Reactivate Industrial Heritage

Additional drawings

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Sarajevo
Development country

Ottoman empire 1830

Hapsburg empire 1908

Kingdom Yugoslavia 1929

Part of Croatia 1941

Federation Yugoslavia 1946

Federation Bosnia Herzegovina 1996
Historic timeline of Bosnia and Herzegovina (BiH)

- 223 B.C.: Roman invasion of Illyria
- 500 A.C.: Slavic people arrive on Balkans
- 650: Change Tribal system to feudal system
- Ca. 1318: Bosnia independent by Kotromanic dynasty
- 1463: Bosnia part of the Ottoman Empire
- 1878: Most areas of Bosnia part of the Hapsburg empire
- 1908: Whole Bosnia under control of the Hapsburg empire
- 1918: Kingdom of Serbia, Croatia, and Slovenia
- 1929: Kingdom of Yugoslavia
- 1941: Part of German occupied Croatia
- 1946: Part of Federation and Socialistic republic of Yugoslavia
- 1992: Declaration of independence as the Republic of Bosnia and Herzegovina
- 1995: Peace Treaty Dayton
- 1996: Bosnia Herzegovina splits in Federation Bosnia Herzegovina and Republic Srpska

Schematic timeline of South-East Europe

- Pre-history / Classical antiquity / Romans
- Byzantine Empire
- Ottoman Empire
- Habsburg empire
- Yugoslav war
- Bosnia Herzegovina

Schematic timeline of Western Europe

- Early Middle-ages: Feudalism and Christianity
- High Middle-ages: Divided Church / Holy Wars
- Late Middle-ages: Faminities and plagues
- Early Modern Europe: Renaissance/Discovery / Reformation / Crisis / Enlightenment
- Wars: Cold wars
- Collapse of ECCP / independent countries
Bosnia and Herzegovina

- **macro**
  - Sarajevo
- **meso**
  - Novi Grad industrial zone
- **micro**
  - City of Sarajevo

**Characteristics**

#### Political map

- Federation of Bosnia and Herzegovina
- Republic of Srpska

**Cantons of Federation of BiH**

1. Una-Sana
2. Posavina
3. Tuzla
4. Zenica-Doboj
5. Bosnian Podrinje
6. Central Bosnia
7. Herzegovina-Neretva
8. West Herzegovina
9. Sarajevo
10. Canton 10

**Ethnic majorities**

- **Serbs**
  - over 66%
  - 50-65%
  - under 50%

- **Croatians**
  - over 66%
  - 50-65%

- **Bosnians**
  - over 66%
  - 50-65%

- **City of Sarajevo**
CONCLUSION MAPPING

Mountain

Pressure from neighbourhoods

Bus

Disconnection

Mountain

Pressure renewal and highrise

Undefined green

No connection with the river

Own illustration
1 Activate bottom-up planning
2 Discover and meet the local needs and ideas
3 Strengthen networks and communications
4 Reclaim nature and landscape

5 Re-invest in the existing building stock
6 Boost diversity in all levels
7 Set the ground for a civic economy
8 Use technology to accommodate visions

Strategy
The square in the middle of the industrial heritage should be opened up and the buildings should work together to make a stronger concept. The primary goal is to serve the residents from Buca Potoc and Al Pasino/Mojmilo. It is important to fulfill their needs.

The terrain could be the replenishment for the surrounding neighbourhoods' shortcomings. That is public space, which is lacking over there, especially in Buca Potoc. Also the river can be used for that purpose.

1. Activate bottom-up planning

2. Discover and meet the local needs and ideas

3. Strengthen networks and communications

4. Reclaim nature and landscape

At the moment, the network is east west orientated. It is important that there is also a north south connection in a sense of people flows, but also traffic. A new transport line can also help Buca Potoc out of its isolated position in relation with the city.

In the area is already green. The problem is that it is undefined and not recognised. The solution is to open up the green and connect it with each other to improve the quality of the existing nature. Given that, there is a lot of nature, it is only hidden at the moment or underdeveloped.
In the area are many standard warehouses and sheds. However, there is also heritage with special value. These buildings/complexes could be re-used. Some structures could be part of a Park and many recent buildings along the main road function well at the moment.

With a mix in program, there will also be a mixture of target groups. The diversity will be great. There should be place for the ‘development industry’. Small work spaces, but also functions focused on the public. In general diversity leads to innovation, creativity and an improved image.

The development industry is part of the thought of the conception ‘educate, develop and produce’. The development industry can be placed in this area of the city and their innovations could be exhibited to the public to stimulate it even more.

6. Re-invest in existing building stock

7. Boost diversity in all levels

7. Set the ground for a civic economy

As stated, there will be room reserved for the development industry. With flexible spaces and low rents, innovation will grow and there is space for starters to expand and develop their ideas and set ground for a civic economy.

8. Use technology to accommodate visions

The development industry is part of the thought of the conception ‘educate, develop and produce’. The development industry can be placed in this area of the city and their innovations could be exhibited to the public to stimulate it even more.
Steel factory
Existing
Steel factory: Office

Existing

Scaled from 1:500
Steel factory: sheds

Existing

Scaled from 1:500
Steel factory: Energy building

Scaled from 1:500

Existing
Steel factory: Sections

Existing

Scaled from 1:500
Steel factory: Sections

Existing

Scaled from 1:500
Steel factory: Functions

Existing
Steel factory: Elevations

Existing

Scaled from 1:500
Steel factory: 3D’s

Existing
Small warehouse

Existing

Scaled from 1:500
**Small Warehouse**

**Existing**
Step D.D.

Existing

Scaled from 1:500
Step D.D.

Existing

Scaled from 1:500
WAREHOUSE

Existing

Scaled from 1:500
WAREHOUSE
Existing

Scaled from 1:500
TERRAIN PLAN
Evolution Building Plan
Evolution building plan

- Lobby and restaurant
- Conference halls
- Meeting rooms
- Public spaces
- Back stage
Evolution Building Plan
Evolution building plan

Facade harder towards the industrial side and more gentle towards the ‘rural’ side.
Evolution Building Plan

- New volumes
- Open up building
- Demolish ‘bad’ parts
- Concept of ‘adding’ value
- Corridor broadened
- Using existing structure and grid
CONSTRUCTION CONCEPT
Green roof/ Solar energy

In de warme zomerzon presteren zonnepanelen lang niet optimaal. We laten energie op het dak liggen. Door verkoeling van een groen sedumdak gaat het rendement tot 25% omhoog.

**Temperature range:**
- **Buiten:** > 30°C
- **Binnen:** > 25°C en < 30°C
- **Zonnepanelen:** Zonnestraal 35°C
- **Substrate:** Sedumplanting, rootzone, drainage, waterproofing

**Yearly sum of solar electricity generated by 1kWp system with performance ratio 0.75:**

<table>
<thead>
<tr>
<th>Location</th>
<th>Yearly Sum [kWh/kWpeak]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maastricht</td>
<td>&lt;1300</td>
</tr>
<tr>
<td>Nijmegen</td>
<td>1300 - 1400</td>
</tr>
<tr>
<td>Arnhem</td>
<td>&gt;1400</td>
</tr>
<tr>
<td>Eindhoven</td>
<td>1400 - 1500</td>
</tr>
<tr>
<td>'s-Hertogenbosch</td>
<td>1500 - 1600</td>
</tr>
<tr>
<td>Rotterdam</td>
<td>1600 - 1700</td>
</tr>
<tr>
<td>Den Haag</td>
<td>1700 - 1800</td>
</tr>
<tr>
<td>Amsterdam</td>
<td>&gt;1800</td>
</tr>
<tr>
<td>Utrecht</td>
<td>1800 - 1900</td>
</tr>
<tr>
<td>Tilburg</td>
<td>1900 - 2000</td>
</tr>
<tr>
<td>Leeuwarden</td>
<td>&gt;2000</td>
</tr>
</tbody>
</table>

**Map of the region:**
- **Green area:** Yearly sum of solar electricity generated by 1kWp system with performance ratio 0.75 [kWh/kWpeak]
- **Red area:** Yearly sum of solar electricity generated by 1kWp system with performance ratio 0.75 [kWh/kWpeak]

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44-60
Ventilation system

Conventional method
Directed air flows

BaOpt method
Undirected air flows
Geothermal Energy

EUROPEAN GEOTHERMAL RESOURCES
Working document based on data
integrated on 01/09/2000

(Shell International)
Flexibility

Entrances from two sides

Removable objects

Combining spaces
3D sections
Impression Sporthall
Impression Sporthall
Roof Details

Scaled from 1:5

- Roof profile frame
- Substrate layer
- Drainage layer
- Root resistant layer
- Insulation layer mineral wool
- Profiled steel plate
- Sheep wool panel
- Gutter
- Steel water resistant profile
- Hinge construction old and new
- Steel curtain wall element
- Insulating glazing HR++
- Sealing belt
- Existing steel profile tube
- Adjusted sandwich panel
- Raw steel finishing
- Insulation sheep wool panel
- Curtain wall element
- Water resistant steel frame
- Roof frame with sheep wool ins
- Steel cover with coating
- Added insulation mineral wool
- Water resistant layer
Floor details + Horizontal detail

- Concrete floor 150 mm
- Planis layer 30 mm
- Insulation for floor heating
- System panel for floor heating
- Top floor with integrated floor heating
- Thin top floor stones 10 mm
- Insulating glazing HR++
- Glass door frame panel
- Insulation mineral wool
- Plans layer
- Existing concrete floor
- Insulation layer against thermal bridge
- Insulating mineral wool 140 mm
- Concrete floor 150 mm
- Existing floor with added insulation and floor heating
- Frame with blind connection
- Sound insulation panels
- Multiplex plate
- Raw steel finishing
- Frame, glass door with integrated floor heating
- Insulating mineral wool
- Plans layer
- Existing floor with added insulation and floor heating
- Intermountain for moisture
- Guard board
- Steel curtain wall element
- Gutter for curtain wall protection
- Sandwich panel element

Scaled from 1:5
Floor details + horizontal detail

3a horizontaal

3b verticaal

3 verdekte of niet-zichtbare (blinde) bevestiging

New wall system