URBAN SENSE

EXPLORING AND DESIGNING MULTI-SENSORY CITIES

SUMMER SCHOOL 2019
2-15 AUGUST 2019, HIEDANRANTA & CITY CENTRE, TAMPERE FINLAND
IN COLLABORATION WITH
SCHOOL OF ARCHITECTURE, ENVIRONMENTAL POLICY & SPIN UNIT
Urban Sense

Urban Sense - exploring and designing multi-sensory cities aimed to introduce students to a range of analysis tools and methods that help map the complex physical, experiential and social urban environment. Using an exploratory pedagogical process, “super site specific”, the course moved between urban scales and spheres. Through three stages of 1) working with data, 2) with local communities and 3) with a real built intervention on site, we were put face to face with several intriguing challenges that contemporary architects confront.

The attitude of “super site specific” creates rich and multivocal readings of places. These readings may contradict. A reading based on personal experience at site may be different to the reading based on social media activities visualized on a map. With geographical data we can do readings, that reveal unused potentials to local actors. Local actors instead know by heart why a certain spot has remained unbuilt. Our course wanted especially to explore this maze of multivocal readings.

In order to make the readings productive, we paid attention to what kind of questions we can ask from different kinds of data sets. For our readings to be productive we also stepped outside the simulated world of class-room, to be part of real on-going processes on site. The discussions with local actors helped us reframe our questions to become more meaningful for what was going on. Local actors instead could provide explanations to contradictory readings from other data sets.

Readings became productive also in the materiality of the site. Based on them, small intervention ideas were designed and built. The aim of the interventions was to push the development of the site a little bit towards new directions. In other words, these interventions were to be “super site specific” catalysts: rooted in what has been, boosting what will come. These interventions are presented in this booklet.

Course Timeline

- Intro
- Understanding and hacking urban data, from Instagram sourced to national open datasets
- Explorations between the subjective experience on site and different located data sets

FIRST WEEK

- Remote sensing technologies and tools, traditional sauna by lake
- Testing laser-scanning & photogrammetry at site
- Tour at site in Hiedanranta, meeting pioneering communities, picnic at site
- Questions and tools for geodata analysis, tutoring of site analysis
- Interim critics of analysis with local communities
- Ideation of interventions

SECOND WEEK

- Sparring each others intervention ideas
- Deciding materials and tools
- Realization of interventions in 2 days
- Documentation of the projects
- Final critics and sauna with locals at site
SITE HIE DANRANTA

The city of Tampere (230,000 inhabitants) bought a large unused industrial site to become a new western centre supported by a tramline. New development will be dense, including 25,000 new inhabitants and 10,000 jobs. The sustainability goals of the area are high and there are different experiments from dry sanitation to biochar going on. The old industrial buildings and the pioneering communities that have started to take these buildings into use, form the seeds of identity of the place. Reaching from social enterprises to artisans and alternative cultures of all ages, these pioneers seek to grow together with the new development.

LINKS AND SOURCES

DAC project: www.agilecities.fi
URMI project: www.urmi.fi
Urban Education Live project: http://www.urbedu.live
SPIN Unit: www.spinunit.eu
ArcHC_3d research group: http://archc3d.fa.ulisboa.pt
Info about Hiedanranta: https://www.tampere.fi/asuminen-ja-ylarinteenkaupunkisuunnittelu-ja-rakentamishankkeet/hiedanranta.html

COURSE TEACHERS

Panu Lehtovuori, Professor of Planning Theory, Finland
Damiano Cerrone, Architect, Finland
Jorge Garcia Fernandez, Architect, Inv. Assistant Professor, Portugal
Elina Alatalo, Architect, Environmental Policy, Finland
Mika Pettissalo, Community Artists, Finland
Our built environment is a complex system integrating elements defined by geometries, attributes and relations. Its understanding depends not only on our expertise as city developers, but also in the tools and methods we have to register, reconstruct, and analyse data; and the ability to answer current city demands. In our society, Remote Sensing and Geodata of the built environment present the greatest potential for ‘understanding’ efforts, due to their capacity in digital representation, multi-nature integration, infrastructure costs, etc. However, in practice, the revealed spatial data does not always provide the necessary accuracy, requiring arduous transformation process; they are dependent on standard requests, and are not set up for reuse and long-term archiving. Without such capabilities, we are left with inadequate knowledge that further limits the scope of the use of digital resources and our capacity to transform our cities.

Under the premise that technical advancements must be combined with in-depth knowledge of today’s uses and needs, URBAN-SENSE aimed to develop integral data and relevant answers to support further physical interventions. The study of innovative and classic survey methods was combined with a hands-on training on laser scanner and photogrammetry to accurately digitize both geometry and radiometry. ‘Working with data’ was addressed in a collaborative workshop environment where surveyed spatial information was enriched with semantic information (gathered from open multisensory-based repositories). The definition of custom-case questions and the path to get their answers, both shaped by a training on offline & real-time data processing methods, provided at this phase, a solid launching platform toward a multi-vocal reading and a feet-on-the-ground designing and building processes.

When working with data, we should pay attention to whether we are asking the right questions? There might be a relevance gap, meaning, that the data that we collect cannot really answer the questions we have. It is also possible that our questions do not really matter to people. They might not be relevant to what is happening at site. Thus, we engaged with local or otherwise substantial people. They helped us create findings together.

For example, we created a 3D-model of one small building with a laser scanner. Locals noted that they do not actually need that kind of a model of that building. Nevertheless, our exercise was not in vain. It demonstrated a tool that could be used for other purposes. There were locals who got excited about the possibility of using laser scanning and photogrammetry for capturing graffiti art. Graffiti artist paint over each other, so the gallery changes all the time. With laser scanning and photogrammetry difficult spots can be reached to create detailed colorful recordings of the vanishing art.

There was lots of freedom in the interventions. No materials had been acquired in beforehand but the teachers knew very well of different resources available, ready to get them at short. The intervention ideas developed also in relevance to materials found at site.

RELEVANCE GAP

TOWARDS INTERVENTIONS
STUDENT PROJECT

INDUSTRIAL HERITAGE

MELODY

Photo: Elina Alatalo
INDUSTRIAL HERITAGE MELODY

As a project of the Summer School “Urban Sense: exploring and designing multi-sensory cities with advanced tools” we decided to bring melody in the Industrial Heritage zone of Hiedanranta.

INITIAL IDEAS

As a group, we thought of contributing to the development of the former industrial area of Hiedanranta. The community and the sense of wanting to make the most of the abandoned place pushed us to create something original that could somehow resonate with the environment. Using recycled materials found in the area, we decided to focus on creating a musical instrument that can be played by everyone.

After a brainstorming of possible concepts, we opted for the simplest solution, as the time available was not enough to be able to aspire to more sophisticated options.

We therefore opted for a Wind Chime

FINAL RESULT

The project presents a series of carved metal tubes tied to the base through iron wires. The distance between them is such that the instrument resounds only in moments of imposing wind, so as not to cause discomfort to the neighbors due to the redundancy of the sound.

The decision to use recycled objects in relation to the area was designed to show a mentality aimed at UPCYCLING.
BEHIND THE SCENE

Our project started with the idea of creating something new using what was already in the site. First of all, we were thinking how we could utilise the old industrial building that is named Korjaamo and lies in the heart of Hiedanranta. We started off with a lot of ideas on how to add something to the building without making any harm to it. In the end, it was the idea of creating an instrument that finally caught everyone’s interest and we started to discuss about its possibilities further.

Once we had an idea of what we were going to do in Hiedanranta, we started to throw ideas around. One of the first thoughts formulated by a team member was the idea of a gigantic Kalimba that visitors would be able to play while they are visiting Korjaamo. It would be built inside the main hall of the building. As an interesting and ambitious as the idea was, we quickly came to the realisation that we would not have nearly enough time nor the resources to build something even close to the original idea. However, this idea of giant Kalimba ended up being the starting point of our project.

We realised that the site was quite windy, so we finally had the idea of a Wind Chime. We thought we would collect some of the scrap metal and other unused materials lying around the site and see what we could come up with. With the help of Mika, our trusted instructor on the site, we started to look for materials. Little by little the shape of the Wind Chime started to get clearer.

After testing our theory on a prototype, we started to build the instrument. We cut metal bars, welded pieces together and adding bits and pieces to hang from the base the Wind Chime came to its final form.

STRUGGLES & IMPROVEMENTS

In conclusion, something that at the start seemed to be apparently like an easy task became a concern. The junctions between these objects, with which we were not used to work, were not easy to do. Finally, to find the good balance between all the components was hard too.

The lack of time couldn’t let us test and improve the project further on. After we had found the place for the Wind Chime, we realized it might need some ways to enhance the sound. There were such ideas as put some wings on it to amplify the movement of the main body or modify the junction between the hanger and the base in order to increase the degrees of freedom.

Despite this, the project gave us the opportunity to improve ourselves by learning to work with completely new objects and materials. Furthermore, it taught us the value of active urbanism and how it can deeply change the aspect of places.

GROUP

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STUDENT PROJECT
HIEDANRANTA SAUNA INTERVENTION

Photo: Veera Turku
HIEDANRANTA SAUNA INTERVENTION

INTRO: An intervention to Hiedanranta residential area in Tampere, Finland by using digital tools and local opinions.

Hiedanranta - local interventions

Hiedanranta - one of the expanding parts of the Tampere. Place where an architectural office, the locals and people from surrounding areas join into the process and workshops to create a home for everybody step by step, before the construction starts.

In this adapting context, we met with surrounding ateliers who work with leather, wood, and glass, we met skaters and people, who were just passing by. Here everything started from inside of each workshop and small rooms and now are growing into this huge scale of to-be new residential area. We wanted to contribute to this transformation and interfering atmosphere. We choose the sauna – area in the middle, focusing on how to make it more usable.

DIGITAL TOOLS

Moving back from universal scale, digital tools intervened into our process to help to understand what is ‘Hiedanranta experience’. First by analyzing the data in the cities that are created by human capital, the way to feed the cities according to the needs of the new century. ‘Mapping the Human Perspective’ to retrofit the existing and to develop cities by informal data, on the examination of space, activities and values.

The second tool was the laser scanner. It helped to map the physical site and turn it into digital data cluster, that helped to understand area better. Then the view from human eye level were retrieved in all perspectives and directions. Geometrical shapes, RGB colours and infrared information of the site was obtained. So, ‘What kind of data we want to collect?’
PHYSICAL TOOLS

The questions we asked:

- What are the elements of the area?
- Where is the gravel, where is the asphalt?
- What are the free elements/ materials on the site?
- What could we/ locals get from arranging these elements in a new way?
- How do we arrange them?

The main idea was to give a sense and some colour to the main public area in front of the sauna. In the research phase many questions were asked, and answers were found. Considering the good acoustic of the area and the planned concerts in the future, the place for seating arrangement was determined, but due to the limited time of 2-3 days, only portion of the area was cleaned from gravel and dirt. Asphalt was painted to create designated areas for:

- Twister game
- 5 m circle for circus performances
- Different circles to create seating arrangement for concerts and movie nights.

For the movie nights, a white fabric is arranged and set between two sauna auxiliary buildings. It helps to separate more private inner yard of sauna from the road during the daytime and serves as a projection screen in night-time.

The data from Helsinki illustrates, that citizens are interested to visit new areas before they are transformed and refurbished into new city fabric. So Heidannanta – a place where the architectural projects are being proposed, is interesting to people right now. Locals are joining and contributing to create a collaborate environment for everybody, who will come here to work, live and relax in the future city.

Now this area has a potential to grow into another data collection point: Area will become essential for the residents and will help in the decision-making process of the future.

FUTURE

Although, the main idea was established in limited time, the area just got to a point where it attracts more attention and can develop itself into what it will need in the future.

The final product is not finished, as it will be a long process, but already first baby steps are made.

‘What can be done next?’ - it is a question that needs to be answered now.

How can the brick walls be used to contrast the gravel and asphalt, once the construction is finished?

What mobile seating arrangements can be made, could the textile atelier help on that?

What games can be added next to the twister, what lines are needed for the skaters to follow?

How can the sauna volumes be integrated into open area, as well as the stage it provides?

GROUP

M. Dilara Karademir, Architecture, Turkey
Juris Gailis, Architecture, Latvia
José Magalhães, Architecture, Portugal
Matsuo Ryo, Engineering, Japan
Luyao Xiao, Architecture, China
STUDENT PROJECT

EXPLORING HIEDANRANTA’S LANDSCAPE
EXPLOREING HIEDANRANTAS LANDSCAPE

WHY ARE WE INTERESTED IN THIS AREA?
- LANDSCAPE
- LAKESIDE
- MANSION

COLLECTING INFORMATION BY:

A. USING THE DATA
   - DENSITY OF VEGETATION
   - QUALITY OF THE ENVIRONMENT
   [MATERIALS, NATURAL ELEMENTS ETC.]

B. EXPLORING THE AREA
   - SENSE OF THE ENVIRONMENT
   - KIND OF VEGETATION
   - VIEWS

POINTS OF INTEREST

CONCLUSIONS:
- MAIN FEATURE OF THE AREA: NATURAL ELEMENTS
  [DIFFERENT KINDS OF VEGETATION, WATER, ROCKS]
- VIEW POINTS
  - "HIDDEN" POINTS OF INTEREST [VIEWS, WALK PATHS]

PURPOSES OF THE INTERVENTION:
- LESS AFFECT TO THE NATURAL ENVIRONMENT:
  THE SIGHT ITSELF IS THE MAIN POINT OF INTEREST
- EMPHASISE THE NATURAL ELEMENTS
- CREATE A NEW POINT OF INTEREST AS AN INTRODUCTION TO THE AREA
- CREATE A WAY FOR VISITORS TO EXPLORE THE AREA, TO DISCOVER HIDDEN SPOTS, FEATURES OF THE NATURAL ENVIRONMENT AND VIEW POINTS
**STEPS OF THE PROCEDURE**

a. SELECT THE POINTS OF INTEREST
b. COLLECT PLANTS FROM EACH POINT
c. EXHIBIT THEM

d. CREATE AN EXPLORATION GAME TO LEAD VISITORS TO THE POINTS OF INTEREST THROUGH TRYING TO DISCOVER THE EXHIBITS IN THE SITE PULLS.

Look at the photos and try to find the surrounding area by following the colourful 'guiders'.

Then, continue with the focused view which includes the exhibited plant.

**FUTURE POTENTIALS—DEVELOPING THE PROJECT**

- Clean the hidden paths and create new ones around the landscape area
- Create a permanent exhibition as an introduction to the area
- Create sitting areas near the view points
- Create groups for visitors and inhabitants to occupy with artistic-educational projects with regard to the natural environment of the area

**EXHIBITION—EXPLORATION GAME**

**GROUP**

Elaheh Iranmanesh, Architect, Iran
Anna Nektaria Georgiou, Architecture student, Greece

Photos by the group
Reimagining the Pier

Hiedanranta is where sand meets water. The water has shaped the coastline and the local environment. But now the pier is a wasteland, inviting impermanent local activity.

Balance + Sense

The pier has a shared history with the forestry industry, safeguarding stockpiles of logs before their journey through the Uittotunneli and over Pispala. The sense of water ways, streams and currents, has been vital to Tampere. And the balance attained through stones is visible on the granite buildings. Through new associations and relationships of water, plant and stone, life will return to the Pier. Drawing us to the edge, over the water and to gaze out over the horizon. Landscape is dendritic, parametric and hyperbolic. Made from the turbulent currents of air, water and planetary motion. Turbulence is what gives us natural variation, through predictable cycles and impermanence. This ongoing movement is what shapes us and the communities we are. The barren wasteland of the pier invites impermanent local activity. Mobile construction and ephemeral art return breath and life to the area.

Play + Experience

When stones are in harmony, even on a windy day, they keep together. Here we can learn through play and experience. Interacting with stones and making stone art. From stones, we come to the hexagon: symmetrical, and representative of cell structures and organic life. The hexbox is simple to make, it is modular and can easily tessellate. The design is also culturally responsive to the colourful plant hexboxes in Eteläpuisto next to the Kesaranta POP UP kahvila. The old rusty cart fits perfectly to this old peer. The garden bed in the middle of it not only provides the shade on a sunny day, but also adds more beauty to the beach. As there are no benches at the beach this cart gives opportunity to have a seat and look around at the nice view from Hiedanranta.
The pier has been a point of discussion, avoidance and dispute due to the dangers of the wood fibre sediment that lies in the lakebed. Also, it has become a wasteland after the local government felled the trees and removed the toxic soil, leftover from the industrial forestry work.

However, from difficulties and problems we can find resolution. Upon closer inspection we find a kaleidoscope of colours, and thus, minerals, on the exposed land. And we find opportunities for new materials in the lakebed: “The project will develop a new microbiological process in which waste fibre from pulp production can be used to produce valuable chemicals, biogas and organic fertilizers.” – City of Tampere

The idea to make this cart belongs to Mika Pettissalo. It should be a cart with benches in front and on the back side, wooden stumps which everyone can take and use as seats or as tables or whatever. Can be improved by adding benches on the sides of the cart.

To make this cart we used some of the instruments first time on practice. The only issue was the limited amount of time to complete the work – you can see it clearly on the welding points – they are pretty bad and could be improved as well. However, as it is possible to use the lights on the back of the cart – you can move it with a car.

It was important for this cart to retain its rusty and worn appearance – as it complements the view of the pier and the old factory buildings nearby.

GROUP
Janna Lumiruusu, Emerging Technology, Suomi
Ivan Ananev, Computer Science, Russia
The course in short

*Urban Sense - exploring and designing multi-sensory cities* aimed to introduce students to a range of analysis tools and methods that help map the complex physical, experiential and social urban environment. Using an exploratory pedagogical process, “super site specific”, the course moved between urban scales and spheres. Through three stages of 1) working with data, 2) with local communities and 3) with a real built intervention on site, we were put face to face with several intriguing challenges that contemporary architects confront.

The course was organized as part of Tampere Summer School 2019. This brought to our special course of Architecture and Urban Studies a rich variety of students from different fields. In the Summer School there were close to 30 intensive courses offered, varying from Social Circus Pedagogy to Cross Cultural Marketing. From these courses the students could create their own curriculum. Along the studies, Summer School offered also social activities, such as getting to know Finnish nature or cooking Finnish food together.

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TAMPERE SUMMER SCHOOL
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