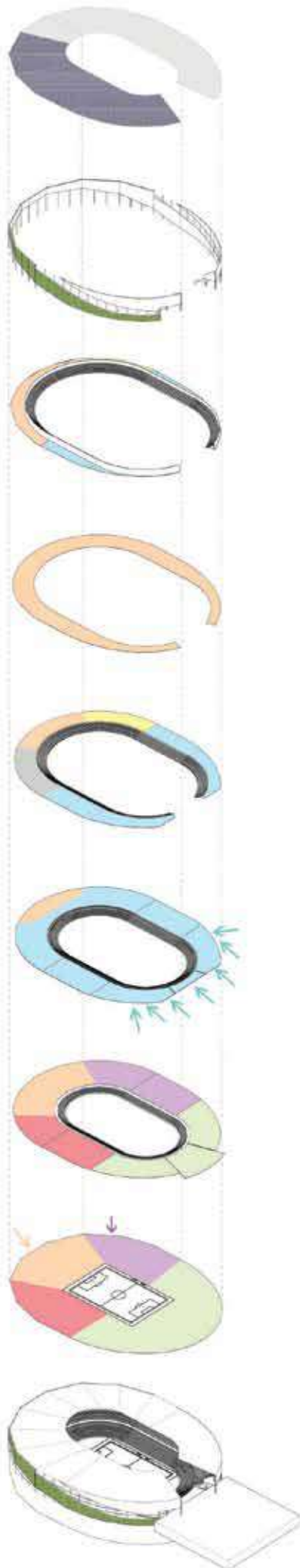
That's why we find so many historical buildings oriented towards East. Today nations are getting together so that we and our future generations live in a better world by making sustainability our Equinox.

Sustainability is about focusing on three pillars : environment, economic and social. In addition, the Heysel plateau presents the special challenge of being an event based city. To respond to these requests five goals have been defined.

Firstly a new stadium is built and aligned it with the equinox and the Atomium to strengthen the land- marks in a win-win situation. Secondly the green network is enhanced by linking the existing green areas and creating a strong park. Thirdly, large open areas and strategic mobility axis are provided to address the challenges of an event based city. Fourthly, the local economy is boosted by the event industries and urban farming. Fifthly the buildings are designed for mixed-use and services at a strategic location for the neighborhood. So lets become the green generation.







Roof

Skin

5th floor

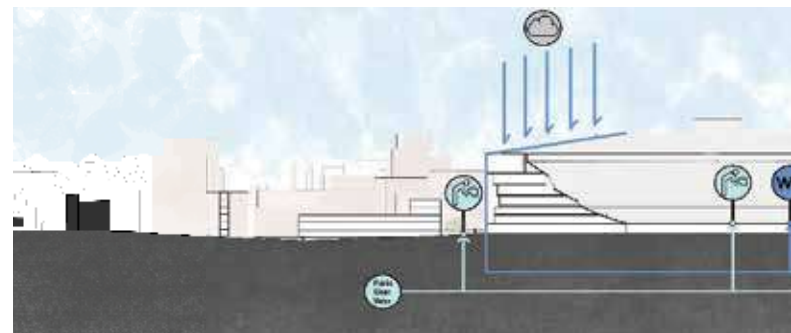
4th floor

3rd floor

2nd floor

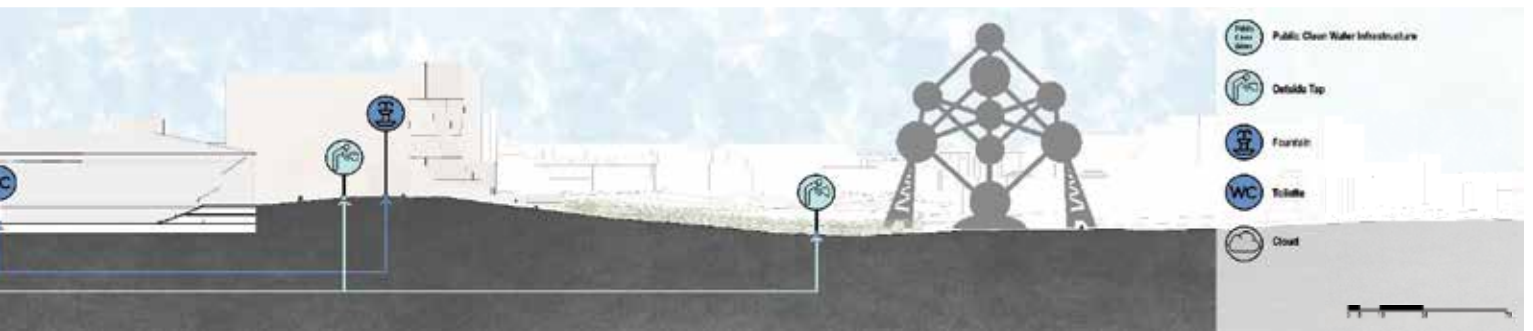
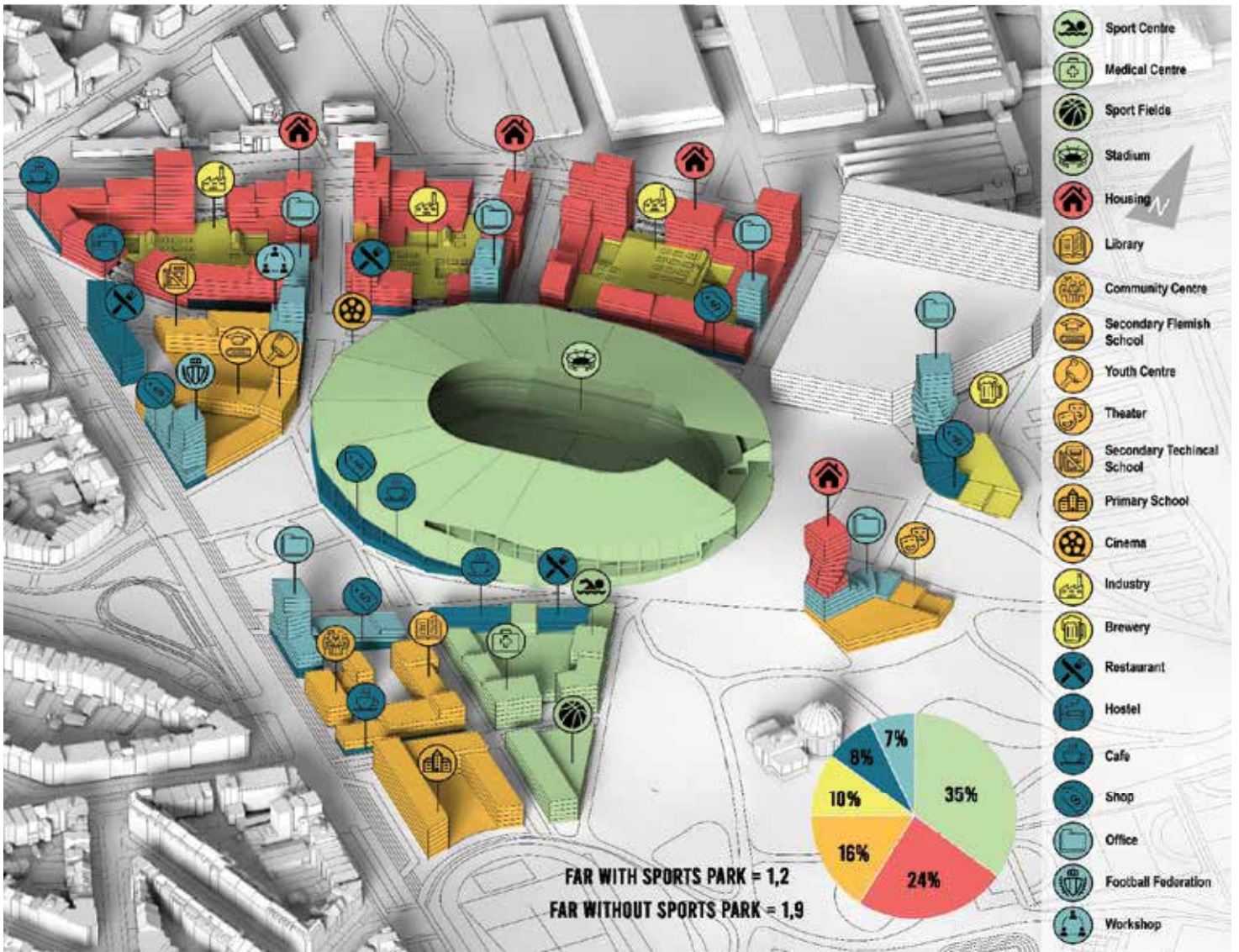
1st floor

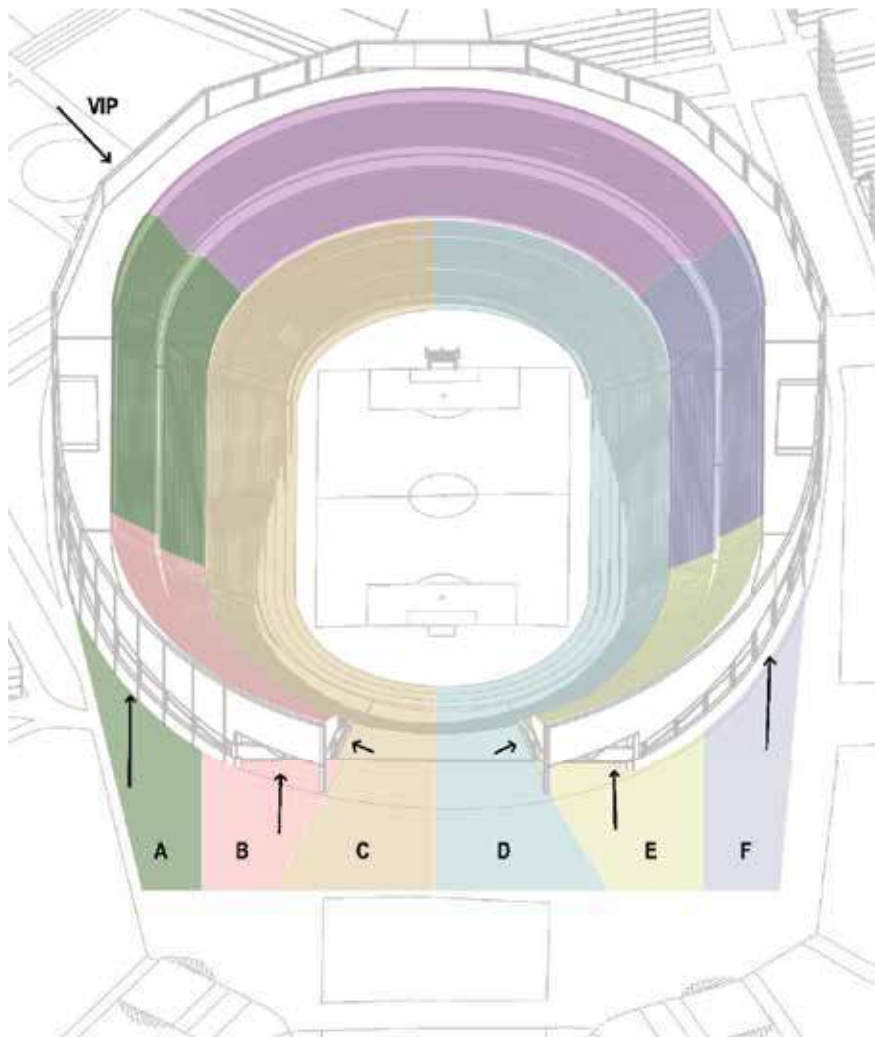
Ground floor



| | |
|--|-------------------------------------|
| | Visitors bleachers |
| | Press zone |
| | Local bleachers |
| | Kinepolis cinema |
| | VIP area (restaurant, cafe & lodge) |
| | Athletes surface (changing room) |
| | Service zone (waste and water) |







- Entrance A - 5.760 Seats
- Entrance B - 5.440 Seats
- Entrance C - 5.800 Seats
- Entrance D - 5.800 Seats
- Entrance E - 5.440 Seats
- Entrance F - 5.760 Seats
- Entrance VIP - 6.000 Seats



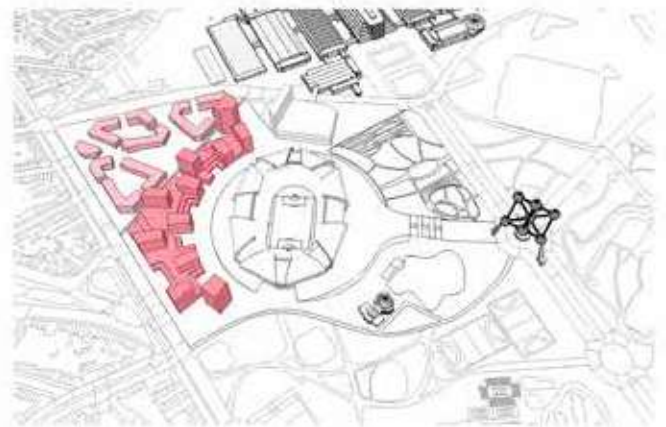
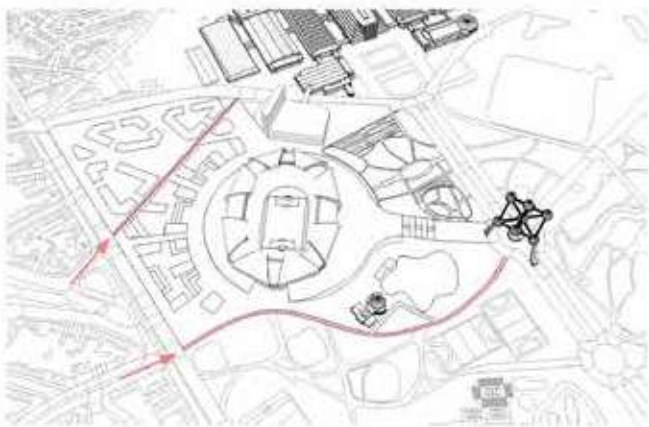
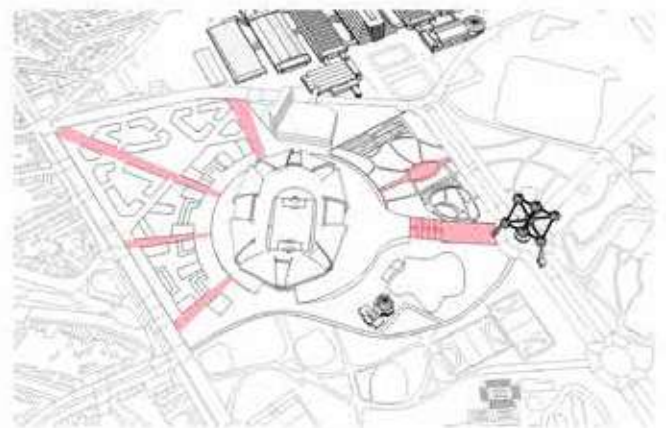
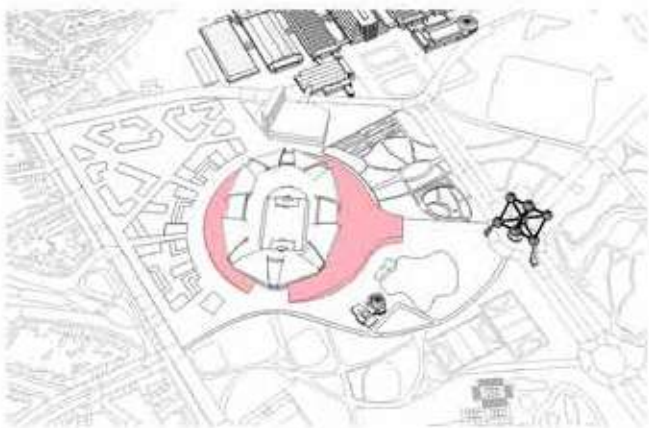
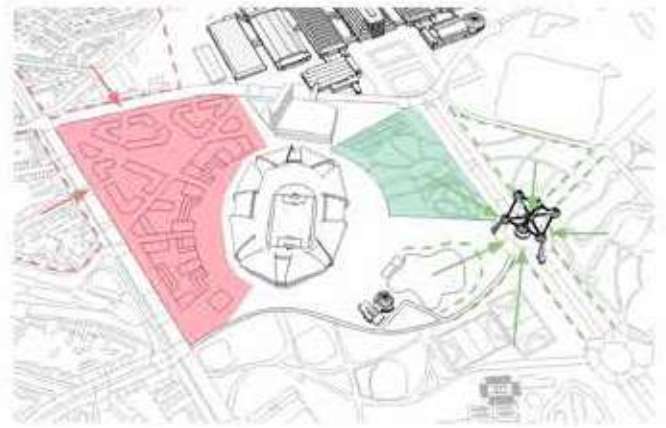
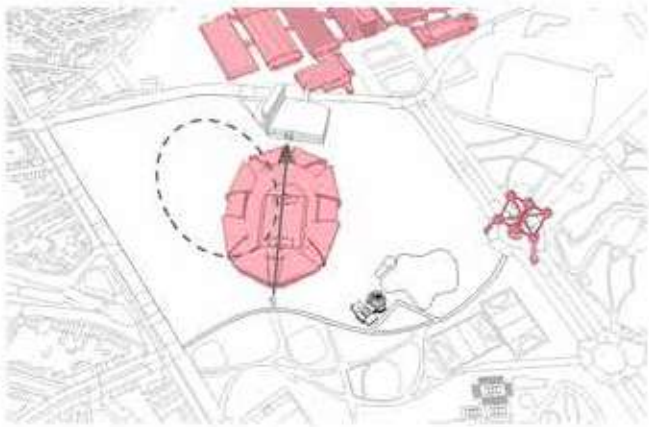
CENTERPOINT

TEAM:

MARION BATTARE, SEBASTIEN HEYVAERT, MICHEL RAAD, OLIVIA VAN GOETHEM & SOFIE VANDERMEEREN

FULL PAGE IMAGE OF THE PROJECT

03



in



CenterPoint is an urban development project which focuses on the recreation of the King Baudouin Stadium. The vision of this project is to create a new multi-functional stadium, which produces life in and around it, at all times and is the center point of a new, self-sustained neighbourhood. This new stadium will also stand as a new landmark, positioned between the Atomium and the Expo, with a main axis between the stadium and the Atomium.

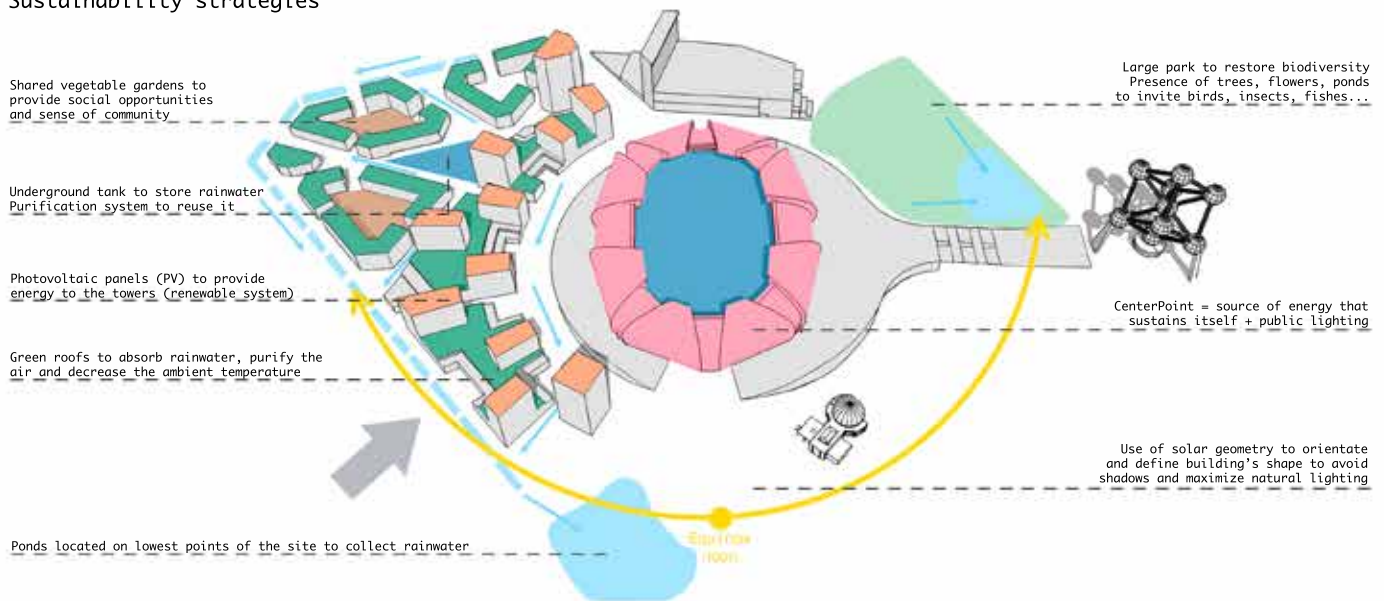
The CenterPoint divides the site. On the East side, the green area around the Atomium is extended with a biodiverse Park, containing a large pond. On the West side, the site consists of a high density, mixed-use area, serving the needs of the local residents. This city part is again divided into a part that corresponds more to the traditional urban housing blocks, and a part that responds more to the stadium, with a socle and high rise towers. To accentuate the multi-use stadium, it is placed on the highest point of the site and a platform is created around it on the one hand, to control the flow of people and on the other hand, to serve as a high viewpoint towards the Atomium. Radial lines -

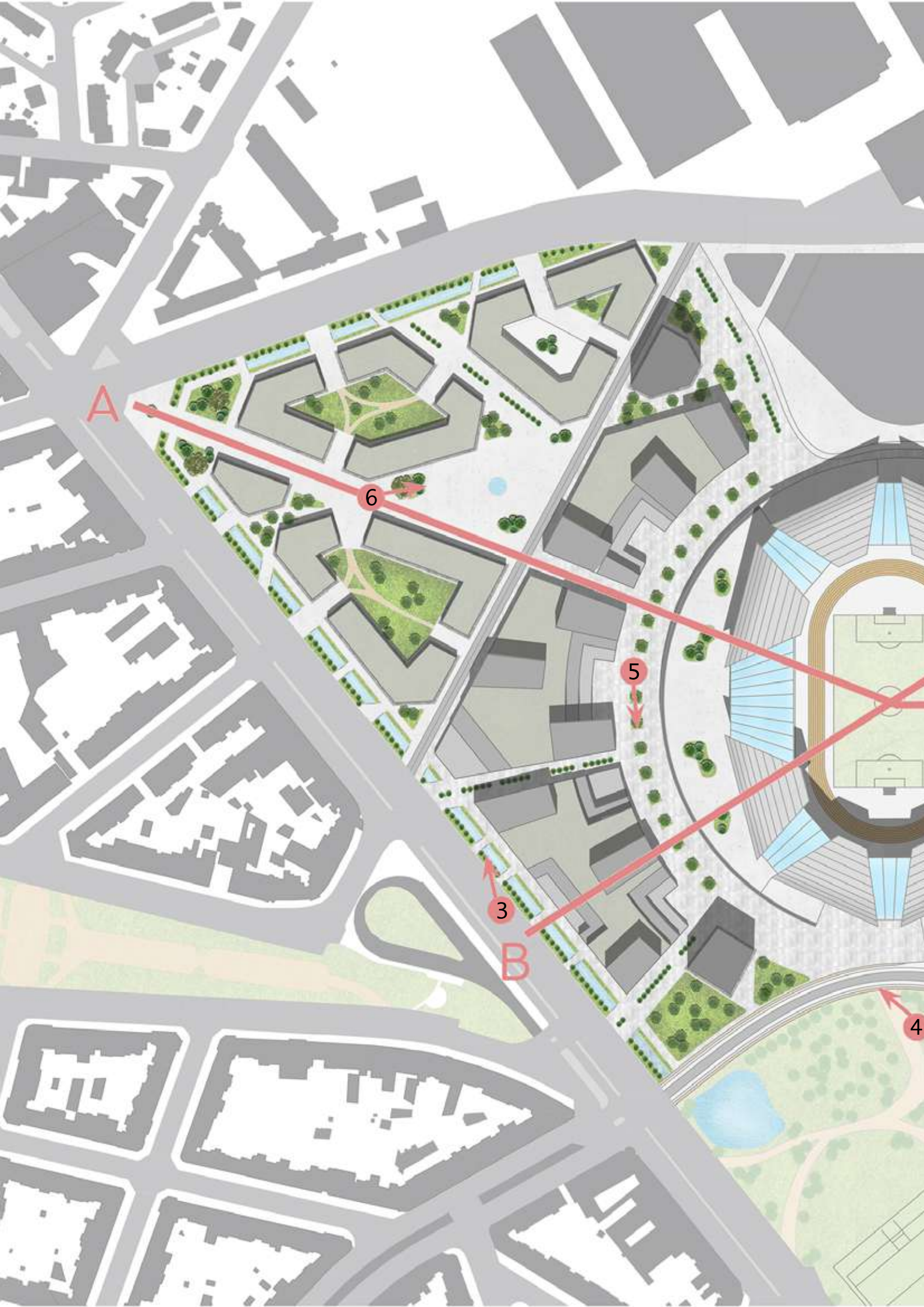
- are created around the stadium using pedestrian roads and buildings to accentuate the CenterPoint even more.

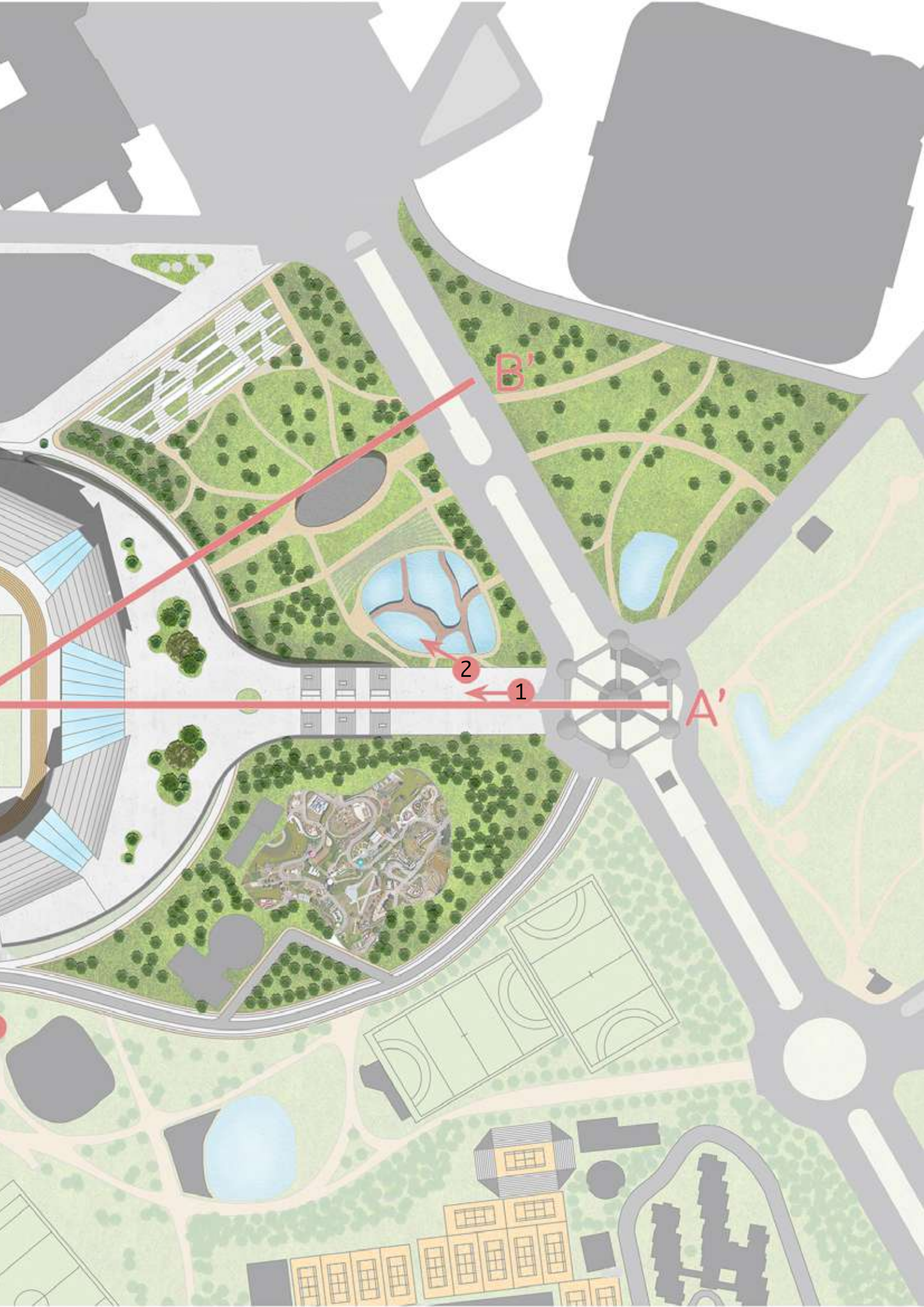
The project also focus on sustainability strategies. On the whole site, as many trees as possible are preserved, and many more are planted. Free solar gain is collected as much as possible by orientating the buildings and defining their shape to avoid shadow and maximize natural lighting. Rainwater is collected to be reused, and the remaining rainwater is collected in ponds. Also, the stadium sustains itself and its surrounding by introducing photo-voltaic panels and collecting rainwater.

The Heysel Plateau is now hosting a new 42.000 m² -multi-use stadium, offering functions to tourists as well as "local" people, in a sustainable way. High-rise buildings and socle are placed around it to answer this large CenterPoint, and an urban neighborhood can be found behind this socle to answer social needs. This new landmark stands up in front of the Atomium, and is located next to Brussels Expo's Building, and a new coming International Congress.

Sustainability strategies





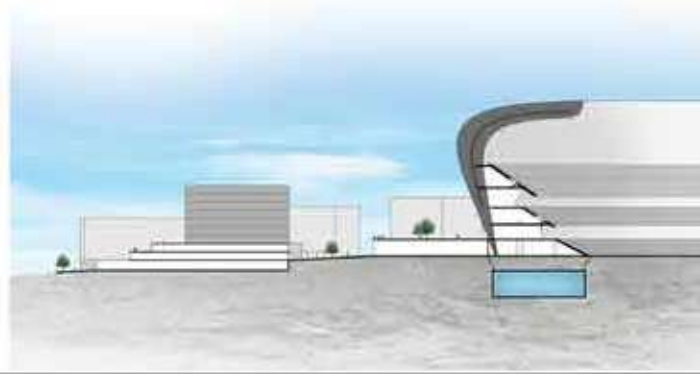
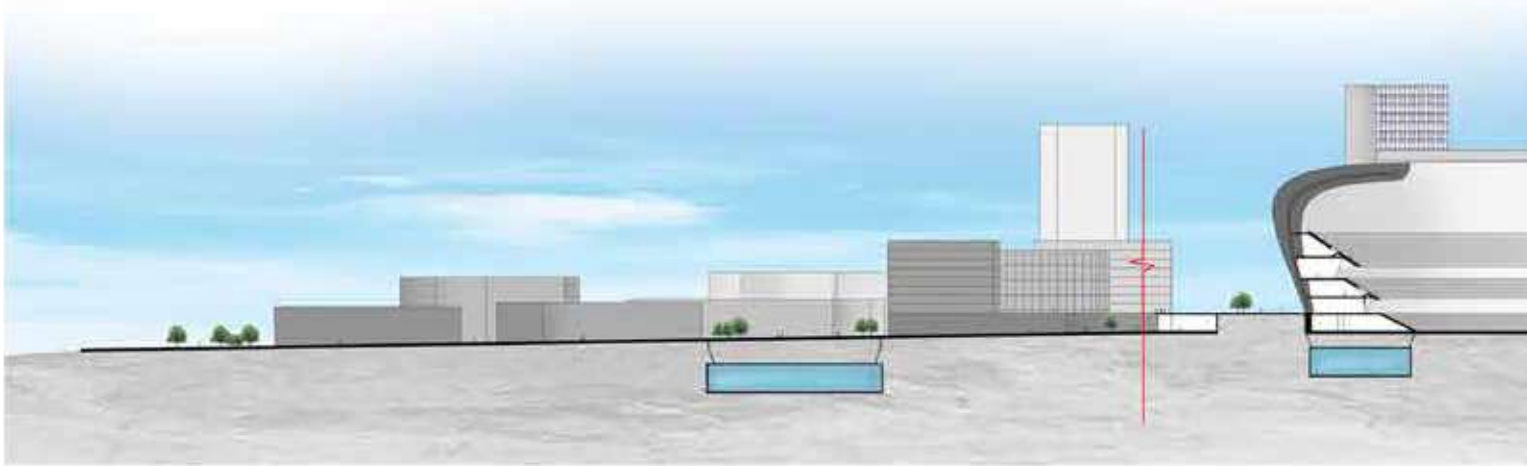


B'

A'

2

1



Program

Primary & secondary school

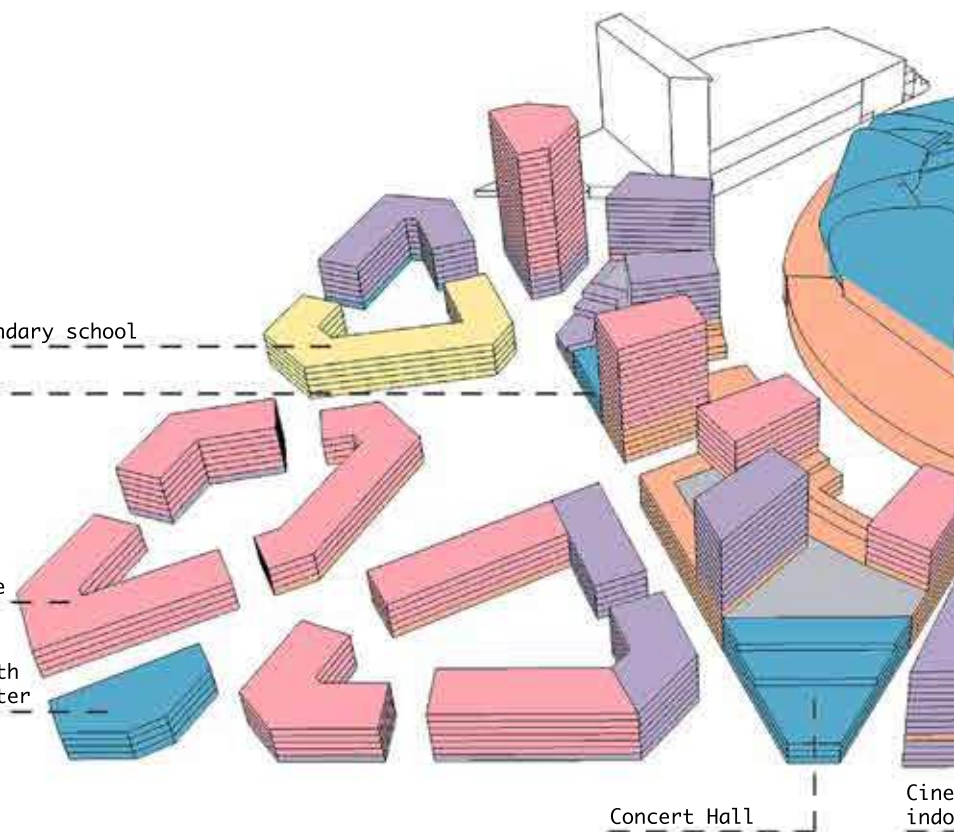
Library

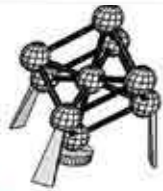
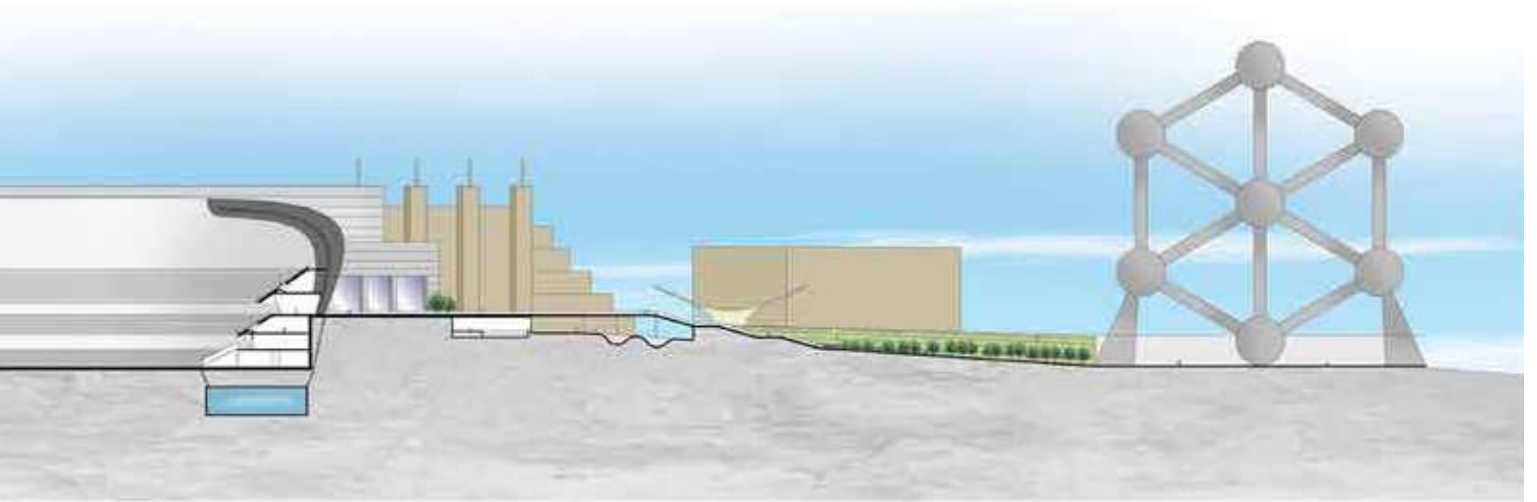
Retirement home

Community, youth & cultural center

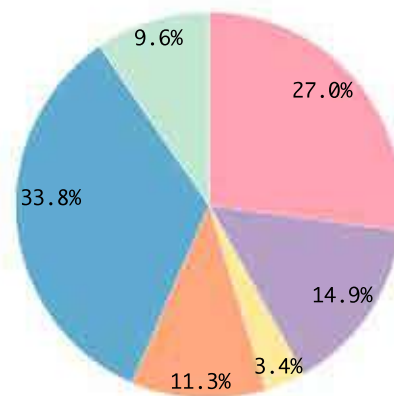
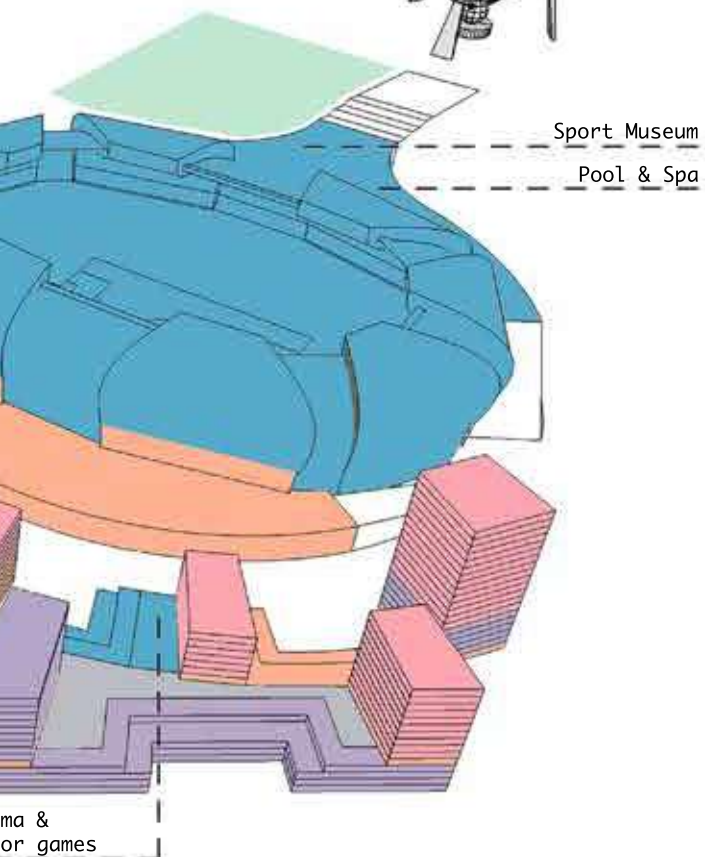
Concert Hall

Cine
indo





FAR: 1.9







OXYGEN²

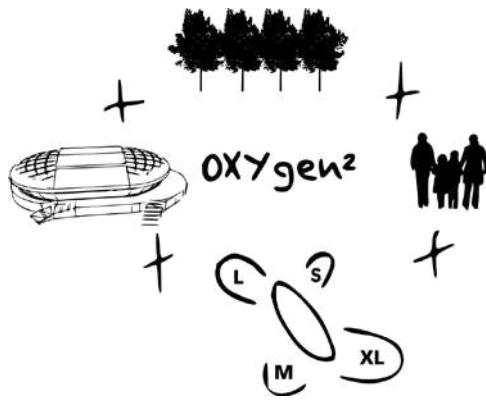
TEAM:

FELIX BAMBUST, SARAH BLOMART, ARIANNA CORTI, SAMIR KENNOUN, KIM NARAE, ESTEBAN WELSCHEN

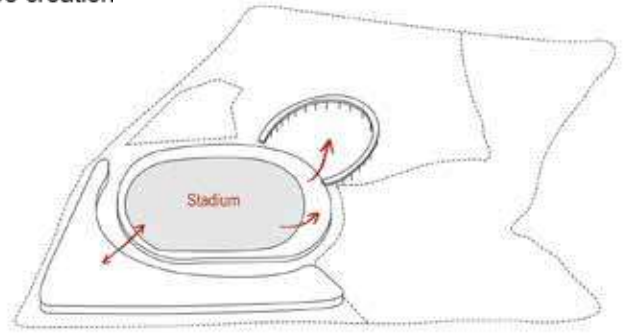


04

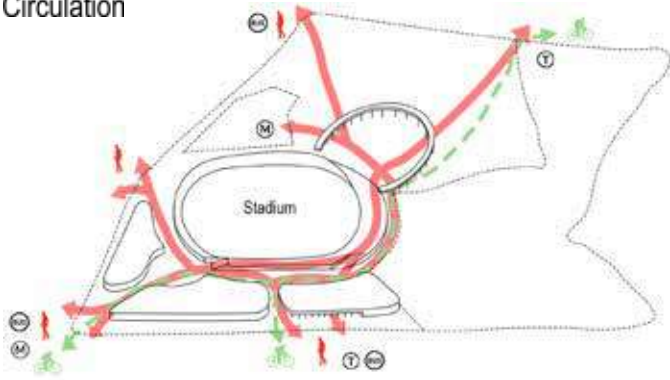
Vision



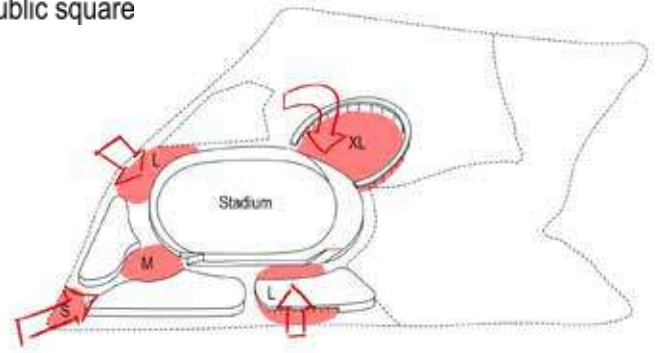
Shape creation



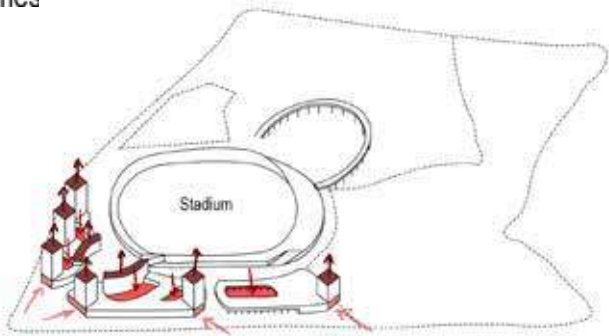
Circulation



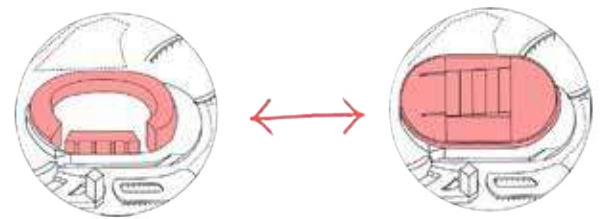
Public square



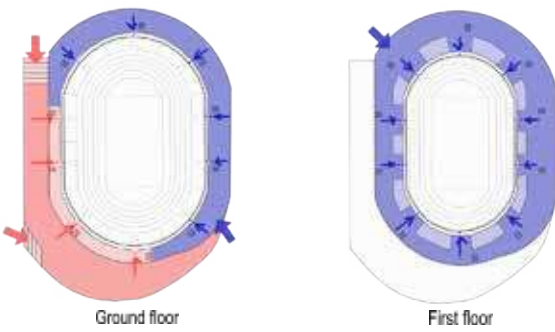
Volumes



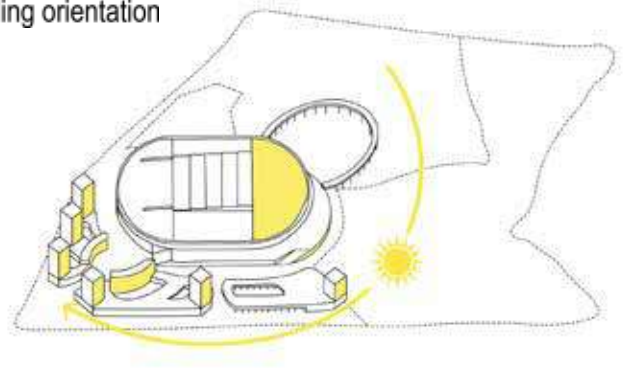
New stadium



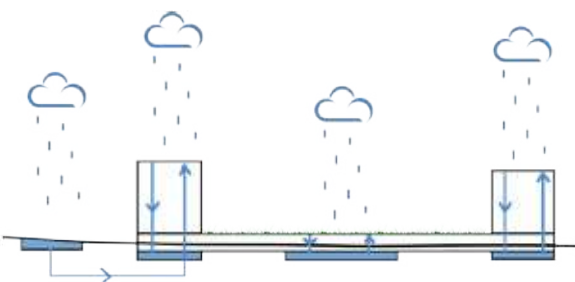
STADIUM Zoom



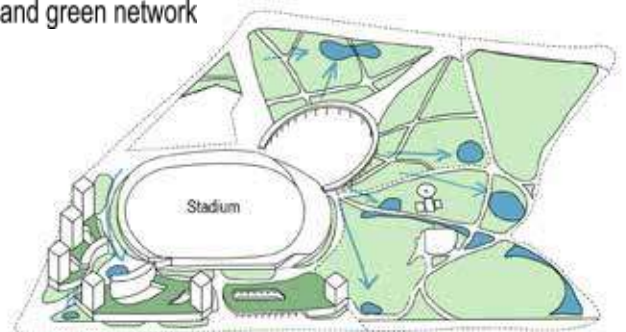
Building orientation



Water management



Blue and green network





OxyGEN²

“Let different Generations Breathe through livable Squares.”

In our design, we have tried to rejuvenate the Heysel plateau by renovating the existing stadium and creating four different scales of public spaces around it to create a better environment for the neighborhood, spectators and visitors.

In our preliminary analysis for the site, we encountered some of challenges which were that the Heysel plateau’s space was too much taken by the parking lot, giving too little space for the people and due to the elevation difference, the two zones (front side of the stadium: Avenue Houba de Strooper and Expo side: Avenue des Athletes) were separated and not integrated together. Also, the mobility, water flow and crowd fluxes had to be taken into account.

For the early phase of design development, referring to the case study ‘Royal Arena’ in Denmark, we created the deck around the stadium for the reasons of a better circulation from the front to the back and creating spaces for swimming pool, football museum and sports center underneath the new skin (deck).

The biggest square is the focal point of the project and it is sitting at the highest point in the plateau which makes a great view from the square towards the atomium. Beside the main square, we created 3 different size squares to provide more public spaces to the residents and not to concentrate the flow of people in one square.

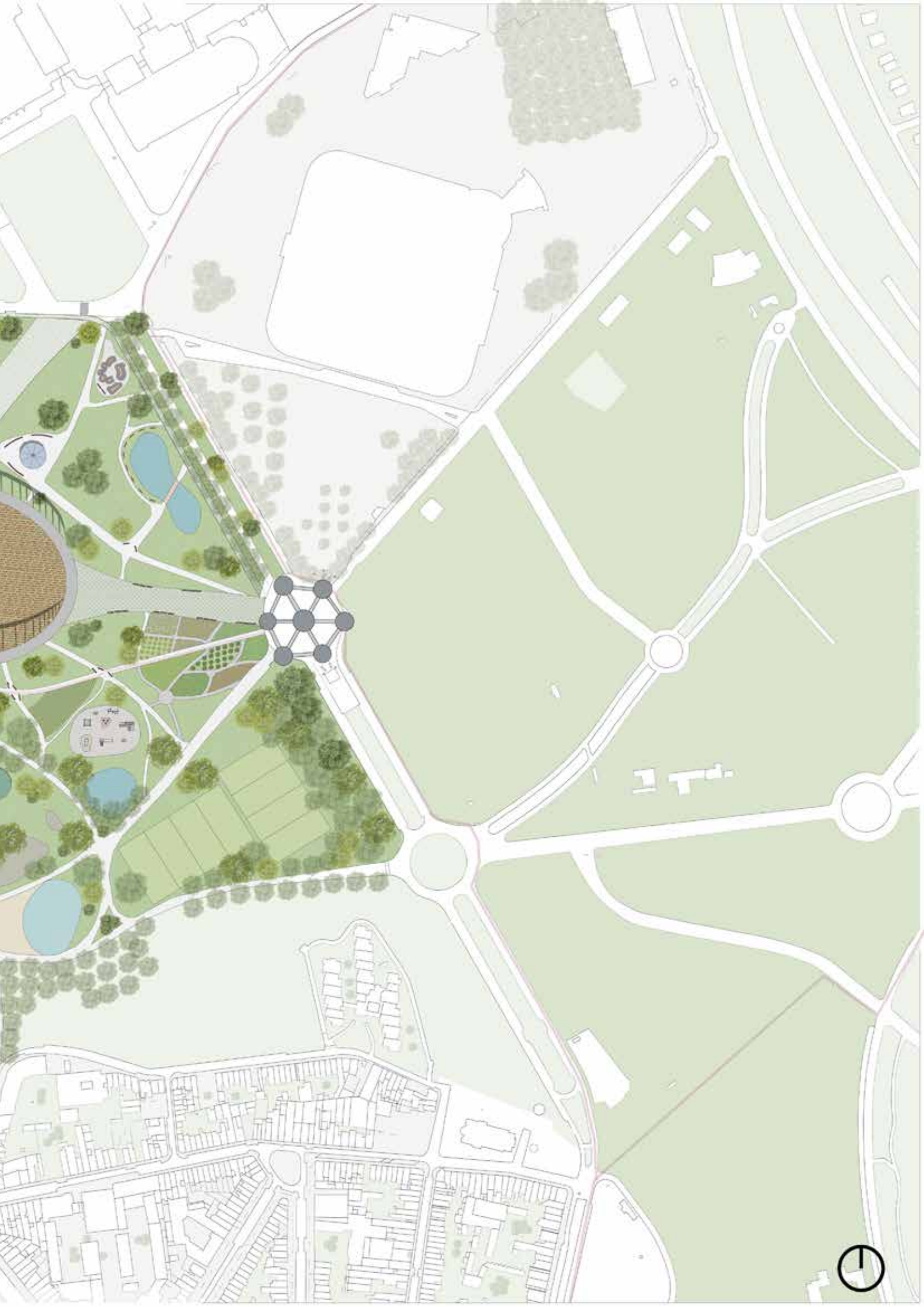
We are aiming that the project will become an anchor for the development of an entirely new neighborhood, a connection between the stadium, the expo and the atomium. Our project will become a destination for concerts, sport and cultural events.

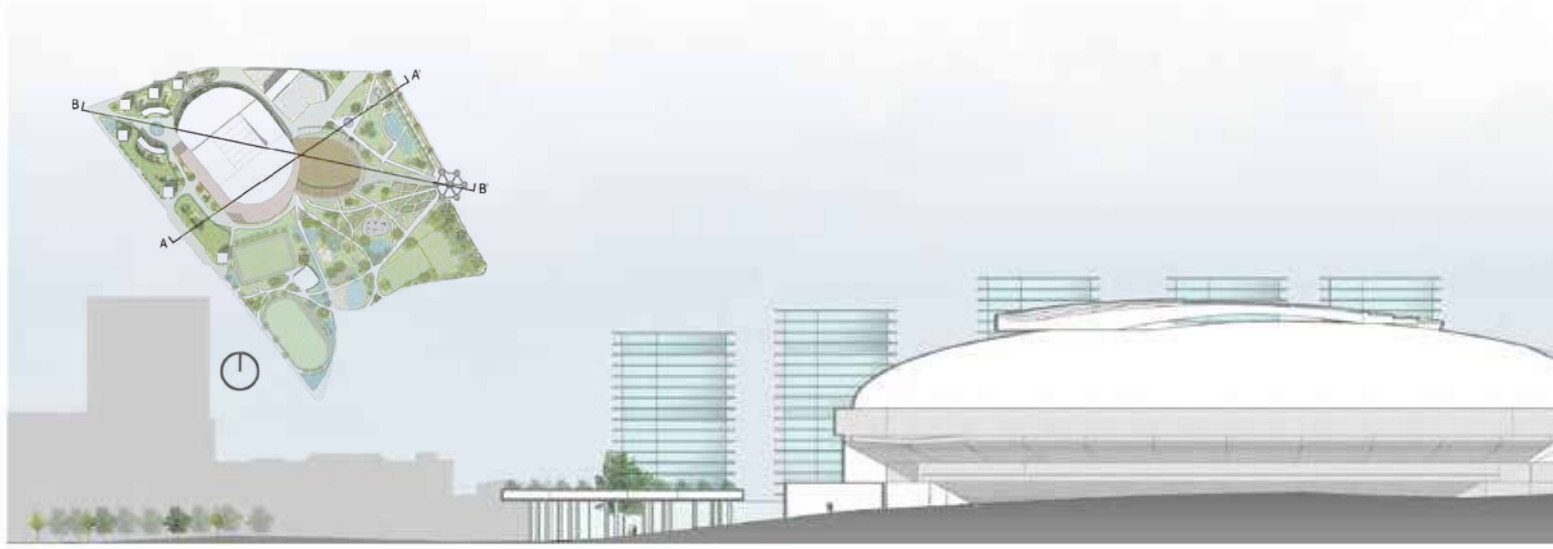
Furthermore, the new renovated stadium is based on a highly versatile plan that provides optimum capacities for multiple concert configurations, whilst also serving as an attractive venue for major sport events.

The entire masterplan aims at becoming an urban connector by stitching the area together with the adjacent districts and by delivering public plazas, vibrant streetscapes and pockets for city by achieving goals of sustainable urban development.

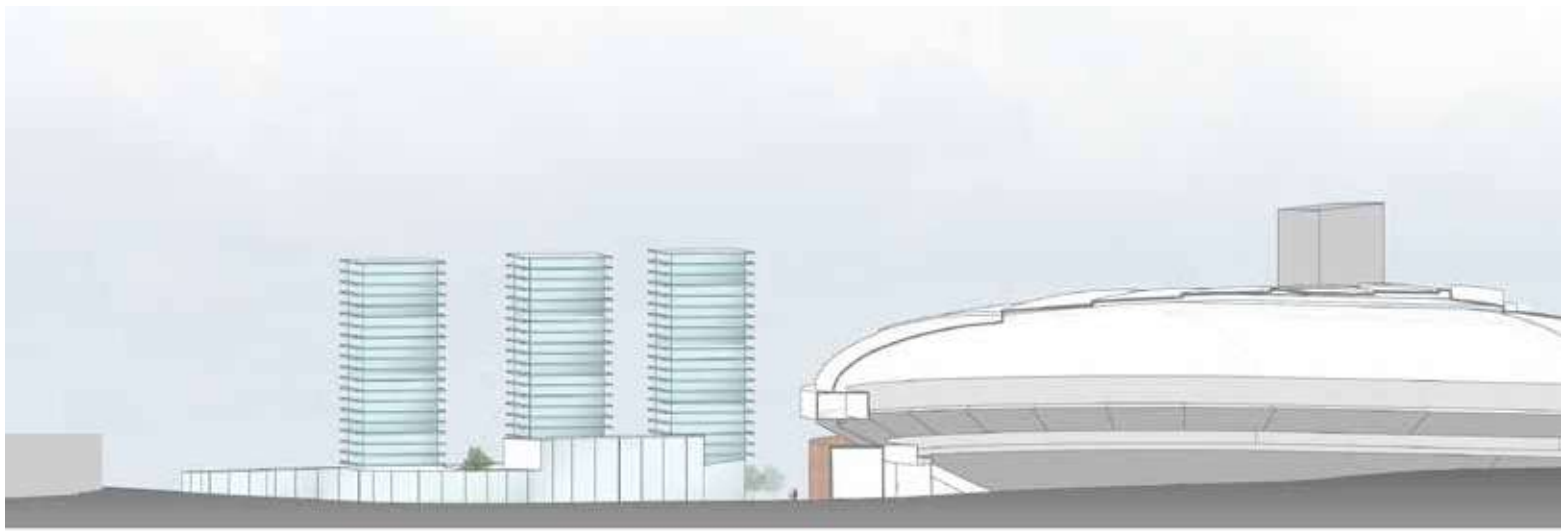
MASTERPLAN





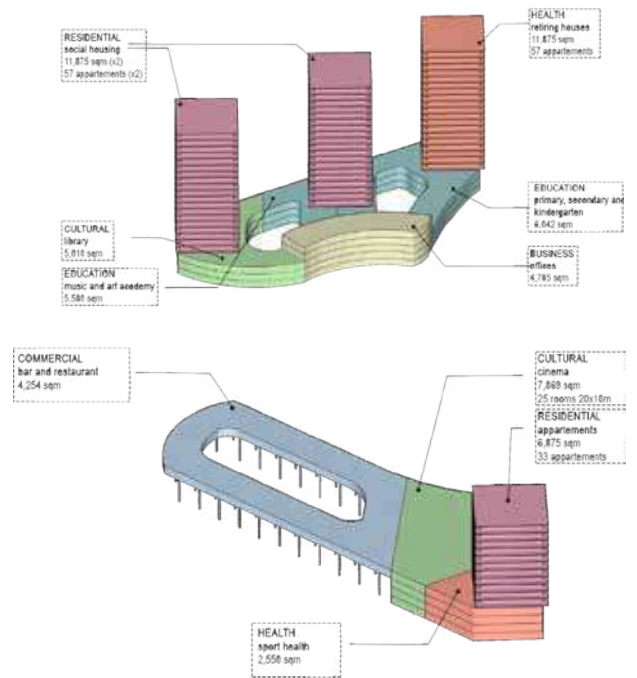
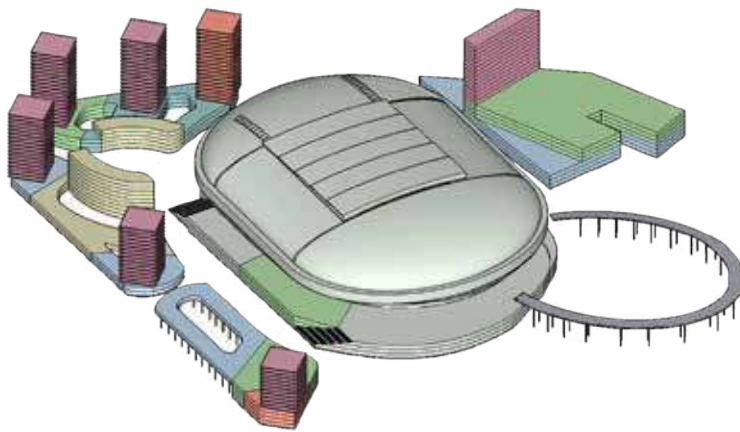


SECTION A-A'

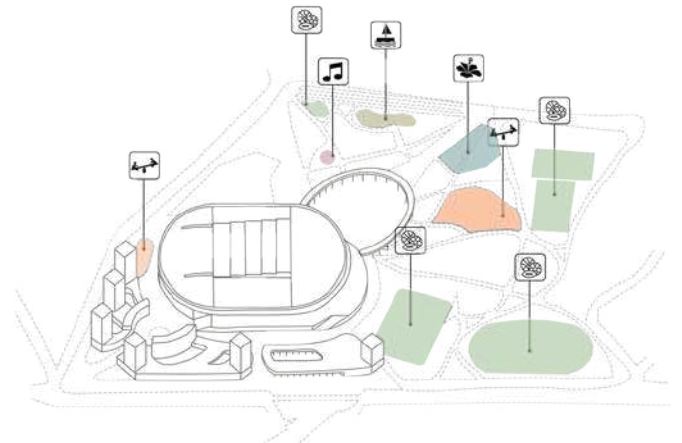
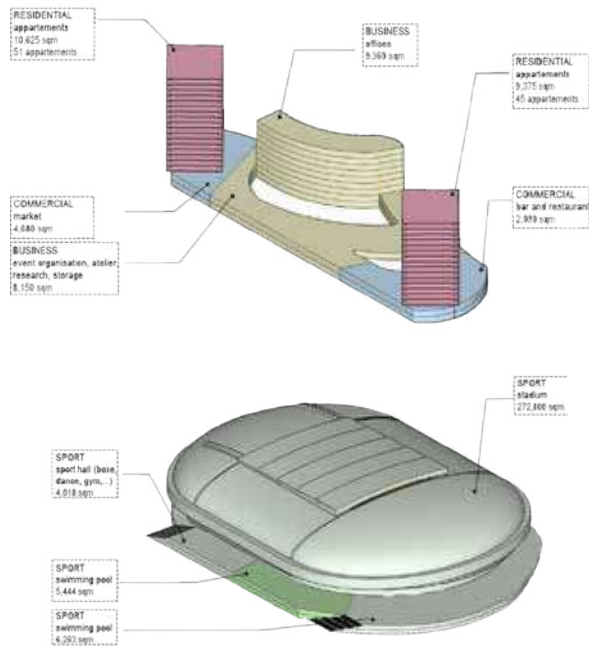
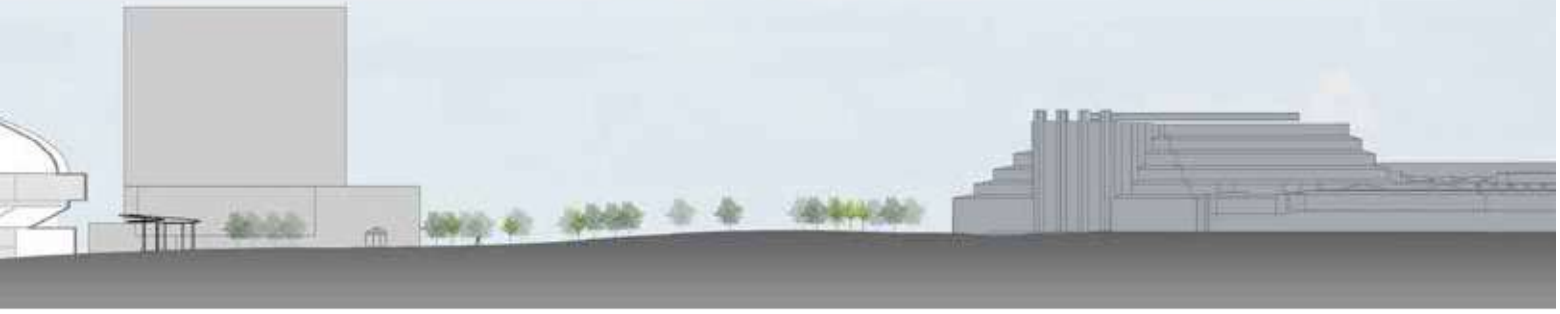


SECTION B-B'

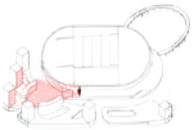
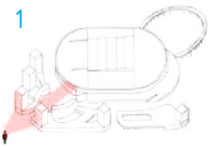
PROGRAM

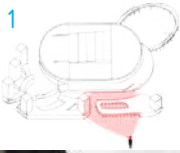


| | | | |
|---|---|--|---|
| RESIDENTIAL 108,000 sqm Apartments 64,800 sqm Social Housing 43,200 sqm | SPORT 283,081 sqm Stadium 272,800 sqm Swimming Pool 6,283 sqm Sport Hall 4,018 sqm | CULTURAL 18,323 sqm Cinema 7,889 sqm Library 5,010 sqm Museum of the stadium 5,444 sqm | HEALTHCARE 4,425 sqm Retiring house 1,875 sqm Sport health 2,550 sqm |
| BUSINESS 15,185 sqm Offices 7,035 sqm Coworking space 4,000 sqm Events organization 2,150 sqm Research 2,000 sqm | COMMERCIAL 21,500 sqm Local shops 1,000 sqm Market 10,000 sqm Bars & Restaurants 10,500 sqm | EDUCATIONAL 6,042 sqm High Schools 3,722 sqm Multipurpose room 820 sqm Workshop 1500 sqm | FAR 1,4 with sport park FAR 2 without sport park |



1





NEXUS

TEAM:

THOMAS DEWULF — MAHTA HEYDARI — JULINA SPINOY — SRIYAM THUM- MATRON — JULIA TORRES
— SIMON VAN OSS

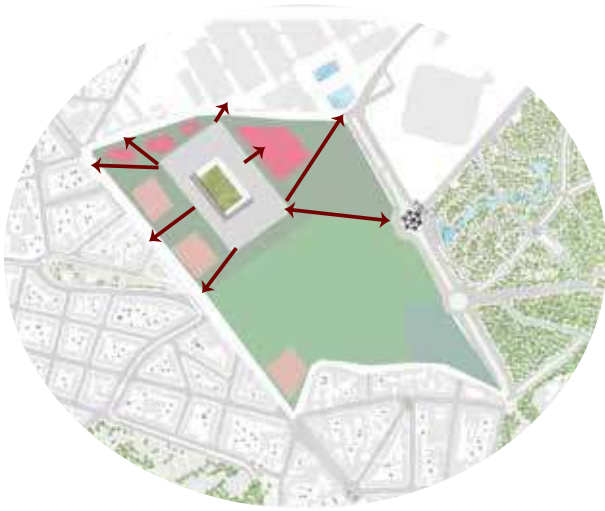


Analysis, Spatial Concept

Green East - West connection



Renovated stadium determines the spatial structure

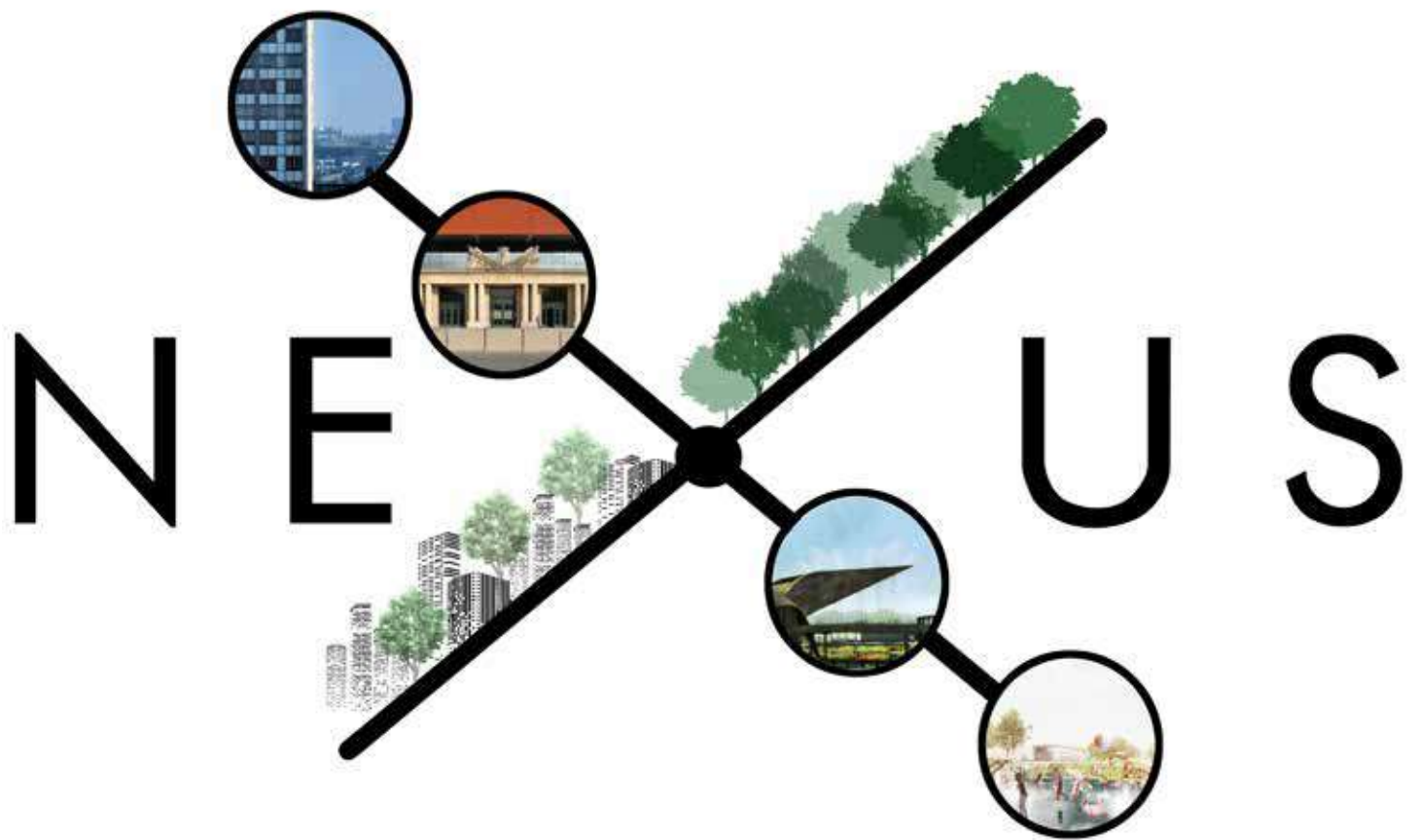


Pedestrian / bike oriented

- Public Space
- Sportspark
- High density building
- Building block
- Bike Highways



NEXUS

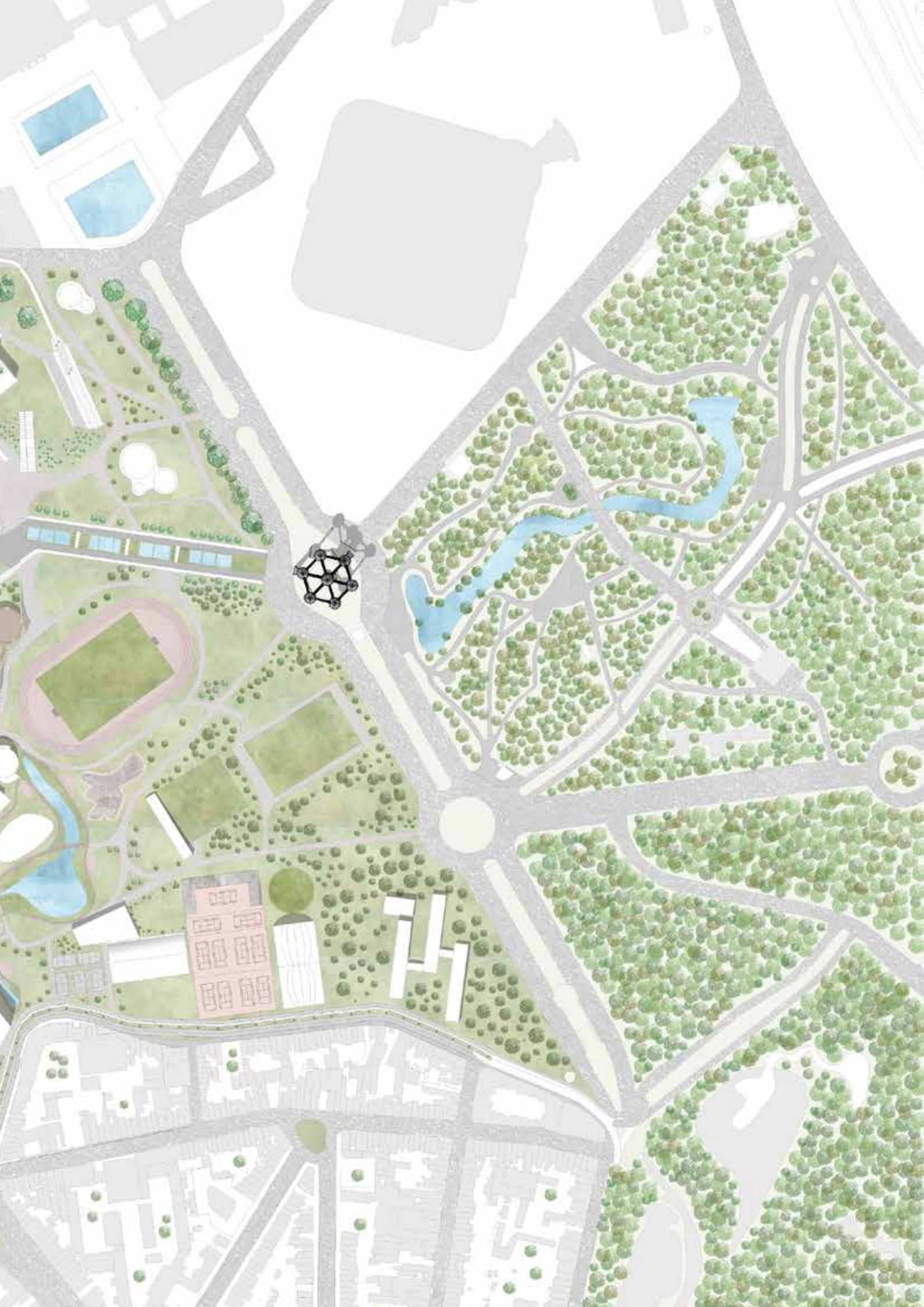


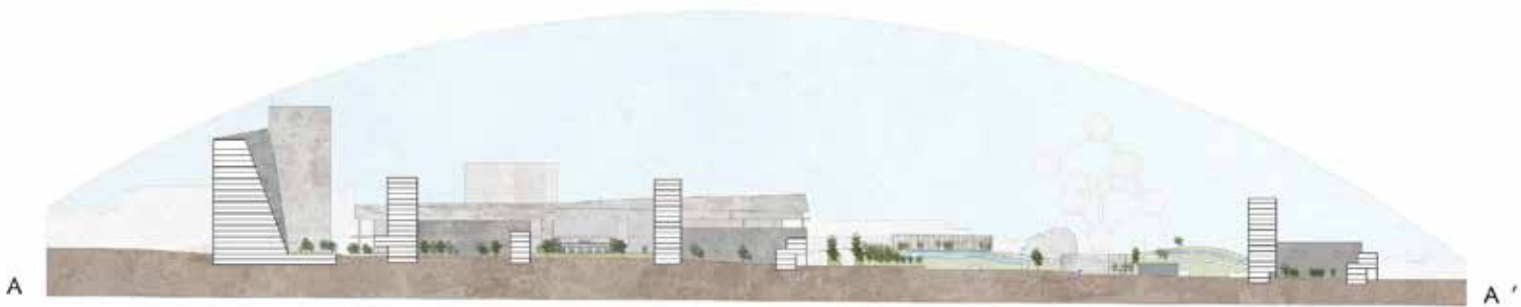
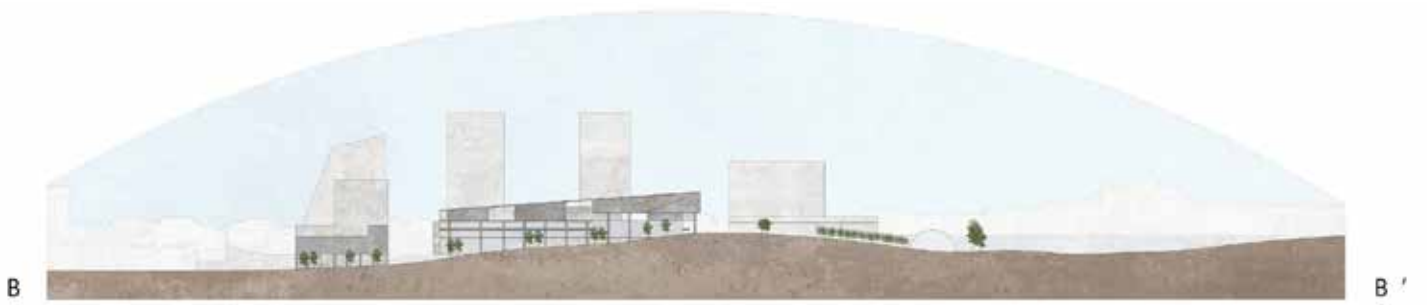
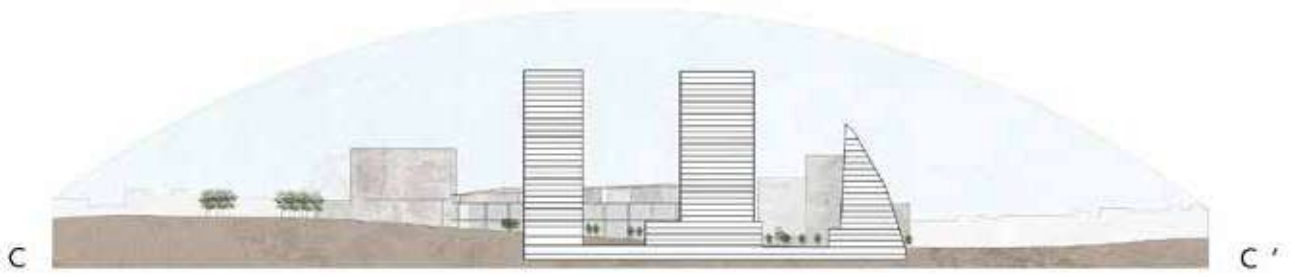
Our main vision for the regeneration of the site was to transform the stadium from a barrier, quite literally with the gated area around the stadium, to a connection point or guide, which connects the housing neighborhood on the west with the Atomium and the Park van Laeken. This connection we call our green promenade.

On this west side we find already this kind of beginning of a green boulevard with a small park in the middle in the 19th century urban structure. This is for us the perfect location to extend this green network onto our site to connect the housing with the green of the park.

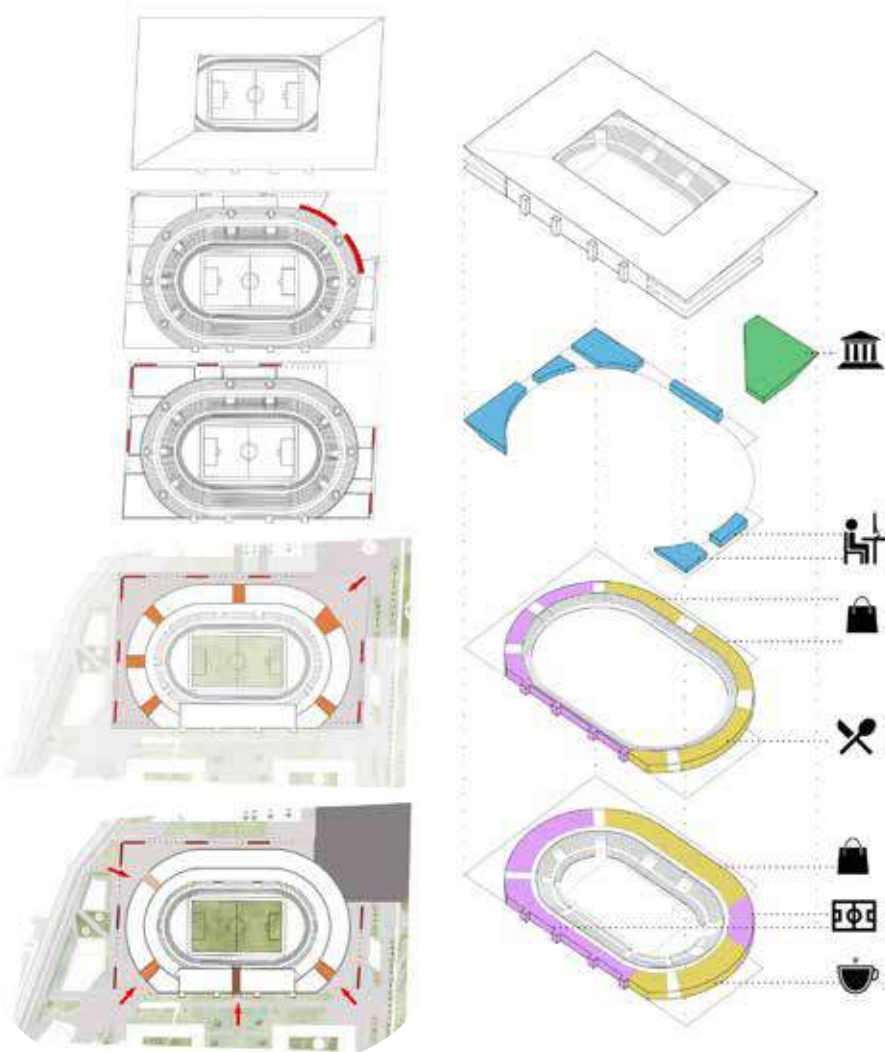
We suggest renovating the stadium by keeping the monumental façade, and the brick wall from 1985, but to add an external belt as done in 1995. This external belt will hold the ticket entrances so the large gated area around the stadium won't be needed. The stadium is turned into a new center point by adding other programs to the belt such as shops, restaurants, cafés, offices and a sports museum which will be accessible by an external balcony.



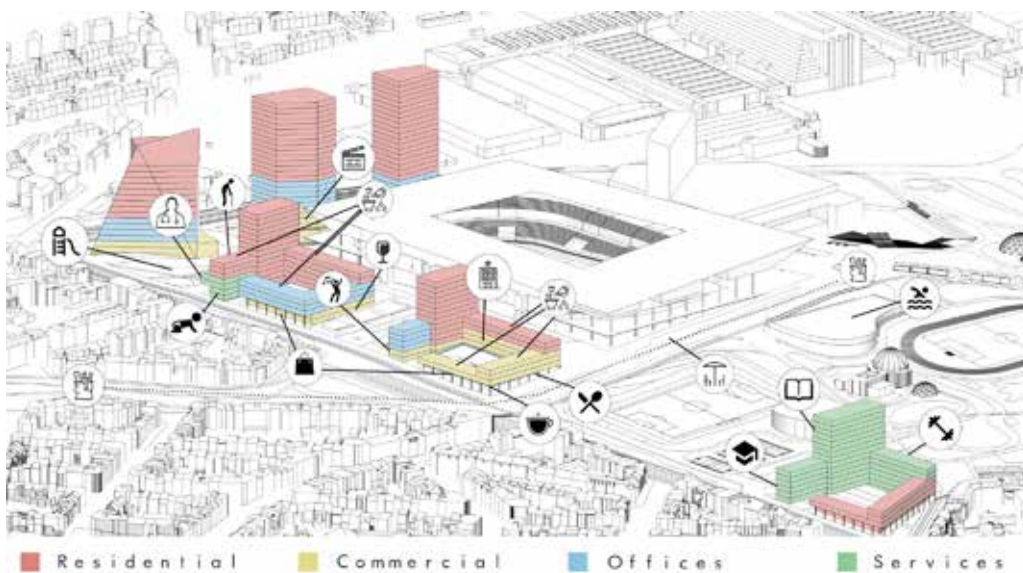




Program



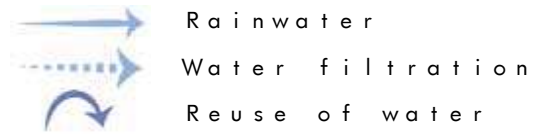
- Stadium functions
- Museum
- Offices
- Horeca & Shops



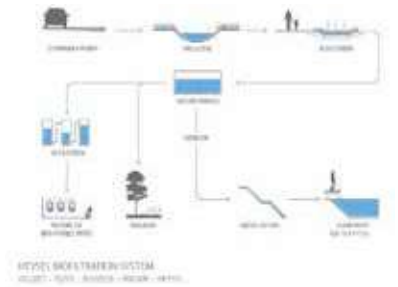


Sustainability Strategies

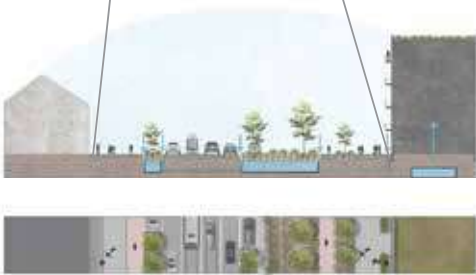
Blue and Green network



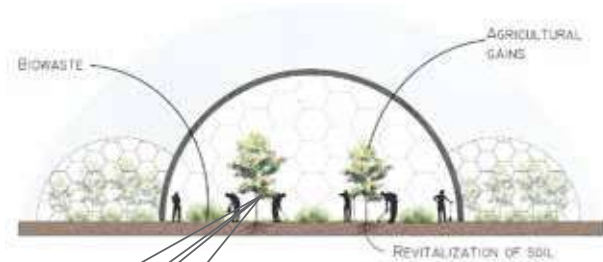
Water filtration



Boulevard Section



Green houses



Solar / Green roof



Solar Panels for the daily-use functions

The green roofs are private or semi-private

The green houses represent expositional agriculture to revitalize the polluted soil



SUSTAINABLE URBAN DESIGN STUDIO, MA-1
BRUFACE - ULB + VUB - 2019/2020