

## **Simulating and Modelling Urban Flows**

*Experimenting with tracking technologies in urban design*

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*Publication date:*  
2015

*Document Version*  
Publisher's PDF, also known as Version of record

[Link to publication from Aalborg University](#)

*Citation for published version (APA):*

Wind, S. (2015). *Simulating and Modelling Urban Flows: Experimenting with tracking technologies in urban design*. Arkitektur & Design (A&D Files). A&D Skriftserie Vol. 91

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# SIMULATING & MODELLING URBANFLOWS

experimenting with tracking  
technologies in urban design

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MSc02 Urban Design F2015

Aalborg University  
Department of Architecture, Design & Media Technology

Studio: Simulating and Modelling Urban Flows  
MSc02 Urban Design Program  
April-May 2015

Title: Simulating and Modelling Urban Flows - Experimenting with tracking technologies in urban design

Published in: A&D Files, volume no. 91  
ISSN no.: 1603-6204

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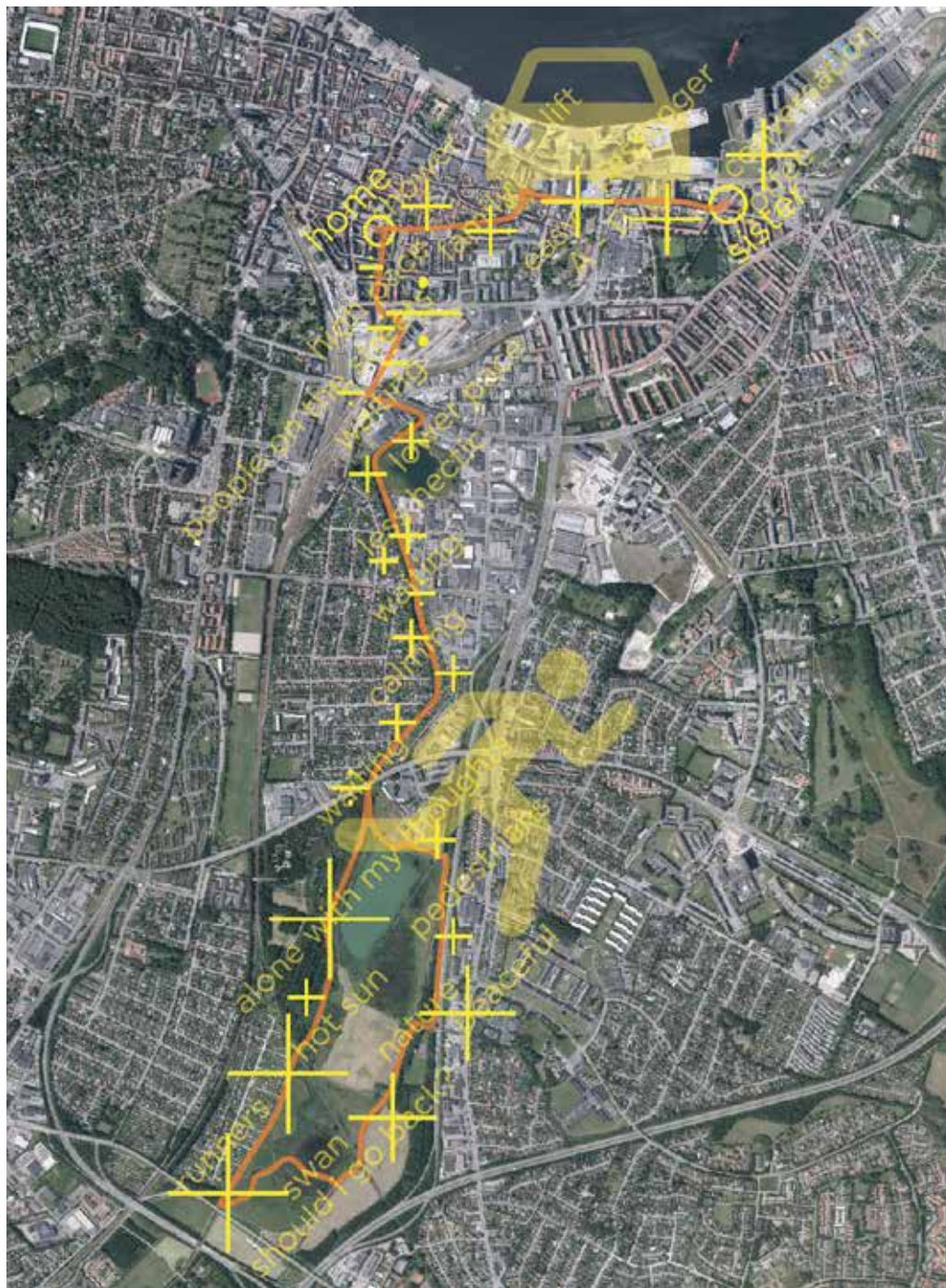
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Introduction	05
The organisation of the studio	07
Experiment 1: Urban Songlines and GPS tracking	08
Experiment 2: Design intervention and thermal tracking	70
Bibliography	89





Urban Songline (picture: Andrea Dynnes Holmbo)



Intervention in experiment 2



## Introduction

The development of raw computational power, ubiquitous computing, advanced communication, information, mobility tracking and geo-location technologies is rapidly changing our societies, the way we communicate with each other and ultimately how we organise and live our everyday lives. For Urban Design, a truly integrative profession that think across and use knowledge from various fields and disciplines, the implications and effects of such technologies pose great interest not only because they are shifting people's understanding and usage of urban spaces and cities thereby gradually changing the premise and object of urban design, but also because such technologies are new powerful potential tools in the urban designers toolbox. As these technologies are developed and integrated into our daily lives (i.e. mobile phones, the Internet of Things, driverless cars etc.), they are also becoming cheaper, easier to use and available to a consumer audience. For urban designers this means that mobile tracking technologies such as GPS devices are right at hand, potentially ready to be applied in the urban designers work processes. This poses interesting new possibilities for urban designers.

The objective of this four week studio at the Urban Design master program at Aalborg University is to explore the potential usage of mobile tracking technologies within urban design processes. In the studio the students have been presented to new tracking technologies and novel methods for capturing, analysing and representing urban flows through the use of GPS tracking and thermal camera tracking technologies. The students have been challenged to apply these two technologies in two separate 'method experiments'. The aim is to gain knowledge of how to analyse and design urban flows at specific sites in the city as well as critically reflect upon the intersection of urban design and these new technologies. Hence these methods might potentially be treated as new instruments in the urban designer's toolbox that contribute to informing design practice of (functional) urban sites and environments.

This booklet showcases the urban design students' hard work and effort of experimenting with and teasing out the potential of these new mobile tracking technologies. Thanks to the students and teachers that have participated in and contributed to the studio.

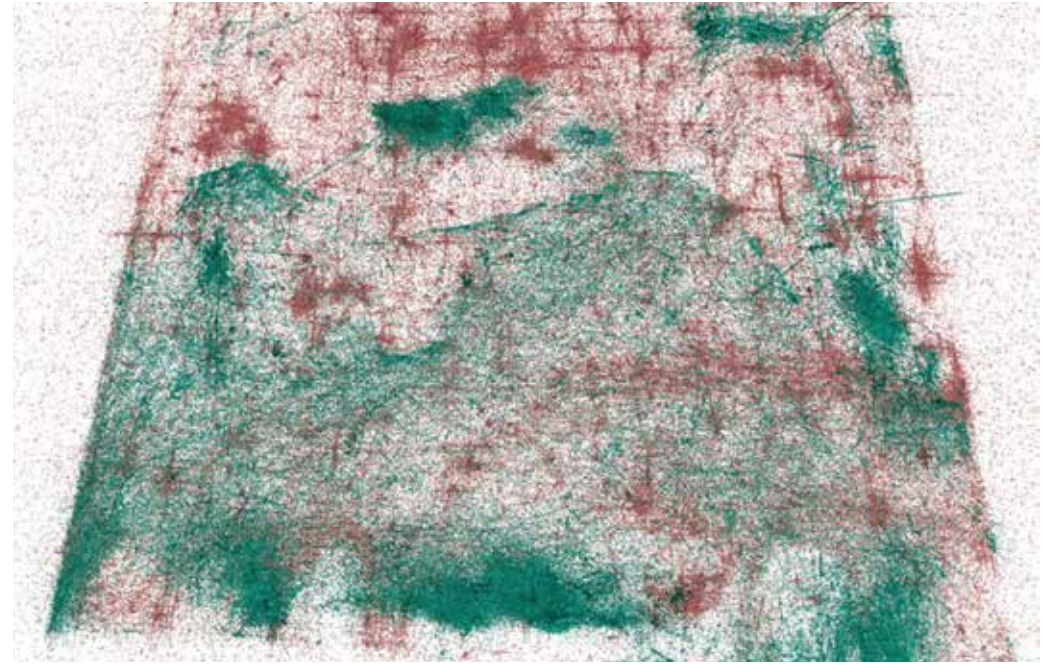
Simon Wind  
Studio coordinator, SUF MSc02 URB F2015

*"designers must know about the natural and social sciences pertinent to the design of human habitat and use this knowledge as a basis for design"*  
(Lang 2009, p. 466)

*"... technologies are already "out there," urban planners and designers must know about these since they are as important a part of the contemporary city as asphalt, sewers, houses, and public plazas. Second, the networked technologies are producing data about the city that planners and designers might as well make use of to create more accurate and sophisticated decision-making frameworks. Third, the networked technologies offer a potential for new types of public participation processes and civic engagement in urban planning and design. Fourth, the new technologies can do more than map and report activities in the city. They offer themselves to become active and dynamic layers of new experiences and creative practices in the city"*  
(Jensen 2014, p. 235)



Students planning experiment



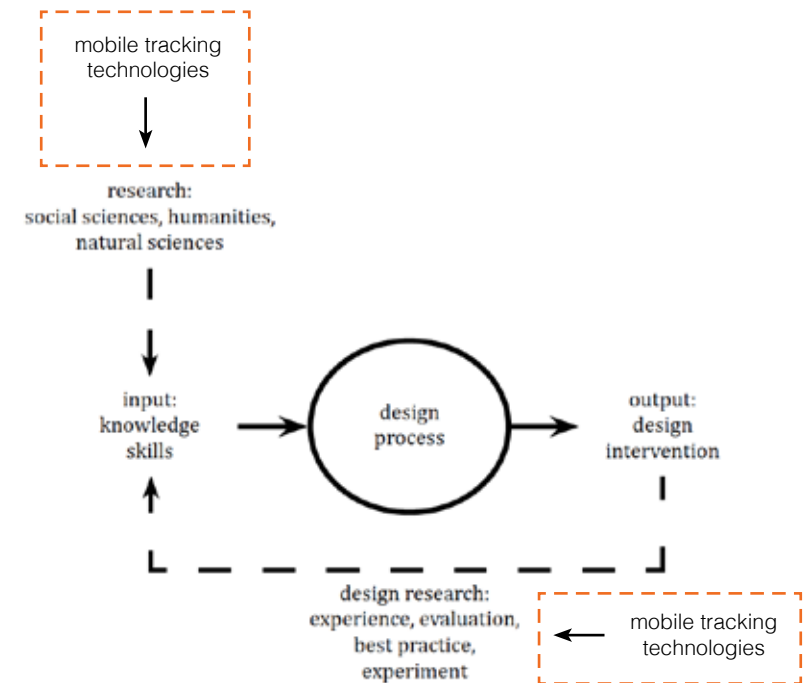
Thermal tracking data

## The organisation of the studio

Overall, the studio was organised into two experiments. In the first experiment, the students were presented to GPS tracking in relation to the urban design method of 'Urban Songlines' (Marling 2012). Urban Songlines "is a kind of 'story-telling – method' that has been developed in order to present urban qualities experienced by ordinary people. Urban Songlines is a type of story-telling method in which it is possible to gain new insights (potentials, opportunities, issues, understanding) of the city and places in the city that might inform design. Using Urban Songlines served as a methodological platform to explore if it is possible to gain deeper understanding of how the city is used and experienced as a meaningful, functional and affective urban environment in a person's everyday life world through a deeply qualitative and phenomenological methods in combination with the quantitative GPS tracking technology.

In the second experiment of the studio, the students were introduced to thermal tracking technology as a novel method for capturing and working with flows of movement that might potentially inform urban design. Through the period of approximately a week an urban site and its flows were thermal tracked. Concurrently the students produced and tested a series of physical interventions, architectural probes, at the site. Through the tracking data (and also qualitative data produced in observations and interviews), the students have reflected upon, evaluated their physical (re)design for the flow system at the site. Thereby, the students have tried to integrate the thermal tracking as a feedback loop within the design process.

Hence both experiments work with more than one method and it is exactly in the intersection of different methods (both qualitative and quantitative) the students were asked to reflect upon and discuss the potential of mobile tracking technologies in urban design. In the following pages the two experiments are presented. The first experiment of the GPS infused Urban Songlines the students worked individually, interviewing each other, and each student had to produce two pages presenting the method and their findings (see page 8). In the second experiment, the thermal tracking design intervention, the students were organized into three teams of 10 students. Their findings were presented in four pages and two posters (see page 70).



Methods in the design process creating the knowledge foundation for design interventions can be coupled with new mobile tracking technologies such as GPS tracking and thermal tracking.

### **Experiment 1:**

Urban Songlines combined with GPS tracking



Aleksander Borg Pedersen  
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# EXPERIMENT I : URBAN SONGLINES AND GPS TRACKING

## Respondent biography :

The respondents name is Andrea Victoria Hernandez Bueno. She is 27 years old and from Venezuela, and she lived the last 10 years in Caracas city. She is a student and independent architect, at the same time she has a part time student job unrelated with architecture. In her free time, she likes to do architecture competitions and exercise. She loves sports, especially spinning and working out because it is the only time she has to herself, where she is free to not think about architecture. Competitions are important for her, in order to express herself and make her own statements in architecture and urban design. Caracas city differs much from Aalborg city, despite the overwhelming scale of Caracas, she loves the combination between nature and city that is present in hills and mountains as for instance "El Avila".

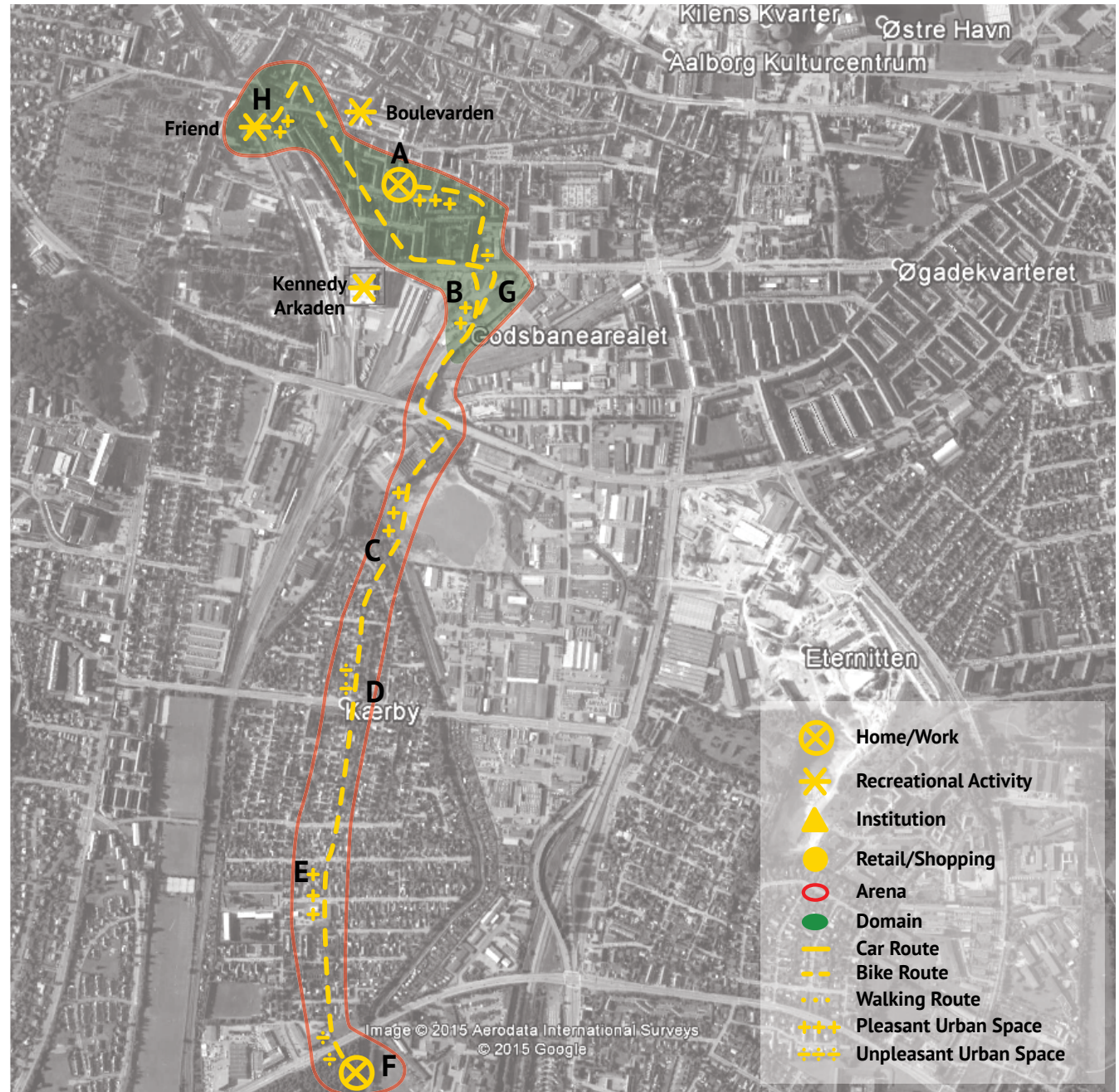
The respondents usage of the city shows clear areas, that could be improved.

At point B/G the semiotics and infrastructure could be merged better, to improve the ease of reading the space.

At point D the hierarchical priority of pedestrians and bicyclists should favorize bicyclists. This could be done with motion sensors, to avoid interrupting the car traffic unnecessarily.

At point F, priority should be placed at illuminating the space at night and improve the tactile qualities of the space. This would improve comfort and sense of security as well as the aesthetic experience.

An attractive urban space provides clear semiotics in a well-organized infrastructure as a foundation. Furthermore, it provides aesthetic qualities as attractive and comforting lighting, views of green or urban fabric preferably with cultural value, preservation of architectural heritage and/or attractive contemporary architecture. Specifically for commuting, an attractive urban space provides different spatial qualities, where the city's morphology creates spaces that change in shape, tactility, permeability and view, while they expand and contract along the route. As seen in this experiment, a mix of programs and zoning provides the, afore mentioned qualities. In general a diversity in urban spatial qualities creates the foundation for an attractive urban space.







Picture A :  
This is the back entrance of the respondents house, placed in the courtyard where she can keep her bike. From here she can choose an opening that points in direction of her destination. She experiences the courtyard space as safe, quiet and comfortable, with plenty of daylight, and centrally located in the city. It brings her a sense of relief, as it is a place where she wants to stay and can withdraw from the hassle of her everyday duties.



Picture B :  
The Godsbane Area is the fastest route to work and has the least inclined slope. Furthermore the respondent enjoys the open view and urban surroundings, which demonstrates an ambitious urban development.



Picture C :  
The respondent enjoys this area, with green vegetation, an open view and surroundings with historical buildings from the old railroad facilities (to the right outside this picture). Animals, as hares and ducks, cross this path and, with the sunset, this path causes her much joy. It is a quiet space, that allows for reflection and calms the respondent down, while traveling back and forth to work.



Picture D :  
This area made a clear impression on the respondent, since the light is often red, when the respondent approaches the intersection. Apparently, traffic coming from right and left are prioritized the highest. The aesthetic qualities of the space are overpowered by the frustration of the infrastructural neglect.



Picture E :  
Through this residential area, the respondent found many architecturally pleasing experiences. Typical danish residential villas are placed in this medium dense neighbourhood. Plenty of vegetation, building in the Human Scale and speedbumps, characterize this space as comfortable and pleasing.



Picture F :  
When the respondent arrives or departs from work, it is usually dark and the parking lot outside is poorly illuminated. Furthermore there is not much to appeal to the senses, except the view to a forest in the background.



Picture G :  
The Godsbane Area is an important infrastructural node, which is why it is featured twice. The respondent crosses this point often, regardless of her point of departure or destination. It is well illuminated at night, but lacks proper semiotics, to indicate the direction and limits of the bicycle path.



Picture H :  
On this picture we see the facade of her friend's apartment building. The apartment is centrally placed in Aalborg city center, close to the railway station. The respondent chose the fastest route to this destination, as visualized in the Urban Songlines diagram. This area has good infrastructure and pleasing aesthetics, but nothing out of the ordinary.



## SIMULATING AND MODELING URBAN FLOWS

- Andrea Dynnes, 20112375

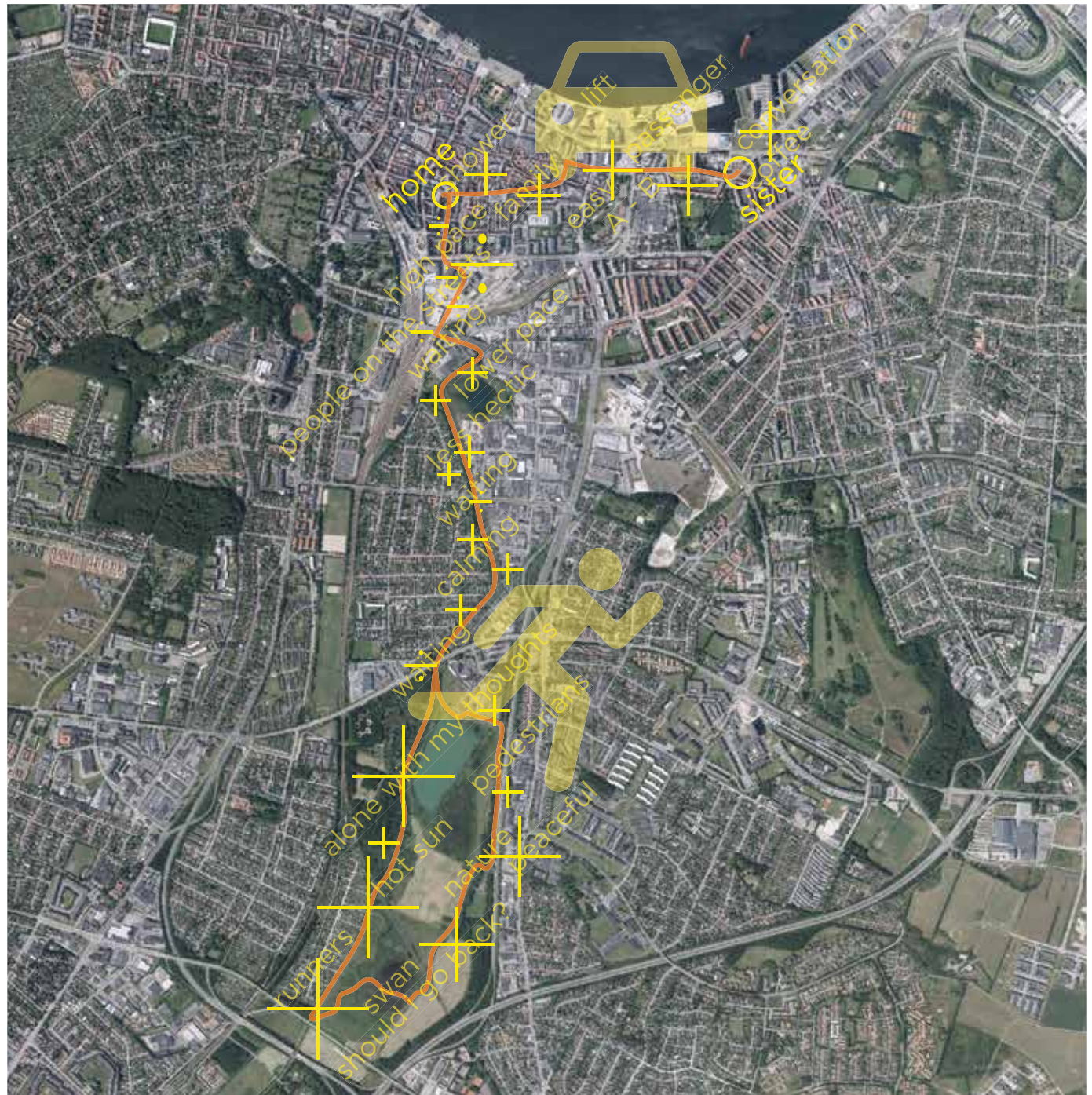
### Respondent biography

The tracking conducted in experiment 1 is a GPS tracking of a student from urban design. His name is Christoffer Olesen but everybody just calls him "O". The short name fits his reflective and modest disposition, and the way he always seems very self-contained and never over the top.

Christoffer is part of a running society with a few other people from the semester, and they're all training to do a half marathon. It seems though, as if he is not in it for the competition, but that he genuinely enjoys it and that it's part of his daily life. That is also why the tracking is very much an example of Christoffers everyday journeys.

### Summary of findings:

Christoffer's tracking from Saturday April 18th shows how he uses different parts of the city and how different urban environments affects the way he moves through it. He went for a run that day, and the map and interview shows that the energy of the city streets makes him increase his pace and adds dynamics to his journey, while the natural areas of the city makes him more calm and able to relax and clear his mind. The study shows the necessity of inner city areas that mixes the dense urban structure with it activities and the green pockets that leaves space open for reflection and contemplation. This should not only be small parks, but big open spaces in close contact to the inner city where there's room to engage in physical activity. A fine example of something similar, but in a more urban context, is the harbor front where the long stretch close to the water is left open and the design focuses on people moving along it while experiencing different things on the way.







Picture A:  
Christoffer decides to go for a run. It begins at his place near Danmarks-gade. He is determined to get to Østerådalen and picks the shortest route to get there.



Picture B:  
Christoffer's pace when running is always higher inside the city. The dynamics of the city and his determination to get to a more open and quiet place makes him move faster.



Picture C:  
At Kennedy Arkaden Christoffers pace decreases because of the openness of the space.



Picture D:  
Christoffer reaches Østerådalen. He feels more relaxed because he escaped from the hectic streets. The only times his speed increases is when he has to pass other runners or pedestrians.



Picture E:  
An unexpected situation occurs when Christoffer meets a swan. He gets frightened and for a couple of minutes he considers to turn back. Eventually the swan leaves, and Christoffer avoids taking the longer way back.



Picture F:  
Christoffer enjoys being alone with his thoughts while running. He describes it as a meditative state of mind where he can think about everything and nothing.



Picture G:  
Later that day he goes to visit his sister. He gets picked up by his parents and has a pleasant ride where he focuses on catching up with them and doesn't pay much attention to the surroundings.



Picture H:  
He has a cosy afternoon with his family in his sister's apartment on Storgade. Even though the apartment is on the first floor they do not get disturbed by the noises from the streets.



### Respondent biography :

The respondents name is Ida Marissa Matthiesen with the age of 25. She is a student at the Aalborg University since September 2011, currently in Urban Design master programme. During her spare time she uses to work a lot in three different places: A bar called 'Heidi's', a restaurant called 'Restaurant Kronborg' and for the Aalborg Municipality. Also, she enjoys being together with her friends and boyfriend watching movies, going to the cinema together and different activities. She is originally from Flensburg, Germany a small town close to the borderline to Denmark, and is therefore grow up bilingual since she grew up in both countries. The towns she grew up in are small and cozy, with a majority of young people. Flensburg is a very old town which for centuries was used for trading. Since the town is located at the harbor the main access for trade was reached by ships. This trading history of the city reflects the culture and is now a part of the image of the city.

### Summary of findings :

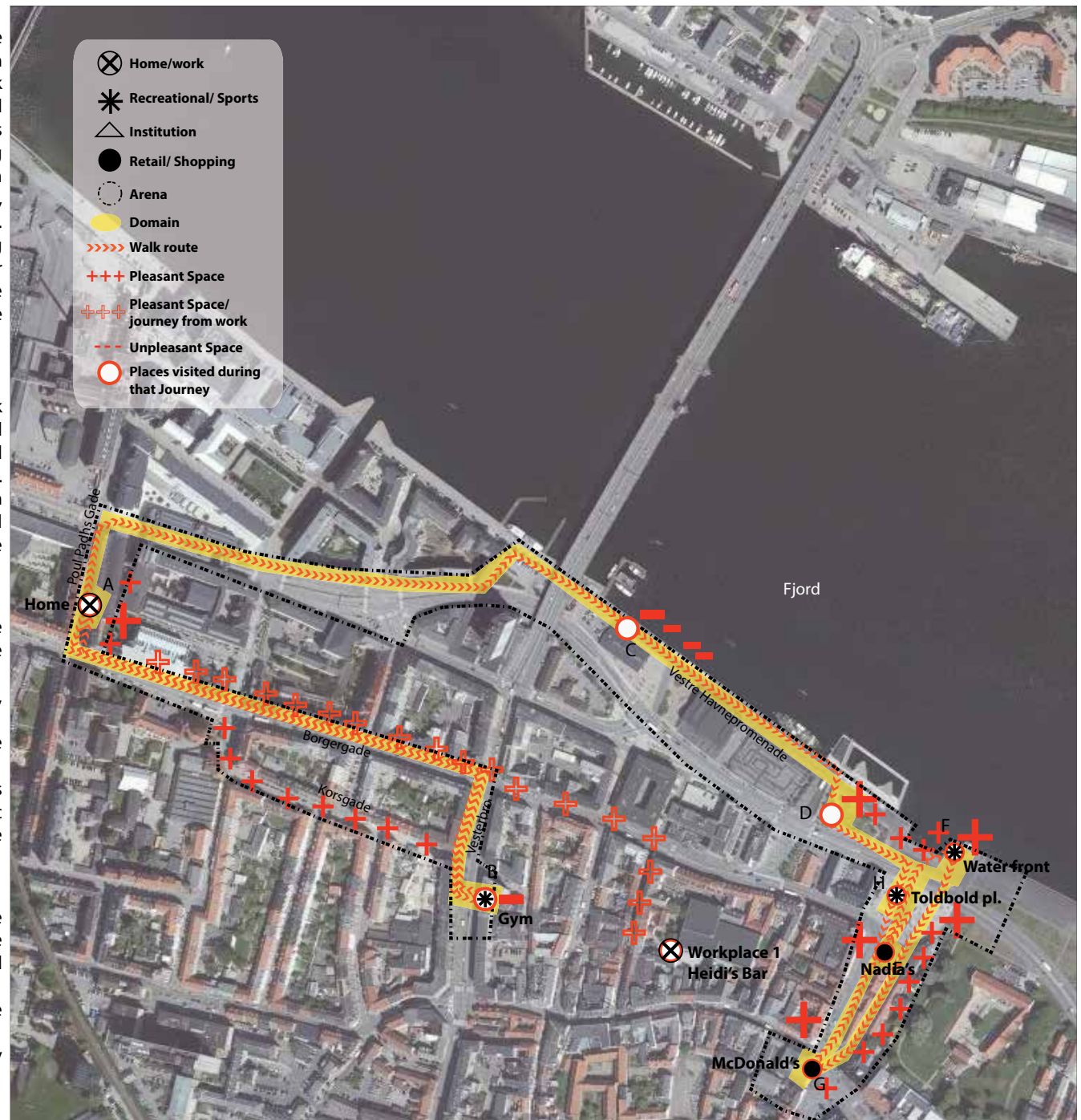
Motivations and activities are important to invite people to walk the city. To Construct meeting points and places with identity and to create another imagine of the city base on good moments and memories. Places are related with feelings, emotions and persons. There are mandatory routes people take generally, so people use them automatically everyday. Sometimes, people can change the general journey depending on their feelings, creating their own places in the city that can calm them down or make them happy.

### POTENTIALS AND OPPORTUNITIES TO RE-DESIGN:

- Materials are relevant. Water and green are crucial elements to create different atmospheres and attract people in certain places. To use textures to organize the places, create new semiotics with texture.
- Incorporate urban furniture or flexible areas that can be use it to eat, seat, chat or just stay to enjoy the weather.
- The scale of the spaces in the city is important, it can determinates the places people chose to move around and also their sensations.
- Incorporate attractive programs for the use of the spaces, such as commercial, cultural or entertainment. To promote the use of the public spaces using the program as a catalyst to create identity and guide people in terms of how to use the space.

### EMOTIONAL EXPERIENCES:

- Positive experiences during the journey. "I didn't found any place unpleasant. Sometimes depending on my mood I use to take Korsgade instead Borgergade because is not full of people. I don't like crowded spaces. I like to have my own place in the city".
- Meaningful spaces in the city. "Me and my boyfriend decided to create a point of encounter, so we have been meeting there couple of time".
- Food it is important. "Food is an important part in my life, enjoy the city for me means to share moments while we are eating".
- "The sunlight is important in every place in order to stay".







Picture A : HOME

Identity of the place, her house is a very important space in her life, she spent most of the time there building memories with friends. She claims: "I like my home because is the place where I stay most of the time. I like to gather with friends to watch films or prepare food and eat".



Picture B : THE GYM

The gym is a place where she does not go often, she doesn't feel that is a place to heat or love. She said "it is a place that I feel it is necessary to go to exercise and to be healthy. However, it is not an important place in my life but it is part of my trip story during that day. It is not a common place I use to go during the weekends". Also, she spent a lot of time at the gym that day, hence for her it was a relevant part of the day journey.



Picture C: HARBOR FRONT

She went back home after gym to change herself clothes and then go out again to have lunch with her boyfriend. They agreed to meet in the harbour front. Before arriving to the meeting point, she enjoyed the walk, except for this particular point, because it was a bit crowded, and she prefers more intimate places.



Picture D: MEETING POINT AT THE HARBOR

She arrived to the meeting point that has a special meaning for her and her boyfriend: "We decided to have a meeting point in the harbour front, so we have met there the last couple times to go out". She feels it is cozy and she likes the fact that she can interact with the nature, green, water and sun. In addition, she is building memories in this place given it a meaning and a relation with a person.



Picture E : THE LUNCH

The fact that there are a lot of food shops to buy and take away, was crucial for them in order to decide to come back to the harbour front to have lunch. "The day was sunny, so we wanted to have lunch in the harbour and enjoy the sun. Nadia's sandwich somehow conducted our journey, because it was in the right place and it is the perfect kind of food to enjoy in an open area". The program is important to invite people to stay and enjoy the areas in the city: "Food is an important part of my life, enjoy the city for me means to share moments while we are eating".



Picture F : THE HARBOUR FRONT

They always seat in that place to enjoy the harbor front, because it is a very sunny place and there are not too much people around. Furthermore, the connection with the water was important for them. "I like that area because it was very quiet and sunny and we could seat in the grandstands to have lunch and enjoy the sun".



Picture G : THE DESSERT

After lunch they took a different path to go to McDonald's (Lille Kongensgade) and have dessert to take away. "We decided to take Lille Kongensgade street, because it is more intimate, and also there are not too much people around". After buying the dessert, they went to the Tolbold Plads to eat it.



Picture H : TOLBOLD PLADS

They decided to go to that square in order to "have a different scenery, and new surrounding". "We stay longer to enjoy the sun and the weather, better there than stay close to the harbor, because in the harbour front the area is more windy". Another factor that made them go to that square was because of the presence of urban furniture and different areas to have sit and enjoy the sun, because "it is actually a very sunny area to stay".



Respondent biography :

Jeppe is 23 years old and from Bornholm. He moved to Aalborg four years ago to begin his studies of Urban Architecture at Aalborg University.

Jeppe lives with his girlfriend approximately 5 km from the university and he normally bikes back and forth.

Jeppe prefers green and blue areas over dense urban areas, which explains his choice of residence.

Summary of findings:

Jeppe bikes to school and back home almost every day. Depending on the weather, this experience can be quite pleasant or not so comfortable. Jeppe explains that the first part of the route from home to school is more or less a non-space with a vague character of a light industrial suburb. In isn't till he reaches the inner city that he encounters more qualitative urban and architectonic developments.

The micro climate betters in the inner city as well. At the more open stretch closer to Jeppe's home, he often experience much wind and feels exposed, whereas the higher buildings placed closer together offer more protection from the wind.

Even though the circumstances written above point to that Jeppe prefers to move in the inner city, he still tells me that he is very fond of living further away from the city center and closer to the nature. Even though his tracking don't show it, he often uses the nearby recreational areas - either for a run or a trip on his mountain bike. He also like to spend time in his garden and see this private, outdoor space as a huge quality.

If I was to re-design the city so that it would fit better to Jeppes needs, I would focus on creating more green spaces within the city. Furthermore I would look into how I could create a feeling of more private spaces within the public spaces of the city, as I can sense that Jeppe is a private person who prefers smaller spaces which offers cover, security and is scaled to the human.



A



Jeppe Live in an apartment in a one-family-house, whit his girlfriend. Jeppe likes the area that he lives in; it is close to nature areas and shopping. The area is quiet even it is close to a big road.

B



The elevated-highway-bridge is a heavy construction, and it puts pressure on you when you are going under it. The tunnel works as a wind tunnel, and there is often headwind; Bad "bicycle-climate". The pillars are creating a barrier between on one side bikes and pedestrians and on the other side cars and hard traffic.

C



The space is very open. There is plenty of space for the cars and the bikes. The buildings around the road are schools and industry. Wasteland "non space" is located beside the road. The area is spirit-less, and is only a place for mobility.

D



The intersection is very busy, you feel unsafe do to traf-fic in this area. The area is open and there are no barrier between cars, bikes and pedestrians. The buildings around intersection is mixed use.

E



Closer to the city-centre than the starting point. This intersection shows the identity of Aalborg all togeth-er, each corner has a part of Aalborg's identity; low buildings, high buildings, industry and green pockets. Karolinelund has a nice and iconic portal, which is a part of the identity to.



### Respondent biography :

**Name** Steffan Vangsted Frandsen  
**Gender** Male  
**Age** 23  
**Occupation** Student  
**Residence** Apartment (condominium)  
**Political view** Liberal

Steffan is a student at Urban Design, AAU in Aalborg. He is originally from Hjørring in Northern Jutland where he also works in a department store during weekends. He owns a car and prefers private transportation rather than public. The car provides a certain degree of freedom in relation to his work schedule and his travelling back and forth from Aalborg to Hjørring, together with the practicalities and freedom of being able to visit family and friends in his hometown anytime he wants.

### Summary of findings :

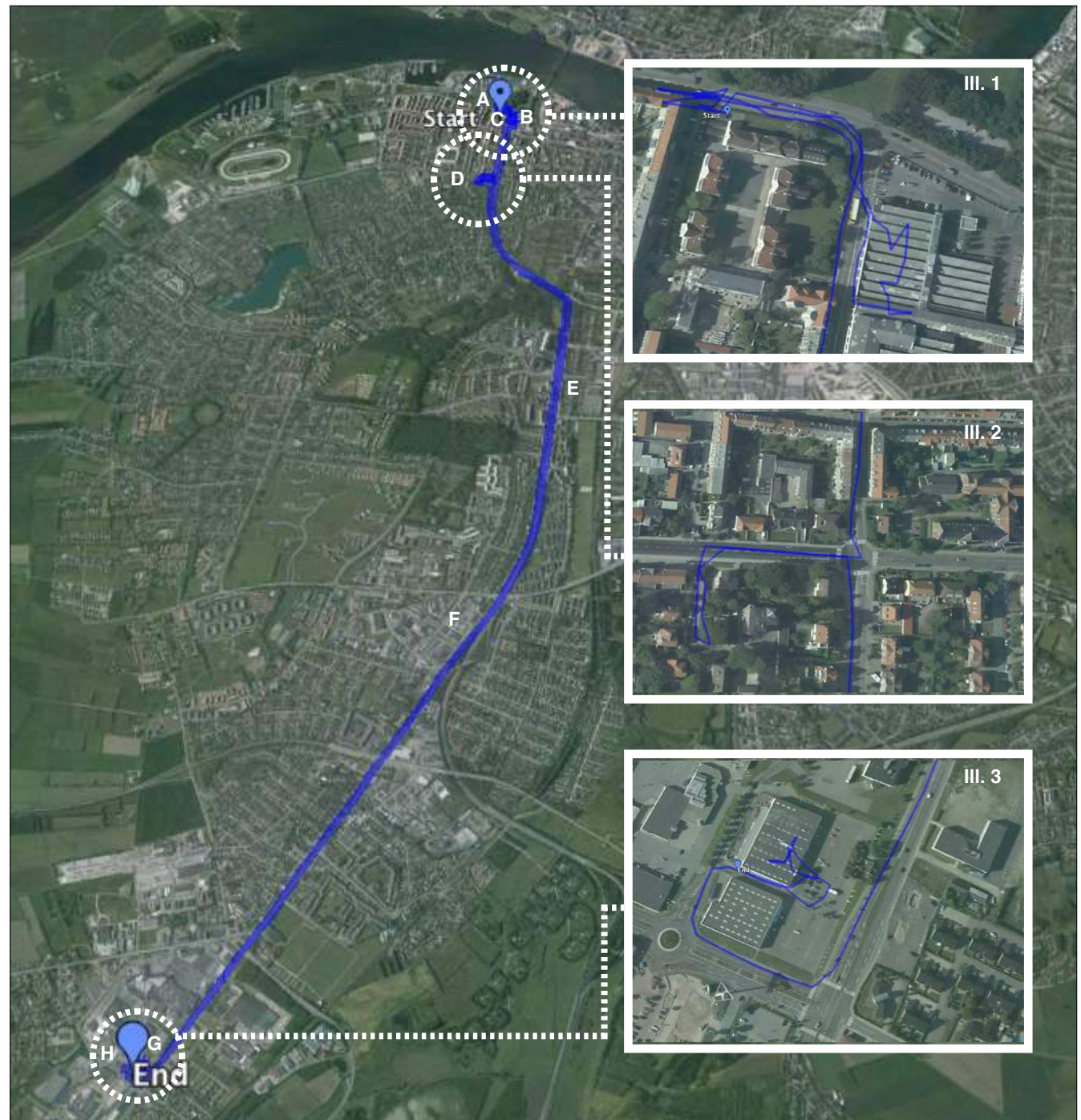
Steffan's route through the city takes point of departure in a specific day during the week. Sunday April 19th, he drove to the outskirts of Aalborg to buy a tail light for his car, from Vestbyen to City Syd. This is a route which he normally takes once or twice a month, depending on the objective of his shopping. And particularly this aspect is important when discussing the usage of the city.

The inner city offers a great variety of smaller convenience stores and pedestrian shopping areas. All in close proximity for people to bike or walk. When owning a car, this all comes into perspective, since distance becomes less relevant compared to time spent on the actual process of shopping/buying/consuming.

Issues arise in respect of 'motion through landscape'. How do you perceive the environment around you when moving at higher speeds on highways, freeways etc., and how should urban designers plan for experiences along the way?

### Potentials for urban re-design along infrastructural pathways

- Densification
- Activities
- Diverse programming
- Modification of infrastructural arteries
  - Curved lanes
  - Speed reductive materials







Picture A : Starting point at home

Sunday morning, Steffan resides at home at Ryesgade 73 in Aalborg, relaxing and enjoying a day off. His apartment is located in close distance to shopping facilities in Vestbyen, and he considers buying groceries in the local supermarket.



Picture B : Grocery shopping in local supermarket

He walks a short distance over to Kvickly, buys milk etc. The GPS tracker actually tracked his route, more or less, inside the store (Ill. 1). He walks the same route back to his home.



Picture C : Personal property

Steffan stops to check the tail light of his car, which is parked in front of his apartment block - convenient. The tail light needs a new bulb, and he considers where he should buy a new one. He decides on driving to the southern part of the city (City Syd), He reasons cheaper pricings over time spent on transportation and decides on driving to the southern part of the city (City Syd) instead of Silvan.



Picture D : A quick stop

Complications might occur when operating a car or any other kind of motorvehicle, and a quick stop has to be done (Ill. 2). A detour to the local street Annebergvej is made, and he stops in order to check the breaks (the car had recently been to the auto-repair shop).



Picture E : Infrastructural asphalt landscape

Hobrovej is a fairly straight, infrastructural artery leading to and from the city and connected to the freeway E45. Steffan makes calculations regarding which road he wants to take beforehand getting into his car. Considering the fact that it is a Sunday afternoon, he knows that the road is without any traffic. Had it been any other day of the week he would have driven through the neighbourhood of Hasseris, but today it is all about getting to City Syd as fast as possible.



Picture F : Highway vs. Hasseris

But it is Sunday, and the highway is effortlessly convenient when just having to drive from A-B to one's destination in City Syd. The only downside is the lack of city life along the roadscape. The speed limit of 70 km/h also affords lower densities and less built environments in relation to the infrastructural lanes. (The route Steffan drives through Hasseris is a more experientially diverse route.)



Picture G : City Syd

Steffan arrives to City Syd, an area he doesn't enjoy spending too much time in, unless he has a certain objective to pursue. This time he needs to buy a tail light, and Harald Nyborg suited his needs (Ill. 3). The area affords 'shoppability' for large consuming individuals, meaning a typical transportation mode would be by car. Box-stores and a landscape of vast/occupied parking lots take up the space.



Picture H : Shopping in Harald Nyborg

But on the other side, everything is positioned and gathered in one store. While being inside the shop, Steffan points out the positive elements of shopping in City Syd. The store is big enough to provide a comfortable space, categorized, and easy to navigate through. He knows where objects are located, and the layout of the store is optimized for a nice shopping experience.



## Experiment I : Urban Songlines and GPS Tracking

### Respondent biography :

Gosia is an Urban Design master student from Poland. She moved to Denmark last September to start the studies in Aalborg University after her architectural bachelor back in Poland. Gosia is interested in public spaces and the social dimension of design, which is key for the good use of space. Gosia enjoys her spare time reading, meeting friends and travelling as much as she can.

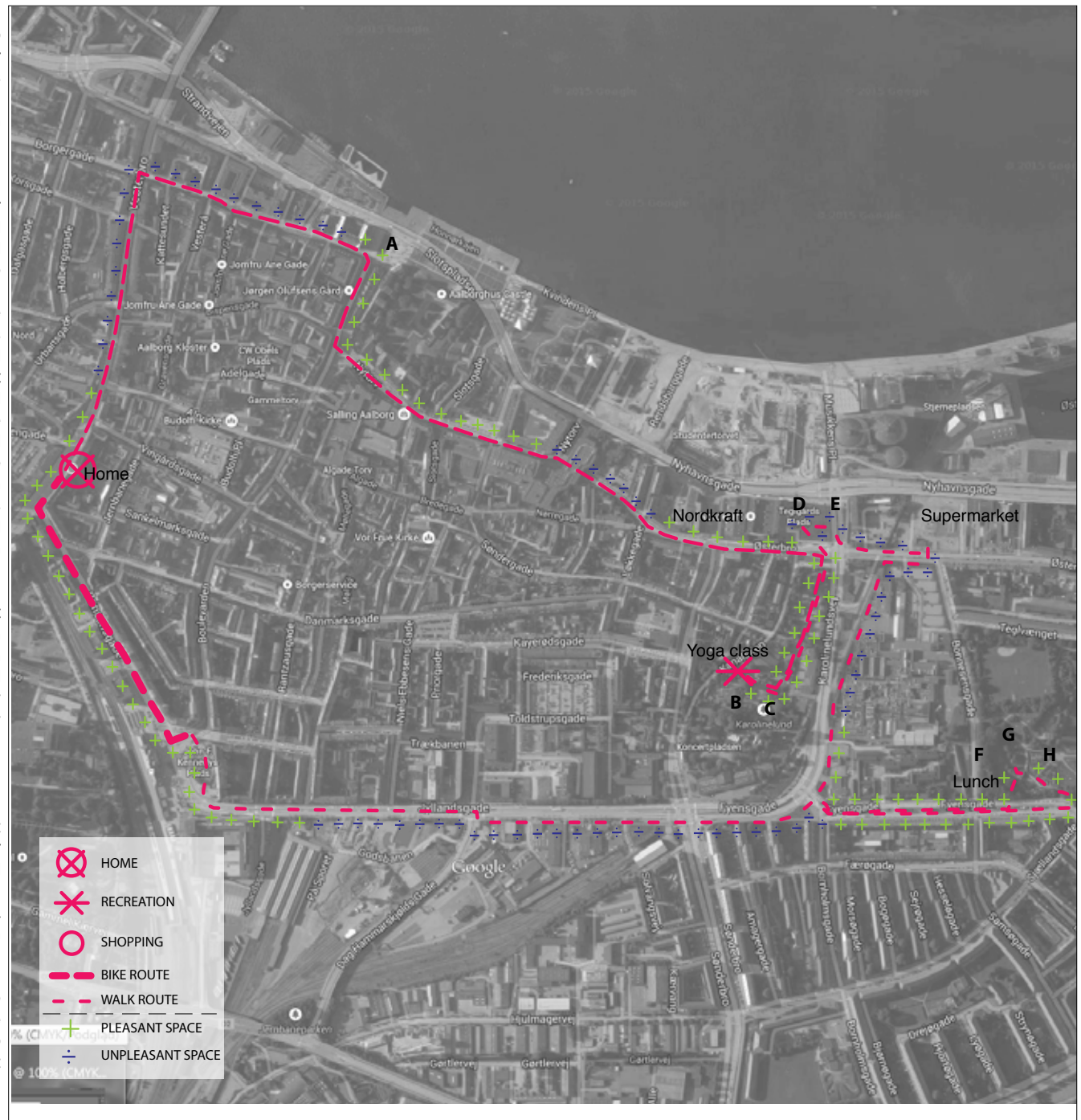
### Summary of findings :

It was a rather a different Sunday for Gosia. Yoga is a weekly activity for her, but the weather was particularly good and the class was performed in Karolinelund Park. It was also new because the climate allowed her and her friends to have lunch in Østre Anlæg Park. She spent most of the time on Sunday in both parks, but they were experienced in different ways. Karolinelund was an amusement park that became an urban park, while Østre Anlæg is much more related with landscape. The first one affords more activities, such as skating, urban farming, activities under a shelter and interior activities in the very creative atmosphere of Platform4 (a non-profit space that host all kind of artistic genres such as music, theater, art and architecture where people can create and develop some new skills) The second park, similar to English romantic gardens, has a more relaxed and quiet atmosphere, with people enjoying a lake and the lawn around it, some eating tables and big open spaces surrounded by nature. The shift between these two parks was experienced by Gosia, who in the first one performed this yoga class in company of a friend, whereas the other was more enjoyed in this quiet atmosphere having lunch with a couple of friends even though there was more people around.

Gosia's tracking shows really straight lines from one place to another, that represents how well she knows the space and the shortest distance between them. Although the track between the supermarket where she bought lunch and Østre Anlæg Park is different. When Gosia was asked about it she said that it was because either her or her friends are familiar with the area. They only knew how to get from one park to the other, and they walk until they reach the other end of Karolinelund and, therefore, the route that they knew. 'We will use an easier route if we want to do the same activities any other time, now that we know a little bit more the area', she said.

During the day Gosia shifted not only from one atmosphere to another, but also from mode of transportation. In the beginning of the day she and her friend biked towards the yoga class, after which the other friend came and they switched to walking mode in order to walk with their friend. After lunch, when they were heading home and this last friend changed direction, Gosia and the first friend changed back to biking. This change of transportation mode helped Gosia and her friends to create an easier social interaction, therefore the way of transport changes the relationship with her friends.

Gosia also mentioned the fact that Jyllandsgade (the street they took on the way back home) was a rather boring place to walk, only acceptable because she was entertained talking with her friends. It is not very attractive street to walk because its design, much more focused on bikes and specially cars. It is a street to go from A to B and not that much to host activities along the way.







Picture A:  
Gosia uses this space every now and then in her way to the university. She usually crosses the square with her bike to meet the harbour bikeline, while going through inner streets when the wind is blowing too hard by the fiord. On Sunday she hesitates on what to do because she didn't take the normal path, but the parallel street, although the weather was good, due to the final destination, that was not the school but a different one.



Picture B:  
Gosia does yoga on Sundays morning, but it was the first opportunity of doing the class outside. She said it was a very pleasant atmosphere because of the weather, although in the beginning she was concerned about the possibility of being cold outside because of the wind. The close relationship with nature helped her to enjoy the class and extract energy from it, as well as doing some other activities available in the park.



Picture C :  
Most of the participants in the yoga activity left after class, but tKarolinelund is a clear example of diverse urban activities. Many people stayed after the class doing some other facilities, like skating or urban farming, but some others just had lunch or chatted with friends. The different use of space created a very pleasant feeling of social interaction, according to Gosia.



Picture D :  
While Gosia was waiting for her friends, she realised for the first time about the space in front of Nordkraft and the light structure placed in the middle of it. She felt anxious because of the absence of people in the area,, but she kept thinking about the possibilities of the space. 'It was rather empty because of the absence of sitting places. Not a very comfortable place to wait' she said.



Picture E:  
The place of encounter between new modern architecture and old water tank creates a heterogeneity in Aalborg. This industrial character still remains in some buildings all over the city, but the contrast with the Musikken Hus captured Gosia's attention. She is not very sure if she likes it, but it is capturing her mind.



Picture F:  
'Sometimes the context doesn't matter if you are enjoying the time with friends. This situation could have happened anywhere else in the city', she said while describing the picture. It was Gosia's first picnic this year and therefore she was more focused on the conversation and food with friends than in the surroundings. The nice weather and the natural environment helped her feeling calm and relax, something very enjoyable in the student's life.



Picture G:  
Enclaves of nature in the urban tissue are very important for both Gosia and the city. They became places of relaxation and peacefulness away from the business of the city. The quiet atmosphere that can be found in city parks, is very valuable when people get tired of cars, constant movement and activities. It is a place to enjoy the moment.



Picture H:  
Big green open spaces create opportunities for informal interaction. It creates meeting between groups of people, even if they do not interact directly with the others. While Gosia and her friends were having lunch, a group of young people arrived and stretched a rope between trees in order to learn how to walk on the tightrope. Gosia and her friends were observing their progress while enjoying the meal, in a very loose atmosphere.



### Respondent biography:

Andrea Dynnes is a 26 year old girl, studying Urban Design at Aalborg University. She is the respondent for this experiment, where she has been tracking her route for Saturday the 18th.

Andrea is a happy and very cheerful girl, who loves to travel and meet up with her friends where ever she goes. This can be seen in her tracks for the 18th, where she was in Copenhagen, visiting some of her friends. She likes to experience the city and its places while she is there, and this can be seen in her long route through Copenhagen, where she visits a lot of special places. She has had a busy day.

### Summary of findings:

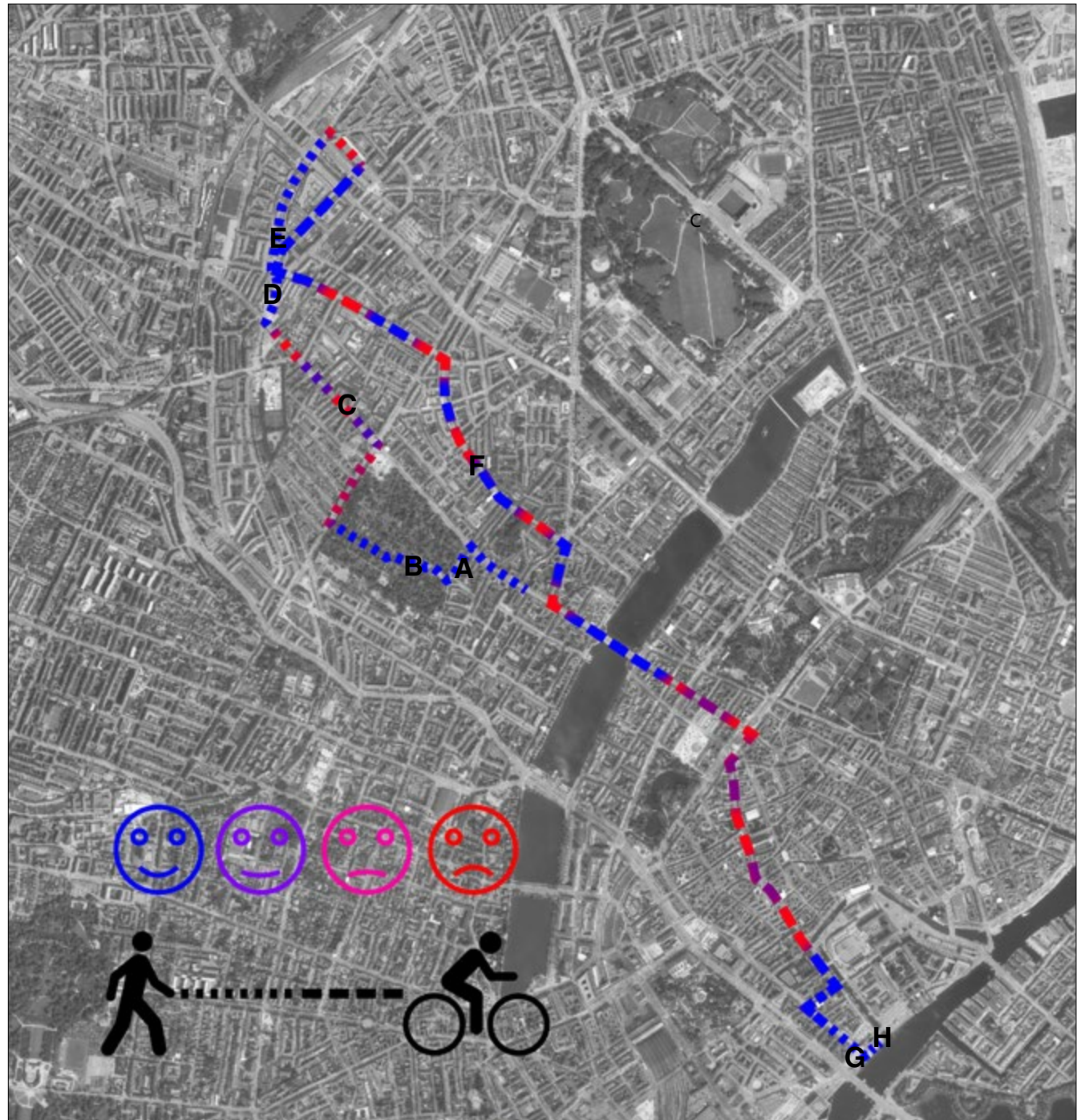
While Andrea has been traveling through the streets of Copenhagen, she has been taking pictures and thought about how the different spaces made her feel. This method is known as Songlines (Marling, 2012). In the illustration to the right we can see Andreas route and which spaces made her feel happy and comfortable, and which made her feel unhappy and uncomfortable. We can see that she has been using two types of mobility on her journey. She has been walking and riding a bike.

We can see that, while walking she chooses some longer routes. She does this to experience some sites which isn't located on the fastest route from A to B. She likes to walk longer to experience some places which makes her feel good. Then when she has to find the original route again, she feels unhappy because she realizes how long there is to the final stop. This we see between finding A and C, and after finding E. Here she walks off the fast route to experience some of the special places near her track. She only does this while walking. When she rides her bike it's the fast route she chooses.

The spots where she is comfortable and happy is mostly places designed for pedestrians or bicycles. Spot B is at a park with a lot of trees and nature. Spot D and E is at the Superkilen, This is a recreative space designed by BIG. On the bridge between the lakes and at spot G and H she is surrounded by water and this also makes her happy and comfortable.

The spots where she is unhappy and uncomfortable is in the more dense part of the city, and where there is road work. She mostly experiences these spots while riding on the bike.

To make more comfortable spaces in the city, maybe we should design for slow mobilities, like pedestrians and bicycles. We should make more parks and use elements like trees and water in more urban spaces of the city.







Picture A: Here Andrea was on her way to visit a friend in Copenhagen. She had just left some other friends, who she also had visited. They went out the night before, so she was a bit hungover. She walked along this yellow wall and remembered the park on the other side of the wall.



Picture B: Andrea went into the park and saw these cherry trees that were very colorful and beautiful. This made her feel very happy.



Picture C: After the park Andrea had to walk back to the original route. She was walking in this street and there were road work. There wasn't much space for pedestrians, and she was carrying a big bag and also she had to walk in the shadow. She got very upset and uncomfortable while walking in this street.



Picture D: Then Andrea got to the first part of the Superkilen, which is a red urban space. This made her feel happy again and she almost forgot about the bad experience in the previous street. She likes how the space is so active and there are a lot of people.



Picture E: Andrea continued walking in the Superkilen, even though it was the wrong way. She walked through the second part which is a grey space. After this she had to walk back to her original route, and this made her feel unhappy. But then she met with her friend and got very happy again.



Picture F: After some time at her friends place, they decided to go for a bike ride. Cycling through the streets of Copenhagen was alright, but there were uncomfortable situations that made Andrea upset. But the nice weather and the wide bike paths made it a good experience. Especially on the bridge between the lakes she was happy.



Picture G: Then they reached the waterfront. Here was an exhibition in the glass dome, and a lot of happy people. Even though the weather got worse, there was a nice atmosphere on the waterfront and Andrea was very happy.



Picture H: Before Andrea and her friend went into the exhibition they had something to eat.

### Respondent biography :

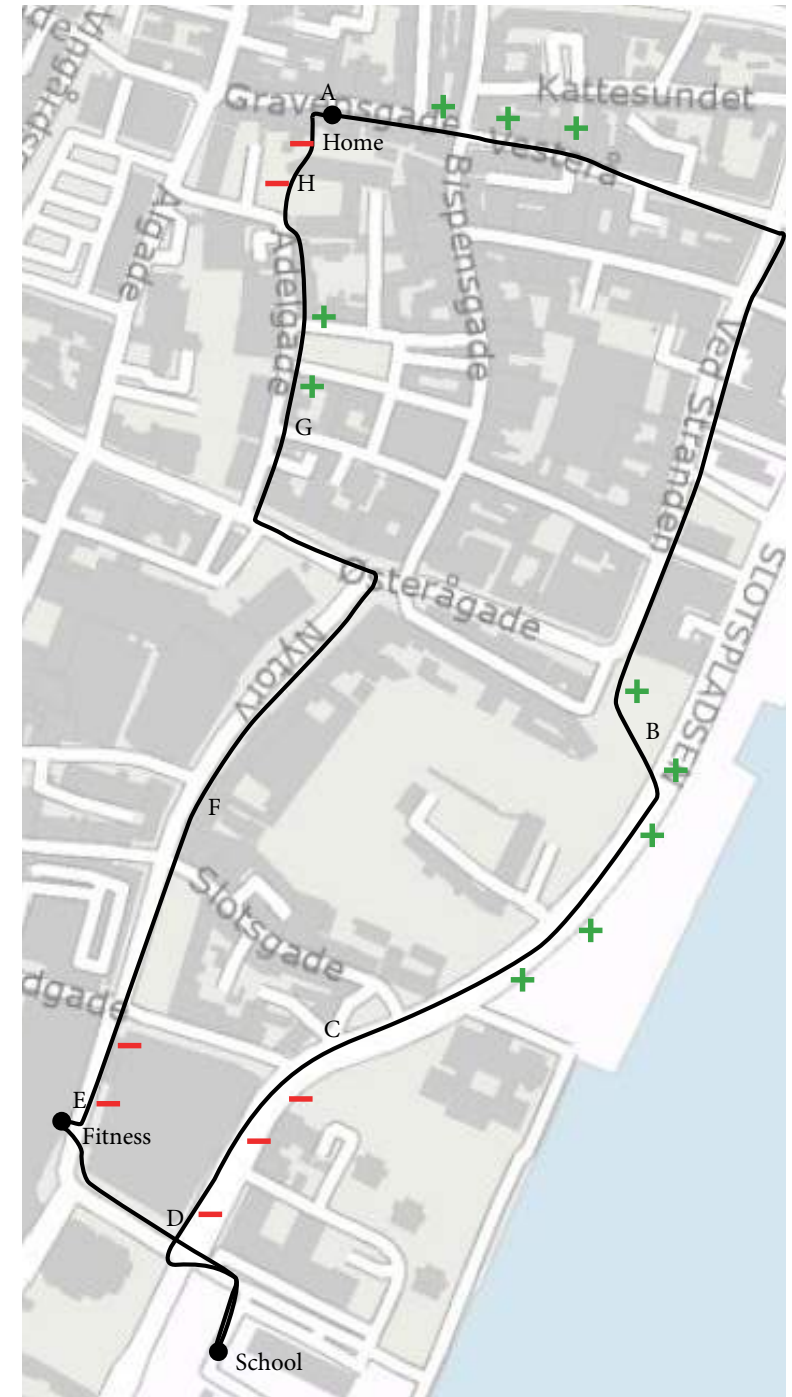
Nellie is a 25 year old danish student, currently living in Aalborg. She is originally from around Aarhus, but she moved here a few years back to study Architecture and Urban Design, and now is enrolled in a Masters programme in Urban Design at Aalborg University. Although she does not own a car, she thinks it would be helpfull to have one for visiting her family, as the bus connection from Aalborg is not that good. The main method of transportation she uses, on a daily basis, is her bike, although for shorter distances she preferes walking. She lives in a 70 sqm apartment, which she rents together with her boyfriend. She live in the city center, but she has mentioned that in the future, when she does not need to go to the center daily, she would like to live further away in a more calm and green environment, in a house closer to nature.

### Summary of findings :

On an everyday basis, the respondents use has been fairly functional, the main descriptions being about the route to and from home, and how it differs depending on destinations (whether school or the gym). Still, some experiences have popped up from her descriptions that make for some interesting discussions. Due to the fact that the bike lanes are not connected with the city center, her main route is at often times stoped due to waiting periods when she has to make sure no other cars, pedestrians or bicyclists are coming. This could be argued in the sense that the center need better bike connections with the rest of the municipal system.

Another point has been made regarding experiences along the way. The respondent very much appreciates the fjord as a good place to bike, but that it never occured to her that it could become her main route, since the deviation from her normal route wouldn't be that high. As such, an argument could be made to using the more leisure focused areas of cities as transit and transport routes, as many people, while going to their destinations, may want to enjoy the different sensations that a water-scape public space has to offer.

Another point of departure for the discussion with the respondent was also the way in which car activity influences her perception of her daily rute. Aside from a few key sponts along the route, there are a fair amount of areas where contact with cars, while not direct, is important. These types of place are described as “boring, unnatractive”, and as such pass by unnoticed. This is a shame, considering that these place are near key commercial points inside the city (the Fris shop, or Selling). This enforces the current trends in mobility and mobility uses to try and minimize the impact cars have on city centers. If, for reflection purposes, cars would be partially removed from the equation, Nellie feels that these spaces would benefit from more pedestrian attention.







Picture A:

The respondent is leaving home which is in the shopping street, and therefore she has to look for pedestrians or other bicyclists especially in the cross section from Gravensgade to Bispensgade. She likes the width of the street as it is possible to pass each other easily, and look into the big windows of the shops while in motion.



Picture B:

Looking out for cars coming from behind and ahead while crossing at Toldbodplads. The respondent really likes the place here because it opens up and feel the first sunbeams in the morning.



Picture C:

Biking on the biking path next to the busy lane with morning road users, feels safe and is used by a lot of bikers in the morning. From here there is both the view to Utzon Center and daffodils on the other side which just started to peep up.



Picture D:

The last part of the street can sometimes feel quite stressful because of the heavy traffic in the mornings. The red light has to make her stop twice before she can enter the school on the left side.



Picture E:

Going home from school the respondent is choosing another route than the one in the morning, because of different errands, as after school the route most days go to Fitness World in Friis. After that continuing on Nytorv where the street is shared with cars, and therefore there is narrow space for bicyclists, but just for at short distance before it widens again.



Picture F:

Further at Nytorv the street widens more, and also the fact that this part is closed for cars, makes it more convenient to be a bicyclist in this area, though the respondent has to look out for pedestrians and busses and the fact that people are seeing it more as a shared space, and therefore she has to be more aware as a bicyclist.



Picture G:

Taking a side street from Østerågade the pavement changes from asphalt to paving stones. Bigger stones are placed, which therefore invites to using it as a bikelane instead of the bumpy ride on the paving stones. Furthermore the street is closed off for cars and is therefore making it a calming route.



Picture H:

The last part before the shopping street the respondent has to jump of the bicycle to go up the steps, in the narrow passage. It is not a really pleasant last part of the trip, as many people are using the passage for trash and toilet in the weekends when people are on their way to Jomfru Ane Gade, but it is the fastest one. After climbing the stairs, she has to drag her bike the rest of the way as the shops in the shopping street are open in the afternoon hours.



## Respondent biography :

The respondent, Aleksander Borg Pedersen, derives originally from Copenhagen, Denmark, with the age of 25. His educational background is centered around interior design which is the reason for why he moved to Aalborg in order to continue his studies in Urban Design at Aalborg University. In his spare time he enjoys urban exploring, working out, traveling and spending time together with his friends. The respondents' nationality is Danish, but he was born in Norway and has also lived in Italy during his bachelor degree for three years. This is due to a fascination for other cultures and a general curiosity. He grew up in the northern suburbs of Copenhagen, which is referred to as 'The Green Area' (Det Grønne Område) due to its curvy landscape and green fabric, consisting of large, old oak and beech trees.

## Summary of findings :

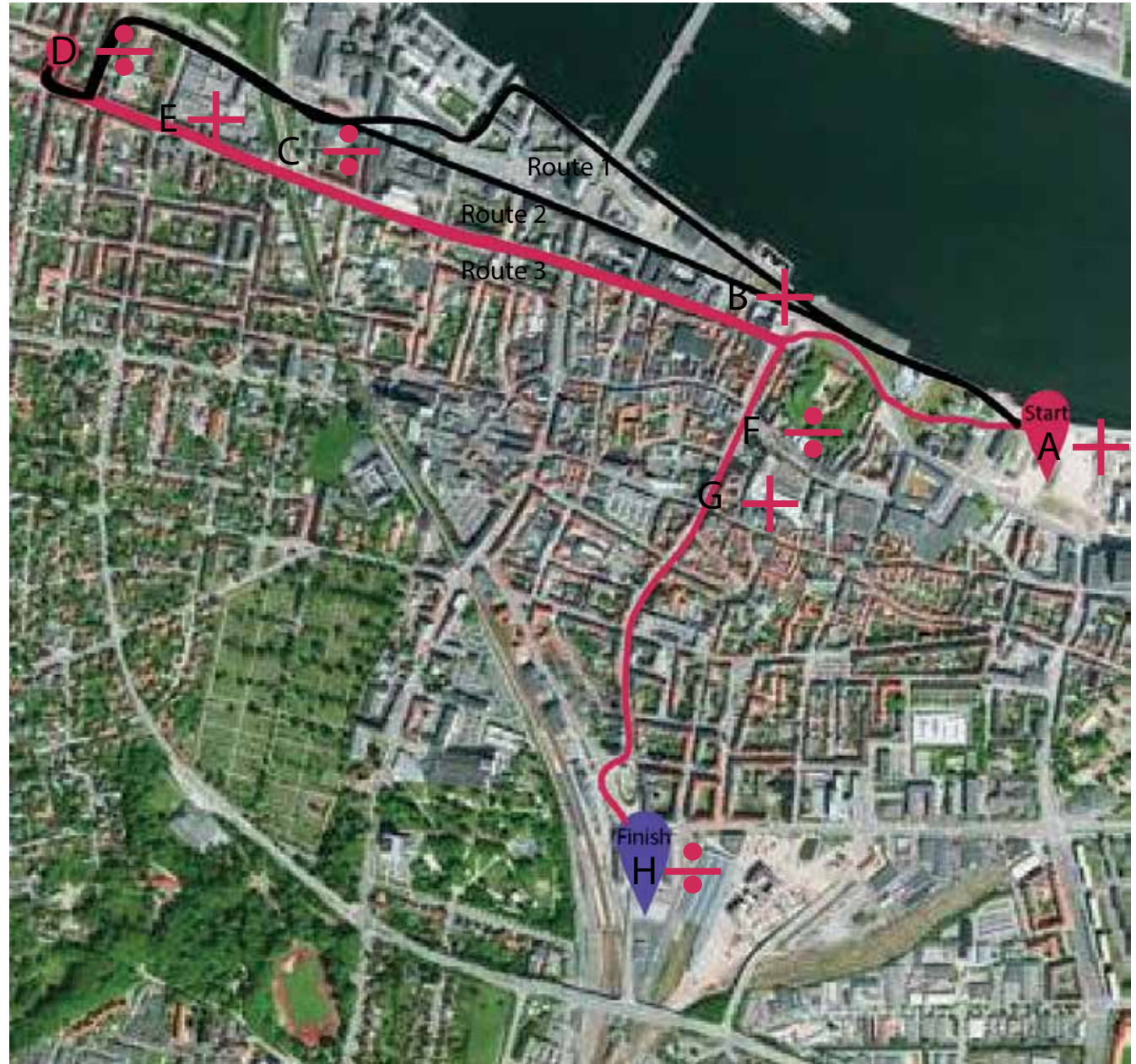
The respondents' route as we see it on the map is not necessarily his everyday route. His choice of the course is very much depending on the weather conditions. On windy days he might change the route from bicycling at the water (route 1) to a route which is more protected from the wind (route 2). Again on other days he switches to the route we can see on the map. The course is thus a very spontaneous decision and is never planned in advance but rather in the moment he steps outside to depart.

Courses can often be spontaneous routes to navigate you through the city. Depending on the mode of transportation system people can either be more flexible when for example riding the bike or walking or be more fixed when riding a car, bus, tram or train. As a part of the soft traffic more parameters such as the weather conditions and the density of traffic can affect your route. When on the other hand sitting in a public transportation system people will have more or less no influence on the route. The choices of transportation system as well as the trafficable parameter play therefore a crucial role for choosing or changing the route while moving through the city.

In terms of urban spaces it can be concluded that the respondent prefers areas which are equipped with benches and proper sitting facilities. Again the weather conditions play an important role for the respondents' usage of places since open and windy places are rejected or only used as a transit space.

Also places which are under development attract the respondents' interest because the process for him is a fascinating part.

Due to the city's age and history it creates according to the respondent a great quality to enhance together with newly developed buildings and urban spaces since these are the elements creating social interactions. This transformation of the city from an industrial city to a recreational and intellectual city is a crucial turn for the city's identity.







Picture A :

This place is a part of the respondent's everyday life since he goes there every day. Although this type of architecture is not necessarily the respondent's favorite it still is an interesting place for him due to the situation of the development. The respondent's perception about this place is positive caused by his interest in the pursuit of the development.



Picture B:

This is an area which the respondent experiences positively while passing through. For many people this place invites to stay and rest whereas the respondent enjoys it by looking at it and walking or biking through where the wind plays an important role for his use of this space. According to the respondent the area has done a lot for the city. It has created a cultural identity.



Picture C:

This is one point of the respondent's route which he perceives rather negatively. A lot of parameters such as wind, a lack of shelter and a non-aesthetical pleasing expression influence his opinion of the place. The most pleasing point is on the platform where a nice view of Aalborg and some of the city's landmarks.



Picture D:

This is the respondent's street where he lives and therefore spends a lot of time. Nevertheless his experiential perception is pessimistic due to several parameters. He describes it as a very windy and boring street. Another negative parameter is his personal experience of a conflict with a car that almost ran him over. In general he says that cars can't figure out to navigate through this area.



Picture E :

This infrastructural intersection is also a part of the respondent's everyday life since this is the place where he buys groceries. A part of it has lately been under constructional development and resulted in a new pleasant urban area.



Picture F :

The respondent describes Nytorv as a hybrid and remarkable area. Although he weights this place rather negative due to unusual urban elements such as the lamp posts. Even though it is a nice place to walk through he says it has a great lack of sitting facilities. The existing sitting places are now facilitated by retail establishments such as McDonalds, Joey and the Juice and Baresso.



Picture G :

Further on the route we find Jens Bangs Stenhus which the respondent describes as a remarkable building. It is interesting for him that the city contains such old buildings in the middle of the city center. According to his personal perception it is a landmark for Aalborg. Since Aalborg is an old city and was wealthy back in the history these are the reasons for the old buildings which create great qualities for the city.



Picture H:

Even though the bus terminal and the station are two separated infrastructural nodes the respondent perceives them as one. Especially the bus terminal behind Kennedy Arcade lacks of basic urban equipment such as benches and trash cans. Especially due to the fact that this space is primarily used as a transit area but which could be expended to more.



## Experiment I : Urban Songlines and GPS Tracking

Katrine is a 25 year old girl from Aalborg, Denmark. She has grown up in Aalborg, and she and her family has lived several places, Boulevarden, Grønlandstorvet and Sønder Tranders. The different places she has grew up gives her good acknowledge about Aalborg as a city centre, but also the neighbourhoods out in the periphery. Most of her daily life consists of school, work and spending time with her boyfriend, friends and family. And most important her turtle Mijammo.

During the tracking time Katrine spends her Saturday with a trip to her family in Gistrup and Sønder Tranders. She often run or bike to her parents, around once a week. The visit it to often to borrow the car, eat or meet her sister and brother. The parents house is the meeting place for Katrine and her bother and sister. Living close to her parents means a lot to her, and if she needs help with something, she can always go to them. This day she has run out there, and meets the rest of the family for a lunch.

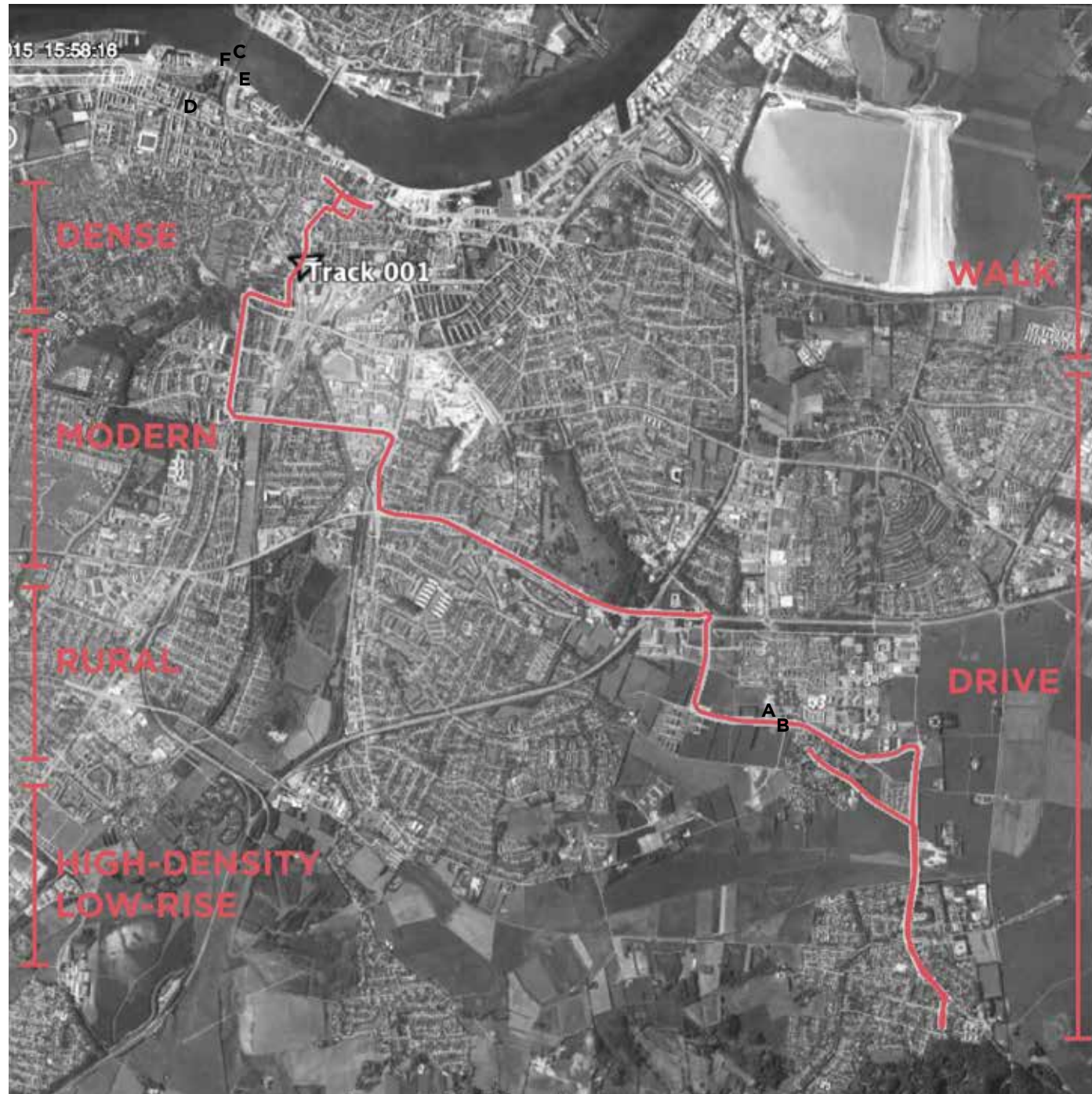
When a ask if she can explain what kind for neighbourhood her parents house is located in, witch goes under traditionally residential houses, Katrine explains is as small houses and narrow streets where cars automatically drive slow. She reflects about the architecture of the place, that really makes the neighbourhood charming. The bumpy cobblestone road is something she combine with the area, and the is a lot of memories to the place. Quote: is a area she really loves.

After lunch, Katrine and her brother drives their sister home to Gistrup, and continue the drive into the city centre. Her brother is driving, and Katrine points out that if she were driving, she would chosen another way. But the destination is selected on the basis of finding a free paring lot for the car so they can walk around.

Katrine walks in the city with one errand, buy stockings and shampoo. Her route in the city centre is formed by the different stores, she knows exactly where the stores she what's to go to, and thereby the flow of her trip. Although she says that if she had a different errand or she was walking whit someone, she properly choose different streets to walk.

On her way home through Boulevarden Katrine chooses sidewalk after where the sun is shining. And on this trip it was the east side, and therefore she ended up buying some candy in the kiosk.

I added a theme for the different area Katrine moves through during the tracking time, because I think the different types of area is quite divers and characteristic in their own way. To compare it to my daily life, I usually surround myself with the same surroundings.







Katrine's parents' house in Sønder Tranders is an area with old residential houses. She describes it as very cosy and nice atmosphere. The low houses and the cobblestone road creates a low speed.



The house is "around 100 years old", and used to be a farmyard. Katrine describes it as a very charming house and backyard. The house has its original shape after the farm. The garden is very beautiful, a lot of greenery, trees and flowers.



Algade has a lot of shops, and Katrine knows exactly where the ones she wants are located.



When Katrine walks through Boulevarden towards her apartment, she often looks up at the spires at the building.



A lot of the charming brick buildings have a lot of spires on the corner. And Katrine notices them all because they look different.



The plaza at Louisegade is a transit area for Katrine. But she thinks it is very nice and beautiful trees and design. It is not often people sit there, but it is open and comfortable to go through. And sometimes people sit there when the sun is good.



### Respondent biography :

Anne is a 25-year-old girl, originally from Holstebro. Anne moved to Aalborg for studying architecture and design at Aalborg University. Anne lives alone in her apartment in the citycenter of Aalborg. Anne has no kids and no car. She prefers to live in the citycenter, but she uses the green parks and arrears for recreation and motion. It is important for her that her home is close to school and shopping. Anne prefers to walk instead of going by bike. That is why she want a home which is located centrally.

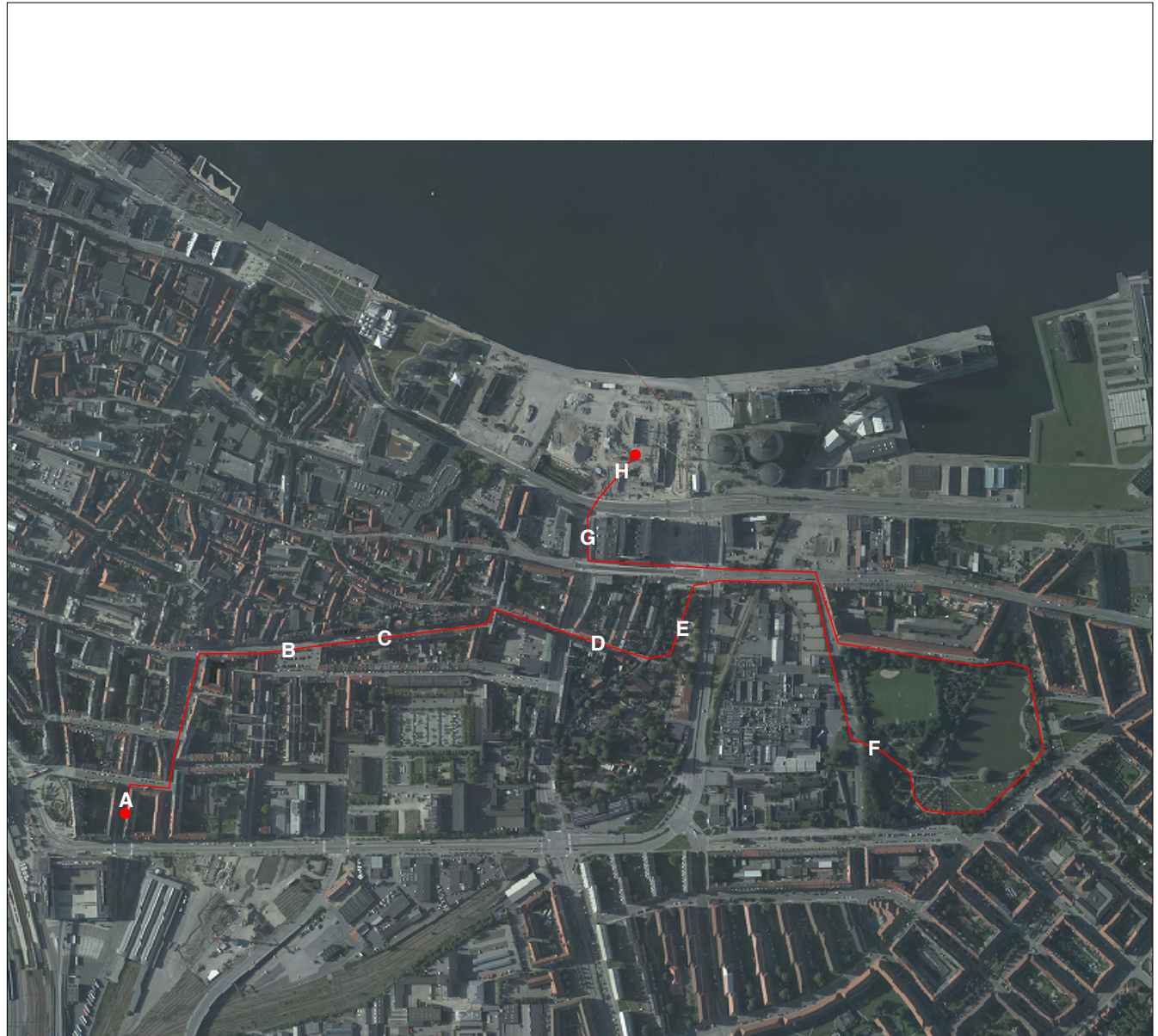
### Summary of findings :

*Anne is a city girl, she loves to live in the city centre, and she loves it because of the closeness to everything; school, work, shopping and other facilities. The green areas in the city are also attractive to Anne, she uses the green areas for; relaxing and recreation, running and walking. The green pockets in the city are free of cars, and that is a quality. Aalborg is a green city compered to other cities.*

*The old buildings in the city are charming and create and good atmosphere in the small streets, the histories of the old buildings are creating an identity to the city.*

*Many streets in Aalborg are equipped with trees and benches, as a result of that there is a lot of urban life.*

*Aalborg is using art to attract people to certain areas. The art on the pathways in Karolinelund is attractive to Anne, and she uses Karolinelund and its art as a break from the pulsating city life. Anne likes Aalborg. Aalborg has a certain spirit, created by old buildings, green parks, the water in Limfjorden and the people who live in Aalborg.*







Close to Annes home are a lot of old building located. The old building creates a well-proportioned room together with the road and surroundings. The old buildings have a lot of small details. All the houses are different from each other and there are always a lot of cars parked in the streets.



Anne takes a shortcut through Frederikstov, to save some time on her way to work and school. The dimensions of the space fit the amount of traffic. Socially marginalized people often use Frederikstov as a place for meeting.



The trees in Danmarksgade are creating an atmosphere different from Frederikstov. The buildings in Danmarksgade are unmaintained then other places at Annes route. Cars and bikes are constantly negotiating while they are in motion.



Anne thinks that the public space between the buildings is nice and cosy, the built environment is in low scale. The parked cars are creating an edge between the buildings and the road.



Anne uses Karolinelund for motion and a green break, because there are no cars and no car traffic. There are always interventions going on in Karolinelund, "and that is exiting". Anne likes the art on the pathways. Karolinelund is a green pocket within the city.



There are a lot of entrances to Østerlæng, but Anne always uses the same. Anne thinks that this entrance is a good place for distribution of people into the park. It is a nice place for interaction and it is a portal to the green area.



Anne goes by Norkraft on her way to work. She thinks that it is a nice passage for soft users. The buildings around the passage are old and iconic. There are always a lot of life in front of Nordkraft.



The space close to Musikkenshus, has a bad microclimate; a lot of wind and noise are appearing. There is a huge diversity in the height of buildings, and the high edges created by concrete is a barrier for bikes and pedestrians.



### Respondent biography :

Maria is a 24 year old Urban design student. She lives in an apartment with her boyfriend in the eastern part of Aalborg. From here she has her daily routes . This experiment covers Marias movement in the area in 3 days (friday, saturday and sunday). The green route is her daily trip to and from the university. The yellow is a trip to the shopping mall, Clty Syd while the blues is a day where she went grocery shopping and running in the park. Marias background as urban design student gives her the tools to understand and reflect upon her routes in a different way than the average citizen. However she explained how this experiment brought forward a lot of things that she have not thought of before.

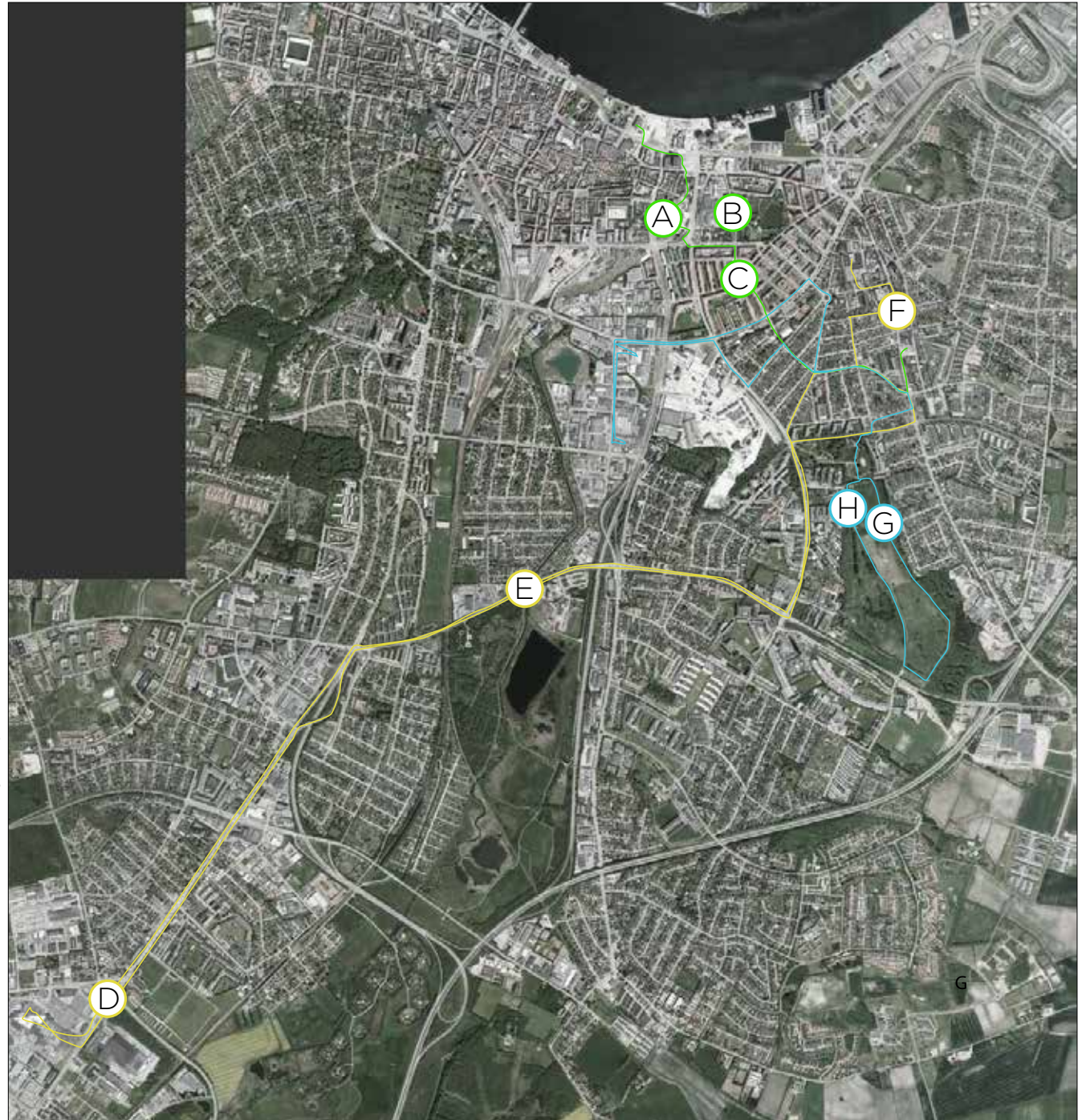
### Summary of findings :

Marias observations are all done either as pedestrian or cyclist.

Maria really enjoys the little green pockets of the city. Although some of them might be small or places that she just passes by it gives her a sensoric experience that she allways enjoys. Being able to see the flowers blossom and the seasons change is something that she pays great attention to. And even though her garden in Karolinelund is not much she enjoys stopping by on her daily routine to check on her plants. To her it is a big hobby that allows her to stress off her in otherwise busy day.

In addition to this it is clear from the experiment that Maria has her daily routines and routes that make up a great part of where she moves. Although Maria went as far as City Syd she made a big deal out of telling how annoying that trip was and that she hardly ever moves in this part of the city. Even though the sun was shinning she hated riding that far on her bike on big roads designed for the car. Maria enjoys the little scale of small buildings or trees which lets her feel safe when especially when she is on her bike. And while she is often on the move when rushing through her day she takes the time to stop and appreciate these little things.

In this sense a good urban space from Marias point of view is a place where she feels secure on a road that is designed in regards to both cyclist and pedestrians. She appreciates streets with a smaller scale as she finds it cozy. And most importantly Maria finds value in even the tiniest green elements in the city. So although a small tree or even a flower might not seem as much Marias gives a lot of value as it brings forth the senses when she moves in the city.







Maria is part of the urban garden project in Karolin-elund. Here she has a tiny garden where she grows her own plants. She enjoys spending time and checking on her plants. This day she stopped by on her way home from school to see how her garlicks were doing. There is a very coxy atmosphere around the urban garden movement that she enjoys and often strangers come up and ask about her plants and the project



Maria drives by Østre Anlæg every day and on this part of her route she likes to have nature on one side while being 'protected' på the parked cars. Her she can see how the spring is letting the trees and flowers in the park blossom as well as hearing the birds singing as she drives by



Maria considers this a very dangerous spot as cars often ignore the stop line. She has almost been hit a couple of time and has seen several accidents in the crossing. Therefore she always pays attention when cycling here. At the same time this is a very windy spot which often annoys her when she is on her bike.



Maria hadly ever visits City Syd but as she had to get something special she had to go. The area is designed for cars and very unpleasant place to ride your bike. The big signs reminds her of 'Learning from Las Vegas' and really encourages cars to move through the area in speed. So here Marias background as urban design student plays a great part of how she sees and interprets tjhe street



As Maria crosses Østerå she gets a sense of being in nature while riding her bike on a busy street. She really likes how contrasts meets and how there is a path connecting the river to the road.



On her way to grocery shopping Maria walks through what she describes as "old Vejgaard". When she walks down this particular road she gets the idea of being in a village. The small scale of the houses brings forth a cozy atmosphere that she really enjoys.



Here, Maria is out running in the park close to where she lives. She enjoys running in the park and sense the nature. This is exact spot is the end of the path that she runs so therefore she is usually tired when she gets to this place. While some might consider the big yellow chimney ugly she likes it as it is a landmark that woks as point of orientation for her.



...another landmark in the area is the observatory. She likes how it lays in the open field and the shape of the building that clealy reveals its functions. The obersavtory is located on the highest spot in the area and therefor this spot also has a great view of the city.



### RESPONDENT

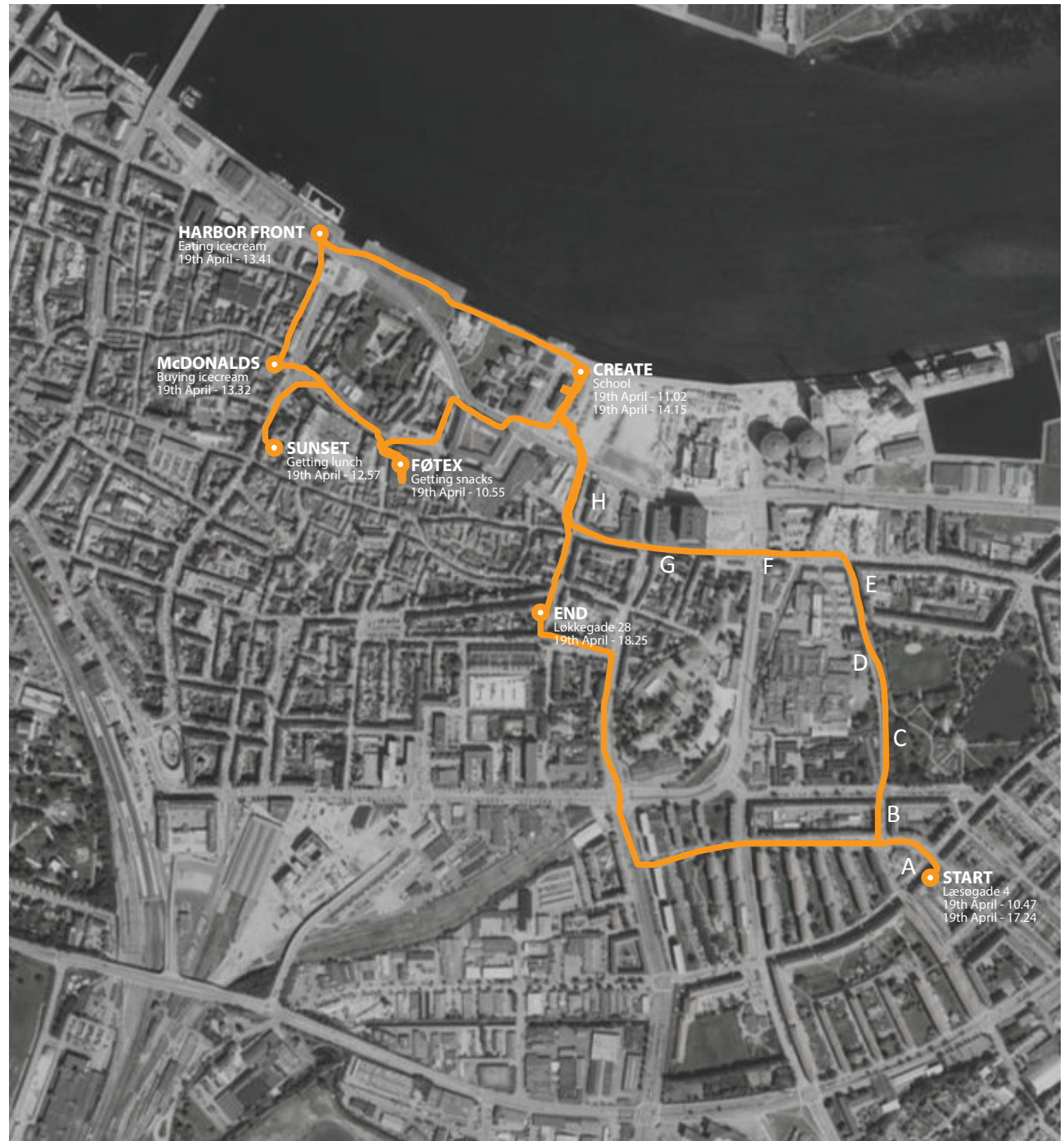
The respondent is Villads, a 24 years old Urban Design master student at Aalborg University. He grew up in Viborg and moved to Aalborg four years ago to study. Currently he lives in the eastern part of the inner city in a shared apartment with a friend that he knows from back home. In the spare time, Villads works at the restaurant Flammen, which is located at Østerågade in the city center. While not working or studying, he enjoys spending time with his girlfriend Christina. She lives in the city center, where he often stays. Furthermore, Villads is involved with the university football team and he likes to run. To get around in the city he usually transports himself by bike or foot.

### SUMMARY

Villads used the city to his own advantage. He has regular routes and routines, which he follows every day. Aalborg is not a big city, but the interview with Villads shows that he lives his everyday life in just a small part of the city. The school, the apartment, his girlfriend and spare time job are points, which together create the outline of the district that Villads moves in on a daily basis. Without a purpose, he will not leave this zone. A football match or a good party can lure him out of the comfort zone. Otherwise, all the need is there and in a distance that he can walk or bike, which he prefers.

Villads prefers an efficiency and direct way from A to B. He attempts to do daily duties such as shopping on the way and avoids the busy shopping streets with many drifting people, which will be in his way.

The fact that the school is located in the city center makes it possible to use the city as an integrated part of the study life. It is easy to go grab a coffee or to buy lunch, and a nice sunny day calls for an ice cream at the harbor front. You can say that the location of the school influences the city in terms of students using the city center as a link in the everyday life.







Super Brugsen in Øgadekvarteret is located close to the apartment where Villads lives. He associates this with being almost home, and he often shops here.



On the way to school, Villads rides his bike along Samsøgade, which is in poor shape. The holes in the pavement constitute obstacles, which might create dangerous situations. He finds this ignoring.



The church tower rises from the open recreational park Østre anlæg. Villads sees the tower as an orientation point, which he mostly notices on his way back home from school. The church bells let him know what time it is.



The bicycle path is located on the edge of Østre anlæg. Villads enjoys to ride along the park, where birds are singing and the sun breaks through the leaves of the trees.



Once a car door was opened in front of Villads at this place. He always thinks about the accident while biking here. This creates an unsafe feeling even though the bicycle lane is clearly defined.



At the intersection in front of Nordkraft, both cars, pedestrians, and cyclists cross. This creates an environment with a lot of interaction and life in contrast to the smaller streets that Villads moves along on the way to school. He sees Nordkraft as a landmark in the area.



Next to Nordkraft, he moves through a shared space, which seems squeezed in-between the buildings. Villads finds the space difficult to navigate through in terms of the lack of defined lanes. He always checks the clock on the way.



From Løkkegade, the school is visible. He has reached the destination.

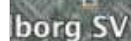


Norwegian living in Ålborg, residence in the centre on Danmarksgade 28.

### Summary of findings :

*After his run Lars and his girlfriend Ida walks towards the public park of Karolinelund. They follow the pedestrian path along Dan-  
marksgade and prefers to walk on the side with the most sun, but  
have move back and forward a couple of times due to construction  
along the path close to Netto.*

*Lars feels pretty relaxed in the park, as the programming of Karolinelind is relaxed and random. He gets around a lot and I get the understanding that he likes to take advantages of the public urban spaces and activities the city has to offer.*







Picture 1 : Photo taken during the along Øster Å stream after passing Gabriel site. Lars enjoys the increasing nature as he follows the stream.



Picture 2 : This photo is from the fair end of Øster Ådalen where the wetland opens up landscape, he values the space and the fresh feeling of the wind.



Picture 3 : Lars notes the lower houses as he gets closer to Kaolinelund.



Picture 4 : This moment is from the entrances of Karolinelund. Lars specifically enjoying the bit random mixes of functions and activities in the park.



Picture 5 : They find a spot where they decide is good to stay and for lighting the grill.



Picture 6 : 'Uhm.. grilled food is the taste of summer'



Picture 7 : The open space makes room for playing.



Picture 8 : Lars notes the blossom of the flowers as a sign on the season is changing.



### Respondent biography :

Lærke Essemann Jensen, 23 years old.

Lives in the centre of Aalborg, at Algade 28.

Studying Urban Design at Aalborg University, works at Musikens Hus at the harbour front.

Primary mode of transport is the bike.

### Summary of findings :

The blue path illustrates Lærke traveling from home to work on a Sunday afternoon. From the interview, Lærke tells that this trip is just moving from A to B. She is a bit late for work and she wants the fastest and easiest way.

The chosen route is through the pedestrian street, Algade, where it is prohibited to bike in the daytime. If biking, the speed is limited to the amount of pedestrians in the street. Furthermore, Lærke tells that the paving in the end of Algade is really bad.

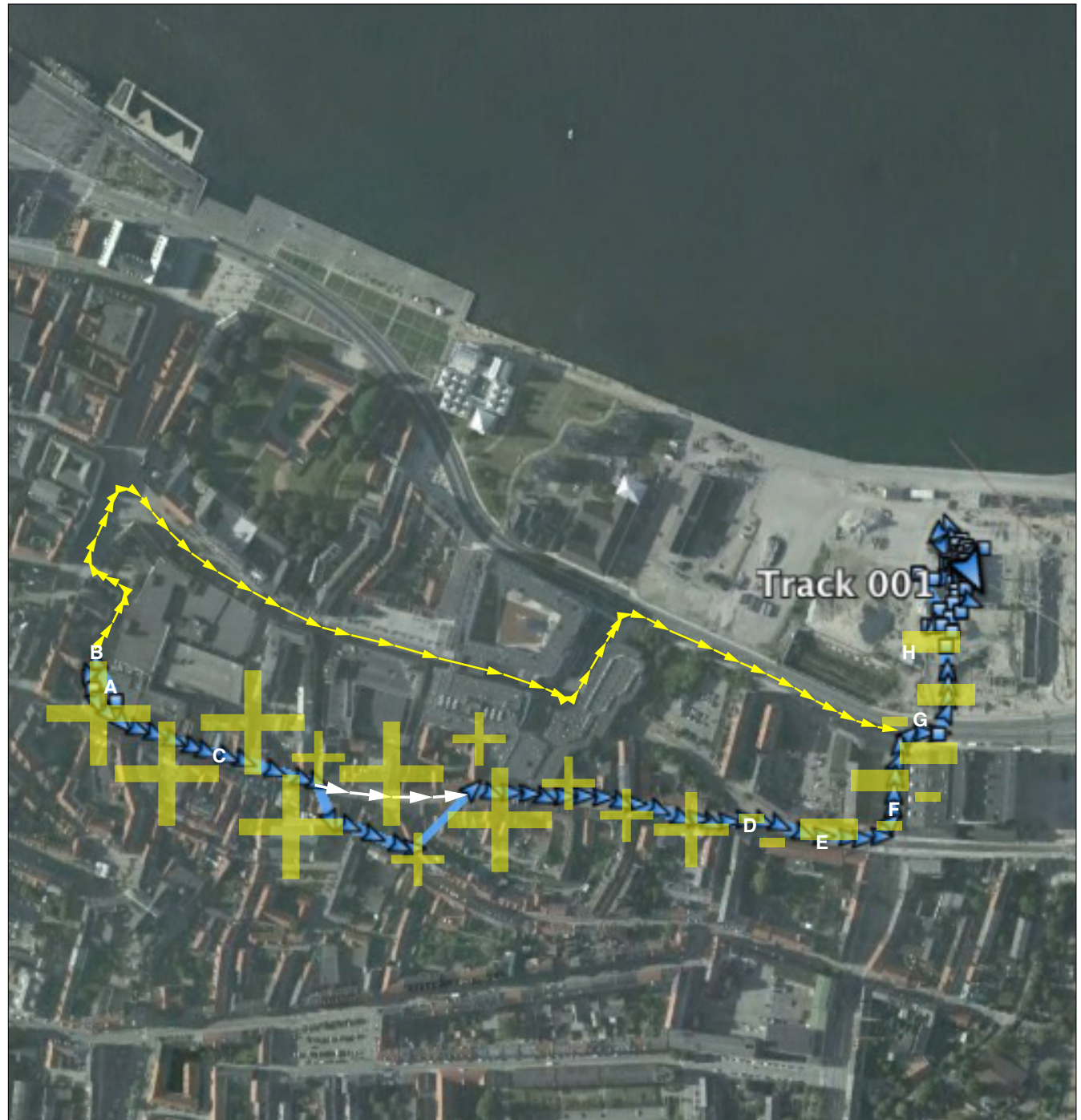
The yellow path represents the correct bike path from Algade 28 to Musikens Hus. There are three light crossings on this route, but it is possible to bike faster.

Even if the blue path is prohibited and has some difficulties, this is the chosen route. Lærke says it is because this route is the nicest and most pleasant. The buildings are not so high along Algade, and she feels a greater belonging to the street.

The yellow route feels slower because she has to bike in the opposite direction of work before she comes down to Nytorv.

When she comes down to Nordkraft and Musikens Hus, the buildings are taller and she does not longer feel the same belonging and pleasant atmosphere.

From the end of Algade to Musikens Hus, the only focus is to get as fast as possible to work.





Picture A :  
Tracking at home. Enjoying the sun at the terrace.



Picture B :  
Picking up the bike in the backyard.  
Tall buildings block the GPS-signal and create errors in the tracking.



Picture C:  
The rebel in action - biking down the pedestrian street.



Picture D:  
The sun reflects in the windows and down on the street. This creates a warm and pleasant atmosphere.



Picture E :  
The buildings are two and three stories tall. Lærke says this is important for how she experience the space.



Picture F :  
Nordkraft. The road is in the shadow of the tall buildings.



Picture G :  
Crossing Nyhavnsgade in front of Musikens Hus.



Picture H :  
Parking the bike outside Musikens Hus.  
Ready for work!



### Respondent biography :

The respondent is a young woman at the age of 22. Her name is Marianne Vinum and she is a student, studying her master program Urban Design at Aalborg University. Marianne moved from Copenhagen to live and study in Aalborg less than a year ago. Being in Aalborg for just a short period of time she is staying in a one-bedroom apartment in the center of Aalborg. Furthermore, she works part time as a swim instructor and enjoy swimming herself or going out with friends.

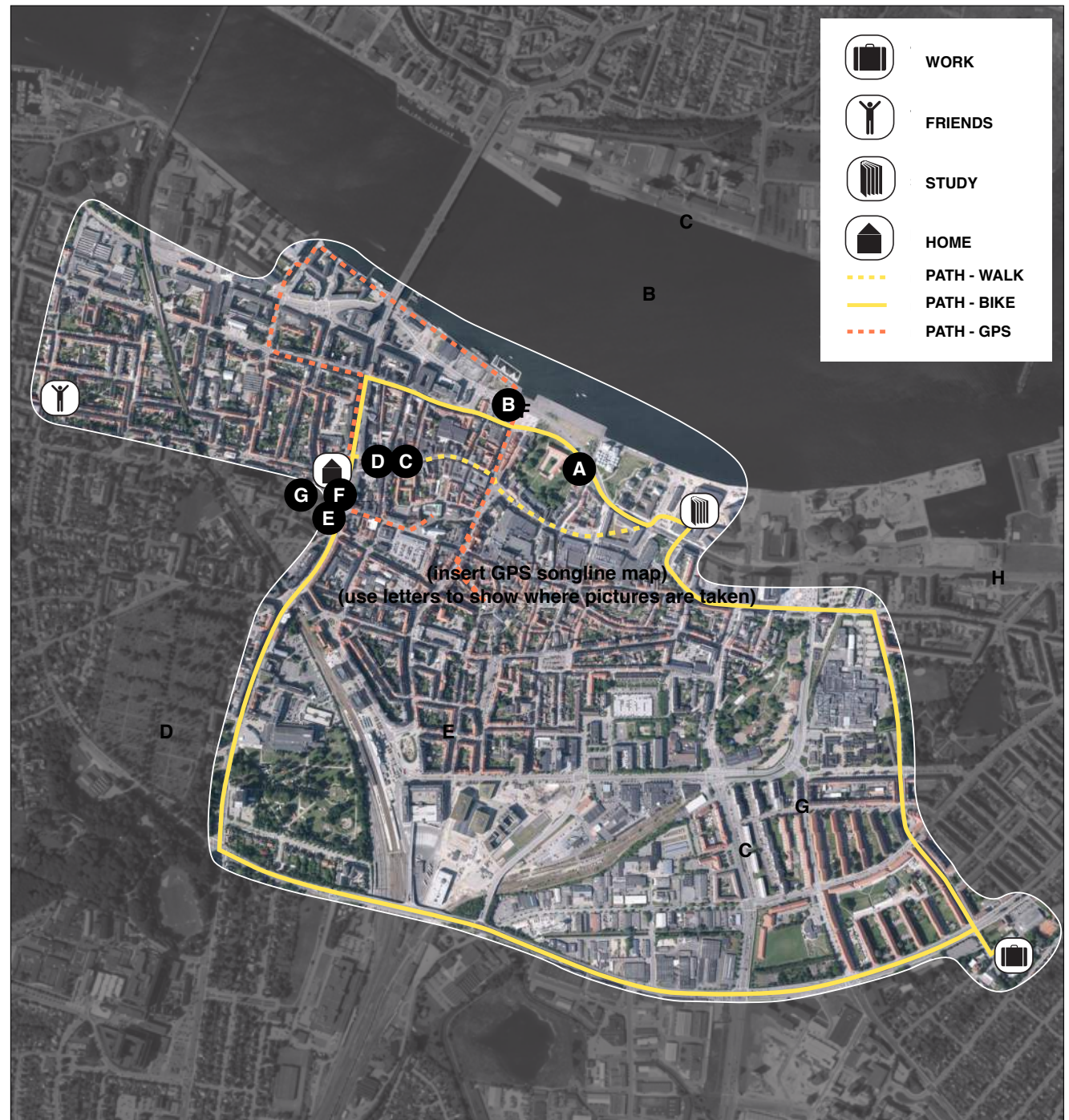
### Summary of findings :

Marianne's songline is presented in two parts. Primarily we view the orange path, which is a GPS tracking of her movement through the weekend and secondly the yellow path that is her daily movement during the week. The yellow path connects her to home, university and work, while the orange is motivated by more spontaneous moods and in a situation where she is together with friends. Comparing the two paths it show that she is avoiding her weekday path. In the interview she explains that she and her friends were looking for some icecream and then ended down by the harbor. The harbor is by her opinion a good place for leisure. In the GPS tracking you will find that she is walking the streets of Aalborg, which has shopping, café and outdoor leisure/sitting. These places are very crowded – especially in the weekends. It can be assumed that this path was chosen because of the programming. Programs are:

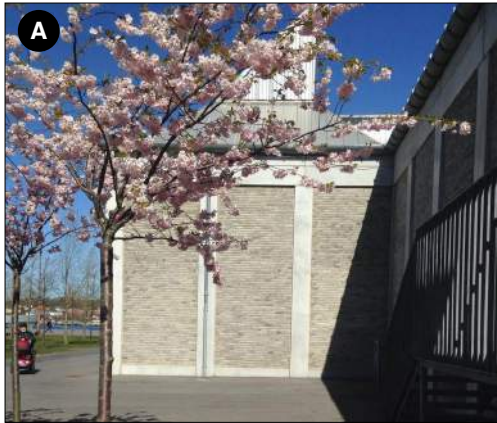
- Leisure by the water
- Eating and drinking
- Shopping
- Outdoor activity

In her interview she confirmed that she enjoyed seeking cultural experiences and leisure in her spare time. Opposite to the weekend we view the yellow path of her everyday movement. These paths are focusing on how to get from A to B. Marianne enjoys walking in the city centre but in the afternoon she try to avoid it when she is busy. She changes between walking and biking to get around in the city. In the afternoon on her way home or to work she will be trapped by the slow pace of the people walking there and that is why her path goes all the way around the city centre, to the other side of the station (Over Kæret) or to the eastside (Østre Anlæg), to get to work. It is must faster to take this path because there are not that many stops. From another perspective it is not a pleasant trip either. On the fast pace roads you are competing with the cars and there is a lot of noise.

Based on this observation one could reflect upon how it would be to make a design intervention where the bikes would have a better domain inside the city. It could be by expanding the notion of shared space or by making a fast pace bike lane.







Picture A : UTZON CENTER

Picture A is taken from the backside of the architectural museum, Utzon Center. The building is very unique and compared to the old architecture in the centre of Aalborg it stands out. Marianne goes by this building almost every day on her way to the university. What is noticeable is the pink spring flower that makes a contrast to the grey façade, which she has captured in this photo.



Picture B : JOMFRU ANE PARK

Jomfru Ane Park is an attractive place to hang out and especially in the summer. It is in the city centre but you can still feel a private atmosphere because the level of the park has been lowered. If not to stay it is generally good experience to walk by because there is often activity in the park. People are playing soccer, basket, fishing, running, bathing and drinking coffee to name a few.



Picture C : SHOPPING STREET

The shopping street is on the way to the university and is nice to walk in the morning when there is not that many people. It is more quite and there is shelter from the wind. There is a lot happening in street level in the exhibition windows and it changes every day, month and year. In the shopping street there is interaction with other people.



Picture A : THE BULL

Centerpiece of this picture is the bull. It is a sculpture placed at a central crossing on Vesterbro. The bull has become more than a sculpture, it is a local node for people in Aalborg. Marianne chose this picture because it is close to where she lives and a way for people to find her place. The bull is a landmark and an object to navigate around.



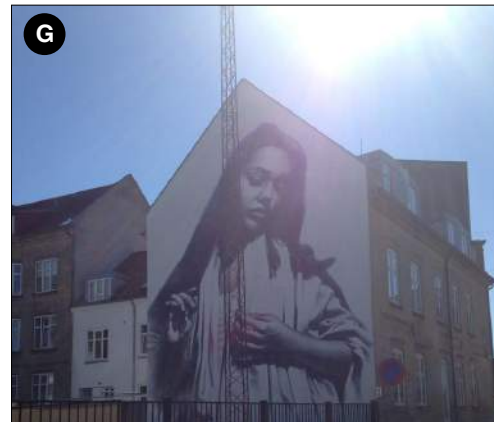
Picture E : VESTERBRO

Vesterbro is one of the main streets of Aalborg and also an every day occurrence in Mariannes daily routine. She passes by Vesterbro on her way to the university, her job or grocery shopping. She likes this street, though there is a lot of cars and noise, there is always people nearby and it makes her feel safe.



Picture F : HOME

This façade is a picture of the building Marianne is living in. It is a nice and beautiful old building. However, it is not comfortable in the evenings because the space is very empty and there is no light. Close to the building is a couple of bars, which means that she can hear drunken people outside her window.



Picture G : MADONNA

From her bedroom window she can see this image, a street art picture of the Madonna. This picture is something she enjoys every day and likewise she likes the west side of Vesterbro because there are several places where they decorated the empty gable or walls with street art.



Picture X : GPS TRACKING

In the process of making the songline, Marianne had to track her movement in a few hours with a mobile app. This image is her path uploaded to Google Earth.



## A respondents songline

### Respondent biography:

Name: Oana

Age: 24

Education: Student, Urban design

Status: In a relationship

Where do you live? Borgergade, Aalborg

How do you get around in the city? Walk and ride

Do you work? Where? No

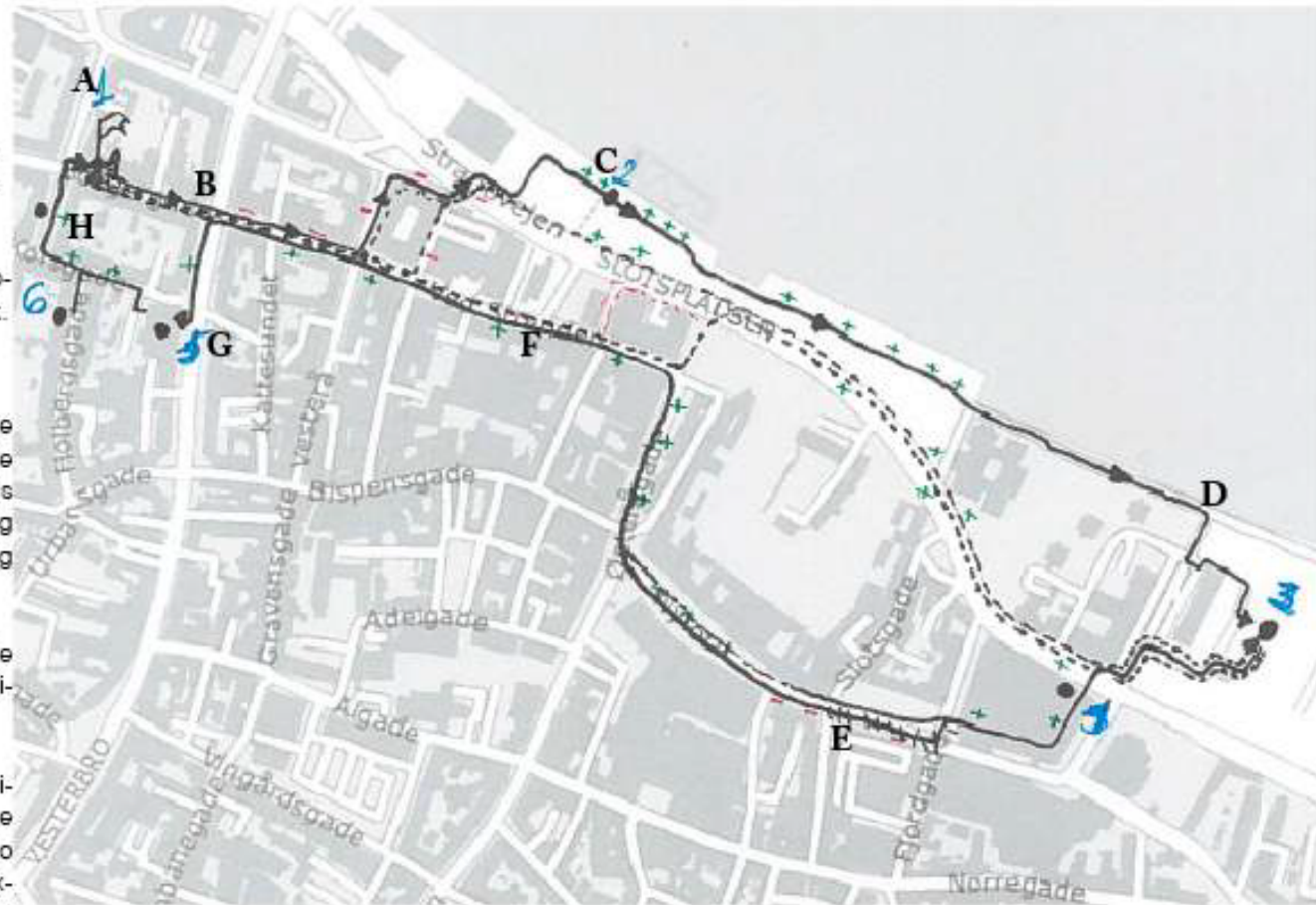
What are your interests? Shopping for groceries, going for a walk, reading in a park.

### Summary of findings:

The respondent are taking the calm route in the morning with great views and close to the "nature" of the city by the fjord. It is enjoyable to her because of the changing weather and the different looks depending on the sky and the mode of the water.

When she walks back in the afternoon she prefers to go through the city where the vibrant urban life and feeling is present.

Both routes are mainly staged for pedestrians and both work depending on the time of the day. It is an advantage for Aalborg to offer its citizens two different and great experiences located close to each other giving the every day user a choice of mood and atmosphere.





**Picture A :**  
Starting point - Leaving from home and starting the journey towards University, which can be by biking or just walking, depends on the weather forecast. First, she is taking the bright and sunny sidewalk, because she can "perceive in a different way the atmosphere and spatiality of the street". She is really focus on enjoying this first part of the trip, Borgergade street, because she likes to analyse the urban life and to be "charged with the hustle and bustle of the city".



**Picture B :**  
Arriving to the intersection point, she is annoyed by the fact that she needs to wait for the lights to become green and after she needs to hurry up, because of the lights' timing. In this part, she is not enjoying the surroundings for the reason that always needs to avoid the crowdness that is next to it. Going further the journey includes Vesterå Street, area that is chosen only because is a shortcut, otherwise is a part of it which is not pleasant to be transit - shadows and parking lots.



**Picture C :**  
The next frame is focused on the most enjoyable part because for she is really important to have experiences on the way, and here, "walking along the fjord there are a lot of elements which frame different atmospheres". Another advantage to take this route is for the sunrise and sunset, because you have an overall view of it, being a very open space and "the moment is amplification by the water reflexion".



**Picture D :**  
The end point is at University, where she has the final destination everyday. Here she is talking her time to rest before the courses and have a cigarette, meanwhile the students are passing, which makes this moment more interesting for her, for the enjoyable atmosphere of "watching people and being watched".



**Picture E :**  
The second route that she presented, was strong related with the difference in schedule during the week. This journey has the same starting and ending points, but the route itself is quite different when she is coming back from University, being determined by the other things that she needs to do until she arrives home, like groceries, shopping. Leaving from school, she is taking the route that includes Føtex, because here she can find different things than in other supermarkets.



**Picture F :**  
After going to the supermarket, she is choosing the route parallel to the fjord, because is more urban and like she said "usually when I go back to home, I really like to analyse and feel the vibration of the city". This frame of the route was described as a city experience and a "process" of observing the people that are going by.



**Picture G :**  
The next stop is Netto for diversifying the shopping and in the same time is a good method for her to relax. Sometimes, maybe she is not buying anything from here, but she is appreciating the moment by delighting her visual sense.



**Picture H :**  
Close to the final destination, she usually is having a short break, because she wants to smoke her cigarette and in the same time to stay only to relax on a bench outside before going home. This whole journey is happening only in the days when is nice outside, because otherwise she is preferring the short and fast route, instead of this enjoyable journey.

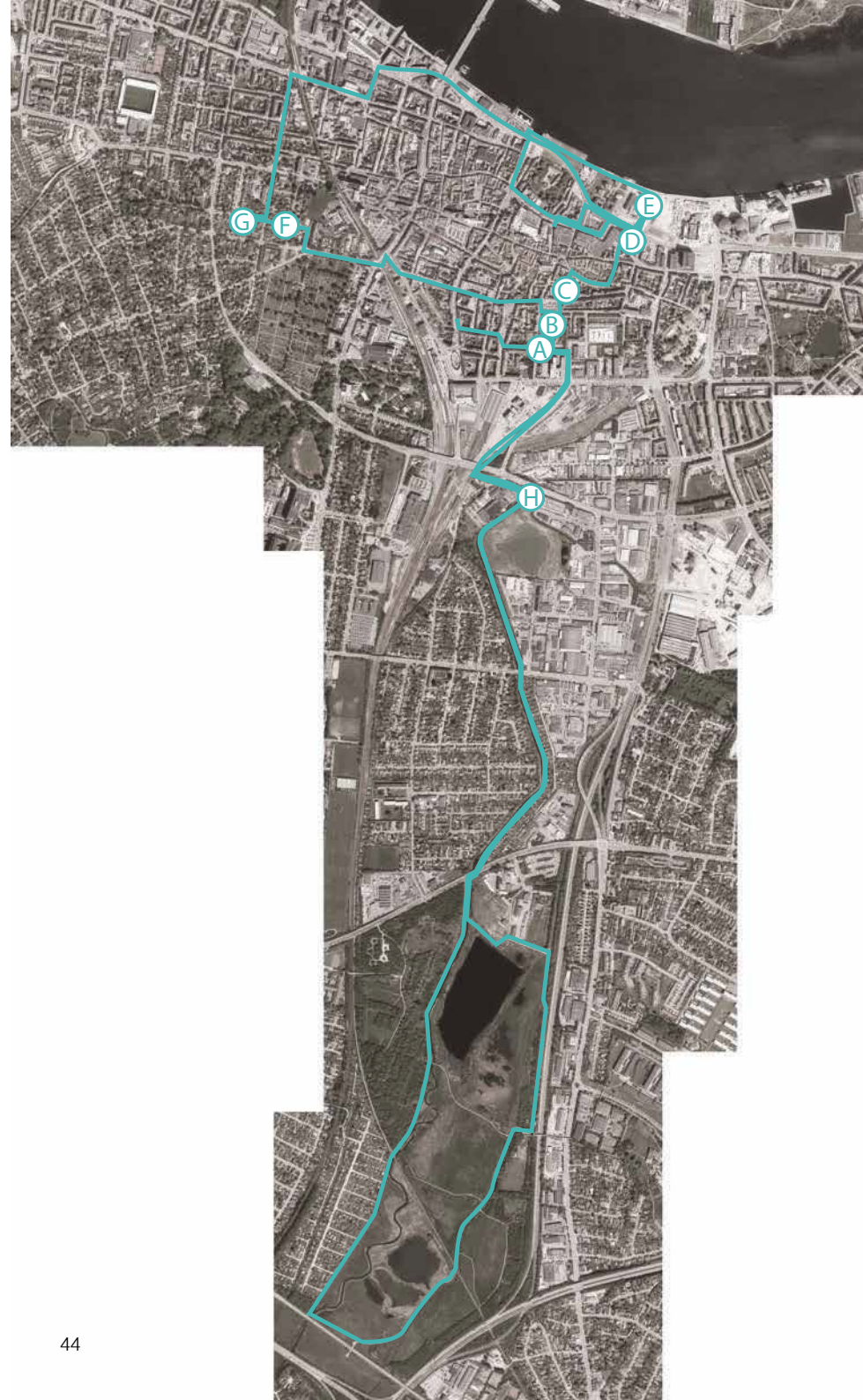


## Respondent biography :

Jeppe Krogstrup Jensen, a male at the age of 24, has been living in Aalborg all his life with the only exception of a year, as he was an exchange student in the US. His parents live in Hasseris, which is a single-family houses area close to the centre of Aalborg. Almost four years ago, Jeppe moved out of his parent's house to an apartment in the city centre. Jeppe is a master student at Aalborg University, where he is specializing in Urban Design. One of Jeppe's great passions is street art. He is a professional street artist, so as he walks through the city he likes to be inspired by the works of other. Jeppe are living the bachelor life, often taking expulsive choses about his movement in the city according to where his friends are. His daily life is balanced between studies, work and leisure.

## Summary of findings :

Jeppe is only moving inside the city centre. The farthest he moves from his apartment is to the house of his parents in Hasseris, 3 kilometres away. Jeppe is mostly transporting himself around by foot. As Jeppe is very expulsive in choosing the activity and route for his day, the weather has a great influence on his movement. The great weather of the weekend he was tracked made him both visiting his parent's garden and Fjordmarken, where he played football with some friend. Jeppe do not like to walk along Danmarksgade, the street he lives on, as he is finding it monotone and without comfortable spatial experience for the pedestrian. He is always trying to walk another way. In the morning when he is walking to school, he is using the fastest way through Søndergade, but in the afternoon on his walk home, he takes a detour through the pedestrian street to experience the urban life – the flow of people shopping, drinking coffee etc. He likes when the urban spaces are small and intimate – places having a village character with small characteristic houses and narrow streets. Jeppe search for the near pause from the urban life, which he finds in the peaceful suburban district and green pockets in the city.







A passage for pedestrian: Jeppe prefers travelling by foot and he likes places where the pedestrian has an advantage. Jeppe do not observe any especially spatiality in the passage. It is more a question of the quickest route from A to B and the factum he can travel quicker than cars.



The street: The picture shows the street where Jeppe lives. He loves the scale of the low houses reminding him of the old market towns. He likes the character of the place – all the different colours of the houses. He thinks this street has a lot more identity than Sjøllandsgade where he was living earlier. He can feel the present of people living in the apartments and houses, which was a feeling not present at the four to five stories high apartments building in Øgadekvarteret.



Klokkestøbergade: Jeppe likes the intimate atmosphere there is surrounding the street with the small city houses with their own characteristic. To Jeppe the place has a homely feel to it. He likes the small peaceful area in the city, where the hectic city life is not present. It is easiest to travel through Klokkestøbergade on foot.



The landmark: The street art on the façade is a landmark on the daily route of Jeppe. He thinks it is awesome to travel past the street art every day. It makes Jeppe proud of his city Aalborg, when he experiences the different street art project around in the cityscape. He is very aware of where the projects are and uses time to search for and study the street art.



The study: The daily surroundings of Jeppe. He thinks Rendburgsgade is the place he uses the most of his time. It is a very practical place having facilities such as lectures and group room. He does not think much about the spatial experience as he daily travels through the house.



The street of the childhood: He has a strong personal connection to the suburban street where he grew up. It is a pause from the city life to visit his parents in Hasseris. Jeppe sees the suburban road in Hasseris as a huge contrast to the city. It is the peaceful street containing a lot of memories.



At the garden: Jeppe makes use of the factum he is living so close to his parents, so in case of great weather he likes to spent his time in the garden of his parents. It is another pocket, where he escape from the hectic city life.



The run: Jeppe is training for a half marathon this summer, so he uses a lot of time running. He prefers to run in the nature, which he finds in Østerådalen. It is another green pocket he turns to in his attempt to find some peaceful surrounding. His running becomes a contrast to the daily life – a pause from studies and work.



### Respondent biography :

Zohel Noorestani , 25 years old , lives in the central part of Aalborg. Have been living here for about 5 year. Have done her bachelors in Architecture and Design, and is now doing her masters in Urban Design. She is original from Copenhagen, where she has her 'main station', her family and friends. She is single, living in a town house with other people; here she is renting a one-bedroom apartment,

### Summary of findings :

Through her four, soon to be five years of living in the center of Aalborg, Zohel has come to love the city. She appreciates the size of the city and describes it as being, "*concentrated in a small scale*" and defines the city as easy to get around without any use of public transport.

Hence, the small scale, she loves that she is living close to both all her necessary activities as well as her favorite cultural and spare time activities. This includes both fitness, grocery, school, university library, cafes and the harbor. All these activities within a radius of 500 meters.

Hence her motility: accessibility, skills and application is a forced to go either by foot or by public transport since she does not own a bicycle. If she needs to, she sometime able to borrow one of her friends. Otherwise, she is used to walk around the city because of the small distances. She explains that she prior to living in Lykkegade, as she is now, she was living further out in the west. Because of the longer distances she here bought a bike and used that as her primarily form of transport. She conclude that her choice of way of transporting herself is related to the distance she is travelling.

She mentioned that one of her favorite urban spaces is Nordkraft, due to the mixed programming that Nordkraft affords. She explains how Nordkraft is both affording daytime activities as well as night-time. Hence the assignments at the university, she has been using the university library at Nordkraft, in the evening she is using both the restaurants, cinemas as well as the social pop-up events. She mentions that since the wide range of affordances the range of users is wide as well.

On the map, on the right, one of her daily travels are portrayed. Her travels from the university towards her home, to her grocery shopping and over to her friend's house. Here she explain how she normally take a longer route home because of the atmosphere. The longer one is lit and since it is bigger, it affords more life than the shorter one. The shorter one is narrower with fewer streetlights. She explains that she never has experienced anything bad but because of lack of people she doesn't like the atmosphere and doesn't feel safe. She explains, "*especially doing the weekday there are no aren't any people. I don't like going there.*"





Picture A :  
This small neighborhood is consisting of small one apartment housing, which for Zohel sends an atmosphere of being out of the country. For Zohel being from the suburbs of Copenhagen, she is not used to these types of housing, finds them therefor exotic, and relates them to English housing area. It is not only the houses that affords this atmosphere but also the surroundings, such as the pavement.



Picture B :  
Nordkraft represents the mixture of modern and old elements coming together; this is one of her favorite types of architecture. She is fond of the activities that the building affords. Some activities she is using both in her daily life but also in the weekends, the activities and programs are such as the university library, secondhand fairs, restaurants, table tennis and so on.



Picture C :  
As prior mentioned, Nordkraft is one of Zohels favorite urban spaces of Aalborg. The feeling of an old industrial building mixed with the new gives it an atmosphere of patina, mixed with modern design while affording her a cultural experience. She primarily uses the building for it university library when she has assignments to hand in



Picture D :  
Friis is the shopping center where Zohels fitness center is located. When she is walking to fitness, she is passing through to smaller passages. These small passages creates and add a special element to the city that she appreciates. One of them is the tunnel under the city library – she does not like the programming of the path hence the lack of semiotics and hierarchy. She mentions that she multiple times have been close to being run over, because of the bad division between the pedestrians and bikes.



Picture E :  
Østerbro is a street she is crossing multiple times a day both to and from school, to fitness and when she is carrying out her daily activities. There are two elements to this picture – the road and the café. The road, and thereby the pavements indicates the hierarchy among the car traffic, bikes and pedestrians. The other element is Abby Road, which is a café, little expensive but, is a place where she goes to treat herself some times.



Picture F :  
The University building represents her everyday life and means a great deal. This is where she spends most of her time. The photo especially represents the schoolyard and she mentions that appreciates the contrast between the spot greenery and cold structure of the building. She emphasizes that she is looking forward to spending more time out there doing both spring and summer.



Picture G :  
The picture shows a small passageway through the library. Here she likes the atmosphere of the library. She mentions that even though that it is a closed building it still has a feeling of being an open structure. "It gets a lot of sun, which doesn't make it creepy to pass through". She emphasizes that the large amount of sunlight opens up the room in a nice matter.



### Respondent biography :

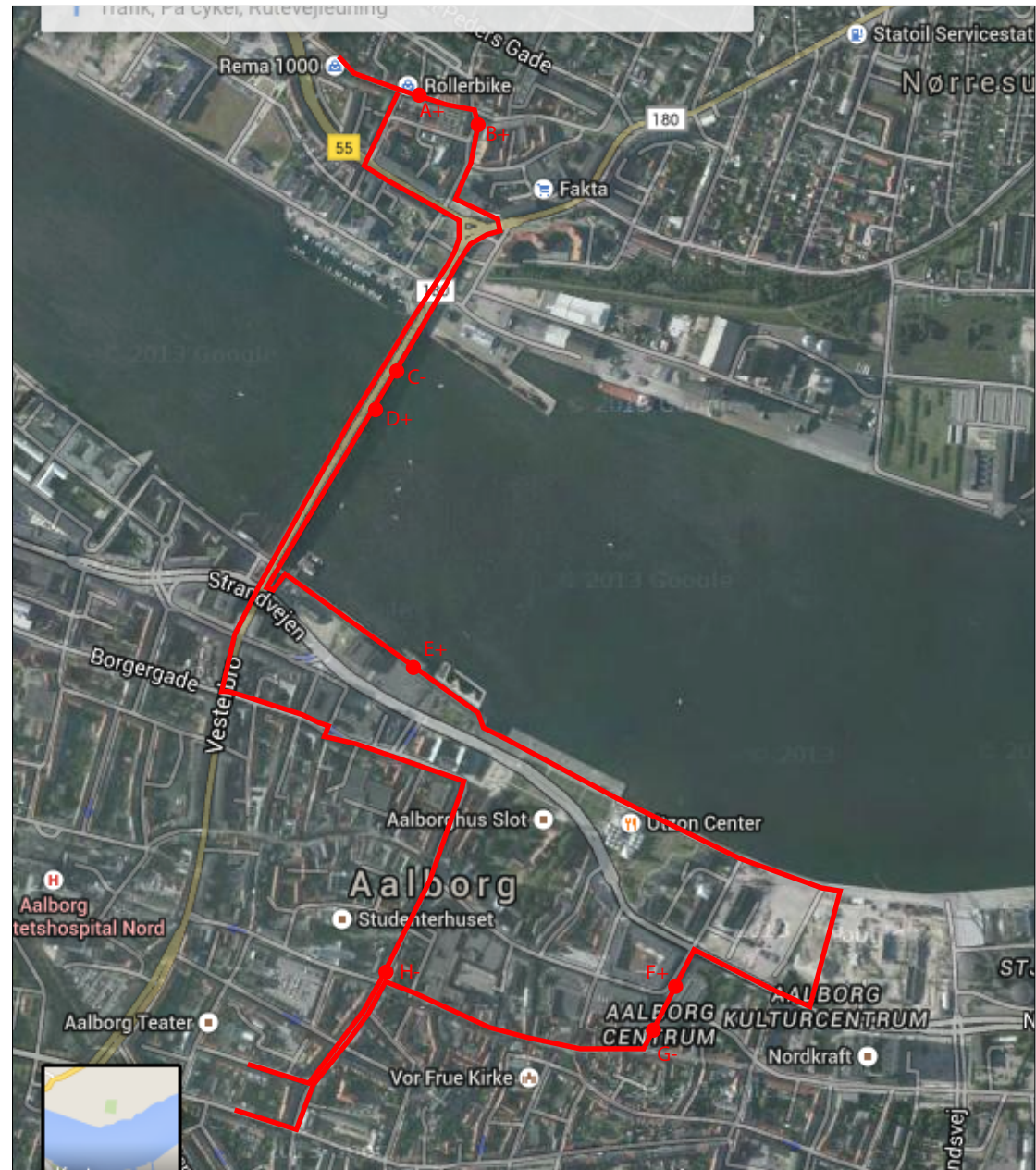
The subject is a 22 year old male. He comes from a family of the upper middle class. He does not like being dirty or to ruin his clothes. The subject lives alone in a student apartment in Nørre Sundby. He moved to Aalborg in 2011 to study in the university of Aalborg. The subject has a girlfriend whom he visits every day at her student apartment in the city center of Aalborg. The subject likes to live in Aalborg because of the architecture, the history and the university. The subject does not like timewaste and therefor always plans his journey before he will step outside the door. The subject is sensitive to areas which are forgotten, and he finds a special interest in old houses.

### Summary of findings :

The subject has three daily routes. His first is his journey from his home to the university, his second is from the university to his girlfriends apartment and the last is from his girlfriends apartment to his home. He seeks the fastest and most comfortable path from place to place. This means he always try to walk in the sun, avoids the traffic lighting and walk in a fast pace. He is most observing on his second path. Here he is off from school and therefor feels free to enjoy his journey. When going on his last journey of a normal day he is back in the same fast pace, and want to go home without being bothered by anyone.

The subject is very habit formed, he makes choices unconsciously and instinctively to what he is used to. It is rare the subject changes these paths, only when he is in "mobile-with" and walking with someone else. The first choices he makes on a journey always affects the latter. By this the subject is okay by taking a little longer journey if the journey in total is faster and he will be in constant movement. The subject is easily affected by architecture and open spaces, he becomes very unhappy when good unused spaces is left with few functions and the architecture is closed off. Looking at picture G, the subject had a very strong and unhappy feeling of the area. The street is close to a lot of different functions and is left as a space of hard traffic and pedestrians walking through to get to Algade from Friis or the harbor front. The timbered house in the middle of the street is forgotten behind the big shopping mall Friis and a big grocery store Foetex. The street could be a center of connection between algade and Nytorv. This perhaps is not possible because there is connecting streets closer to nytorv, but a change or new functions could be applied to the street, not to be an attraction by itself but to open it up for a better flow and story between points.

"I think it's a sin that the half-timbered house is forgotten. It looks so great and is a part of Aalborg's history. Maybe one could pull the history more forward to the edge of the center of the city, also to adjust the spaces between the main attractions."





Picture A : The subject chooses this path because it is better than the alternative. This street is for him both a + and a -. In the morning he is almost always alone, it is quiet and he can walk in peace. In the evening there are other pedestrians but there is still not many different functions.



Picture B : The subject likes this place. It is an open shared space, where the sun always shine in the morning. He walks across this square because it gives him a good morning, to have the sun shine on him, and to walk in a big open space. He likes that almost no cars drive through.



Picture C : In the middle of the bridge the wind is very strong no matter which season. The subject hurries across because this place does not give him a happy or nice association.



Picture D : The subject stops by the structural pillars of stone on the bridge. This is because the wind is no longer strong, and he can stop and enjoy the view of the harbor front. This spot is the only + for the subjects entire journey over the bridge.



Picture E : The subject enjoys the area where this picture is taken. He likes how the sun always tend to shine, people greet eachother, and it is the first experience of life on his journey. The ship named Elbjoern gives the site a nice character of a harbor.



Picture F : It is a small crossing pedestrian street. The subject is very fond of this street because of the safety-ness the street provides from the hard traffic, and the materials surrounding the street; the yellow tiles of the pavement and the old high court facade containing of red bricks and black metal window frames.



Picture G : The subject does not like this street. He has crossed the road, and is now walking into a closed street only meant for distributing goods and car parking. He feels that the old yellow and red/red and black timbered house have been left behind.



Picture H : The subject does not like the meeting with the hard traffic of busses when he comes from Algade and out unto the Boulevard. The street is meant for shared space, but by this the busses are far too dominating in this environment.



## Respondent biography :

The respondent is a boy called Cosmin, 25 years old. He has a girlfriend but no children, and in his sparetime he mostly visit friends.

He comes from Rumania and lives in Denmark now together with his two friends, because he is studying in Aalborg at Aalborg University. They live in Aalborg Vestby and he likes it here, because it is close to the city center and shopping facilities.

His mode of transport is walking and therefore he does not have a bicycle, as he likes the slow pace.

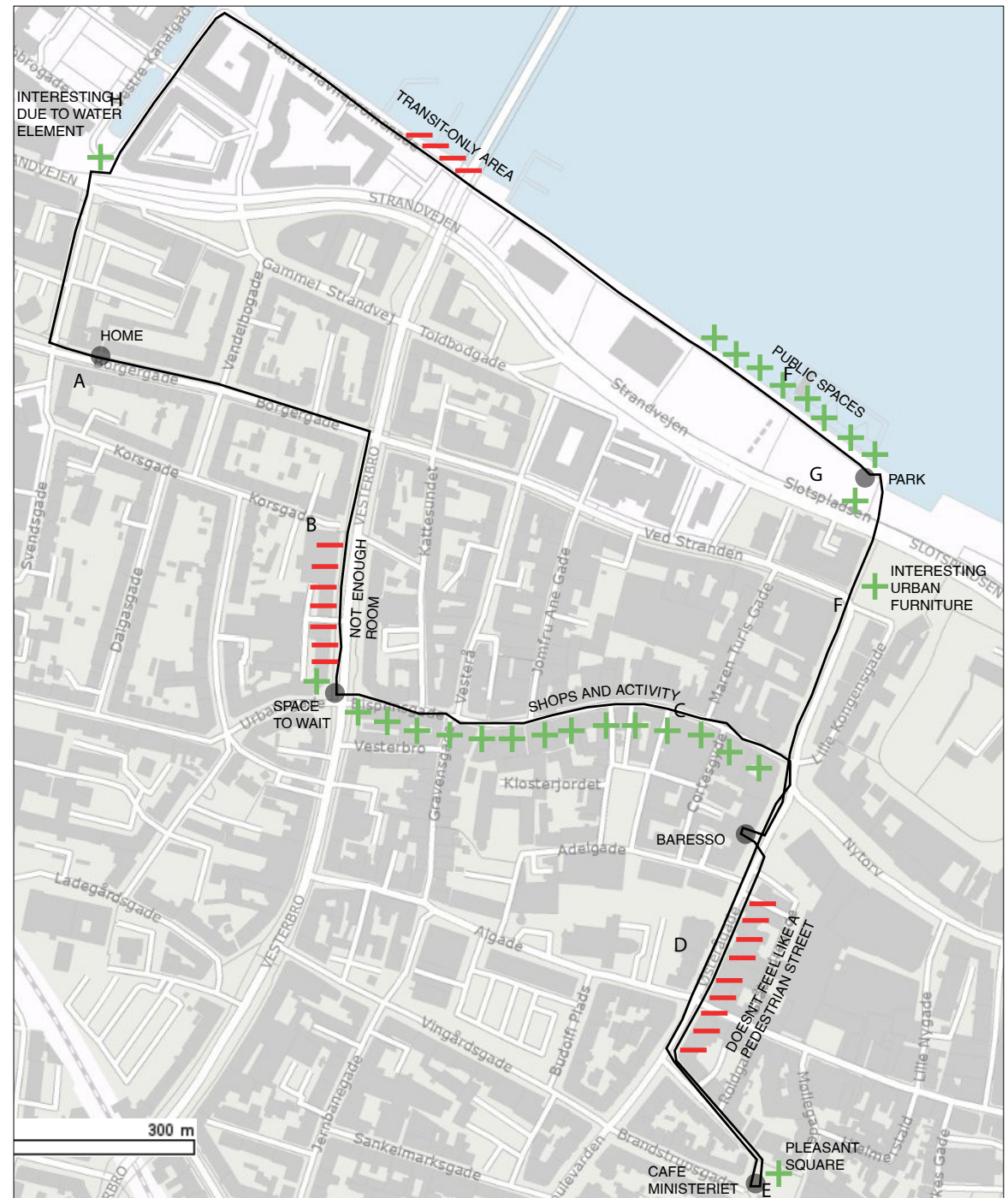
His favorit place in Aalborg is the harbourfront because of the water, the parks and the calm atmosphere.

## Summary of findings :

By talking to the respondent you get a sense of the mode of transport even if it was not mentioned in the beginning of the interview. The respondent have a lot of time to look at what he is passing by, and by that describe in details what he felt and saw on the specific route. The places was always compared to the human scale, which probably would have felt different if he was travelling by bus or even bike.

He walks around in the city, just to see what is happening, but always keeps ending at the harbour front, because of the atmosphere down there. When the sun is up there is always a lot of people enjoying the Jomfru Ane Park and the view to Nørresundby and people fishing, he is mentioning. He wish that the harbourfront was developed even more on the western part of Limfjordsbroen, as there is not worked at all with seating facilities, places to stay or just recreational spaces in this area. Therefore this place is something the repondant think should be focused more on to extend the waterfront to the west.

By travelling as a pedestrian he explores the city, and as he describes in picture E, he suddenly appears at Mølleplads where he did not plan to go. This is again telling a lot about the mode of transport, because you feel more dragged to go somewhere you did not really think of, compared to be a cyclist.







**Picture A:**  
This is the respondents main way to and from home, considering that all the activity he undergoes is in the city center. This area is not described in any way, because it has become a part of daily life, and the respondent does not necessarily consciously experience the place. It can be seen, however, that the street is mainly transit oriented, and gives little room to experience or social activity.



**Picture B:**  
This has been noted as being a poor street experience due to the multitude of bikes and shop signs along the way. This effectively lowers the space in which pedestrians are allowed to walk, and the respondent feels a sensation of crowdedness due not only to the signs, but also to the multitude of cars, since Vesterbro is a main car artery inside the city.



**Picture C:**  
Even though the route had taken place on a weekend at a fairly early time, the respondent was pleased with this area, as it was pedestrian-only, but also due to the fact that there are a lot of shops to the left and right that help to frame the route in a more dynamic manner. Also, in this specific picture, towards the end of the pedestrian street, it is possible to see the tall, old tower, which signals something important is happening.



**Picture D:**  
Although it is the only pedestrian boulevard in Aalborg, the respondent had a negative feeling towards this area. It was described as: "wants to be pedestrian friendly and let people cross over, but there are still light signals, the sidewalk is not leveled with the street, and you don't feel like just crossing anywhere".



**Picture E:**  
This square was one of the first stops in the respondents route. It caught his eye due to it being the only square of this type in the area, and mentions that he was not aware of its existence, and merely stumbled upon it due to the presence of CafeMinisteriet, which was a predetermined destination. The respondent liked the openness the space offered, and the existence of the terrace in the middle of the square gave it life.



**Picture F:**  
Although not a stopping point, Toldbod Square made the respondent stop and look around, due to the interesting shape of the elements that reside in the space. The circular, cake-like geometry is something out of context, which the respondent feels is what makes the space unique.



**Picture G:**  
The main resting point in the respondents' journey was the park just North of Toldbod Square, Jomfru Ane Parken, next to the Fjord. It was not planned, and it ended up being a resting point due to the natural appeal of the area, having larger areas of green, benches, and a more "non-urban feel to it", especially due to the juxtaposition to the water.



**Picture H:**  
This space was interesting in the respondent route because of the way in which the water is brought inside the city. It reminded him of the Amsterdam canals, seeing this type of space inside a cityscape. The only problem was that it felt too empty, that not many people were using the space because not many people were actually living next to it, most of the housing areas being located further South.



### Respondent biography :

Name: Louise

Age: 25

Education: Student, Urban design

Status: In a relationship

Where do you live? Østerbro, Aalborg

How do you get around in the city? Bicycle

Do you work? Where? At the House of Music

What are your interests? Going for a walk, shopping groceries, being in the city centre where the city life is, doing workouts.

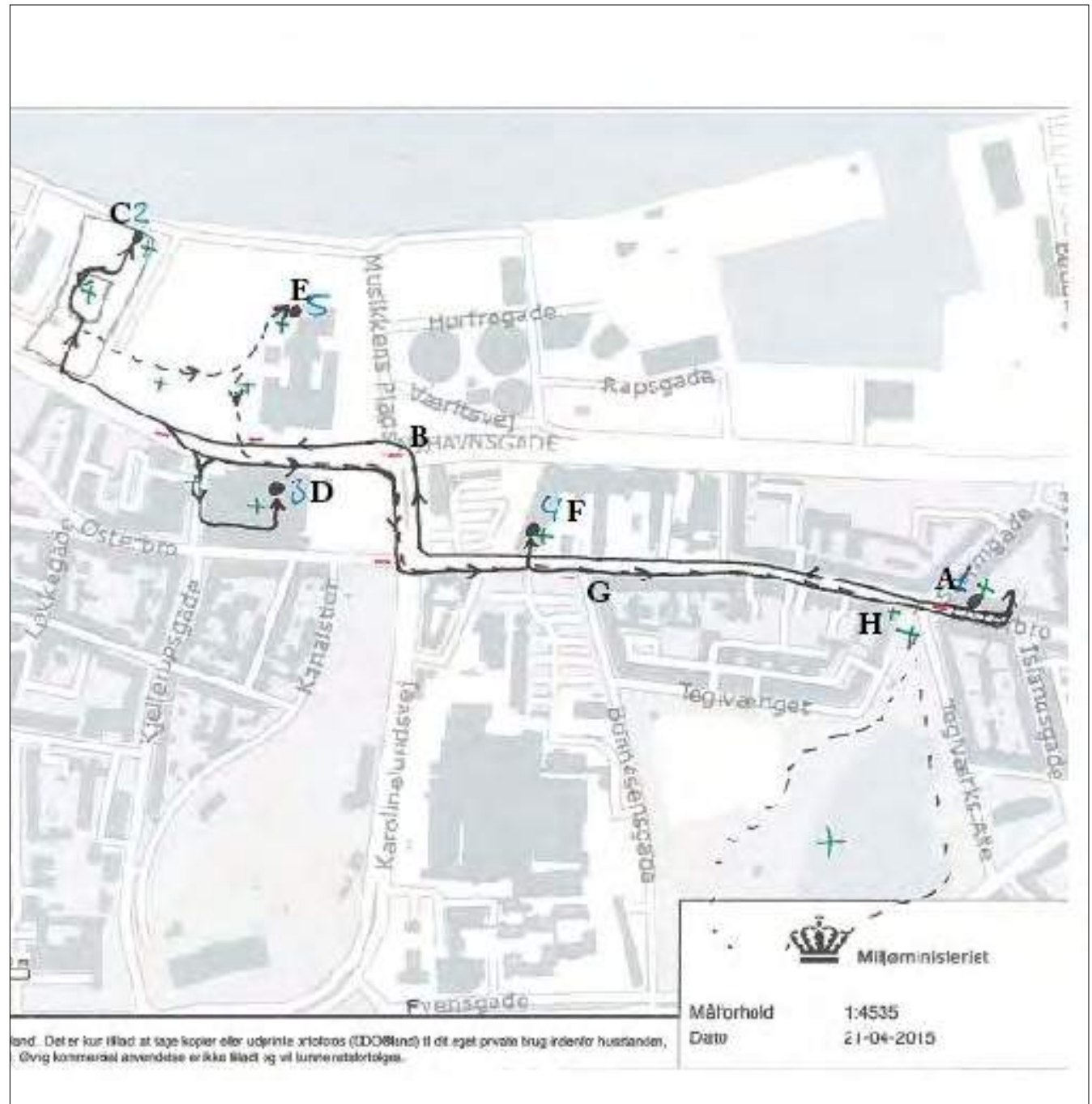
### Summary of findings :

This experiment is focused on the everyday trip, from the respondent's home towards different destinations. Moreover, the main goal of investigating a daily journey is to point the main destinations, to analyse and by interviewing to compose a coherent story described by the respondent's sensorial and emotional experiences.

In this specific case, the analyse was framed by Louise's daily routine. Regarding the everyday usage of the city, I have observed that the city is used through motion and subject's embodied performances. That is why the destinations are an important part of the routes being traced as starting points and in the same time ending points. For Louise, a daily route is between home, university, work and supermarket. She is choosing to bike everyday on this route, because it is faster and she is enjoying/perceiving the journey in a different way by having experiences in motion.

Furthermore, the second part of the interview was more focused on the potentials and problems that she highlighted through a gradually description on her route.

Therefore, structuring the description under these two headlines was a fundamental choice for a better understanding of the different frames character. In addition, the frames that represent areas with problems were described through a subjective point of view as areas where she felt unsafe, because of the urban space morphology (bike lanes near street). On the other hand, the potentials were pointed in the frames with a straight route, because like she said "I feel more safe when I am biking on a straight street, because I can perceive the urban space and in the same time to enjoy my journey".





Picture A:  
The first view of the street every morning, when stepping out the front door and going to the university. This is the departure and arrival point.



Picture B:  
The first situation where the respondent has to be aware of the traffic to do a left turn on bicycle. The crossing is characterized by many cars and feels a little uncomfortable to people on bike.



Picture C:  
Arriving to the university. Biking up the slope and parking next to the building. The courtyard is a nice place to go though and park the bike.



Picture D:  
The next stop in the afternoon is Nordkraft's DGI house. This is where the respondent exercise and have fun. This is a place for the brain to relax and the body to do work out of the day.



Picture E:  
The next stop is the restaurant at the House of Music, where she works and spends hours a week serving the guests. This is her escape from everyday life.



Picture F:  
The supermarket Rema 1000 is the everyday grocery store. The respondent likes to be there, because of the sensory experience, seeing the fresh vegetables and smelling the flowers. ory experience.



Picture G:  
When it rains this part of the bicycle lane is filled with water hours after. It is both fun and a little annoying to bike through. There is a risk to get wet feed if you do not lift them.



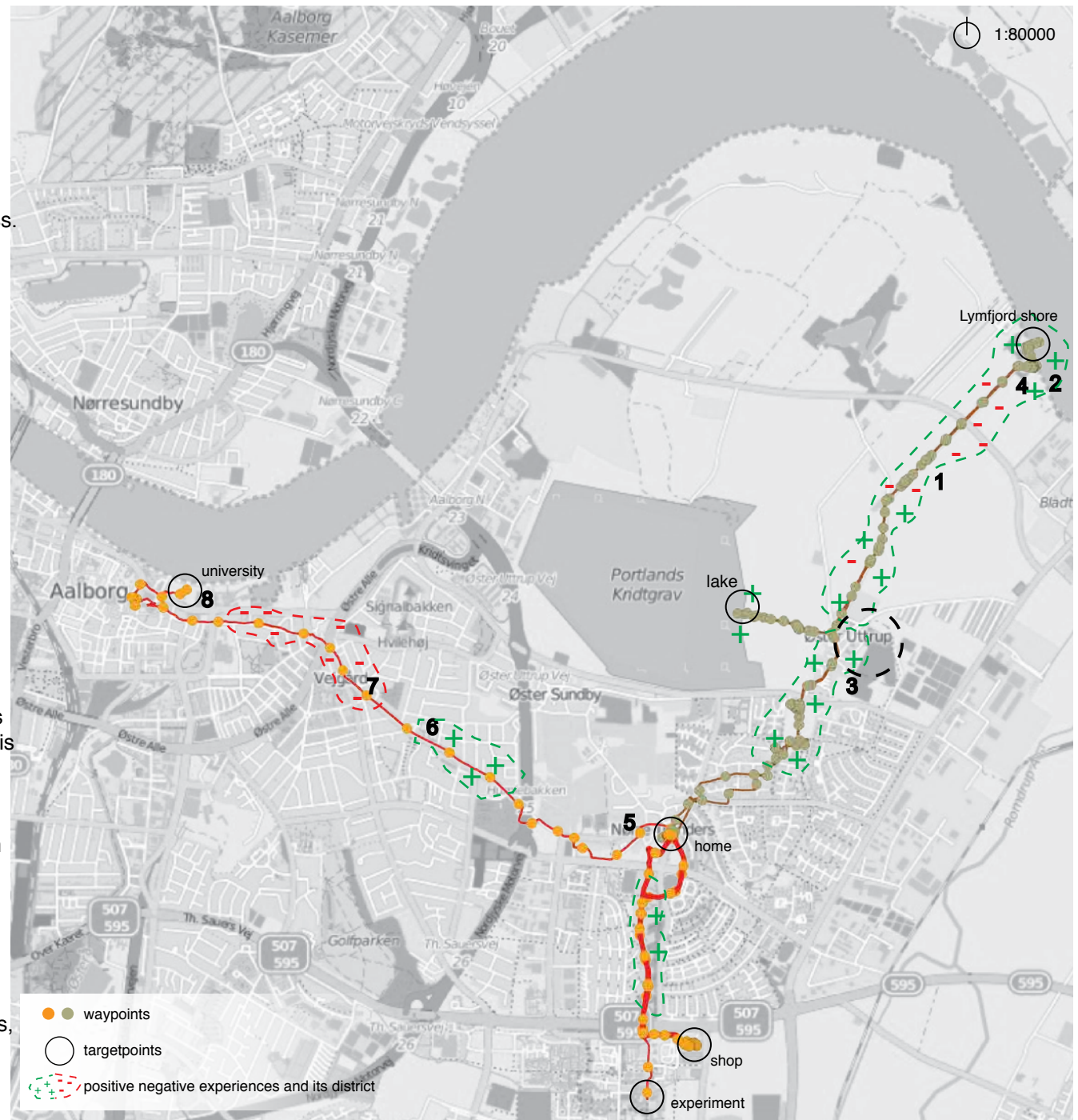
Picture H:  
The respondent is in love with everything a bakery offers. This is conveniently located just across her apartment and they have the best Wednesday cinnamon rolls.



## Respondent biography

Summary of findings:

The respondent answers and thoughts explores the more natural side of the city. His chosen routes points out and reflects on his feelings about natural beauties and its not that he is aware of his surroundings, but there is something that catches his attention which can hold excitement. Its typical to his personality that he is not totally focused on going towards to his target but seeks for experiences which makes his journey comfortable in a way. His decides on detours by chance, mainly driven by the unexplored and interesting ambiances. He looks after more alternatives. His pictures of the journeys deliver experienced associations in memory. These trips highlight the understanding of scenes what an everyday biker could experience here depends on his motivational feeling. The separated various moments of pictures evokes the seen sights mixed with personal memories and emotions. Its a nice point to see his thought about separated infrastructure (bike lane) that means for him more pleasure and option in knowing better the living environment during his stay. This example helps to comprehend what the different uses determines each neighborhood of the city and its usual connections to flows. Investigated traces, hence, give a sense of identity of the contemporary urban space. This traces, hence, give a sense of identity of the contemporary urban space. By the songlines, we get an overview of particular scenes, landscape which are linked with each other to form a positive or if the case a negative portrayal of city fabric.







Picture 1 : Agricultural fields.  
This scene has touched the respondent pleasantly. It has reminded him on home. He had a feeling to its open and wideness that can be compared to freedom. The smell of vegetables and a the warmth coming from under together to the memories of his homeland.



Picture 2: On fjord shore.  
Respondent had mixed emotional feelings next to the fjord. He escaped from ordinary life. By the sea, he experienced visually great distances, the field of everchanging waves. Wood chips give rythm of shore. However, the background with industry blows away aesthetically the scenery.



Picture 3: Pure village.  
He felt entrievied, it introduces what he think about the typical danish village. He felt impressed by the traditional shapes, the use of materials, especially how low the small windows located on the walls. The whole environment functions as an outside settlement geography.



Picture 4: Close to shore.  
This scene gives happyness to him, it evokes a kind of memory of a historical beach settlement, the flagpole, sand and the image of old holiday resort by the sea. He recorded this picture with the elemetns as a great example for the memory of his stay here.



Picture 5: Landscape nearby.  
This is one part of route back home when he got a moment to enjoy of such a landscape. But it is also stressfull as the industrial part ruins the view and tkaes the vallue of the feeling. Everithing is added: horses, the wavy landscape, the visual values, although he cannot live for the moment because chimneys disturbs it.



Picture 6: Nørre Tranders.  
The street of Nørre Tranders means the bright hope for the respondent. The row of detached houses are seen as pages from a dwelling magazine. He considered on these type of houses as his dream homes he wants to live in. He is impressed by the small clear details that makes them different. Materials as applied reflects the earth less artificial but more natural, more friendlier.



Picture 7: when enter the city  
Here starts the different side of the city. The place represents insecure feeling in the respondent. He needs to pay attention even though that the narrow environment is dressed up with nice varing facades. He thinks, that his route is featured with not well organized traffic which ruins the streetview.



Picture 8: University building  
Despite the fact that studying here, he considers this building to be the ugliest he ever seen. Nothing special, random design elements, forms, frames give the impress of no concept. He would have expect to see a more site specific and local concept on it. The street where this lies on appears to be dull, for him its only good for going through it.



### Respondent biography :

The respondent is a 24 year old man and a hard working student from Hungary, where he is living in a small village. He likes new and challenging tasks and hates being bored. At the same time he also has a huge curiosity and is always on the look out for the beauty of his surroundings.

### Summary of findings :

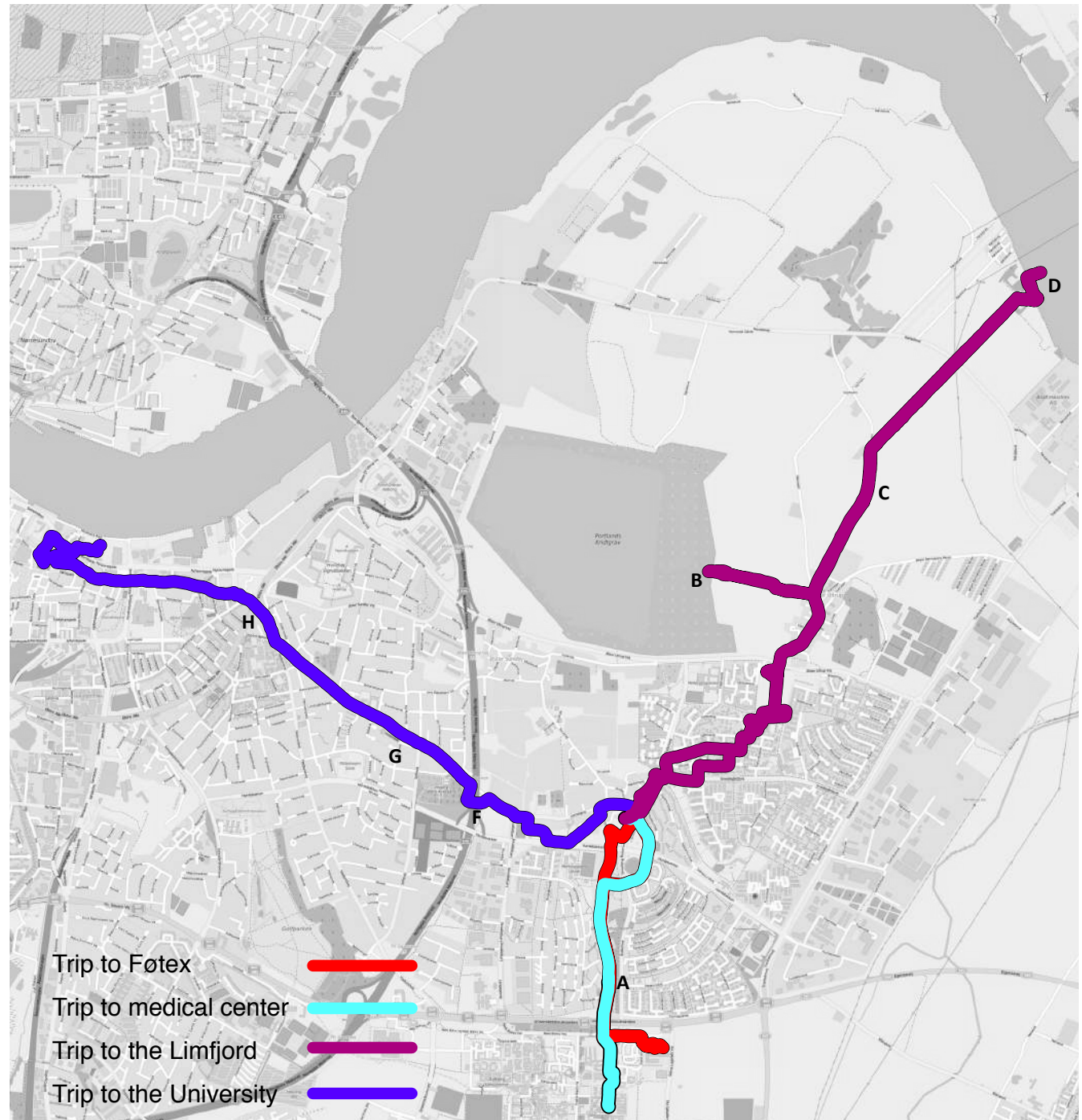
The respondent is very driven by his habits and his curiosity for things, which drives him to explore new parts of the city and break out of his usual route. The four route he did during this tracking are completely different places from each other: The University that he goes to, the Limfjord, The shop Føtex, and a medical center.

The trips to Føtex and the medical center utilized the same route to go to the destination, and lead the respondent through a green corridor where he didn't have to deal with cars and traffic. But at the same time he also experienced that the roads were badly maintained and could result in a bumpy ride, unless you like him knew where you had to slow down to avoid them. On his trip back from Føtex (The red line) he attempted to see whether or not you could find a short cut, so you deviated from his usual route to test this, which reflects his habit of trying out new things.

On his trip to the Limfjord he wasn't alone and had brought a friend with him, where they were driven by finding the "natural environment" of the Limfjord which had led to this trip. At the same time his curiosity also brought him on detours to a clay pit which he had seen on google maps. One of the key experiences he had during this journey was the feeling of getting away from the city and out in the country side, which gave an atmosphere closer to his hometown. The trip itself was a pleasure trip on bike, which was in a slow pace towards the Limfjord and faster back home again. The route to the university that the respondent took during the tracking is one of his usual ones, which by his definition is 60% of the time depending on the weather. He mentioned that he would often take this one when it's windy since it's the shortest and he is in cover by the building. The trip itself is not just an A to B route to him, since at the bottom of the Humlebakken he would actually slow down to enjoy the scenery since he thinks biking is boring and he tries to find things to distract himself while doing it.

So to some of some of the keypoints for the respondent:

- The scenery - It is important that there is something to look at
- Safety and separation- The respondent disliked not having his own bikeline, and actually ended up hating some areas due to the lack of this





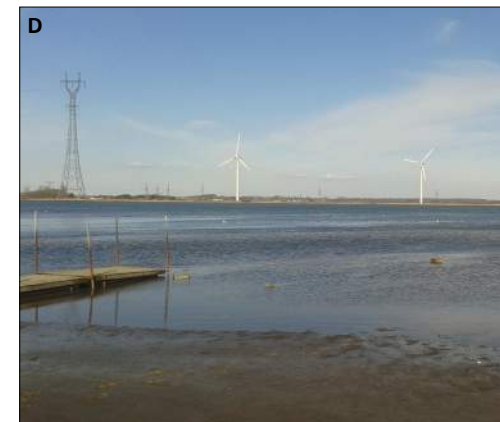
Picture A: The park that the respondent goes through to get to Føtex and the medical center. The respondent felt it as quiet area with designed views specific for the users. He also saw how it was being neglected by the municipality which had resulted in several holes in the pavement, which he had learned to avoid by slowing down.



Picture B: The clay pit. The original reason for taking the detour, was because the respondent and his friend had always wondered about the area from what they saw on google maps. When they arrived in the area the respondent and his friend had to climb an earthwork in order to get to the area, but when they did, they had an amazing view over the entire area, where they also noticed some of all the wild life that live nearby.



Picture C: Picture of the country side of the route. In this location the respondent had a more emotional experience, since view of the country side, the smell of root vegetables, and the sun, reminded him of his hometown back in Hungary. This were an area which had similarities to his home and brought forth some good memories for him.



Picture D: The Limfjord. The respondent was a bit conflicted about the water, since despite it being saltwater, there was no smell of salt and the distance to the other side made it seem like it was freshwater. But despite this he enjoyed the sound of the waves hitting the bank, and being the only sound breaking the peace.



Picture E: Lemvigvej near Nørre Tranders church. The respondent had an almost spiritual experience in this location during an earlier visit, with the close by during the night, he felt disconnected from the world and felt a sense of freedom, which is a feeling that occasionally flashes by every time he visits this area. The experience created a personal relationship between him and the area, which hold great importance for his feelings about the area, and is reflected in his love for the panorama view over the area.



Picture F: The bridge crossing over the highway. The respondent felt a disgust about the area, because despite it looking like a bridge crossing a river, all there is when he opens his eyes are cars. To him the cars goes too fast for him to enjoy and it almost seems unnatural for him to be in this area. Despite this he does a lot of stops in this area, where he switches to a different song on his phone to listen to, when he is biking to or from home or the city center.



Picture G: The bottom of Humlebakken at Nørre Trandersvej. The respondent likes this road since he is on a slope and do not need to use much energy while biking here. The residential on each side of the road are also interesting for the respondent to look at, and for this reason he also slows down on his bike to enjoy before speeding up later on.



Picture H: The junction of Vejgaard and Østre allé. The respondent feels very unsafe in this area and is extra alert while biking here. There is no biking lane for him to use when he has to cross the road or when he has to pass by parked cars, which is why he always checks behind his back an extra time before crossing the road.



### Respondent biography :

The Respondents name is Mia Nøhr Christensen. She is 22- years old. She lives alone in an appartement on Kjellerupsgade in the center of the city, which is 45m<sup>2</sup>. She moved to Aalborg from the northern part of Sealand 3 ½ years ago, to study in the university. Besides studying at the university, she plays handball 4 times a week, which she has for over 12 years. She likes to be in open places and be surrounded by people and watch them act and react.

### Summary of findings :

*Mia has 4 different songlines in Aalborg, which are the most common used routes.*

*Songline 1: Home – University*

*Mia takes the quickest way to the university as possible. She crosses the road quick without big concern for cars, because she does not find the crossing defined as for being more for cars than pedestrians, because the road and street are at the same level. It becomes a shared space for Mia. She can become a 'rebel' and cross the road, even though there are cars, because she feels she has as much right to be there. She only feels a bit stressed when there are so many cars or bikes, that she has to stop up before crossing, because then she has to break her flow on the way to university. Another way to make the trip quick is to take the carriageway cross-over at the road instead of the crosswalk field, and all together the trip can thereby take 2 minutes. Thereby, it is for Mia important that she has the feeling of a shared space because there is no difference in levels, and that she has the carriageway. Together it can make the trip quicker without breaking the flow.*

*Songline 2: Home – Rema 1000*

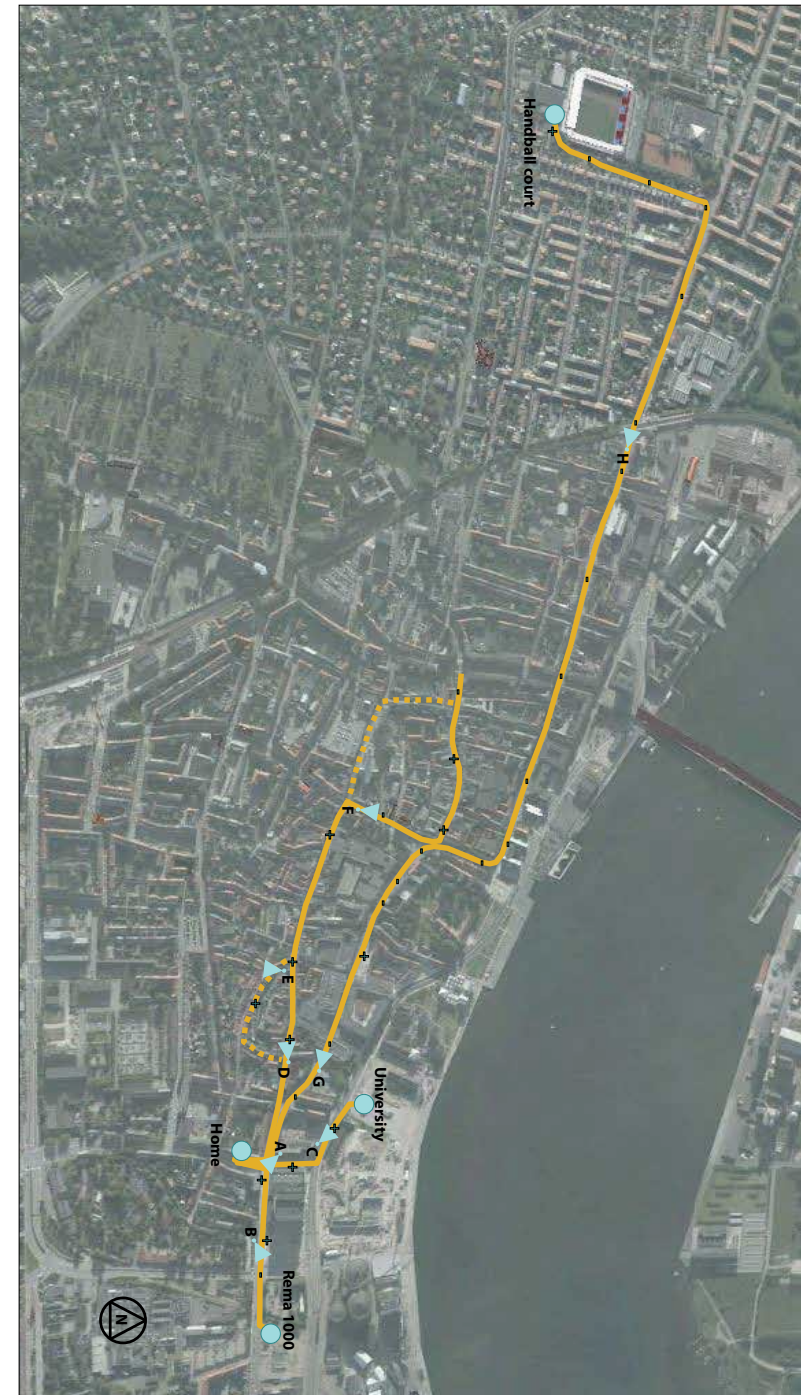
*Mia takes the same way to grocery shopping, both over there and back home again. It is quicker than going to Føtex, but that is not the important issue: that is the travel. Mia likes the space, and she likes crossing to the other side. There are tiles, which she always connects to have the purpose for pedestrians, and she feels like she shares it with the bikes. At the same time she feels protected from cars because of small columns, which direct the cars around her. Thereby, she feels she has a lot of space to move around in, which is a very good feeling for her. The feeling of having an open shared space, where she still can feel safe from cars, is thus really important.*

*Songline 3: Home – shopping streets*

*When having a nice walk to relax herself, Mia takes a walk along the two shopping streets; Algade and Bispensgade. This is because of their variety in shopping stores, which Mia finds both fun and relaxing looking at. And then to study the flow and variety of people, who walks the streets. It is here, she finds the most people, which she finds fun to study, whether it being there clothes or the way they behave. The different stores are fun to study and to look at their supply, whether she wants to buy or not. She overall takes the same way out and back again, always walking to the right side of the streets so as she get different stores. She never takes other streets, because they do not have different interesting stores to offer. The only deviation is on her way home, where she takes off of the route by walking down a street with small cozy houses: here she loves the industrial looking architecture which she finds relaxing and which gives her a break in the more busy flow before going home. The importance on the walk is thus the architecture, the stores and the people, which all together gives her something to look at.*

*Songline 3: Home – Stadion*

*This road is a bore for Mia. She takes the bike to get to Handball in Vestbyen, and it is only to get there and back again. It is the quickest way, and there is absolutely nothing for Mia to study on the trip. She does not take the road down at the harbor because there is too much wind, and this road feels the quickest and the flattest for her. It is merely to get 'from A to B' and thus, the importance here is for her to get there fastest and easiest.*







Picture A : The cross between Kjellerupsgade and Nordkraft. Mia likes to be here; there is always open and always sun, and she thereby connects the space to be a good shared urban space, with low velocity. Even the cars usually drive slow. Because of the width of the road, it goes quick crossing it, and Mia feels safe. Some of the houses as are described as looking nice with their industrial looks but still fits into a modern city, as Aalborg perhaps is becoming.



Picture B: The trip to Rema 1000. Mia is on this way in an open space, which she likes, but she feels a bit unsafe though because the cars have the option of driving in at the place. They do not drive fast, and even though the difference in the pavements can help make it clear for the cars that they should slow down. Mia feels unsafe because the place is shared with the cars. Still, she walks here, because at this side there is sun.



Picture C: On the way to school. Mia has taken the picture on the carriageway, which she just loves. She calls herself a rebel coming to the crossing of a road: she takes the quickest way across, not the straight, so as she goes cross-over. Here, the carriageway is just perfect, so as she has the break in the middle of the crossing. It is more perfect than the unnecessary crosswalk field, because people want to go either to Misikkens Hus, the University or Nordkraft and thereby walks cross-over, not straight.



Picture D: The beginning of Algade. Mia likes this place. She likes that some goes against the rules and bikes through the street: the street is wide enough compared to the height of the buildings, which gives the right dimensions. She always goes on the right side, because the sun hits here, and the bikes keep to the middle, because people tend to walk on the sides where the stores are. This gives a really good feeling and a nice trip for Mia.



Picture E: Here there are really nice looking houses. Mia would love to live here. When she took the picture, there were two dogs laying outside on the street, with their rope attached to the inside of the house. It gives the feeling of being a calm, safe and nice place, when you can have your dog laying on the street like that in the middle of the city. Mia therefore loves it; it is such a relaxed and nice looking place, and rare for a big city.



Picture F: On Boulevarden, between the walking streets. This gives an irritated feeling for Mia, where she does not like to be. There is nothing exciting to go to, and Mia speeds up so as she quickly can go to the next place she wants to be at. The buses especially makes it uncomfortable for Mia: they fill a lot on Boulevarden, especially in the rush-hour. Then, there is almost no sun during the day because of the height of the buildings. Only the flower-shop makes this place a bit nice, because she likes to sometime visit it.



Picture G: On bike before the library. Mia finds the place interesting when comparing it to now and how it was before. Before, the place was messy with no lights. Now, there is light, the wall has been painted and it is more clean, which makes the route more comfortable, as long as it is only this short length of the road. Still, it is uncomfortable when the roof is this low, especially being on the bike. It feels closed in too when driving alongside the buses, which Mia does not like.



Picture H: Underneath the train station in Vestbyen. This gives a bad and irritating feeling for Mia: it is messy, dirty and old, where it has not been cleaned. It works as a sort of wind-tunnel, where the wind hits you when driving on the bike out under the bridge. This piece of the trip is especially uncomfortable, and the entire songline, this picture belongs to, is a big minus. Mia takes it, because she feels it is the quickest and flattest road, but it is extremely boring and is only an 'A to B' road: she takes it only to get from one place to another.



### Respondent biography :

In this GPS tracking experiment we follow Anne and her pattern of movement on a sunny Sunday afternoon.

Anne is a 26-year-old 2. Semester Master student at Aalborg University studying Urban Architecture.

She is a single girl, living in a rental apartment located on the eastern part of Aalborg waterfront.

In her limited sparetime she works at Musikkens Hus down by the waterfront.

Anne grew up in Aarhus and later she moved to Aalborg when she started her studies at Aalborg University.

### Summary of findings :

Anne meet up with a couple of friends; one of them is a former fellow student. They choose to go for a walk through the city. They walk down by the waterfront to experience the activities along this path and stop by the new city campus to show the former student the new premises. "The waterfront has no cars, witch makes it nice and quiet to walk along" Anne says when asking her why they choose this path.

After visiting the school they walk past the new house of music and turns towards Karolinelund. When asking Anne what she like and dislikes in the park she answers "We wanted to go past Plat-form 4 and later visit the urban gardening area"

After looking at the very alternative funktions Karolinelund has to offer, the group sets sail for Østre Anlæg. As mentioned in the intro above, it was a sunny Sunday afternoon that almost forced people to go outside and enjoy the early touch of summer.

In Østre Anlæg they took the whole round to se the lake and its inhabitants (ducks), before taking a short break in the lawn, looking at the activities going on. After a 10-minute break one of the girls had to go to work down at the house of music, and the other girls therefore decided to go as well. On the way back to the bicycles they walked along Østerbro and later Nytorv although Anne would rather walk down by the waterfront the same way back, she had to go down to the majority. After getting to her bicycle she said goodbye to her friends and went home with a short stop at the grocery store.





Anne meets up with her friends at Toldbod Plads. It is a very open area and very centeret around the middle og the waterfront. Here she parks her bicycle and starts her 4 hour tracking session.



Anne likes the quiet and relaxing atmosphere along the inlet and after walking a few minutes the pass the new City Campus building where they decides to look inside.



Turning around the corner of Musikkens hus, Anne and her friends crosses the road and enters the urban playground in front of Nordkraft. Anne never under understood the idea of placing a playground like this captured by 3 busy roads, she finds it rather stupid to use the area for that sort of functions.



On their way they crosses the old amusement park, Karolinelund, which is now an area for temporary use such as alternative partys, concerts, urban gardening etc. Anne saw a creepy guy standing in the corner behind Platform 4 looking very suspicious. She thinks the alternativ look and usage sometimes can give a uncomfortable atmosphere in the park.



After walking along the street from Karolinelund they enteret Østre Anlæg to look at the trees coming into blossom. In here they decided to take a short break, whilst looking at the activities in the area. Anne thinks it is a nice and cozy place to sit, but there were only one bench and they had to sit on the moist grass.



After their break in the park they walked back towards the inner city where Anne suddenly saw her workplace from a different view than she is used to, from here she actually found it less ugly to look at.



After saying goodbye to her friends she took her bicycle and went for her home, but on the way she stoppet by the nearest grocery store. She is forced to go this way along Østerbro because of a very comprehensive construction ground between her apartment and the inner city. Anne is furious because she can't see why it is so difficult to oblige the cyclists during this construction time.



After a nice walk in the city and 4 hours of tracking of her sunday afternoon, Anne returns to her apartment to relax and use the rest of her day for other purposes.



#### Respondent biography :

When not working or studying she likes to relax with reading and having fun by doing small additional trips to experience different events and the diverse city life. To keep in shape she runs, and during summer she does kayaking. She loves spending her time with watersports and hiking in the nature, which gives her new energy and helps her to keep the head clear. She visits her parents in Hou time by time, the place she has been living since 2000 to 2010, and it is like a second home. Århus is another place she visits, because of her sister living there. Otherwise, when in Aalborg, she uses her time at her boyfriend's or runs in Sohngårsholmsparken when she is not home at her flat.

#### Summary of findings :

The respondent has tracked two trips one is a jogging route the other one is a scenery stroke. The jog starts by taking the gravel road around because it is more comfortable for running. Gravel roads mostly affords slower and a bumperier trip, and therefore affords slower means of transportation like walking and running instead of driving the car.

The interviewed prefer this route, instead of one closer to the water because it gives more interesting view. Instead of having a clear view on the whole route, she gets small glimpse of the water which makes her appreciate it more.

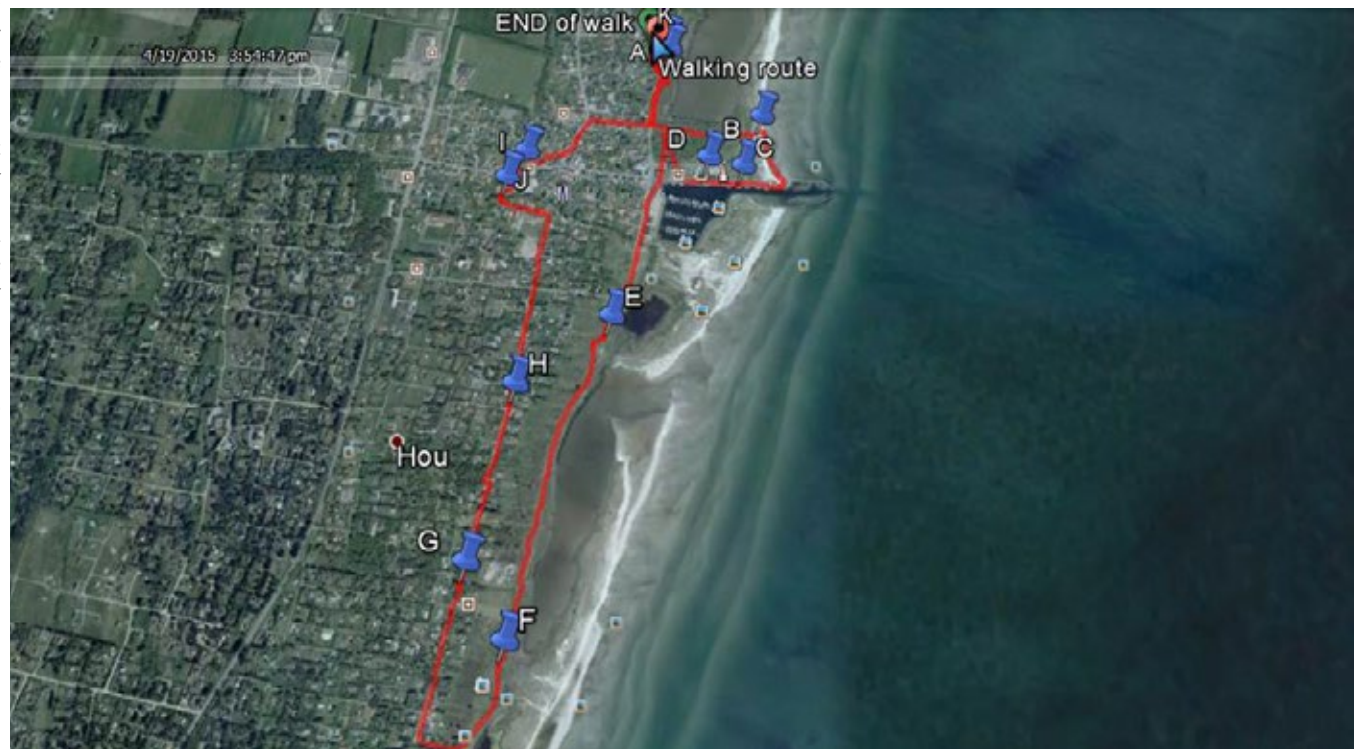
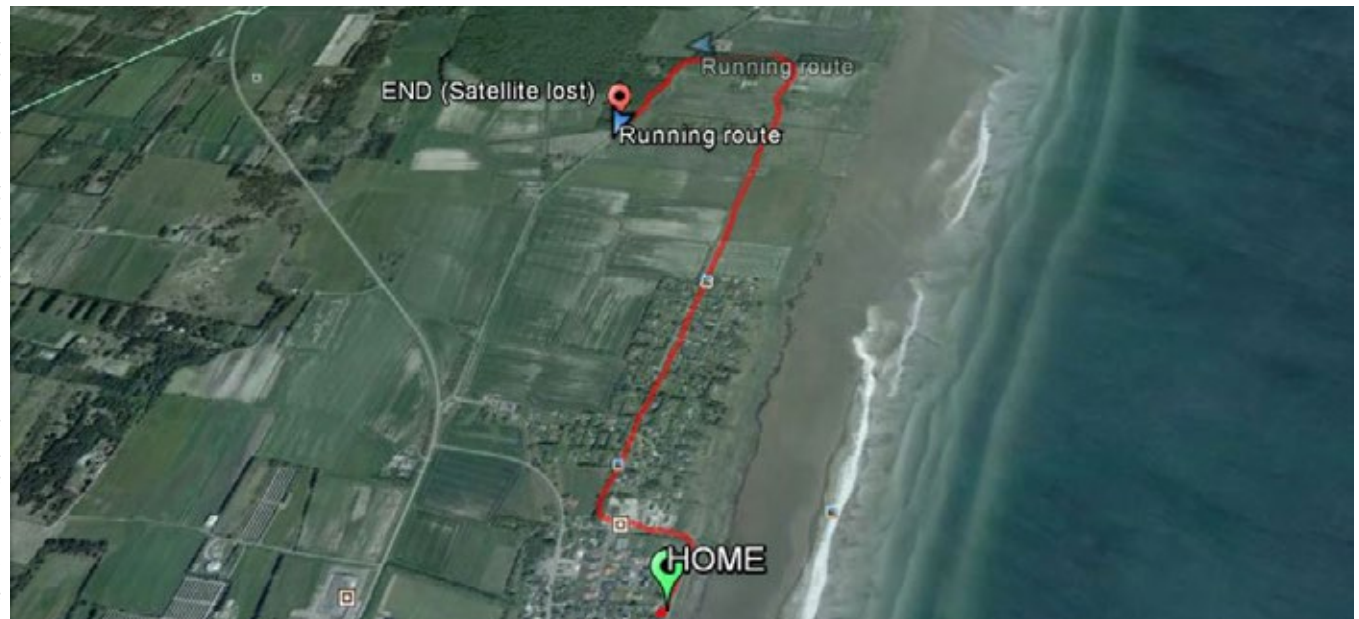
The connection is lost when she reach the outskirts of the forest. But she tells me that on the way home she prefers to use a more direct and faster route and therefore choose to run on the paved road, where she can raise the phase.

The respondent loves to walk, and takes walks to relax and think about everything and nothing. The materials on her walking route doesn't really matter, since the stress on the legs is not so severe as when running.

Hou is a small Danish city which consists mostly of vacation houses and farms, and the city remind her of her childhood. Because of this the route is chosen so it meets the most idyllic and peaceful houses. She loves how new build houses are tried to be erected the same style as the original houses or at least a modern reinterpretation of the old Danish timber build house.

Out from how the respondent use the city of Hou it is possible to sum up a few bullet points of what she prefer in an urban space.

- Materials that affords slower traffic
- Protection from heavy traffic
- Interesting views
- Building in a human scale
- Keeping to the traditions but still trying to bend the rules



A



Picture A : *Her first encounter with the sea.*

*every time she walk past here, she feels relaxed since it is the start of the route, and she knows what she can expect*

B



Picture B: The First time she is down by the water.

This is a focal point for her because it is one of the few spots on her route where she can't see any man made buildings.

C



Picture C: She enjoys the view to the small harbor buildings placed near the water

D



Picture D : The Two buildings for the kayak club is newly renovated to preserve the old danish timber buildings.  
The new building in the background is a new storage building for the kayaks, and are being build in the same style as the two existing buildings.

E



Picture E : *The Small grass and gravel paths indicate the transition from the city center where the normal residents lives to the vacation house area.*

F



Picture F : *The Small grass and gravel paths indicate the transition from the city center where the normal residents lives to the vacation house area.*

G



Picture G : *An example of one of the vacation houses which are being built in the old style*

H



Picture H : A interpretation of a normal danish vacation house which the interviewed really likes. (The house is one big glass facade on the other side.)



**Respondent biography :**

The songlines presented belong to a foreign student at Aalborg University, coming from Eastern Europe, male, aged 28. He considers himself a man of routine, his history speaks of personal uncertainties, lack of decisiveness. He enjoys plants and sports, he is deeply concerned about personal health, hygiene, and is also aware of global "health", manifested in an interest for global ecological issues. His greatest fear is a passive life with no experiences dipped in monotony.

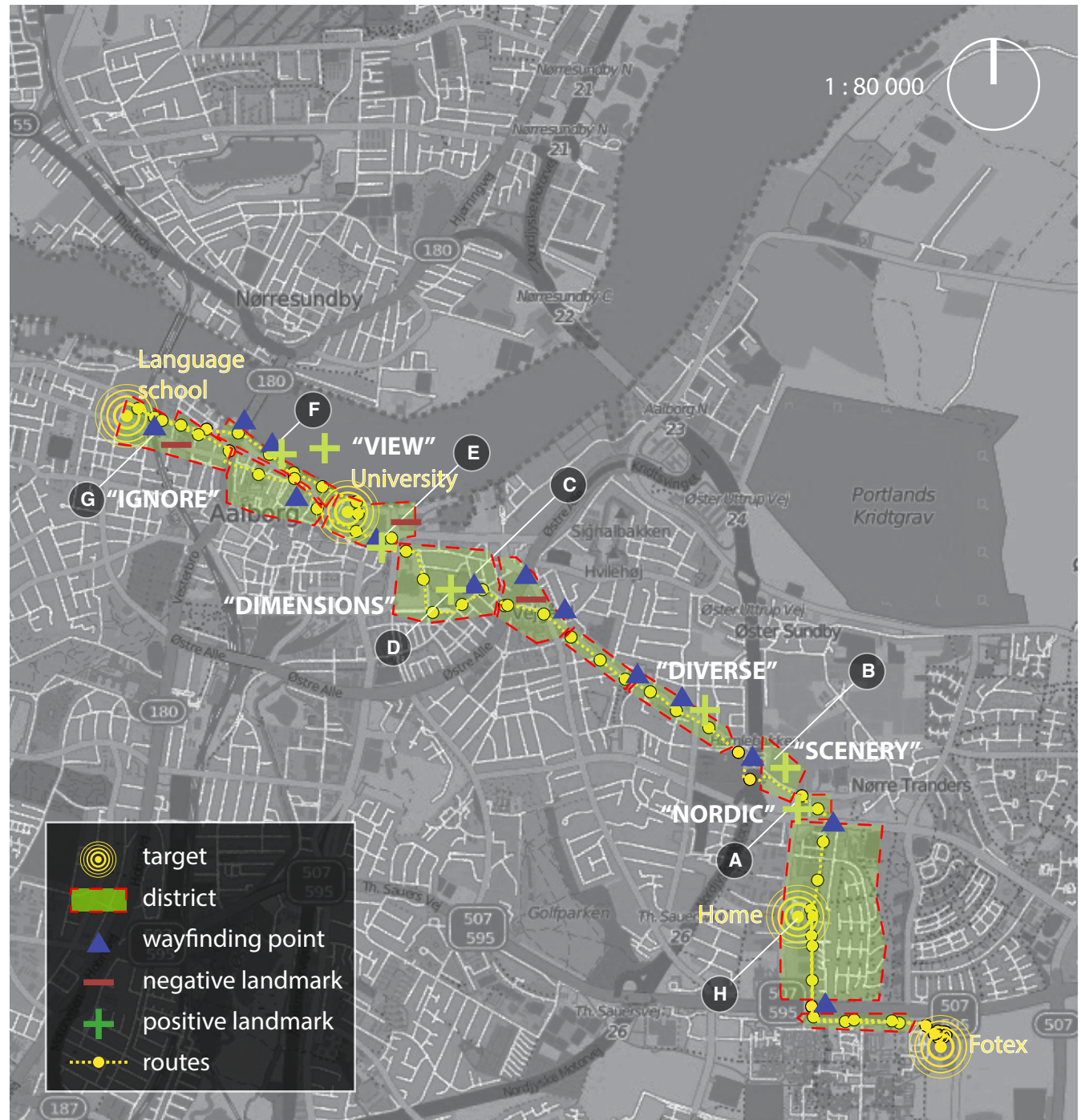
**Summary of findings :**

Respondent is not conscious of his route choices, he follows habits started by initial suggestions by others. His daily routine includes a journey from home to school, he also regularly visits a language school, and a shop near his home.

Recalling his journey, the respondent talks about a succession of districts defined by character. Most of them are demarcated by a waypoint or landmark. Most regions have an overall positive/negative impression, few regions, such as "Nordkraft area" have mixed features. In order to identify parameters of evaluation, a role construct repertory test tailored for environmental psychology has been conducted. The results:

- places considered natural, are also considered friendly
- width is indifferent in more natural areas
- narrowness is a limiting factor in built areas
- places with warm colors are considered friendly
- less order, less rectangular shapes improve friendliness
- bright places are considered friendly
- less attention on traffic evokes a state of security
- uniformity in Aalborg is more threatening than overstimulation

Based on the REP test and the interview, Aalborg is well designed for the routes of the respondent. The three redesign issues are: insecurity in Vejgaard; dullness in Vestby; suppressing presence of concrete tanks by Nordkraft. In Vejgaard a widening of the street by solving parking in the courtyard is proposed; the tanks are planned to disappear, while the problem of Vestby is rooted in the lack of vegetation in the streets, and generally inward-facing buildings.





A



Picture A : small pinewood forest

An oversized, thick barrier of trees balanced out by manicured gardens give an image of a "pioneer" settlement, affording the view on a mystical forest, while keeping a sense of safety by showing civilization. The respondent sometimes even stops by, he noted the intimacy of the area, and marked this region as his favorite.

B



Picture B : horse ranch beneath the church

The experience rendering this site positive is the seamless enjoying of a beautiful scenery. The terrain is wavy, a church marks the top, horses being active components. Seamlessness is afforded by downhill asphalt road regardless of direction, the agricultural land-use clears up space to look at. Interestingly, the car noise from the nearby motorway appeared as indifferent to the respondent.

C



Picture C : church by the park

Despite calling it ugly, the respondent chose this picture, because it dominates its surroundings. He noted he did not feel the same with other churches in Aalborg, and speculated it might be because of the copper laterna. Also, this church has no buildings in close proximity, it is a solitary volume. As landmark it functions well in terms of wayfinding.

D



Picture D : view of a city park

About one-third of the time, the respondent chooses an alternative route between the University and his home, to pass by this park (and occasionally pass through). He is drawn by the lake, but most importantly by the vegetation, including huge ancient trees. The park is a source of sensual healing for any stress suffered at the workplace. The presence of water, plants, animals, a semi-natural, semi-artificial design affords this feature.

E



Picture E: Nordkraft

Nordkraft, according to the respondent, is an "ugly but interesting building" most notable, because it is outstanding, different. He had problems with the asymmetry, and the protruding, out-of-proportion cube on top. He was however, comfortable with size, as long as there is also enough space horizontally, and some features appear on the ground, on human scale (in this case: the cubic stones).

F



Picture F: waterfront with Jomfru Anne Park

A combination of openness, exposure to the sun, water, and a small pocket of a park in the ultra-artificial promenade made Jomfru Anne Park a site of "hygge", comfort and relief for the respondent. Especially the park was envisioned as a tearing up of the asphalt coating, showing the naked soil and its beauties, the plants.

G



Picture G: Vesterbro

On Vesterbro, the respondent feels rather hurried: the heavy traffic, all the separated infrastructure compressed in a constrained width, the overload of semiotic information all adds up to the ambience of a typical busy road. It is also worth notice that if one takes all this away, a row of dull, monotonous buildings is left behind.

H



Picture H: the street by home

This bike-pedestrian path has a special non-visible value: it leads to the house of the respondent. He always feels hungry on this road, and is quite unnoticed of his surroundings. Looking at the picture, he called it indifferent, uninspiring. It is a continuous mass of hedge, grass and asphalt, rhythmically spiced with lamp posts, junctions and one-floored buildings. This route is a hinterland albeit "excellent for jogging". It depends on the public money spent on maintenance, whether it is worthwhile to keep it as it is.



## IDA BELLAND . 24 . NORWEGIAN

Saturday 25.04 . From 10.00 - 16.00

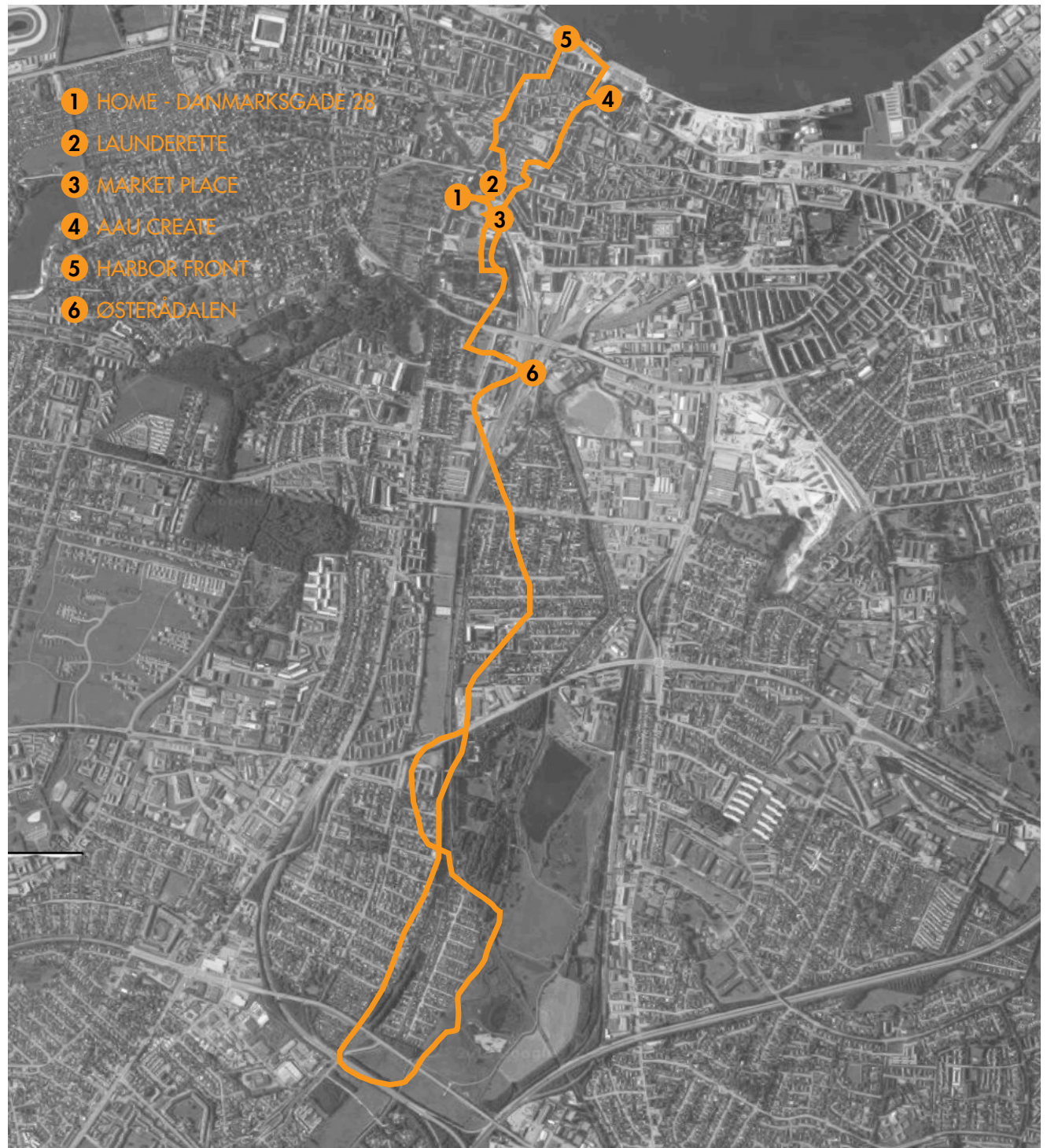
Ida tracked herself for approximately six hours on Saturday the 28th of April. She put a lot of emphasis on, that it was a normal Saturday without any 'special happenings' such as birthdays or other events.

She started tracking at 10 a.m. at her apartment in Danmarksgade 28 where she and her boyfriend Lars had breakfast. During the first three hours Ida went several times to and from the launderette a few blocks away. Afterwards they went down to their blocks backyard where they had to service their bikes. Around noon they went to Netto to hand in empty bottles. After Netto they went to the Saturday market at Frederikstov to buy bread and vegetables. Ida then followed Lars down to the CREATE building and then strolled along the harbor front on the way back to her apartment. Ida ended her tracking day with a run in Østerådal.

## SUMMARY OF FINDINGS

During the weekend it is very important for Ida to do things which 'charges her batteries' – relaxes her. This could for example be a run in Østerådal, doing the laundry or visiting the Saturday market with her boyfriend. These activities become places which Ida associates and creates memories from, so that when passing by them reminds her of certain situations and emotions.

Furthermore there are architectural and urban spaces which affect Ida's everyday travel. For example the end of Danmarksgade closest to the school feels "more dark and closed – almost uncomfortable." Because of this Ida always turns left to the shopping street right after Netto when walking to school. However if it's raining Ida always takes her bike down Danmarksgade – which she finds to be the fastest way on bike. After school Ida has several different routes home depending on her emotions, time, tasks and weather.







The old red brick building after Net-to acts as a Landmark for Ida when going to and from school.



The stroll at the harbor front next to Jomfru Ane Parken acts as a pause and a safe spot for Ida, where she can go to relax and enjoy the different activities and life.



The bridge to Nørresundby is to Ida an icon in Aalborg and she always shows visiting friends and family the bridge.



The Saturday market at Frederikstov, which is always visited to get the weekly bread and vegetables.



Danmarksgade right in front of her apartment. The start and stop of all her journeys, whether it be to school or home from a night out in Jomfru Ane Gade.



Fixing bikes in the backyard. The backyard is a good and private retreat, which can be used for several different occasions.



### Respondent biography :

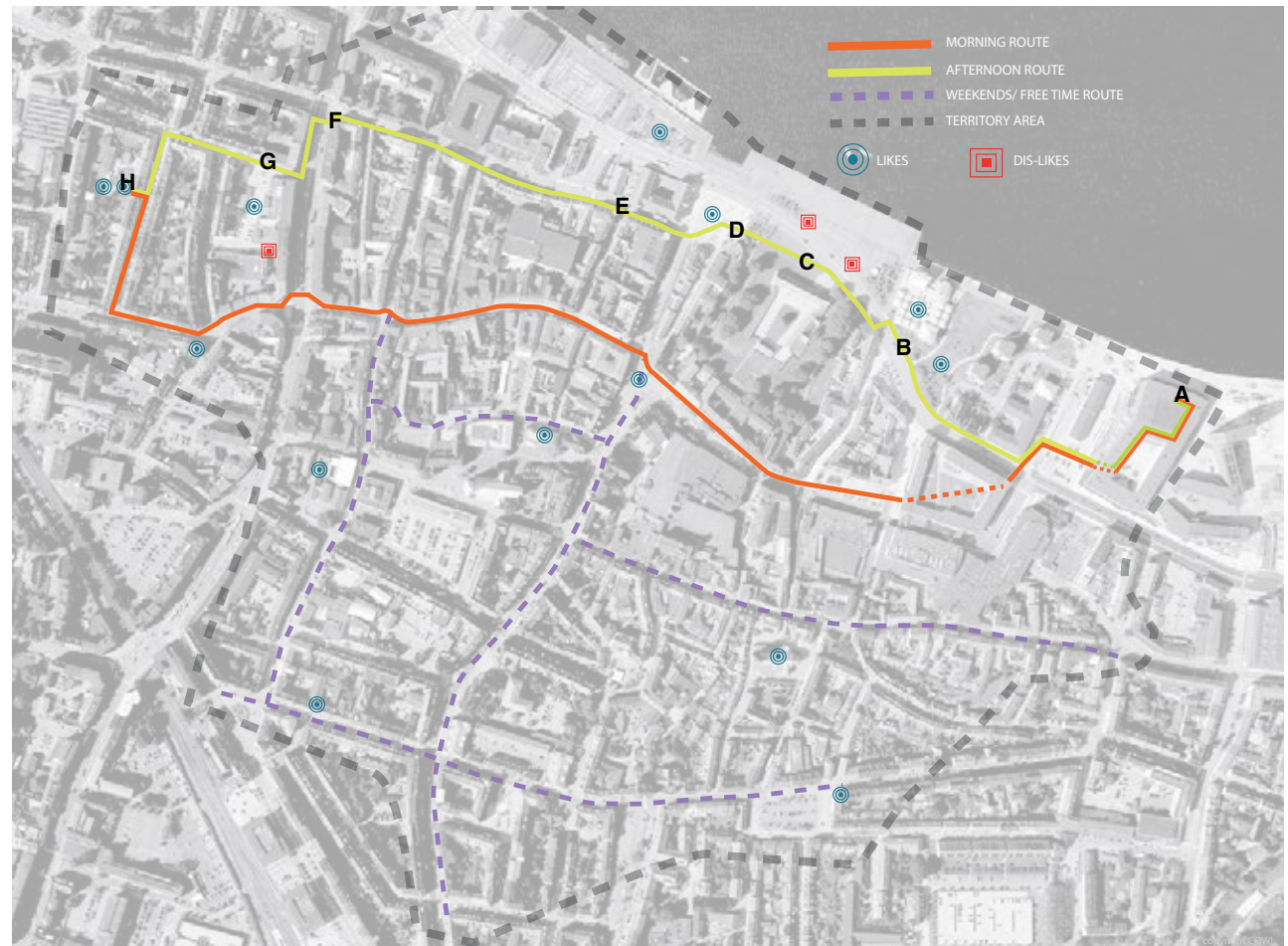
Louise is 24 years old, and moved to Aalborg for 4 years ago because of her studies. She studies in Aalborg university, urban design, where her school takes most of her time, but when she has some free time, she loves photographing, yoga, vintage shopping and interior design. Louise made a GPS tracking of a normal day going to school, which is two different routes. Her morning route is different from the route she take back home late afternoon. Her free-time/weekend route is also different from where she hangs around in weekdays. Her everyday live is reflected on her school, where her free-time/weekend route is reflected on her hobbies. She lives in Aalborg center and loves that she can walk from the one end to the other, where her necessary needs are not more then walkable distance - "Aalborg is a nice city, because u get around really fast. You can just walk from one end to the other"

### Summary of findings :

*"I had a bike, but its broken. I don't really need it, but when i am in a hurry i always do prefer to have my bike"* Analyzing Louise's tracings and her comments on her daily life, it seems That an overall improvement on the light traffic could make Aalborg improve its potential.

*"In the afternoon people is in a shopping pace, - slow, which is irritating when u just want to get home, thats why i like to take another route when going home from school. Different route for different pace..."* Louise takes another route when going home from school. The route is the quickest way to get home, but she feel the need to take another, to get home faster and undisturbed. As Jan Gehl puts it: *"The act of walking requires space, so one can walk freely and undisturbed, without being pushed, and without having to maneuver too much."* - Jan Gehl (2007) In comparison, picture D is also a crowded place, but with a comfortable space to get around. She doesn't feel pushed or disturbed. This is also one of her favorite hangout spots. *"I like the most part of Aalborg... but the south side is horrible, as soon as u past the motorway it is pretty boring and empty... Can get quite dangerous. Its mostly car domain area, and one time i actually got hit by a car in a roundabout!"* - There could be a future development and improvement in the light traffic in the neglected areas in Aalborg like the south side. *"I love Danmarksgade, there is a lot of galleries and retro shop in the corners down there"* - Louise is very cultural and loves Retro shopping and art galleries. This is also imprinted in the areas she like to spend her free-time in. Danmarksgade is one of the streets that holds different secondhand shops and galleries which reflects on her personality.

## URBAN SONGLINES AND GPS TRACKING





Picture A : University in Randsburgade 14

*"I spend a lot of my time here.... I have the most amazing view inside and out. out the harbor side and a view of Aalborg in the other... I prefer to work at home where i can focus more, but we have group-meetings everyday here"*



Picture B : Utzon Centeret

*"The building is beautiful outside and in. Very comfortable space inside, but outside it's to windy. I like to be sheltered, so i stay inside... I have a lot of memories attached to this building. I have worked there, and spend long nights, building models during past semesters. Good memories!"*



Picture C : Aalborghus Slot

*"I like just passing through here, its really romantic. I cross the road just to pass through this area because of the view"*



Picture D : Toldbodplads

*"I usually cross this area in the afternoon. You can easily get across, even though its pretty crowded. I hang around this area a lot"*



Picture E : Maren Turis Gade

*"In the past semester we where located here with a view down this stress. I spend a lot of time here.. they have the best coffee!"*



Picture F : Vesterbro crossing

*"Never been to that bar, but i cross this crossing every day. There is less people here then the one near the "The bull" (A landmark statue) I prefer to take that crossing in the morning, where there is no people around. I always meet up with Marianne (group mate) by "the bull" to go together with her to school."*



Picture G : Korsgade, (Nettos backyard)

*"Short cut- with beautiful graffiti wallpaintings. its a nice courtyard - very different to the rest of the area. they always get my focus when i am in my oven pace, going home."*



Picture H : Dalgasgade (Louises backyard)

*"My garden... when its summer i hear people playing basketball or just hanging around the courtyard outside....I always meet my neighbors in the courtyard.... It's a nice way to catch up"*



## **Experiment 2:**

Design intervention combined with thermal camera tracking

### **TEAM A**

Andrea Victoria Hernandez Bueno

Aleksander Borg Pedersen

Beatriz Fernandez Gomez

Ida Marissa Matthiesen

Malgorzata Anna Raczka

Louise Færch Gjerulff

Marianne Vinum

Ottó Geza Berbik

Peter Primdahl Jensen

Signe Annika Haulrich

Viktor Bukovszki



## Experiment II : Design Intervention and Thermal Tracking

### Objective and Design Intervention :

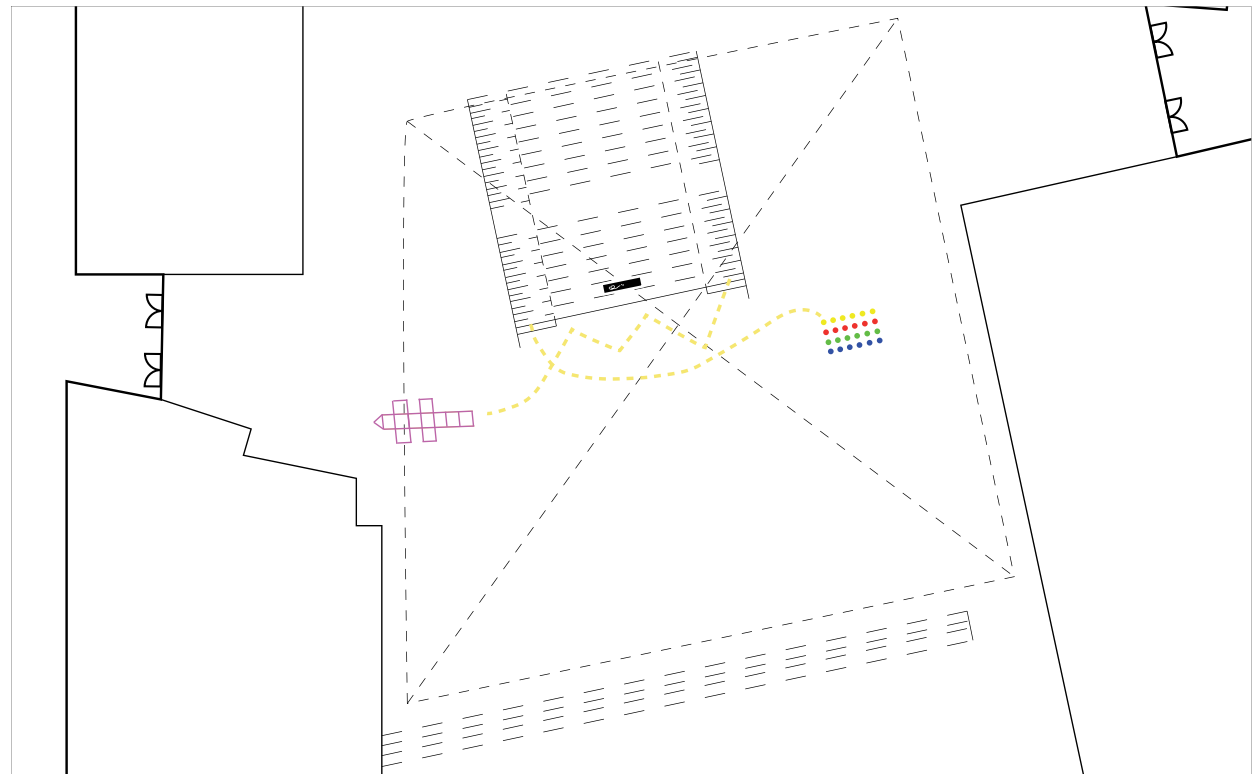
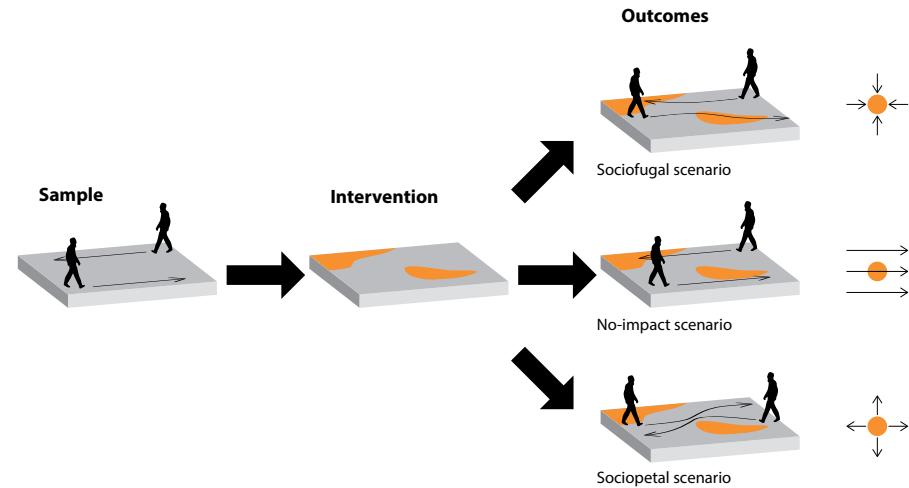
The idea for this experiment is to study how an intervention in a specific place can influence the flow patterns of people while they move, using technological methods as thermal camera and qualitative method as observations and surveys. The place selected is the main hall of the Architecture and Design building of AAU. Generally, this space is used only to transit along the building or for different private events and expositions. Later on, this data will be analysed using computational programs in order to obtain precise statistics of the experiment results.

It was developed a thesis about the expectations or possible reactions from the users once they face the intervention. As urban designers, we are trying out to demonstrate if the different changes of materials on a horizontal surface can activate useless spaces. Furthermore, how the introduction of a programme in a public area can influence people's behaviour, flow patterns and modify the daily dynamic of the place.

The intervention consist on play with the floor surface, creating a playground in the main hall area, including the orange grandstands. There were proposed floor games, such as twister, hopscotch and some footprints paths with organic shapes with the aim to change the normal flow taken by people every day. On the orange grandstands, it was placed a blackboard paper on the floor, in order to be used by people to communicate with the rest of students in the upper floors. The materials used are paper stickers and colour tapes in order to not to modify the horizontal surface perception.

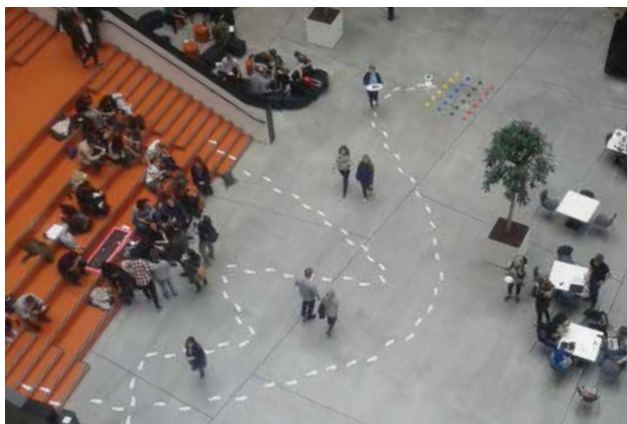
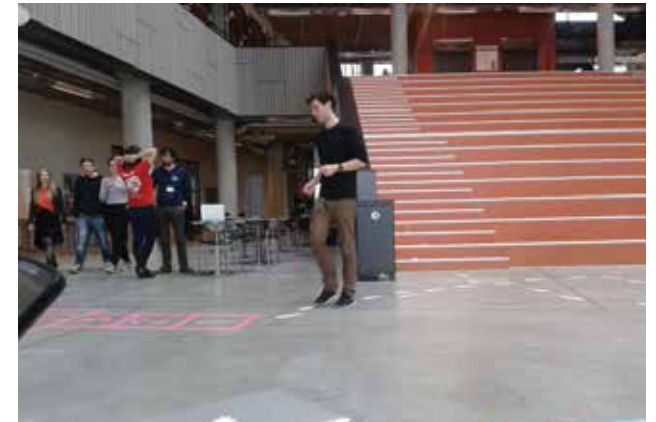
### Documentation of process :

The experiment had place on Monday 27th April between 8 a.m and 4 p.m. The intervention was set up Sunday evening, one day before conducting the experiment and the group placed earlier prepared materials on the experiment area. The intervention included : twister game, blackboard with chalk to write on it, an hopscotch made out of pink tape and white footprints leading from orange staircase to both the twister and the hopscotch. The experiment was conducting with an use of thermal cameras and by observation. Two observers were situated next to the hopscotch, another two close to the twister and one person was located on the first floor to observe the experiment from more overall perspective. The observers were responsible for counting passersby and taking notes of their reactions or behaviors and also for taking photos. They were also interviewing users of the hopscotch and the twister games, to investigate their social and educational background and opinions about the interventions. The observation part of experiment finished at 4 when the installation was taken out.



### TEAM A

Andrea Hernández Bueno, Aleksander Borg Pedersen, Beatriz Fernandez Gomez, Ida Marissa Matthiesen & Malgorzata Anna Raczka  
Louise Færch Gjerulff, Marianne Vinum, Ottó Geza Berbić, Peter Primdahl Jensen, Signe Annika Haurich & Viktor Bukovszki





## Experiment II : Design Intervention and Thermal Tracking

### Analysis

Part of the intervention was to analyze how people react to the new scenario in the lobby. In order to do so, we selected several observation spots where the members of the team would analyze the things that are not visible for the camera. The empirical analysis conclude in the premise that most of the people don't look at the floor while walking if there is no obstacles in their way, and some of the ones that look were indeferent towards it. We also got a lot of data by interviewing both users and not users of the space.

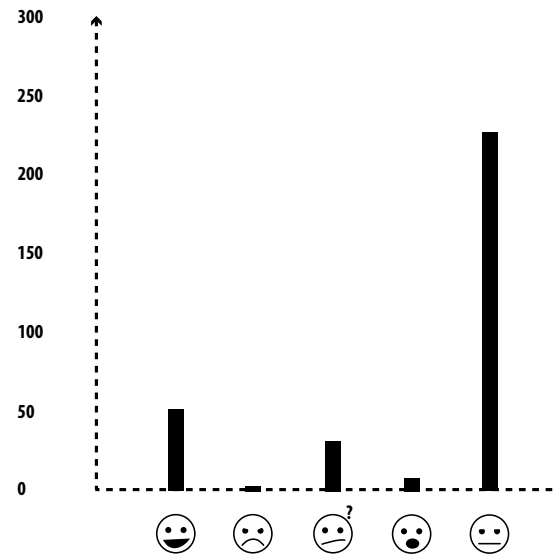
Students from the building were not very surprised about the intervention, but some of the occasional users (people attending conferences and meetings) found it very attractive. For a lot of people it was a way of remembering their childhood and they smile and point at the games, although most of them did not play, but only walk on top of the footprints. The main reasons for not playing were embarrassment and/or being in a rush.

### Summary of findings

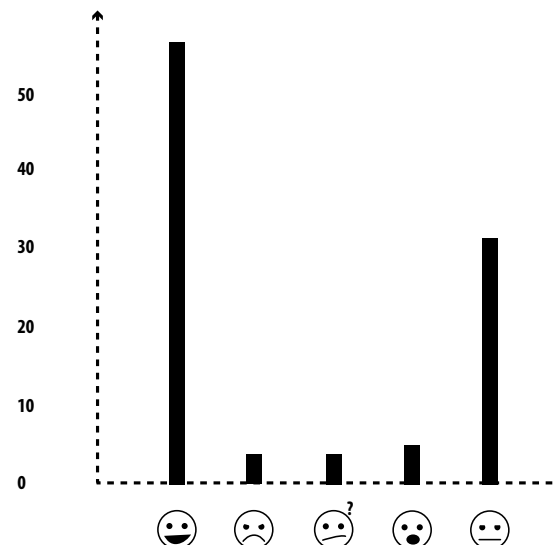
Our intention was to create an intervention that would interact with, or obstruct the movements of people in the building. To do that, we chose to appeal to people's playful impulses by implementing different activities in the atrium, resembling a schoolyard. One was Hopscotch, the second was Twister and the third was a chalkboard on the floor. Inspired by the Nudge Theory, we attached white footstep stickers on the floor, with the intention of leading people to each activity, but along an irrational route. This would provoke people to take conscious choices on using the intervention and how to use it.

The qualitative data showed a significant amount of activity at the Twister game and the footsteps by themselves. Those who did not use activities commented on them with positive remarks from balconies at the upper floors. We observed, that many international students used the activities, while Danish students often made remarks or observed from a distance. Our conclusion was that this had to do with the difference in cultural mentality i.e. Danish students were shy compared to international students. The majority of people walked over both footsteps and activities without paying it much attention, probably due to the physical character of the intervention. Had the intervention been more provocative, in physical and spatial terms, it would probably have had greater impact in 'forcing' people to interact or avoid the intervention. Instead, we had chosen to stick semiotics to the pavement, in order to invite people instead of forcing them. We also observed that the queue to the cantina was angled along the wall, instead of straight, which was unusual and caused by the placement of the hopscotch course.

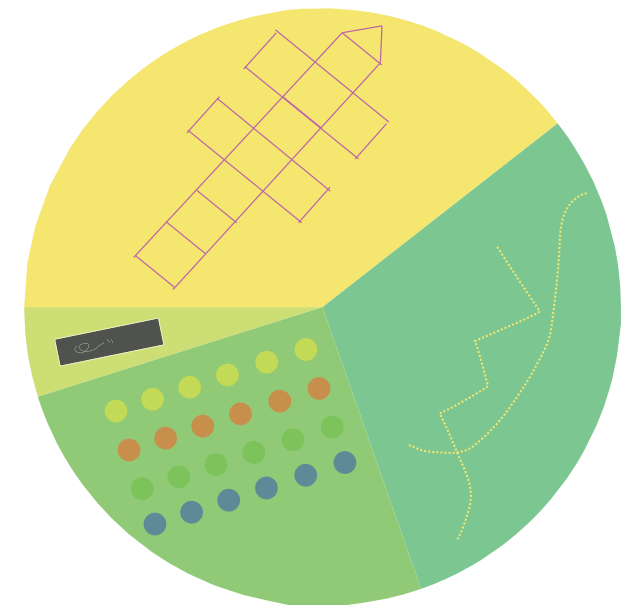
Peoples reaction on semiotic footprints



Peoples reaction on activities



Relative usage of activities

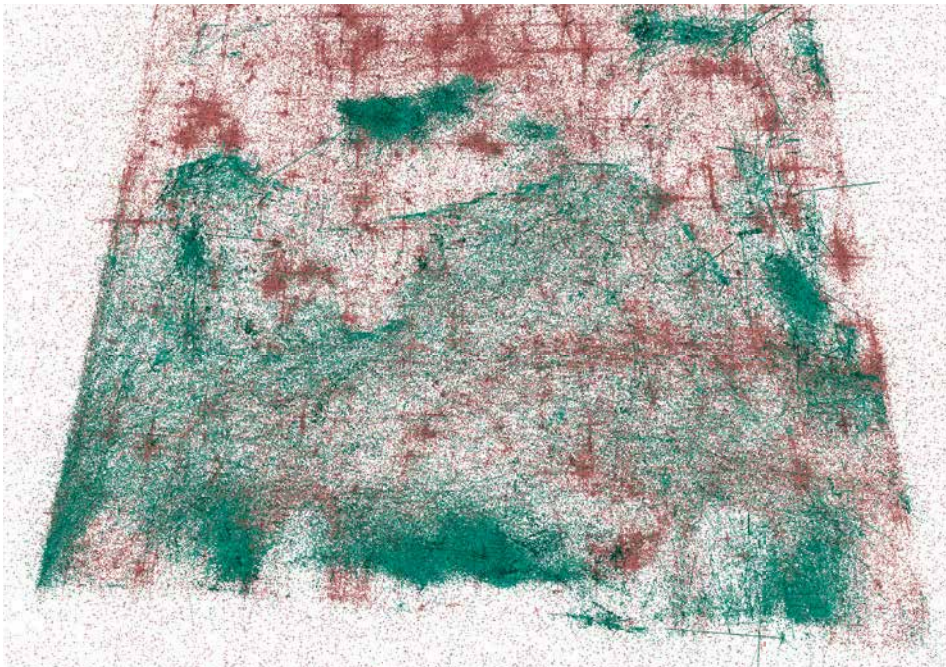


### TEAM A

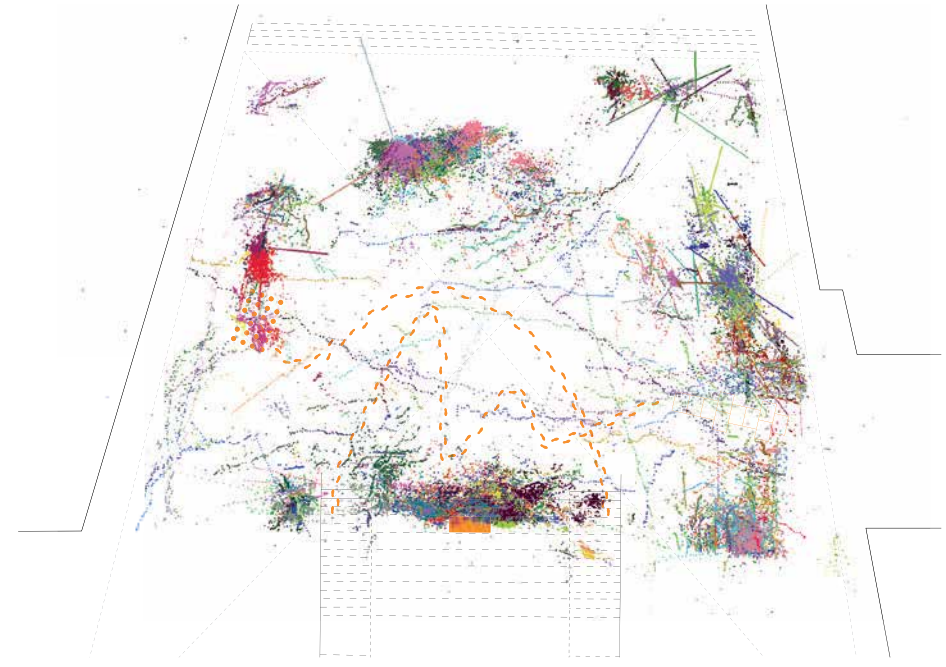
Andrea Hernández Bueno, Aleksander Borg Pedersen, Beatriz Fernandez Gomez, Ida Marissa Matthiesen & Malgorzata Anna Raczka  
Louise Færch Gjerulff, Marianne Vinum, Ottó Geza Berbić, Peter Primdahl Jensen, Signe Annika Haurich & Viktor Bukovszki

Throughout the execution of experiment 2 a thermal camera was utilized in order to track flows of movement in the Create building. Prior the experiment we expected more interactions between the students, and that the regular patterns of the people would change. We expected the regular use of the stairs and floor to change, adopting the use of play. At the same time, we expected the people to know where they wanted to go, to make a conscious choice whether they wanted to go to the twister game, or to the hopscotch game: we expected only a few people to follow the paths of footprints. We also supposed that there would be more activity during the afternoon than during lunch. The experiment verified the flow change, so it became clear that the games had an effect, however it only affected some, while others where just passed by. We planned to trigger the usage of the games by showing examples, but this was not necessary: people used them without an external motivation. Chalk drawing was the game we assumed to be used the most, as it is more moderate than hopscotch or a twister. However, twister was observed to be most popular, resulting in recognizable heat pattern shifts. Players also attracted spectators, meaning the game has cascading effects on the behavior of non-players. A large nest of activity was also registered at the large staircase, but qualitative observation shows this is due to guests, who had lunch there, rather than players of the chalkboard. On the other hand, a so-

ciofugal impact of the experiment occurred on the queue to the canteen. Because of the hopscotch people started to line up along the wall instead perpendicularly, implying a conflict between the two non-flow activities. Other interventions did not change the shape of the flow, since they were attached to the main routes with no other friction generating competitors. Their influences are: slowing down the flow, and attraction of stayers – making them sociofugal areas. The experiment shows that programming the surfaces have an impact on how we behave and can be used for both controlling the direction of the flows and the creation of new “stay” experiences capitalizing flow.



**COMBINED FLOW:** ■ MONDAY ■ FRIDAY  
FROM 07 A.M TO 17 P.M.



**FLOW FROM 12 P.M. TO 3 P.M.**

PEOPLE PRESENT FOR MORE THAN 30 SECONDS



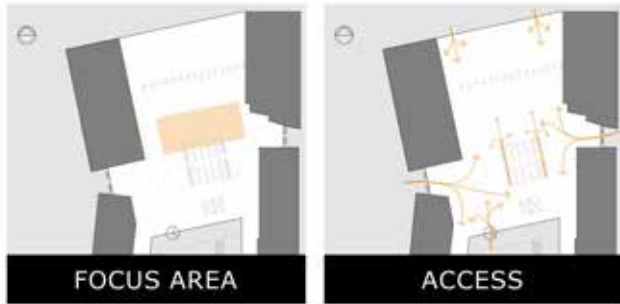
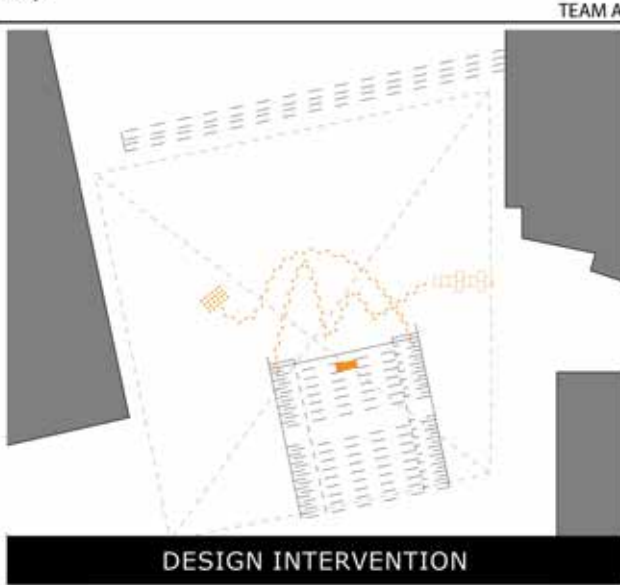
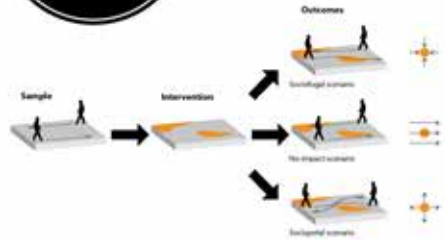
# Surface intervention, come and play!

## Design Intervention

The objective is a study of a design intervention's impact on the flow of people, which was conducted in the main hall of the Crea building at Aalborg University.

The focus of the experiment is to study whether or not an interaction between respondents and the physical or material surface will have an impact on the flow. It is done by changing and molding the surface of the main hall, applying new layers of different materials. These materials such as tape and different colored papers, were glued onto the floor. The mentioned intervention is staged by the usage of games, like hopscotch, twister and drawing with chalk. These activities are familiar for the most of us from our childhood.

Furthermore, a sociological dimension was examined via placing footprints on the floor, to alter flow pattern. Whether or not people are following the patterns was observed. To make sure the patterns stand out and are registered clearly, different patterns are placed; one which is organic and smooth, and one is sharper.



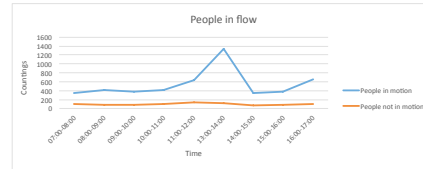
# Surface intervention, come and play!

## Thermal Tracking Analysis

Throughout the execution of experiment 2 a thermal camera was utilized. A thermal camera receives infrared light, thus it is capable of tracking heat. Thermal tracking has both pros and cons. Thermal tracking is unobtrusive, is devoid of privacy issues, and works both inside and outside. On the other hand, errors can occur in the tracking, due to individuals overlapping each other.

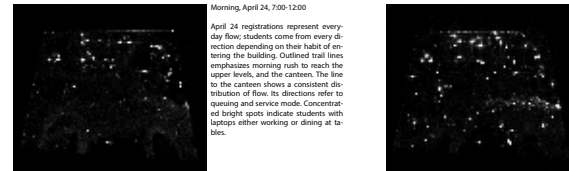
Prior the experiment we expected more interactions between the students, and that the regular patterns of the people would change. We expected the regular use of the stairs and floor to change, adopting the use of play. At the same time we expected the people to know where they wanted to go, to make a conscious choice whether they wanted to go to the twister game, or to the hopscotch game, we expected only a few people to follow the paths of footprints. We also supposed that there would be more activity during the afternoon than during lunch, because people would feel more exposed during lunchtime, where there are a lot more people (also because they have a clear intention to eat). The experiment verified the flow change, so it became clear that the games had an effect, however it only affected some, while others were just passed by. We planned to trigger the usage of the games by showing examples, but this was not necessary: people used them without an external motivation. Chalk-drawing was the game we assumed to be used the most, as it is more moderate than hopscotch or twister. However, twister was observed to be most popular, resulting in recognizable heat pattern shifts. Players also attracted spectators, meaning the game has cascading effects on the behaviour of non-players. A large nest

of friction generating activities work better if they do not compete (occupy the same space) these activities are fed by flow, an easy-access link to the actual armature is essential friction generation may result in alternating flow patterns in space

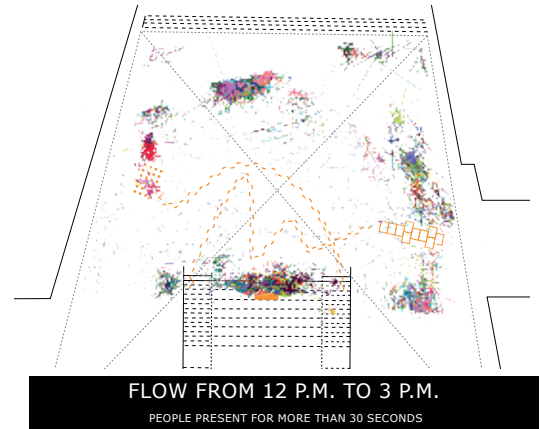
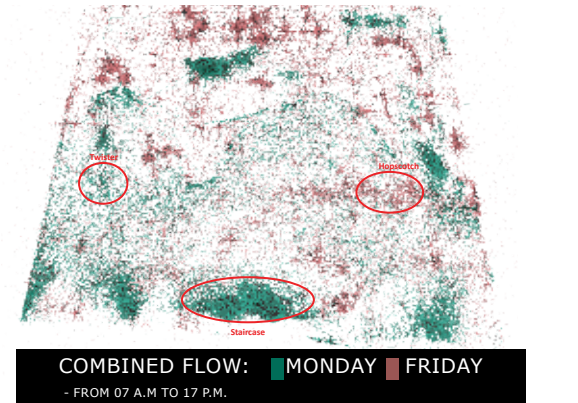
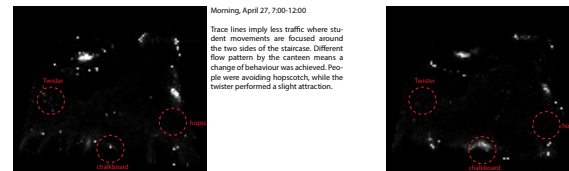


A lot more people were walking than staying (People in flow). Thus, it is more clear in the tracking showing people not in motion, how the interventions affected them: it becomes visible, that people stand by the games instead of walking across them (Flow from 12 p.m. to 3 p.m.).

### REFERENCE DAY, APRIL 24



### INTERVENTION DAY, APRIL 27



### **TEAM B**

Andrea Dynnes Holmbo

Lærke Essemann Jensen

Christoffer Gade Olesen

Steffan Vangsted Frandsen

Lars Danielsson

Zohel Noorestani

Jeppe Frahm Koefoed

Anne Remme Jakobsgaard

Tomas Werner Sejtved

Mia Nøhr Christensen



### Objective and Design Intervention :

The experiment is about a physical design intervention that somehow interferes with the flows in the given project area ( In front of the orange staircase in Rendsburggade 14). The Idea is to see how the design intervention changes people's behavior in the space. The focus of the design intervention is to see how elements of vertical and horizontal structures - vertical which indicates a wall and horizontal, which indicates a cover above - will be preferred as the most comfortable space to sit. This theory is based upon Jan Gehl's "edge effect", where he talks about how people prefer to sit in a space where their backs are covered, with a view out in the open. This theory is recreated by seeing if people will prefer this scenario instead of a cover above you, or sitting areas where you have no shelter out in the open (as the situation is now, in the given project area)

### Documentation of process :

*"benches in the middle of the room look interesting on the plans, but is reluctant to use. The good side seats are in the edge of the room where the back is covered, where the view is good, and where there is shelter and sunshine."* - (Jan Gehl, 2007)

Gehl's theory is the backbone of the development of this project. This project is revolved around observing the behavior of people in open sitting areas. The project started out as a question mark to what will happen in a big open area, if sitting areas were created in niches or in the middle of the room. A hypothesis was put up to see if Gehl is right and people would seek what he calls the "edge effect". Two to four sitting areas are designed to either be defined by walls or a cover. The starting point of the design was to accommodate both flow and places to sit, therefor the "The red folding paper in the greenway" was used as a reference point to a connected structure through the area of construction. The structure would stretch out and define spaces to sit but would also interfere with the daily flowlines of the area. The idea with interfering with the flowlines was to provoke the flow into a new direction and change the behavior of the people. This however proved to be a completely different hypothesis to demonstrate. Therefor a new dimension was created. This dimension was developed to give a new hypothesis for the flow, as a part of the sitting areas. The focus was to observe the behavior of people in places to sit and in flow. Again is the use of Jan Gehl as a theoretical background. The idea is to observe how people would detect two walkways with the same dimension which is either entirely free or covered.

*"The act of walking requires space, so one can walk freely and undisturbed, without being pushed, and without having to maneuver too much."* - Jan Gehl (2007)

Due to the difficulties of construction, the design of the structure was simplified. The triangles changed to squared frames. To fill out the frames, the idea was to create colorful and inviting surfaces, by binding different shapes of colored ribbon around the frames.

### Hypothesis scenarios:

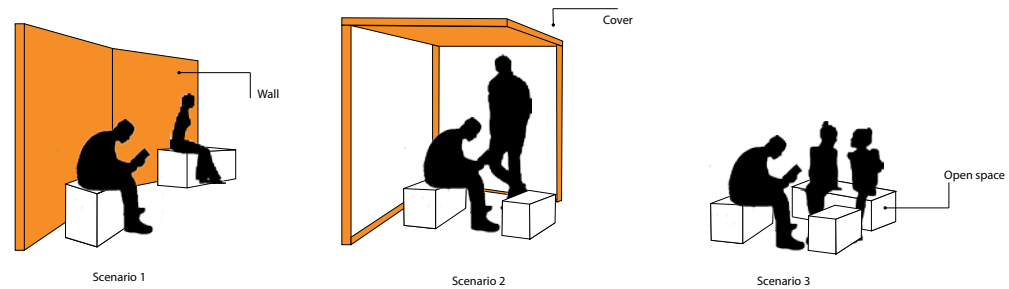


Fig. 1 - Hypothesis scenarios of the design intervention in areas for sitting and longer stay - What type of sitting arrangement is preferred?

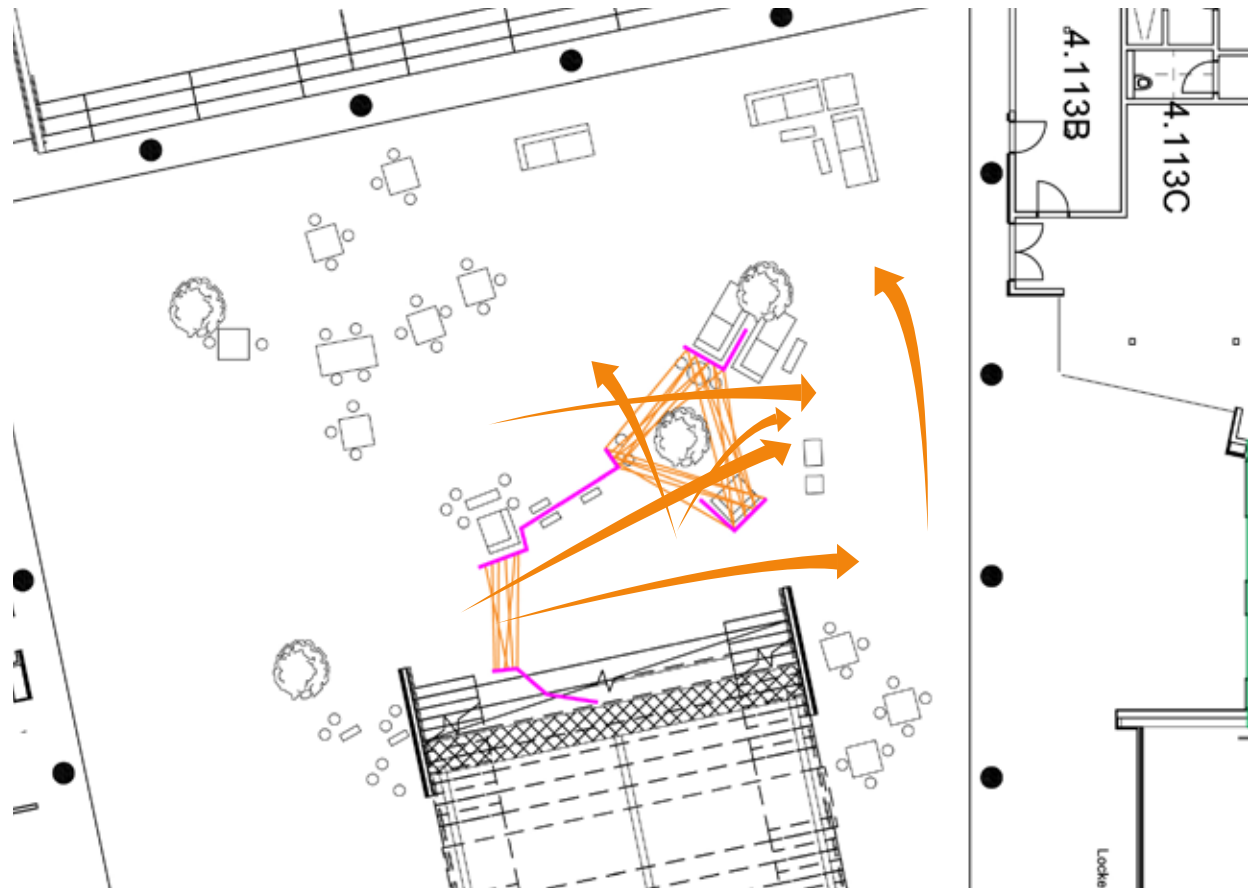


Fig. 1 - Hypothesis scenarios of the design intervention in areas for flow lines - Which lines will be used? Will people go through sitting arrangements?

## Proces of form:

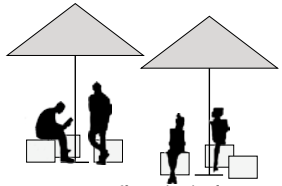


Fig. 2 Stage 1 - Different kinds of covering

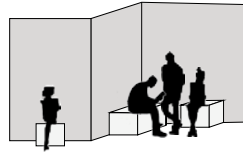


Fig. 3 Stage 2 - Paper folding walkway

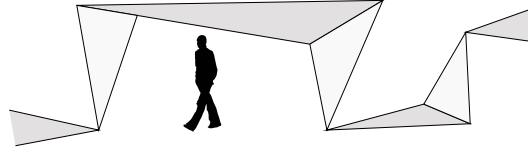
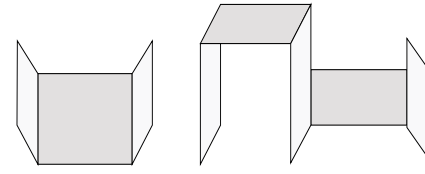
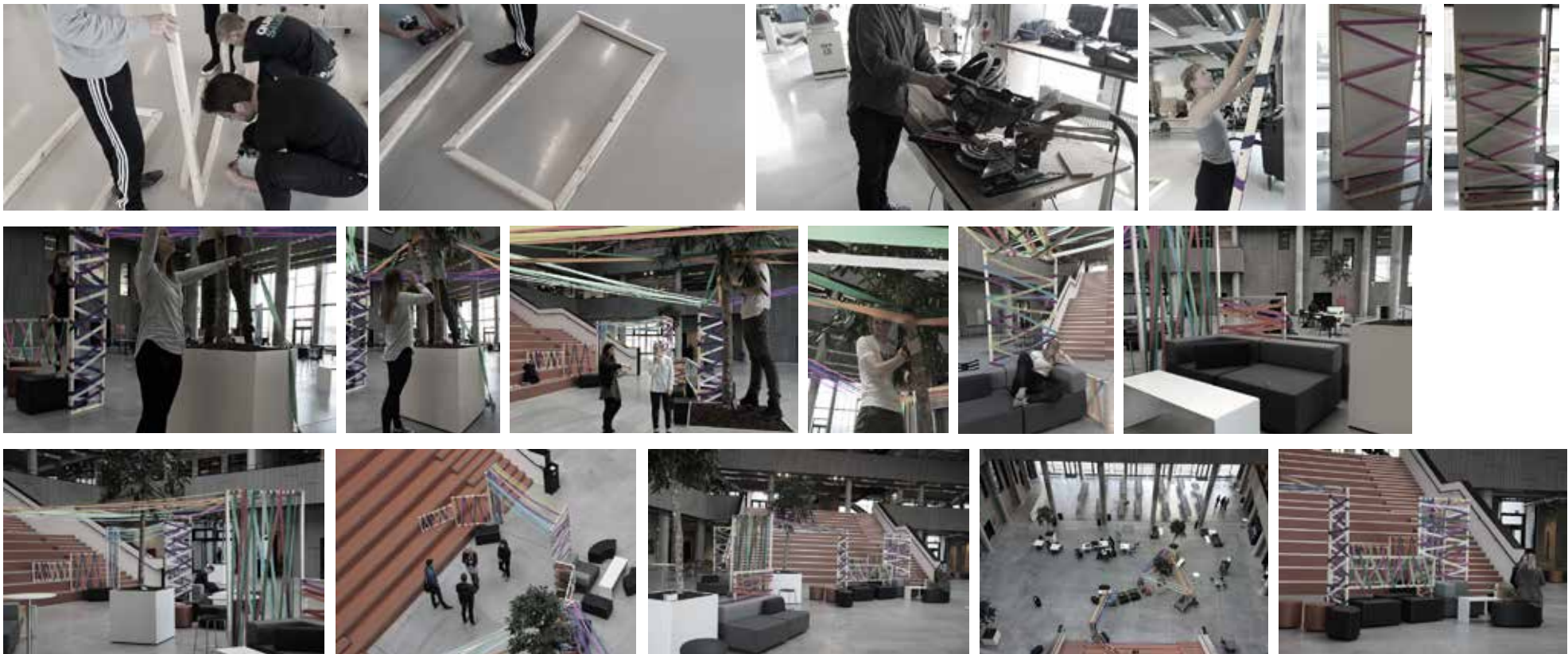


Fig. 4 Stage 3 - Simplifying the structure, flow and stay oriented



## Process of construction:





### Analysis:

The first analysis is a qualitative analysis; the analysis of the structure is made from observations. The structure was placed in the atrium for one day, and the observations took only place that day.

The structure was occupied in many different ways; sitting, leaning and laying. A catalogue is made of how the structure was used, as the result of the analysis.

The second analysis is a quantitative analysis based on data from a thermal camera. The data is converted into pictures showing overall activity during the day. Thermal pictures from different days are compared.

### Summary of findings :

Before the intervention was put up the flow lines were chaotic and people moved all around the atrium in different direction and lines. Stay happened in the same cornered sitting areas. The options for stay in the middle of the room, is not used. During the intervention the flow lines are distributed in more direct lines in the atrium. The intervention challenges people to choose a path. Some choose to go through the sitting areas. Stay in the middle of the room is provided by walls of cover and roof of cover.

The experiment confirms the hypothesis saying that people do not mind sitting out in an open space and close to the main flows as long as they have a cover that makes them feel less exposed.

By creating a light structure (The covers do not have to be solid to have the desired effect) that divides the big open space into smaller pockets the space normally used as a transit area can be transformed into a space with a mix of people moving and people staying. Additionally the flows will be pushed further out into the space and add activity to a larger area. Further studies could include a similar experiment but put into a different context where other parameters are in play. The obvious choice would be to conduct the experiment in an urban setting where parameters such as wind, weather and a more diverse mix of users could end up affecting the results. In this case it would also be relevant to see whether the covers merely needs to be indicated or if it needs to screen off from wind, sounds, etc.

When looking back, a longer span over time of the analysis could give a more precise analysis from the thermal camera. It would give people time to adjust to the structure, and there for occupy and personalize the space. There could also be an analysis which will put the thermal tracking opposite the seating pictures and Gehl's theory of sitting. Hence the tracking of sitting will be more obvious.



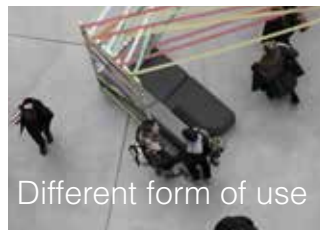
Stay and sitting tractions



Distribution and flow



A gathering point



Different form of use



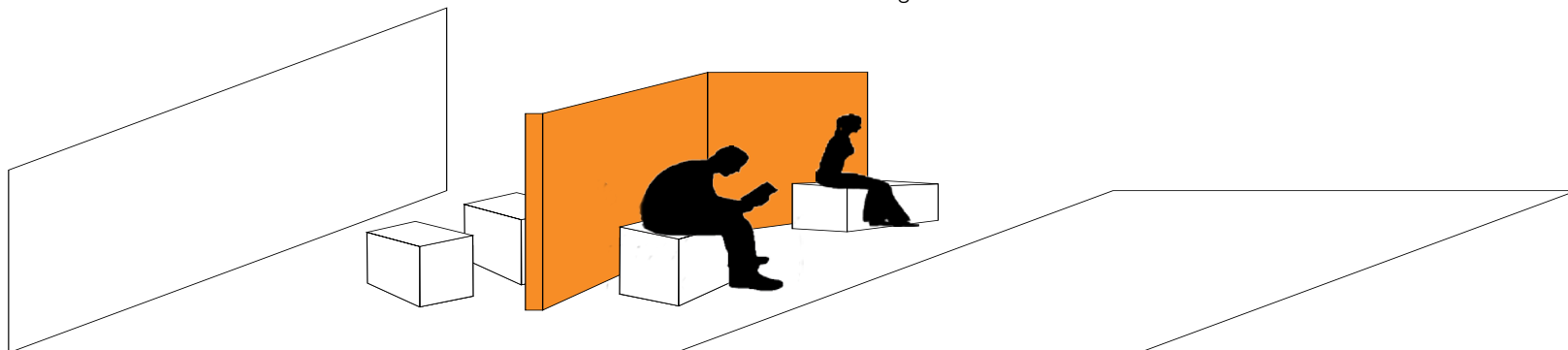
## Results of study:



- Chaotic flow
- Concentrated seating in the corners



- Distributed lines
- Challenges to choose a path
- Sitting areas in the middle of the atrium





# [Cover in Colors] : Design Intervention

TEAM B

**Objective and Design Intervention :**  
The experiment is about a physical design intervention that somehow interferes with the flows in the given project area ( in front of the orange staircase in Rendsburggade 14). The idea is to see how the design intervention changes people's behavior in the space. The focus of the design intervention is to see how elements of vertical and horizontal structures - vertical which indicates a wall and horizontal, which indicates a cover above - will be preferred as the most comfortable space to sit. This theory is based upon Jan Gehl's "edge effect", where he talks about how people prefer to sit in a space where there backs are covered, with a view out in the open. This theory is recreated by seeing if people will prefer this scenario instead of a cover above you, or sitting areas where u have no shelter out in the open (as the situation is now, in the given project area).

**Documentation of process :**  
"benches in the middle of the room look interesting on the plans, but is reluctant to use. The good side seats are in the edge of the room where the back is covered, where the view is good, and where there is shelter and sunshine." - (Jan Gehl, 2007)

Gehl's theory is the backbone of the development of this project. This project is revolved around observing the behavior of people in open sitting areas. The project started out as a question mark to what will happen in a big open area, if sitting areas were created in niches or in the middle of the room. A hypothesis was put up to see if Gehl is right and people would seek what he calls the "edge effect". Two to four sitting areas are designed to either be defined by walls or a cover. The starting point of the design was to accommodate both flow and places to sit, therefore the "The red folding paper in the gateway" was used as a reference point to a connected structure

through the area of construction. The structure would stretch out and define spaces to sit but would also interfere with the daily flowlines of the area. The idea with interfering with the flowlines was to provoke the flow into a new direction and change the behavior of the people. This however proved to be a completely different hypothesis to demonstrate. Therefore a new dimension was created. This dimension was developed to give a new hypothesis for the flow, as a part of the sitting areas. The focus was to observe the behavior of people in places to sit and in flow. Again is the use of Jan Gehl as a theoretical background. The idea is to observe how people would detect two walkways with the same dimension which is either entirely free or covered.

"The act of walking requires space, so one can walk freely and undisturbed, without being pushed, and without having to maneuver too much." - Jan Gehl (2007)

Due to the difficulties of construction, the design of the structure was simplified. The triangles changed to squared frames. To fill out the frames, the idea was to create colorful and inviting surfaces, by binding different shapes of colored ribbon around the frames.

## Hypothesis scenarios



Fig. 1 - Hypothesis scenarios of the design intervention in areas for sitting and longer stay - What type of sitting arrangement is preferred?



Fig. 1 - Hypothesis scenarios of the design intervention in areas for flow lines - Which lines will be used? Will people go through sitting arrangements?



Fig. 2 Stage 1 - Different kinds of covering

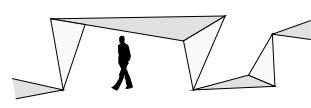
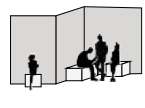


Fig. 2 Stage 2 - Paper folding walkway

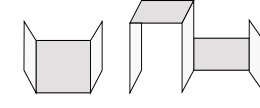


Fig. 4 Stage 3 - Simplifying the structure, flow and stay oriented

## Process of form

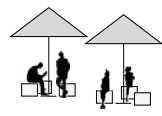
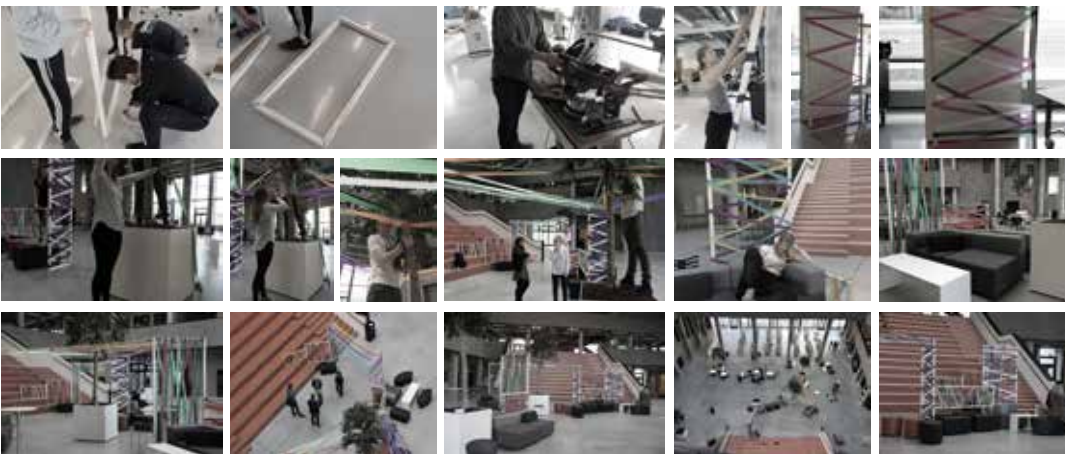


Fig. 2 Stage 1 - Different kinds of covering

## Process of construction



# [Cover in Colors] : Thermal Tracking Analysis

TEAM B

## Analysis:

The first analysis is a qualitative analysis; the analysis of the structure is made from observations. The structure was placed in the atrium for one day, and the observations took only place that day.

The structure was occupied in many different ways; sitting, leaning and laying. A catalogue is made of how the structure was used, as the result of the analysis.

The second analysis is a quantitative analysis based on data from a thermal camera. The data is converted into pictures showing overall activity during the day. Thermal pictures from different days are compared.

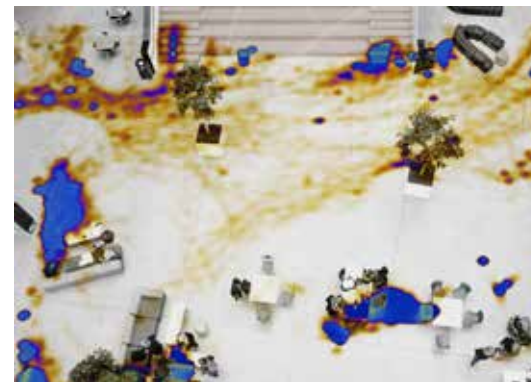
## Summary of findings :

Before the intervention was put up the flow lines were chaotic and people moved all around the atrium in different direction and lines. Stay happened in the same cornered sitting areas. The options for stay in the middle of the room, is not used. During the intervention the flow lines are distributed in more direct lines in the atrium. The intervention challenges people to choose a path. Some choose to go through the sitting areas. Stay in the middle of the room is provided by walls of cover and roof of cover.

The experiment confirms the hypothesis saying that people do not mind sitting out in an open space and close to the main flows as long as they have a cover that makes them feel less exposed.



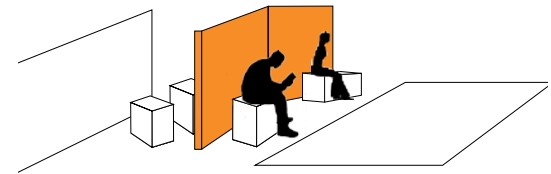
## Flow on a normal day



Heat map without intervention Monday 27-04-2015 from 11-12

- Chaotic flow
- Concentrated seating in the corners

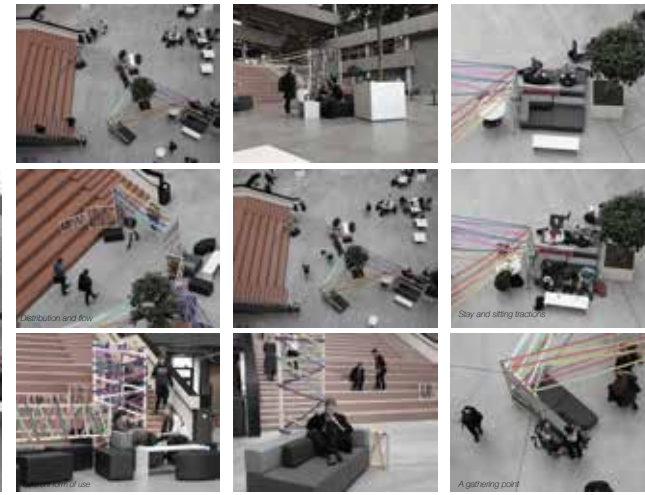
## Results of study



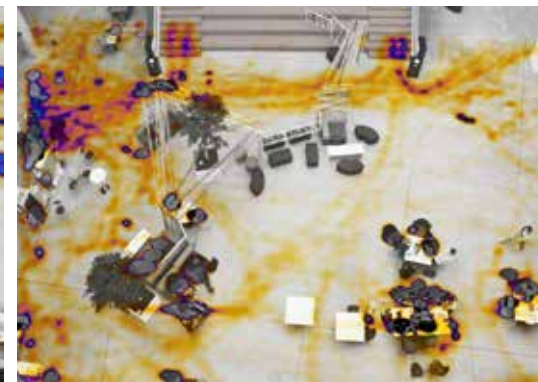
By creating a light structure (The covers do not have to be solid to have the desired effect) that divides the big open space into smaller pockets the space normally used as a transit area can be transformed into a space with a mix of people moving and people staying. Additionally the flows will be pushed further out into the space and add activity to a larger area.

Further studies could include a similar experiment but put into a different context where other parameters are in play. The obvious choice would be to conduct the experiment in an urban setting where parameters such as wind, weather and a more diverse mix of users could end up affecting the results.

In this case it would also be relevant to see whether the covers merely needs to be indicated or if it needs to screen of from wind, sounds, etc.



## Flow during experiment



Heat map with intervention Tuesday 28-04-2015 from 11-12

- Distributed lines
- Challenges to choose a path
- Sitting areas in the middle of the atrium

### **TEAM C**

Anne Schlosser Dehn  
Cosmin Stefan Pislariu  
Ida Tesaker Belland  
Jeppe Krogstrup Jensen  
Katrine Dam Henriksen  
Louise Meier  
Maria Deleuran  
Nellie Veller Hansen  
Oana Maria Paraschiv  
Villads Hannibal Højberg



## OBJECTIVE AND DESIGN INTERVENTION

The main idea and focus of our design intervention, when analyzing the flow in front of and on the main stairs in the CREATE building, was to see if a visual installation could cause more people to use the left side of the stairs opposite now where most people are using the right side, since this side is closest to the two main entrances of the building.

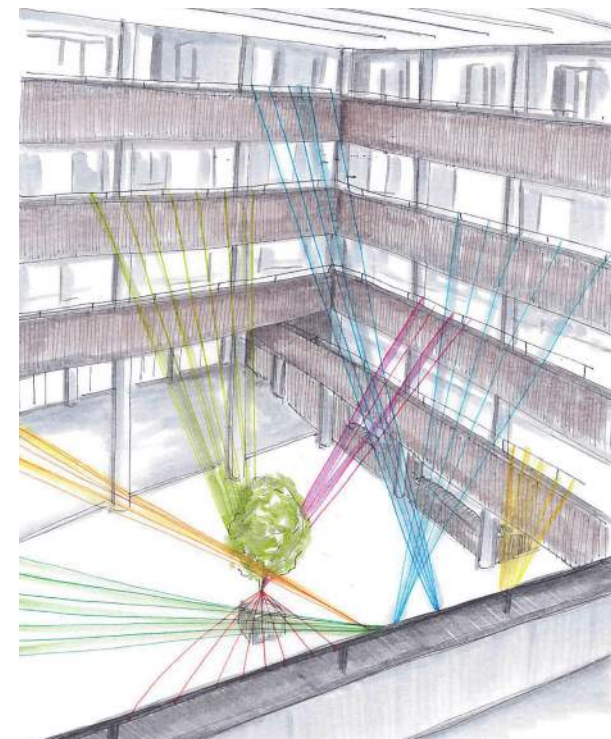
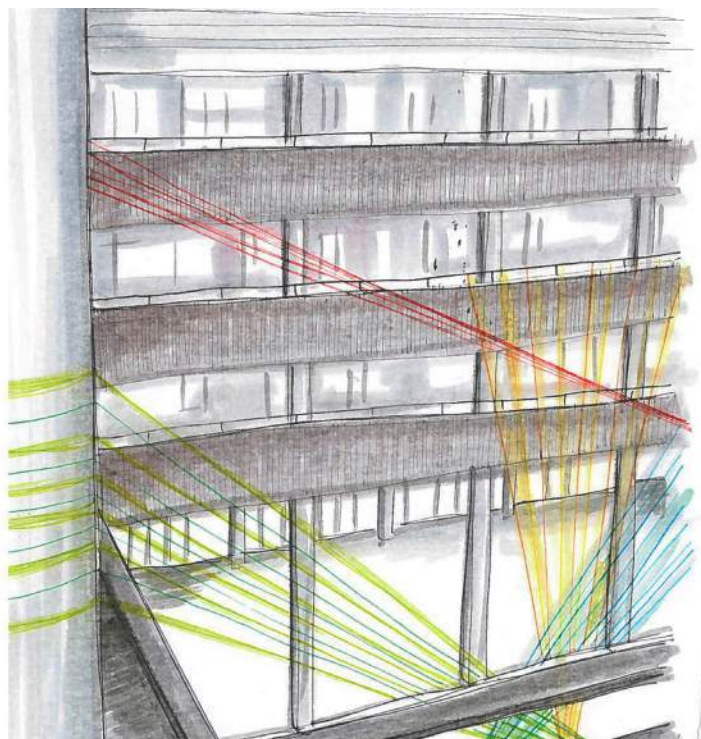
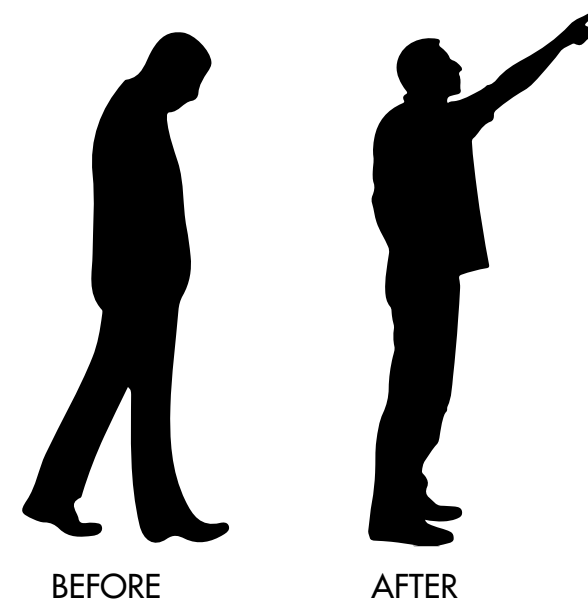
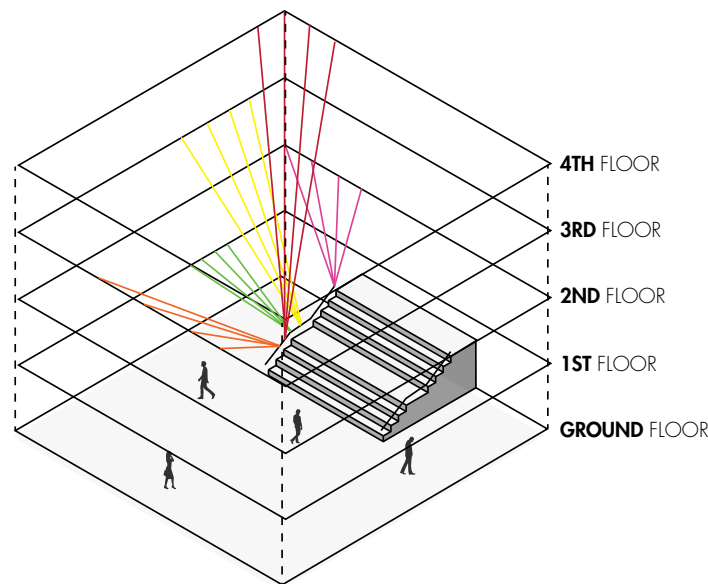
Furthermore we wanted to give people a visual and spatial experience when walking from A to B instead of just having their eyes locked on the ground and their path. Additionally we aimed to create a vertical connection through the atrium seeing as the different floors appear separated even though there is a visual connection through the atrium.

## DOCUMENTATION OF PROCESS

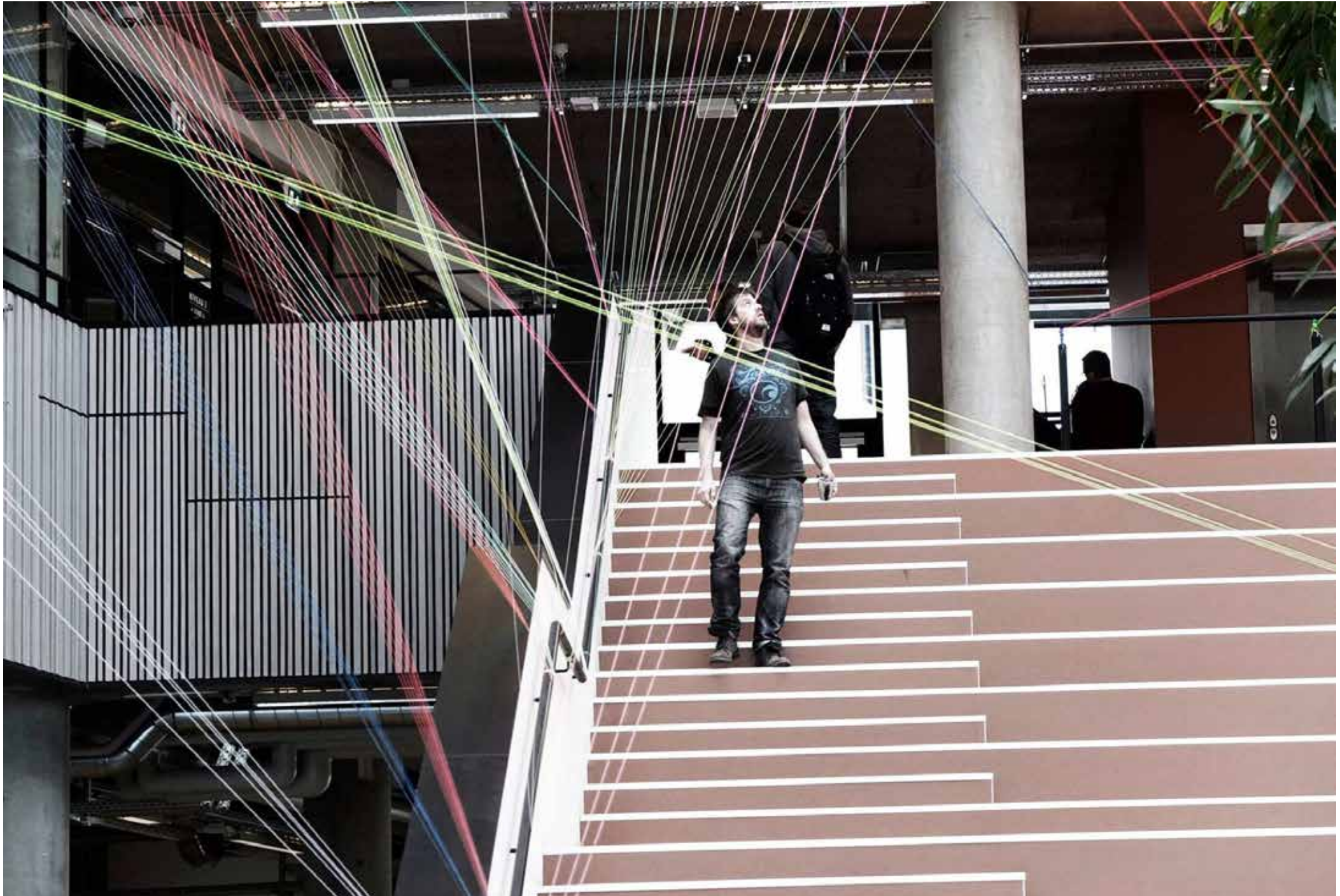
Armed with 52 rolls of strings in 7 different colors we went to the atrium Tuesday afternoon. Prior to this the team had several meetings and short design workshops where the final design and system had been created.

The initial system was to tie all ends to the railing on the left side of the stairs. However, after tying up a few strings we quickly noticed a few problems: the strings from the right side of the building could not be attached to the left railing as there would be too much dodging and diving under strings as they would cross the room only a meter above ground. The system was adapted and new objects to tie the strings too were found.

The other ends were tied to railings on every floor above ground level from many different places, which were chosen randomly during the setup.









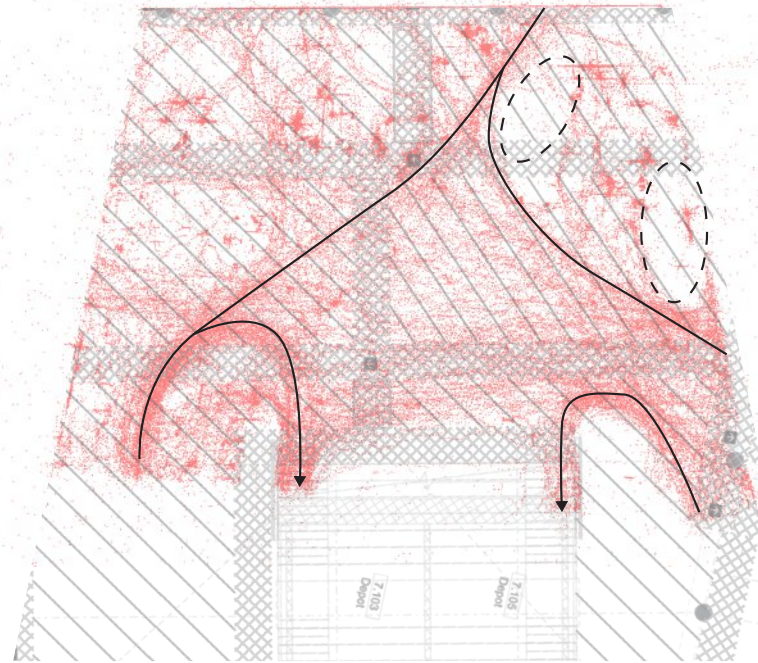
## ANALYSIS

A thermal camera has been tracking the movement of people in the atrium Friday as a reference day and Wednesday as the intervention is present in the space. The artistic intervention the strings create is not the only difference between the spatial experiences the two days, as furniture has been moved around and an exhibition has been taking down in the meantime. The flow Friday has some defined main lines going up the stairs and diagonal through the space. It has many white spots, where nobody moves through. The defined flow lines and the white spots from Friday is neutralized Wednesday. It seems as people move more freely as the invisible main flow lines are ignored. The visual appearance of the strings can influence the spatial understanding of the atrium and indirect change the pace and direction of the flow, but it is a postulate data from the thermal camera cannot clarify. One thing the data from the thermal camera can clarify is the intervention did not change the flows at the two sides of the stair. The main flow is still at the right side. The flow on the left side is the same just intensified in a smaller area, as the strings are taking up some of the space.

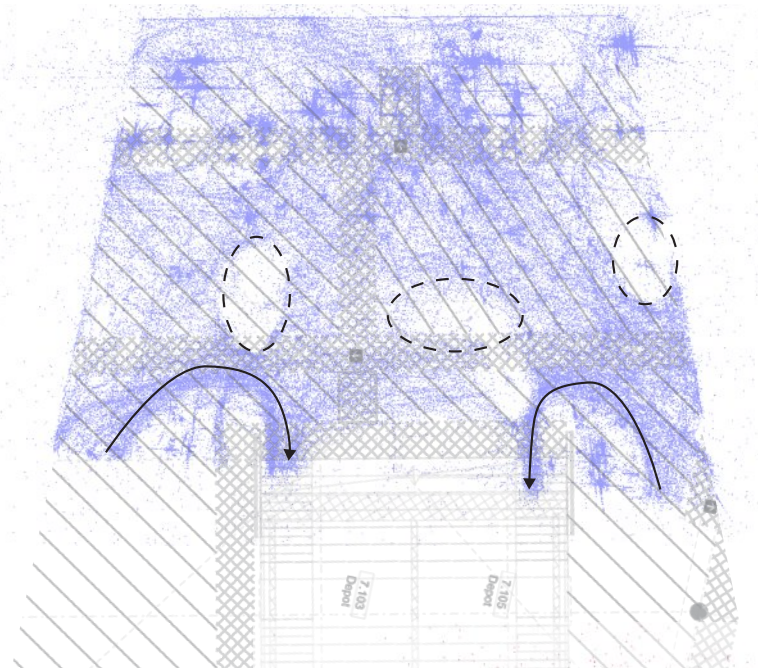
## SUMMARY OF FINDINGS

The intervention do not create large fluctuations on the thermal tracking, but it has a large spatial influence that the thermal camera cannot intercept, as it supply the space with more than flow - an atmosphere. The spatial understanding of the atrium changes as people interact with the strings. The building is suddenly connected vertically. The intervention points at the unutilised potential the atrium has for becoming the unifying centre of the CREATE building. The intervention shows how the spatial experience of a large space can be change without any physical footprint. How an artistic intervention can create a common topic of conversation that connect people across professions and fields of study.

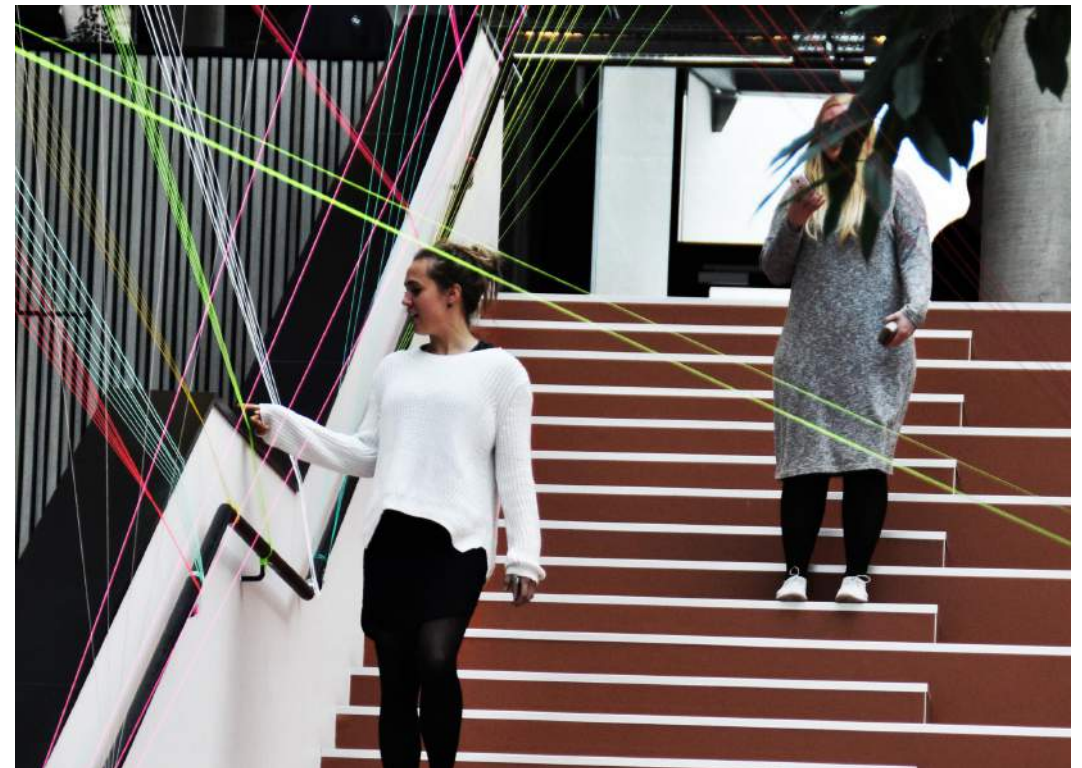
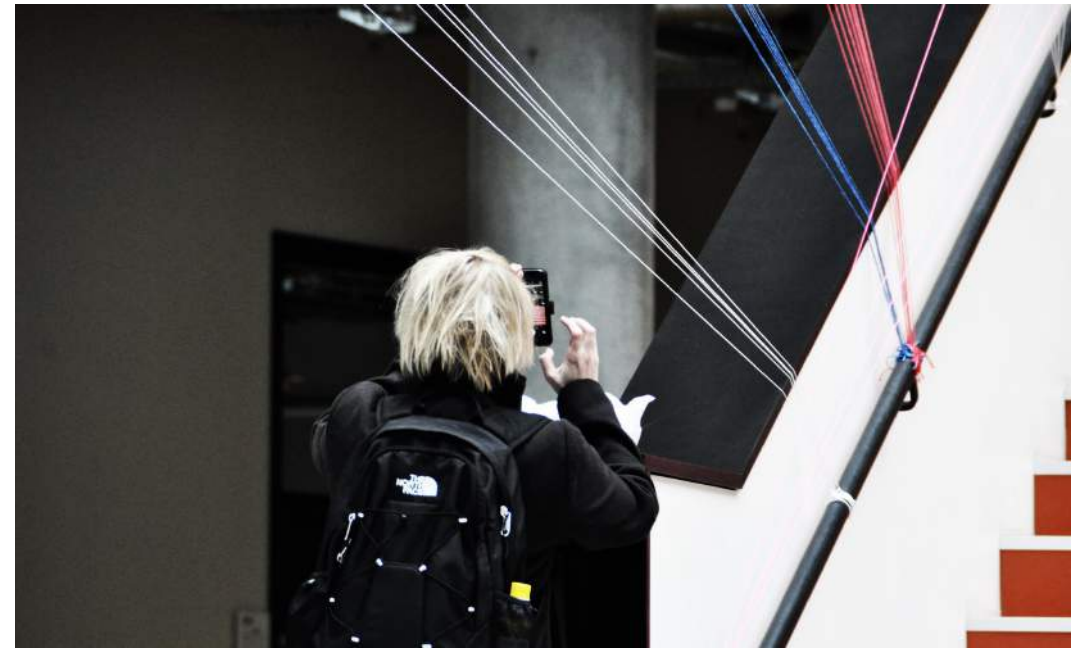
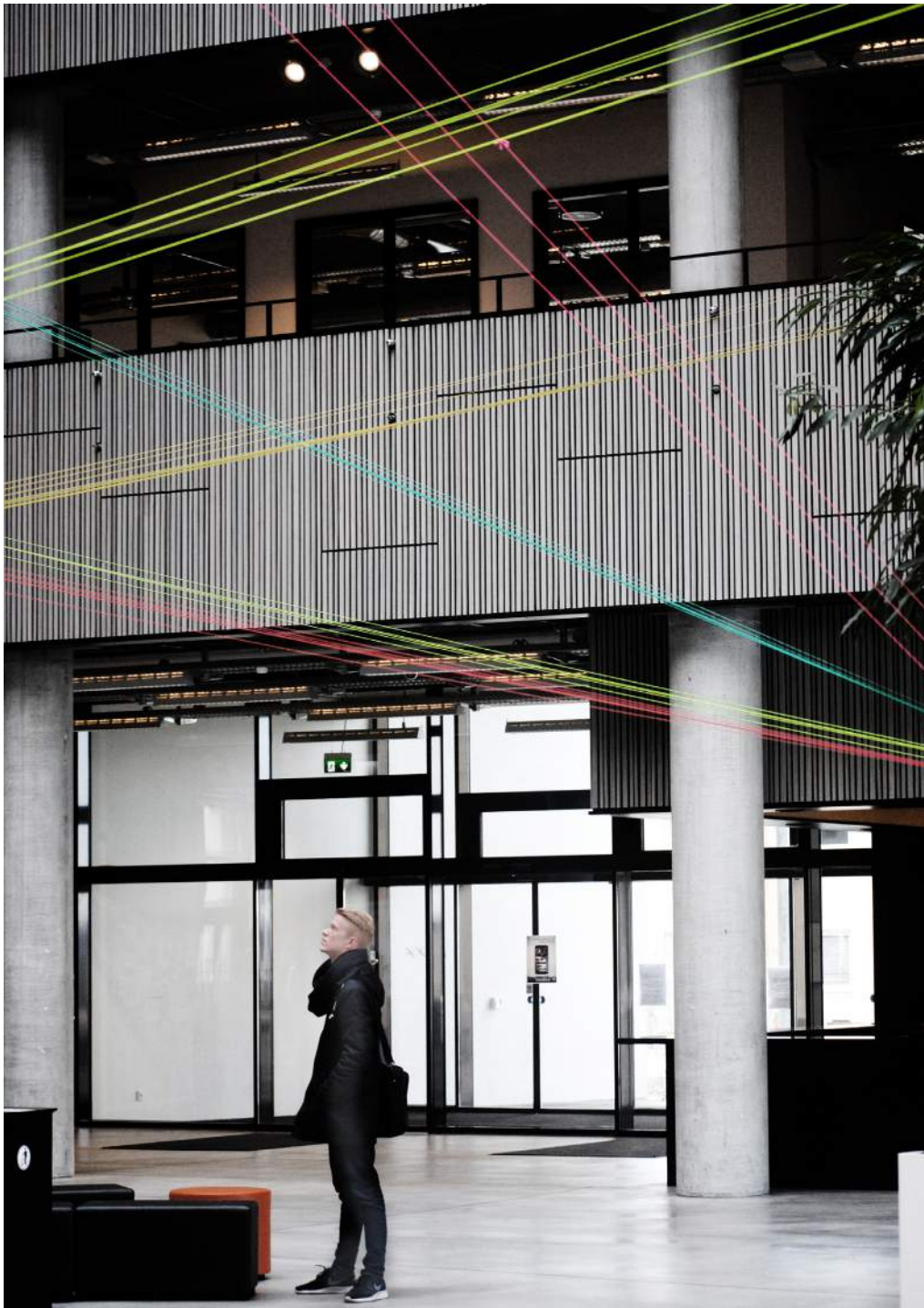
BEFORE



AFTER









# STRINGS ATTACHED

## OBJECTIVE AND DESIGN INTERVENTION

The main idea and focus of our design intervention, when analyzing the flow in front of and on the main stairs in the CREATE building, is to see if a visual installation can cause more people to use the left side of the stairs compared to the current situation, where most people are using the right side as an expressway, since this side is closest to the two main entrances of the building. Furthermore we want to give people a visual and spatial experience when walking from A to B instead of just having their eyes fixed on the floor and their original paths. Additionally, we aim to create a vertical connection through the atrium, considering the fact that the different floors appear separated even though there is a visual connection within the atrium.

## INSTALLATION AND APPROACH

Armed with 52 rolls of strings in 7 different colors and 6 km of string material, we envisioned a colorful, spatial intervention that seeks to attach and connect the balconies to the ground floor in specific points.

The team had several meetings and short design workshops where the final design and system for the physical setup was developed. The initial system for the setup was to tie string to the railing of the balconies and attach all ends to the railing on the left side of the orange staircase to increase the attention and possibly

the movement in this area. However, after tying out a few strings we quickly noticed a few interfering problems: The strings from the right side of the building could not be attached to the left railing as there would be too much dodging and diving under the strings as they would cross the room only one meter above the ground. The design was adapted and new objects to tie the strings to were found - e.g. movable trees and railing elsewhere. Some of the strings were tied to railings, expanding out in a fan-like manner to every floor above ground level. These were chosen randomly throughout the setup creating an intuitive space of strings attached.

## DESIGN INTERVENTION

TEAM C

# STRINGS ATTACHED

## TRACKING ANALYSIS

TEAM C

## INTERACTION

### TOUCHING



### PHOTOGRAPHING



### LOOKING



### CONNECTING



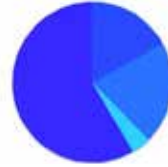
## ACTIVITY OBSERVED

- TOUCHING THE STRINGS
- STOPPING TO LOOK
- REDIRECTION OF ROUTE
- TAKING PICTURES
- LOOKING DOWN FROM BALCONIES

08:00-09:30



09:30-11:00



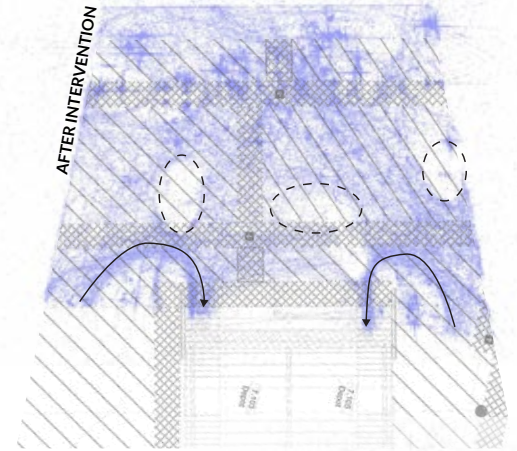
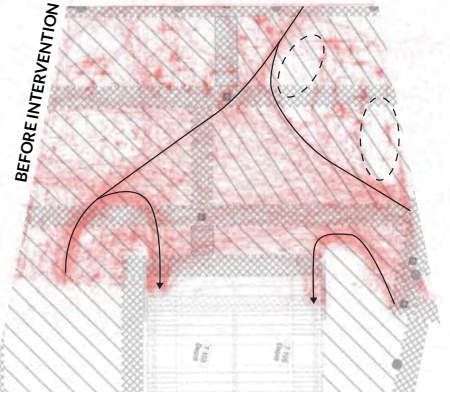
11:00-13:00



14:00-16:00



## THERMAL TRACKING



## **Bibliography**

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