"Eventscape: New possibility of developing urban brownfield in central Duisburg to achieve its cultural identity"

Landscape Architecture Graduation Studio:
"Flowscapes: Infrastructure as Landscape/ Landscape as Infrastructure

P4 Report
19.05.2015

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A number of industry cities in the world have been under through changes for years towards new directions of development in order to fit themselves in the so-called post-industrial age. Surely each of them will face different problems on their way of re-developing, two common issues appears, inevitably, for most of these post-industrial cities: abandoned industry land and new identity of city. These two issues represents the common condition of these post-industrial cities -- spatially, unfriendly building environment, patched urban fabric and lack of systematic public spaces, and, socially, uneven development of different neighborhood, poor quality of social life and lack of effective communication and interaction -- that is urgent to be changed or improved.

In Europe, especially, the necessity of changing such urgent condition is realized by more and more people. Finite area of land has stimulated compact urban fabric of majority of cities where good quality of social life is guaranteed by effective system of public spaces including building, street, plaza and green spaces. Compared to this traditional urban structure, spatial composition of industry cities is greatly defined by the needs of production and distribution that always appears as constellation of industries and network of transport infrastructure, and that somehow tears apart the entity of city and sequence of public spaces which are always crucial to the quality of social life. The whole area of Ruhr in Germany, as one of the largest industrial corridor throughout the world, has been striving for new direction of re-development just as other similar areas. However, what makes this area unique is the ongoing tendency of development that is not covered by individual plan but by collective cooperation of the whole area. Derived from the idea of combining all waterfront areas of the Ruhr into a huge regional natural corridor containing hundreds of public spaces for different cities, the master strategy of IBA Emscher Park is raised as a positive force to initiate the change of the area. The proposal is expected to draw a new image for this most important

**INTRODUCTION**

Emscher Park: Master Plan
industry corridor in Europe, thus improving the quality of both spatial and social structure.

Among several important cities in Ruhr, Duisburg is chosen as the site of the graduation project in this report. The project proposes a potential way of combining urban brownfield with social activities into a green event park near city center of Duisburg in order to ameliorate scattered, poor connected public spaces and improve the quality of public life of Duisburg citizens. It is expected not only to help Duisburg to fulfill its aim of covering itself with a new identity of cultural city, but also to provide a new possible approach of re-developing brownfield near central urban area. Following the general theme of Landscape Architecture graduation studio, the “flowscape” is defined as the flow of people in different scenarios happening in this new event park. The relationship between nature and human system is, therefore, expected to build through the complexity of social and daily activities.
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There is no doubt that Duisburg enjoyed its booming time in the industrial era. What is brought to this city from that time could be perceived not only in economic statistics, but also in its social structure that had been deeply influenced by the system of industry. Out of this system emerges individual factories taking over large area of the city, transport infrastructure connecting factories into a network, and numerous people migrating to this area from all other places. These elements, including buildings, infrastructure and people, worked complementarily within the same social structure, leaving aside all differentiation with nationality, language and cultural background.

We could define such Duisburg as a complete, unique social structure, where people with different cultural backgrounds were connected and led by a common faith named industry, working hard in crowded factories, relaxing at lively harbor, and sleeping in the quiet inner city. However, this city has been facing a changing phase after the decline of big industry.

The population figure has continuously dropped from 542,000 to roughly 500,000 in 2007, and is predicted with a further decline to about 482,000 up to 2020. Social structure of the city is not only influenced by population decline but also by the increasing social segregation as a result of industry decline, migration of workers, and, inevitably, geographic division by highway, railways and rivers.

Intention of benefiting industrial and economic needs has led to a special urban structure for industrial cities. Coal mining companies developed housing around the pits. Public infrastructure then followed the mines and steel works -- it served industries first, before other demands were met. This has resulted in the unattractive urban fabric for most of post-industrial cities, including Duisburg. After the big withdrawal of industry, many
former industrial spots have become vacant land and buildings standing as blank area within urban fabric of Duisburg. These vacant lands are defined with different typologies, scattered throughout the whole city.

Surely the inspiring urban and social structure of industrial age is gone, but those elements -- factories, infrastructure network and people with different nationalities -- still remain. Factories turn into vacant areas; transport network functions as normal elements carrying flowing traffic; multi-culture characteristics of people just remains in those signs of shops and restaurants. Previous social area has now become blank space outside existing social structure. In a way that these elements still exists -- separately -- but the original social connection for them has already gone, is there possible to re-built such connection with a new system which could improve the condition of each elements and link them together not only spatially but also socially? Based on the fact that different plans aiming at integrating social structure have already been put on the table, such as ‘Socially Integrative City’ program and “European Culture Capital”, opportunities are already there to be taken. In this project, such possibility is practiced as an experiment from landscape perspective, trying to re-use those blank spaces and integrate them into a socio-spatial system.
Starting point: Love Parade

On 24 July 2010, a stampede at the Love Parade Music Festival happening in an abandoned industrial railway station just near the city center of Duisburg led to an astonishing tragedy of 21 people dead and at least 500 others injured.

As one of the most important industrial cities of Germany during industry era, the city of Duisburg has been seeking for a new direction of its own development in post-industrial age. A greatly potential future is possible through building its new identity of a cultural city -- and this is exactly the reason why big cultural event is crucial to attract interests from outside. In the year of 2010, Ruhr area was designated as the place to hold the European Cultural Capital celebration, and Duisburg was among five important cities of Ruhr. Love Parade Festival, as one of the most influential big cultural festival in Europe, was held in Duisburg to support the European Cultural Capital Ruhr 2010.

Sadly, such a good intention ended into an astonishing tragedy. It raised in front us urgent conditions:

1. Spatially, abandoned industrial land in post-industrial city -- especially the ones in or near central urban area -- needs a proper way to re-develop and re-use in order to fill up patched urban fabric and bring back positive urban spaces for citizens.

2. Socially, urban cultural events for citizens call for a better organized system in order to achieve positive interaction.

Can this possible connection between events and vacant land create a new value for those potential urban brownfield? And, can a effective and flexible public space be born out of such connection to attract, hold and trigger colorful public activities in post-industrial city in order to build itself a new cultural identity?
Pre-research

Growth of Duisburg city had followed the development of industry for quite a long time. After the withdraw of industry, large amount of area of former industrial land -- railway land, waterfront, mining site, quarries, etc. -- gradually became brownfield outside urban structure. Some of these brownfield have been re-developed into commercial area or post-industrial landscape for public use. These developments area mainly located near inner city of Duisburg, holding most diverse urban events in different scales. This central area, therefore, has great potential to become the central district in Duisburg to build the its new cultural identity.
Pre-research

However, it is exactly in this potential center that the extremely large events Love Parade in a large urban brownfield ended into a tragedy. Looking backwards from now, the fact that such a large event happened in an abandoned industrial land instead of other developed urban public space in Duisburg has released a crucial truth that this city is lack of a proper public space to hold large social activities. Even those existing urban event spaces, if taking a further look at them, are scattered in different places without an effective interaction. Surely such embarrassing condition is not resulted from single reason, but the social division led by those hard borders -- brownfield and transport infrastructure -- is no doubt a dominant factor.
A number of brownfield in Duisburg have been developed into positive urban public spaces, but the ones just near city center still remain untouched. There are, in total, three similar brownfield in this central area, located near each other along the existing railway. They are located in crucial urban territory, while being hard borders for many years, increasing social division of separated neighborhoods and blocking interaction among scattered existing public spaces. They are, in this sense, greatly urgent to be analyzed and developed. Potential relationship between social activities and brownfield is raised as a hypothetical proposal of developing vacant industrial land near Duisburg central area, which will be proved and realized in further research and design phases.
Project Aim: “Eventscape” near Duisburg center, developing existing brownfield into series of green open spaces that hold and trigger different social activities including urban events and daily activities.

Research Question: How to re-develop brownfield in Duisburg central area in order to fill urban fabric and connect surrounding neighborhood and public spaces?

How to regain the public feature of brownfield to strengthen social interaction and improve public life quality in order to help Duisburg achieve its plan of "the European capital of culture" as its new identity?
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Urban Brownfield

There are in total four kind of brownfield in Duisburg: mining site, waterfront site, railway land site, and quarry site. Half of these four kind of brownfield have already been developed into new intervention, such as Innerhafen commercial area from waterfront and Landschaftspark Duisburg-Nord from mining site. The three potential brownfield near city center area, however, remain untouched for many years. They exist as blank area outside urban fabric, confronting ongoing growth of Duisburg.
Three positions

These three untouched potential brownfields near city center are covered with three valuable positions that are defined by three urban systems -- spatial, social and ecological.

Each position will be analyzed separately afterwards in order to provide more information, thus drawing a rational conclusion for design phase.
Public spaces in Duisburg are scattered. In central area, important spaces are located from inner harbor at north to outskirt forest at south. These urban public spaces function in their own within the whole city system, with distinct spatial characteristics. However, sequence of these public spaces are not continuous. Those three urban brownfield exist as obstacle in between, but are exactly in this sense greatly potential to realize such a crucial connection in order to complete the system of public spaces for Duisburg central area.
Existing green spaces in Duisburg are mainly located outside inner city, which leads to a poor environmental quality of many places. Efforts have been taken to bring back friendly waterfront spaces for city, but the ecological circuit is not yet complete. The crucial connection are valuable not only in terms of sequence of public spaces, but also in terms of a positive green public corridor between city and ourskrit forest, thus finishing an ecological strip containing water, forest and urban green spaces.
Colorful social activities are located in different public spaces in Duisburg, among which three areas are perceived as current event spaces. City center, compared to other two event spaces, are predominant spot in terms of the quantity of events and the number of participants.
City center, as an important public space, contains different social activities within its fixed spatial typology. These typologies normally includes buildings and open spaces in between such as streets and squares. Some special spaces such as waterfront also appears in inner harbor and waterfront park.
Event Space Typology:

WATERFRONT

Inner Harbor -- new commercial heart

Commercial

Temporary event space

Residential

Section A-A'

Square
Urban green space
Pedestrian street
Event Space Typology:

STREET & SQUARE

City Center -- commercial pedestrian street

Section B-B'

Commercial

Temporary event space

Commercial

Theater

Square

Urban green space

Pedestrian street
Event Space Typology:

URBAN PLAZA

City Center -- public square

Section C-C'

Temporary event space

Square
Urban green space
Pedestrian street
These public space for daily use are become temporary event space, locate in commercial area or residential area. Events always confront with daily activities. Although these spaces are suitable for highly open event, but they can't be easily blocked as territory for events with target people or mega events with specific spatial need.

Programs for large urban events are complex, and they often need enough spaces to organize. Those existing major public spaces analyzed above, if compared to the complex system of large event shown on this page, are not capable to hold social activities on large scale.

Reference - event system:
“An event is an occurrence at a given place and time; a special set of circumstances; a noteworthy occurrence.”

-- Donald Getz (2007)

New event container with diverse event spaces in Duisburg center area.

First Conclusion

Three urban brownfield near Duisburg city center take the crucial position in terms of spatial, ecological and, especially, social value. Weakness of existing public space as flexible event place restrains the potential of Duisburg to become a cultural city. Therefore, first conclusion is drawn from these analysis, proposing a new event cluster on those three urban brownfield. Such a new event space will be able to hold more typologies of events in different scales and with different organizations. Together with the needs of spatial connection and ecological strip, new event center on those brownfield will be defined as an event park for citizens.

Figure 1: Event typology in terms of structure and scale

Figure 2: Event typology in terms of structure and scale

Highway/ Railway form hard bordor

Tunnel and bridge -- the only connection over the bordor
Inner city and outskirt nature -- further than physical distance

Lack of main cultural route/corridor

Spatial Analysis -- 2nd level

Hard bardors cut city into several parts. The connection cross these bordors are merely tunnel or bridge. Brownfield on those bordors strengthens such block effect, segregating urban and outskirt nature much further than physical distance.
Spatial Analysis -- 2nd level

Connection between main public space is also weak by these bordor, even thought train line provide basic public connection. The pedestrain and cyclery route in Duisburg center are still not well-developed and they can't provide visitors or local citizen friendly experience. It is hard to define Duisburg as European capital of culture from such current condition.
West and East neighbourhood with different living quality -- uneven development.

Social Analysis -- 2nd level

Block effect from hard borders has led the uneven developments between west and east neighborhood near city center. Insufficient interaction between citizens is not only obvious in their living places, but also reflected by the journey from home to working places for a lot of people.

Eastern citizen need to cross dark unfriendly tunnel to working place.
In community building, the third place (or third space) is the social surroundings separate from the two usual social environments of home (“first place”) and the workplace (“second place”). Examples of third places would be environments such as cafes, clubs or parks.

Oldenburg suggests the following hallmarks of a true “third place”:

1. Free or inexpensive
2. Food and drink, while not essential, are important
3. Highly accessible: proximate for many (walking distance)
4. Involve regulars – those who habitually congregate there
5. Welcoming and comfortable
6. Both new friends and old should be found there.

Reference - third place:
Ecological Analysis -- 2nd level

First urban brownfield: elevated urban island. As former freight station of Duisburg, this site has received not only industrial goods, but also different seeds and plants from all over continent. This special history has led the amazing variety of plants growing on this site -- inside the freight building and outside on abandoned railway land. Plants settling in roadbed become tall trees in the years, and birds nest here. Railway tracks of freight station were demolished, and mixed heraceeous are gradually covering this large abandoned field.
**Ecological Analysis -- 2nd level**

Second brownfield, as quarry site even for now, is relatively lack of ecological appearance due to ongoing interuption by human. However, its location in between two large green area -- ceremany and sport park -- and two lines of railway makes it a potential inclosed urban forest. At the edge of this gravel plant, mixed plants already recaptured again. Abandoned machines are rusted by natural forces.
Ecological Analysis -- 2nd level

Third brownfield has kept most of its former industrial elements including buildings and railway tracks. Part of railway tracks have not been used for over 30 years, and young forest is taking place with low disturbance by human beings. Its location near outskirt forest has a strong natural influence on itself in terms of large amount of green growing there. Such characteristic lies a perfect foundation for its re-development into free-experienced exploring forest park.
Natural Succession

Two-stage Natural Succession

With low human disturbance, the preliminary natural succession are readily happened in these abandoned fields. Some parts even step into the stage of young forest. And a two-stage process is proposed to grow an urban forest in some part of these abandoned fields.

During primary succession, shallow-rooted trees such as pines are planted to break apart existing built surfaces and loosen the soil underneath, before being culled. In the secondary succession, a mature forest along with shrubs as sub-canopy begins to establish a more robust and diverse environment.

Ecological Analysis -- 2nd level

To conclude, these three urban brownfield near city center have all presented natural succession on site, at different stages. Distinct ecological characteristics of these sites in terms of categories of plants and stages of growth have provided the variety of natural appearance.

Reference - natural succession:
http://scenariojournal.com/article/urban-regeneration/
Green public network will be introduced between inner city and outskirt nature, and meanwhile link with scattered urban public space. Urban park built on urban abandoned field will improve social interaction for citizens and become event container for colorful urban events in diverse scales.

Ecological Analysis -- 2nd level

Therefore, new interventions in future on these three urban brownfield will probably form a green public network connecting public urban spaces and, more important, bringing natural elements into unfriendly urban fabric.
As a result of former industry development, Duisburg is covered with a patched urban fabric that is different than traditional European cities. In order to conclude such urban context, a remarkable research work from O.M. Ungers is referred to as a theoretical support of the method of analysis in this project. As stated by Ungers, city is defined not as an entity, but as different layers of complementary places that separately represent the composite of city within the whole complexity. Each of these inferior places defines one function or territory in its own rule, while they work together to realize the upper urban system. In the case of Duisburg, scattered parcels of urban patches divided by those hard borders perceived as river, highway, railway and brownfield have gradually developed, separately, into different functions that hold the notion of city. These urban patches -- inner harbor, historic city center, living neighborhood, sports park, etc -- are covered with different urban programs such as commercial area, recreational area, residential area, industrial area, green area... Although scattered located, these patches present a tendency of a potential system of public spaces that covers the heart area of this city, with only two ingredients missing: a crucial patch of social event and an indispensable strip.
“Rather than being a unified concept, the city is now a structure made up of ‘complementary places.’ The many contrasting areas, areas of recreation, culture, commerce, residence and work, together from a loose urban association. The modern city shaped by technology and cultural demands is made up not of a total jumble, but of a system of mutually complementary, significant places. ... Every part has its own special features, without however being complete and self-contained...is highly developed and therefore combines with other highly developed places to form a complex system, a kind of federation.”

-- Dialecttlic City, O. M. Ungers

Now for Duisburg the future cultural capital, the event space will become space as important as commercial residential and industrial. brownfield become eventpark will provide diverse event space for duisburg. Meanwhile they will dissolve the bordor become the third place for local citizen, strengthen the social connection between west and east neighborhood. The old bordor railway will be serve better for the city, bringing visitors during mega event time. A new road or bridge friendly for walking and cycling will be created in order to link the scattered public spaces, strengthening Duisburg’s new identity of European Capital of Culture.
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**Westerpark, Amsterdam**

In the early to mid 1990’s, the site was vacant and in limbo. Slowly artists and other groups started to use the site for gatherings and studio space, creating an "underground" second life for the site. In late 1990’s, it was decided that the site should be turned into a park with rental event space.

What is valuable in this project is its scenarios in different scales:

- **Scale L** -- Indoor event using existing buildings.
- **Scale XL** -- Large event using both buildings and open spaces.
- **Scale XXL** -- Fully occupied event using whole site.

Both events and daily activities will coexist on the same site with good interaction.
Parc de La Villette

- **Lines** -- Connection throughout the park, providing a strong linear focus. Those linear elements not only connect physical pieces at one hand, but also build the "coherent logic" for people at the other.

- **Points** -- Matrix of Follies defined as abstract construction without meaning, functioning to organize the park and to inspire and trigger different activities. Follies are the result of destructure and restructure of programs. They are located evenly in the whole park, making those programs also evenly distributed.

- **Surface** -- Geometric planes with different materials including natural and artificial characteristic. Conventional landscape elements are removed, turning the "park" into a neutral space allowing for complete programmatic freedom.
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"The transcripts are about a set of disjunctions among use, form, and social values. ... Disjunctions between movements, programs, and spaces inevitably follow as each pursues a distinct logic, while their confrontations produce the most unlikely combinations."

"Only together do they define the architectural space of 'The Park'."

-- Manhattan Transcripts
Bernard Tschumi

Design phase is led by a layering method derived from such theoretical research of “Manhattan Transcript” by Bernard Tschumi. This layer method proposes to destructure complexity of programs and spaces by a special principle into four layers. Each of these layers forms itself by its own rule but is modified by other layers. They together compose the event park with variety of scenarios including social activities in different scales.
Principle of defining those layers derives from three system of park raised by Tschumi. Program as activity, space as space, and movement as people. Each of these three system are developed further into several sub-categories according to its own feature. Therefore, these three catalogue form the basic framework of the layers in this project.
### Defining Layers

Connection between categories will be abstracted and re-structured into certain layer. Convas, as the layer for fully occupied event, also represent the underlay characteristic of the site. Other layers -- patch, strip, and confetti -- will stand above the underlay convas, forming varies spaces for different social uses.

**Site Quality:**
- history,
- existing condition,
- special identity...
Confetti -- Kiosk/ Freezone: Third place
Patch -- Event field: Solid event
Strip -- Circulation/ Event bridge: Fluid event/ Unplanned event
Convas -- Site quality
**General Strategy of Re-development**

- **Green public network**
  - Urban green space
    - Abandoned space
      - City boulevard
    - Abandoned field
      - Abandoned field covered by railway
      - Explored forest (introduce natural succession)
  - Abandoned building
    - Indoor botanical garden
    - Indoor event field
    - Introduce two-stage natural succession
    - Outdoor event field
    - Farm / Garden
    - Outdoor event field
    - Explored forest (introduce natural succession)
General Typologies for Event

Fluid Event
(with a clear direction)

Solid Event
(in territory)

with target people

highly open

with target people

highly open
Layer of canvas exists as underlay condition of event park. Such condition derives from existing natural process on site. Through a method of two-stage natural succession, the whole site will grow into natural green corridor contributing to different parts of the city.

With low human disturbance, the preliminary natural succession already happened in these abandoned fields. Some parts even step into the stage of young forest. And a two-stage process is proposed to grow an urban forest in quarry land (site2). During primary succession, shallow-rooted trees such as pines are planted to break apart existing built surfaces and loosen the soil underneath, before being culled. In the secondary succession, a mature forest along with shrubs as sub-canopy begins to establish a more robust and diverse environment.
Re-use of existing materials

Besides natural elements, materials from existing buildings on site will also be integrated into new intervention in canvas layer. This re-use strategy will also be applied in other layers as an positive attitude towards the history of these brownfield.
Strip will function as basic connection for the whole site. It also extends at certain points to meet city road in order to create more entrance for people and to connect existing urban public space. Components as follows:

1 -- event bridge for three sites, following rail track from history. Focus on medium-speed experience from walking and cycling. It also provides free spaces for unplanned events.
2 -- route in each site, with different features.

Meanwhile, strip will also support fluid events such as marathon and parade. It will become part of the whole route for those events.
Event Bridge: Further Design

Basic form

Variation

Example - bridge
Event Bridge: Further Design

Entrance
Connect with building

Stair public space

Event Bridge: Further Design
Route: Further Design

Place for fluid event: marathon, parade...
Route: Further Design
Patches will support clustered events such as market and exhibition. They are calculated in two scales after analyzing main events in Duisburg.

These patches can hold different activities, and they can also work together to support larger event if necessary.
Circle spatial form of event space in patch layer are result of the research of group behavior by people in different occasions. As shown in these images, circle as a gathering shape or group of people is formed spontaneously no matter in small events such as street art or in mega event such as music festival. This spatial form always makes best use of space, and it will imprint sense of territory in people’s mind. What’s more, the circle form makes it easier for people to join or leave the ongoing event — this feature will fit very well with those open events.

Description of Images:

1. Buskers at Centre Georges Pompidou, Paris France 1990 (photo: duckdog68)

2. Street performance.
   https://www.flickr.com/photos/la_bretagne_a_paris/1006905398/in/photostream/

3. The Glastonbury Festival.

4. Duisburg-nord landscraftpark

5. The Sonisphere 2014 festival's main stage at Knebworth from the air.
   [Picture: National Police Air Service Boreham]
Size of event space on site is defined by the research shown on left chart. Density of 2 people per m² can guarantee safety during event without disturbing effective use of space.

Figure1: Crowd density & crowd flow rate

Figure1 source:
Patch: Further Design

Event field (70,000)

A2 - A2'

Section A2-A2'
Section B1-B1'
Section C1-C1'

Event field (7,000)
Confetti supports daily activities. Following the analysis of third place in research phase, layer of confetti is composed by two spatial elements in mixed networks: kiosk as indoor space and freezone as outdoor space. They will not necessarily defined the only space for daily use but rather exists as facilities scattered in the whole site in order to decorate the park, define friendly space in small scale, serve public uses, and trigger daily activities.

Distribution of these confetti elements follows a mathematical formula: 
\[ X^2 = \frac{(A-a)}{n} \]

- \( X \) represents the size of the square in each network;
- \( A \) is the size of each site;
- \( a \) stands for total area of each elements;
- \( n \) is the number of each element.

Since those three sites are covered by different features and each site contains diverse areas, these daily facilities will correspondingly appear differently according to the spots they stand. In this way, different spatial quality will be given to these elements and diversity of daily activities will be achieved.

Kiosks will cover indoor spaces for daily use. They can also become service points when mega events take place. It appears as two forms: new built space and re-use of existing buildings. In a way that existing buildings are normally bigger than basic area for kiosk, those re-used buildings will be developed into multi-function indoor spaces.

Free zones will provide flexible outdoor third place for citizens. Movable elements will function like furniture in order to give people the sense of “in home”.

Material example

Example
Kiosk: new built.
Patch: Further Design

Kiosk
Event building

Art experiment  Studio  Restaurant  Event building
1. Introduction

2. Problem Statement
   2.1 General Position
   2.2 Starting Point: Love Parade 2010
   2.3 Pre-research
   2.4 Project Aim
   2.5 Research Question

3. Context Analysis
   3.1 Urban Brownfield
   3.2 Three positions
   3.3 Spatial Feature: 1st level
   3.4 Ecological Feature: 1st level
   3.5 Social Feature: 1st level
   3.6 First Conclusion
   3.7 Spatial Analysis: 2nd level
   3.8 Social Analysis: 2nd level
   3.9. Ecological Analysis: 2nd level
   3.10 Research Conclusion

4. Case study

5. Design Elaboration
   5.1 Theoretical Support
   5.2 Defining Layers
   5.3 Master Plan
   5.4 General Strategy
   5.5 Layer: Convas
   5.6 Layer: Strip
   5.7 Layer: Patch
   5.8 Layer: Confetti
   5.9 Section

6. Develop Process

7. Reflection
Event bridge will be firstly built as basic connection between inner city and outskirt nature. In the meanwhile, two-stage natural succession will be introduced on quarry land (site 2). Citizens will witness the change of this whole area on the bridge.
First site will be developed at second stage. Hard borders between inner city neighborhoods will be dissolved and general sequence of urban public spaces in central area will be complete.
Third site will be developed after first site. More indoor and outdoor event spaces will be built. By then, public green corridor is almost finished.
Quarry site will be developed into yong forest when former stages are finished. Whole event park will be complete then to serve the city, with its three features:

Cultural corridor;
Event corridor;
Green corridor.
1. Introduction

2. Problem Statement
   2.1 General Position
   2.2 Starting Point: Love Parade 2010
   2.3 Pre-research
   2.4 Project Aim
   2.5 Research Question

3. Context Analysis
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   5.1 Theoretical Support
   5.2 Defining Layers
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   5.4 General Strategy
   5.5 Layer: Convas
   5.6 Layer: Strip
   5.7 Layer: Patch
   5.8 Layer: Confetti
   5.9 Section

6. Develop Process

7. Reflection
I. Motivation and Relevance

Anumber of industrial cities are striving for new directions for their own development in the post-industrial age nowadays. Two common problems are inevitably there for most of these post-industrial cities: one is how to re-develop the huge amount of area of land remaining from booming industry in history while somehow existing as blank spots within urban fabric at present, and the other is how to achieve a new identity for city -- at least for inner city area -- in order to provide citizens and people from outside a positive image of urban environment. Essence of these two problems is the need of enhancing both the quality of spatial environment of city and the quality of social life of citizens. Such need for a social-spatial development is, generally speaking, an urgent condition for most of these post-industrial cities.

There are various efforts -- in different scales -- trying to solve at least one of the problems stated above. Most of these projects often focus more on a proper re-development of brownfield -- spatially and ecologically -- while less on the urgent condition of social structure of post-industrial cities. Although a number of projects have indeed provided different kind of good public space, the question of how to achieve new identity for these cities through enhancing the social life of citizens is still under discussion. Therefore, spaces are still here for more research and interventions on the theme of re-development of post-industrial cities.

II. Relationship between the theme of the studio and the subject/case study chosen within this framework (location/object).

The general theme of Landscape Architecture graduation studio Flowscapes is to define landscape as a form of infrastructure: "The studio explores infrastructure as a type of landscape and landscape as a type of infrastructure, and is focused on landscape architectonic design of transportation, green, and water infrastructures. These landscape infrastructures are considered armatures for urban and rural development. With movement and flows at the core, these landscape infrastructures facilitate aesthetic, functional, social and ecological relationships between natural and human systems." (Nijhuis, Jauslin, & De Vries, 2013, p. 1)

The studio provides a broad framework around the themes of flow, movement, landscape and infrastructure. Varies potential areas with distinct characteristic and different problems are provided for students to choose according to their own interests. The chosen area for this project is Duisburg in Germany, one of the most struggling post-industrial cities in Ruhr area. Reason for this city as the project site are as follows:

Firstly, as one of the most crucial industrial territory in history with its great geographic advantage as the crossing point of different transport infrastructure, Duisburg is at present correspondingly suffered a lot from the influence of its previous industrial development throughout the whole city. Therefore, this city is greatly valuable in terms of research and design projects focusing on redevelopment of post-industrial cities.

Secondly, a number of efforts are already there in Duisburg to help this city, including the Landschaftspark Duisburg-Nord, Innerhafen redevelopment, and Rhein Park. However, these efforts mainly covered some certain types of vacant industrial land -- waterfront site and mining site, while leaving other main typologies -- railway land site and quarry site -- untouched. It is of great significance to include these untouched brownfield into the big plan in order to draw a new image of the city.

Thirdly, Duisburg has been gradually developed towards a relatively clear direction with a new identity of cultural city. It was one of the most important five cities of the European Capital of Culture RUHR.2010. Sadly, the big music festival held in Duisburg in the same year ended into an astonishing tragedy of 21 people dead and hundreds injured. Such tragedy has raised us a condition that Duisburg is
lack of a proper public space to hold large social events, and such a large public space for different social events is no doubt crucial for Duisburg to achieve its new identity as a cultural city.

Following the statement above, this graduation project proposes to create a large, green public space -- a eventscape -- in Duisburg to help its ambition as a new cultural capital in Germany. Under such proposal, the “flowscape” is defined as the flow of people in different scenarios happening in this new event park. The relationship between nature and human system is, therefore, expected to build through the complexity of social and daily activities.

III. Relationship between research and design

In a way that the project is defined as eventscape on urban brownfield, the research before design phases needs two main directions: one is the research of “event”, including social and daily activities, public spaces, and how people interact in these activities, the other is a complementary research on brownfield and industry in order to provide enough historic and ecological information for further design. To this aim, the urban condition of inner Duisburg is analyzed into a coexisting and cooperating system. The idea of “complementary city” by O. M. Ungers is the theoretical support of such systematic urban analysis.

“The city is now a structure made up of ‘complementary places’ that can be divided in different places, areas, recreation, culture, commerce, residence and work, that together and with a good connections from the city... That every individual part of the city have its own special features, without being complete by themselves, always need the others.” (O. M. Ungers, 1999)

Through such research, inner city of Duisburg is defined as a system of patches due to its scattered urban fabric from former industry time. These system characterizes Duisburg as a series of programmatic patches -- including commercial cluster, heritage cluster, sport cluster, etc. -- connected by infrastructure system, in which the patch of culture, or to say the patch of social events, is missing. Such a culture patch is crucial not only because of its program in its own, but also due to its ability to provide this city a culture corridor that will link most of important existing patches. Further research of urban event and urban brownfield is taken in order to pinpoint the location of such event patch and to find the programs and scales of these programs in such event patch. These pieces of research together provide a big context for the project, thus composing the underlay system for further design of the eventscape.

IV. Relationship between the methodical line of approach of the studio and the method chosen by the student in this framework.

The methodical line of approach of the graduation studio might differs according specific project by each student. In general, students are encouraged to develop their own methodology within the Flowscapes studio and build it following distinct characteristics of their projects. Two courses are provided to help students with their methodical line of approach -- AR3LA020: Research Methodology in Landscape Architecture, and AR3LA030: Design with Ecological Processes. Basic steps that lead the project from starting point, through research and analysis, into finalization of design, follow the general framework of the studio: fascination, problem statement, research question, aim of project, context analysis, diagnosis, case study, design proposal, methods of design, finalization of design, etc. Such ideal order of research and design is sometimes inevitably hard to keep due to certain phase in which design and research always overlap with each other. However, looking backwards from this moment, several breakthroughs within the graduation project still compose a relatively clear logic and methodical line.

Two main methods are applied in this project: anatomy as the way to analyze urban context, and layering as method to lead design. These two methods are separately used for research and design phase, while under a same idea of layering, destructuring and restructuring. Two pieces of academic research are important as theoretical support for these methods -- “complementary city” from O. M. Ungers and “Manhattan Transcripts” from B. Tschumi. These remarkable
works provides broad horizon of regarding city as a spatial and social complexity and entity, which are of great significance for this eventscape project.

V. Relationship between the project and wider social context.

How to re-develop post-industrial cities are a common question throughout the whole world in the general condition at present. In Europe, especially, logic between compact urban fabric and sequence of public spaces are missing in most of post-industrial cities. Such relatively low quality of public space system has led to separation within social structure and lack of social cohesion. What’s more, large amount area of abandoned land left from industry era has brought great difficulty in terms of building a environmental friendly spatial system in larger scale. Recently an ambient proposal of IBA Emscher Park is raised as a valuable plan to re-develop water front brownfield in Ruhr area in Germany into a green network for people (see Figure 1). Such ambition successfully drew a new image for this most important industry corridor in Europe, while somehow will not be realized easily without cooperation at local scale. Therefore, this project would support the big plan of Emscher Park in Ruhr area, as an important part in the whole ambition.

VI. Appendix


Figure 1. Event park in Duisburg as a contribution to the whole master strategy of Emscher Park in Ruhr area.