"Give a word to each footstep so that a walk becomes a story or poem." (Wrights&Sites, 2006)

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ABSTRACT

The WHAT MOVES US WHILE WE MOVE?
thesis has its point of departure in the pedestrian tendencies that I have recently noticed. There are two types of pedestrian users in the city: the drifter that is attracted by aesthetics in his urban strolls and the determined that is driven by efficiency in his daily routes, forgetting to enjoy the environment he passes and connect with it.

Out of the two, the determined is a predominant figure in the urban landscape. This thesis is concerned with the antagonistic relationship between these two types of urban users, their presence in Aalborg centre and the emergence of mobile technologies that can make an impact or possibly change the perspectives of the determined users. Drawing together theoretical knowledge, in regards to route choice factors, appreciation of formal and symbolic qualities in the city and impact of the ICTs, and user knowledge, by conducting a survey and focus group interviews, it was noticed that it is possible to alter the determined user's mentality in the city under the right conditions.

A determined user would take a longer and more beautiful route on his way from A to B if sun, greenery and other pleasing urban elements would be present on the streets and if his mood would be synchronized with the atmosphere of the place he is crossing, all at the cost of no more than five minutes. The problem is he is not always aware of all his alternatives, given than Google Maps and other navigation technologies always offer the shortest routes without taking into account the environment.
A navigation mobile application and an urban interface that would guide the user on beautiful paths towards the destination, that represent the final outcome of this thesis, can do the trick. Nevertheless, the paper itself is not about the destination and the final design, but about the journey of exploring the countless possibilities of our daily routes, when exiting the routine.

TABLE OF CONTENTS

A

WHAT MOVES US WHILE WE MOVE?

INTRODUCTION

METHODOLOGY

THEORY

ANALYSIS

PRESENTATION

FINAL REMARKS

B

INTRODUCTION

"Abolish habitual walking patterns, such as the home-to-work-and-back routine: those head-down journeys when the mind is focused elsewhere and 'elsewhen'." (Wrights& Sites, 2006)

MOTIVATION

This master thesis idea was born while watching a speech held for the TED Talks sessions by Daniele Quercia (TEDTalks, 2014), a researcher that has developed the concept of Happy Maps, maps that are focused on urban environments that are beautiful and/or make you happy, rather than short and efficient ones.

Not only was I inspired, but I also realised, that I, myself, have fallen, at some point, in the trap of efficiency and routine in my daily urban trips.
I remember my first month in Aalborg as a student, learning the shortest route towards school with the help of Google Maps and then following it strictly. After some time, one evening, when returning home from school, I noticed Hjelmerstald, a cosy street in the city centre, with small houses and flowers along the path, and for once, I exited the routine, only to experience surprise and a pleasant feeling.

Our daily trips in the city should always offer something, and that "something" can either be pleasing to the eyes, a colourful combination of sounds or leading to an experience. Less of this short "directed movement from a place to another" as Lovejoy and Morris (2005) mention and more wandering and exploring the city is needed.

To avoid the risk of falling on the side of adulating walking, I must acknowledge, as an aspiring urban planner, that in the end, some destinations are not within walking distance and that is when walking becomes a less favoured alternative for moving around the city. Nevertheless, while staying within accessible walking areas, this "muscular powered mobility mode" (Jensen, 2013:40) has its perks.

Why beautiful and not efficient (not short)?

I have started my project determined to state "No more short routes", but beautiful routes, when in fact what I am saying "No" to is the urbanite's eagerness for efficiency to the point that he forgets about the city he walks through, entering an auto-pilot mode. It is true that a short route can be a beautiful route as well, fact that can be proved in Aalborg centre which has many beautiful shortcuts, given by the old, narrow paths. Efficiency is not bad, but it can transform itself in a cult promoted in cities by big corporations like IBM, leading people to obnoxious routines. A route has to be as practical as it pleasing, and sometimes, what the urban users do not realise is that saving one or two minutes out of their commute is time efficient, but maybe it is not well-being efficient.

What can a beautiful path do for you?

A beautiful path can be a promise that in your daily route, you'd feel better, and as Stendhal has said "beauty is nothing other than the promise of happiness"(Stendhal,1822 in Sullivan,2010). A beautiful path, with elements that attract you can make you be more aware of the urban landscape, linking you with the city and generating a feeling of belonging that implies a certain responsibility towards the city. A beautiful path is not only one that has formal characteristics pleasing for the eye. Beauty is so subjective, that for an urban user a design can be comforting just because it reminds him of pleasant times from the past. Thus, beauty also lies in the symbolic qualities of the urban space.

We have to understand that a beautiful path can contribute to good feelings, but first we need to identify what is beautiful. The challenge that came along with the master thesis and that I have accepted is the fact that this subject is treating a concept that is difficult to define and especially quantify: beauty; you cannot measure it and it is highly subjective, as mentioned above. There are though, patterns that start to emerge, as soon as 100 people start pointing out the same visual cues for what can be beautiful.

Homo Movens

What I came to realise on the 3rd Semester, while being a part of the Mobilities and Urban Studies Master at Aalborg University is that walking can be equal to design and planning; the pedestrian can be the city's new architect, by walking the spaces in new ways, reimagining and actively re-designing them. As soon as I started the thesis project, I rethought this idea, adding technology to the equation: walking as a tool to design and plan the city and technology as a platform for it. Everything is about the journey, even this process of coming up with an idea. We go back and forth, reaching the destination at some point, but always exploring in different ways.

This project will hopefully create awareness that there are not only a handful of directions, for example, generated by Google Maps, towards our daily destinations, directions that can become definitive ones once we use them (Daniele Quercia, TEDTalks, 2014). There are other possibilities as well, possibilities that can be situated at the intersection of urban design, mobilities and the alleged science of happiness.

> **Our intent is to show walking not only as a directed movement from one place to another, but a wandering, an odyssey of sight and sound, a quest for knowledge and stimulation, a grand roaming expedition, and a living breathing work of art in its own right.**
>
> (Lovejoy & Morris 2005 in Wrights&Sites, 2006)

INTRODUCTION

We are always on the move. We spend most of our time moving from place to place, commuting, travelling, strolling and so on.

Yet, "much is still to be learned about homo movens, that is, one of the most fundamental dynamics of human existence: movement." (Vannini, 2010:118)

People's mobility has been long time reduced to a "movement from A to B" (Jensen, 2013:178), even though it represents much more than a departure point, a destination and a trajectory, elements to which it has been curtailed 100 years ago. Nonetheless, in the following decades, the topic of urban movement became more and more controversial and theories against and for the mobile phenomenon were developed. Writings from theorists like as Simmel(1994), Goffman(1972), Lynch(1960) depict the fact that moving through the city is an experience generating both "emotional, affective and cultural relations between people"(Jensen, 2013:25). For Lynch, the city "travel" "can be a pleasure, if we pay attention to the human experience: the visual sequences, the opportunities to learn or meet other people" (Lynch, 1981:274).

The mobilities turn, a concept born in the 90s, brought to the urban stage "the dichotomy between transport research and social research" (Urry&Sheller, 2006). The mobilities field has become an interdisciplinary field that includes the work from technological, urban, sociological studies and many more. The role of these studies needs to be incorporated and understood in the everyday life movement of people. In regards to the various dynamics happening on the move, a need to understand "the routes" (Vannini, 2010) is emerging. We are affected by the places we move in and affect them at the same time, "simultaneously contributing to the on-going co-constitution of self and place" (Duff, 2010 cited Jensen, 2013:67).

In parallel with the mobilities turn concept, technology was developing as well, becoming an invisible layer of the city with a considerable impact on the way people move. "The old city of concrete, glass and steel now conceals a vast underworld of computers and software. Linked up via the internet, these devices are being stitched together into a nervous system that supports the daily lives of billions in a world of huge and growing cities"(Townsend, 2013:XII).

But what sort of movement is technology supporting nowadays? While most of the mobile applications focus on an instrumental movement, used by the determined users of the city and providing them with the option of efficient urban trips (Google Maps, Bing Maps), there are some (Urban Gems, Place Pulse) that provide "opportunities for spontaneity, serendipity and sociability" (Townsend, 2013:15), focusing on the experience while moving. This second category of applications becomes a tool to explore the urban qualities that attach meaning to the movement of pedestrians and could transform them into drifters. Still, the big promise of smart cities, cities that have roots in the technological layer, is related to a greater efficiency. (Townsend, 2013:31) So the question is:

“HOW CAN MOBILE TECHNOLOGIES BE-COME A TOOL IN THE MOBILITIES AND URBAN DESIGN FIELD AND DETERMINE A SHIFT IN THE PEDESTRIANS’ FOCUS FROM ROUTINE AND EFFICIENCY TO URBAN AESTHETICS AND PLEASING QUALITIES WITHIN ROUTE CHOOSING?”

Collage. Deger Bakir

METHODOLOGY

"We should concern ourselves not so much with the pursuit of happiness, but with the happiness of the pursuit."
Hector and the Search of Happiness, 2014

SECTION 2.1

PROCESS

This chapter describes and clears up the process of this thesis project, given that a number of methods with different purposes have been used: theory as a base for the research, survey as a way to evaluate a number of theoretical hypotheses and focus group interviews as a way to confirm them. The methods have either focused on the analysed environment or the users of the space, complementing themselves in an urban, sociological and cultural overview.

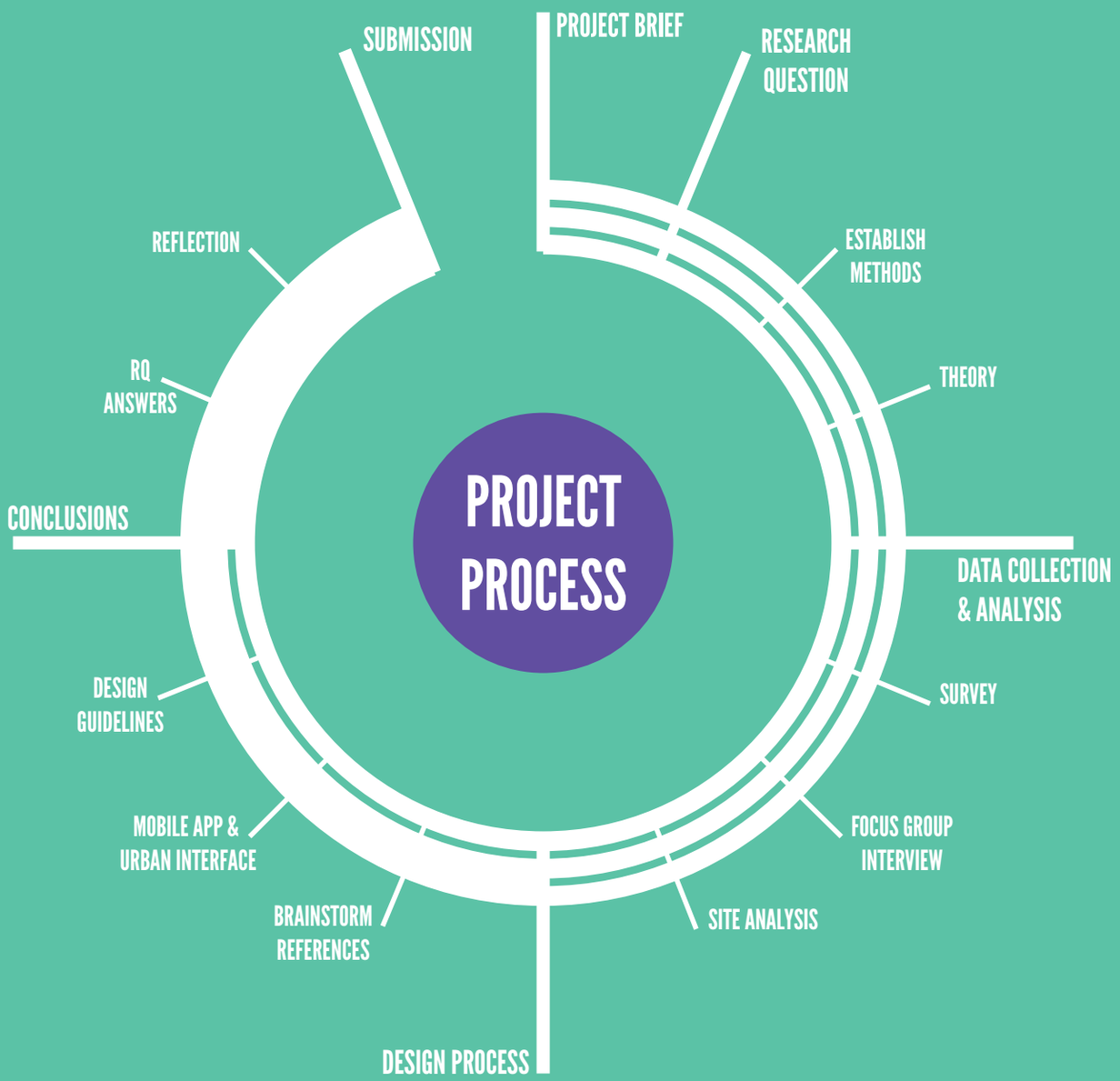


Figure 2.101. Project process

The process of the thesis project is divided in three phases: the exploratory phase, the creative and the reflective one **(See Figure 2.101 on the previous page).**

In the exploratory process, the research question and the theoretical narrative on everyday life mobility, route choice factors and technology supporting pedestrian mobility will become the basis for the analysis and the design proposal. The data collection, part of the exploratory process, has been carried out through an online survey and two focus group interviews. Adding to these, a site analysis was also realized in order to better understand the formal and symbolic features of the urban space.

The creative process focuses on the design of a mobile application supporting pedestrian navigation, a physical urban interface for the application and future design guidelines to be used in urban design and planning. A number of references have been used in the design process, related to either the design of mobile applications or physical wayfinding systems.

In the reflective process, thoughts upon the outcome and the process are expressed: was the research question answered or does it need further exploration, were the methods used the optimal ones, is the design taking in consideration all the inputs and so on.

It can be noticed in the up mentioned diagram, that the thesis is more oriented towards the theoretical and analytical aspects, rather than the design part, that remains developed at a conceptual level.
Within these processes, three main frameworks represent the backbone of the thesis: the theoretical frame, the analytical and the design one, frameworks that will be developed in the following part.

The theoretical narrative

This thesis is based on the theoretical premises that pleasantness can become as important as directness when it comes to route choice factors and the fact that technology can support that. As it will be further described in the theoretical chapter, two types of pedestrian movement have been identified in the urban landscape: an instrumental movement and a non-instrumental one. While the first is driven by directness, the latter is influenced by pleasantness. On one side, directness refers to the length of the route and its complexity, meaning that people that are engaged in an instrumental movement focus on time and distance efficiency. On the other hand, pleasantness is given by aesthetical qualities of the city and the presence of shops, greenery and people.

Nowadays, technology is supporting more the instrumental movement, having mobile applications that are generating the shortest routes from A to B without taking in consideration the formal and symbolic characteristics of the city. Nevertheless, there are some mobile technologies emerging in the city that generate routes while being aware of certain urban qualities (beauty, safety, silence and so on). The technological chapter explores these mobile technologies.

The analytical frame

The analytical frame was divided in three segments: survey, focus group interviews and site analysis.

While the survey and the focus group interview are user oriented and conducted in order to gain further insight from professionals (students with an architecture or an urban design degree) and non-professionals, the site analysis is focused on the studied environment and its symbolic and formal characteristics. All the steps had different scopes in the process which will be further developed in the next sections.

The design frame

The design frame had several iterations along the process, resulting into a non-linear design, but a looped one as seen in **Figure 2.102**. As it has been mentioned above, the main design consists out of a navigation mobile application that generates beautiful paths and an urban interface. The first beautiful paths have been generated after the survey analysis. The method of generating them will be discussed in the design chapter. The initial set of paths suffered changes after the focus group interview, were some of them were discussed. Then, the site analysis was finalised and new input came into the paths' design. The final design of paths came along with the concept of the mobile application.

The urban interface will be given by a physical object placed in key-points in the city. Its utility will be similar with the mobile application, to create awareness regarding alternative routes in the urban landscape.

Having discussed about the main frameworks, in the following sections, the data collection processes (survey and focus group interview) will be addressed, as they represented an essential part of the project and were complex and rich in information.

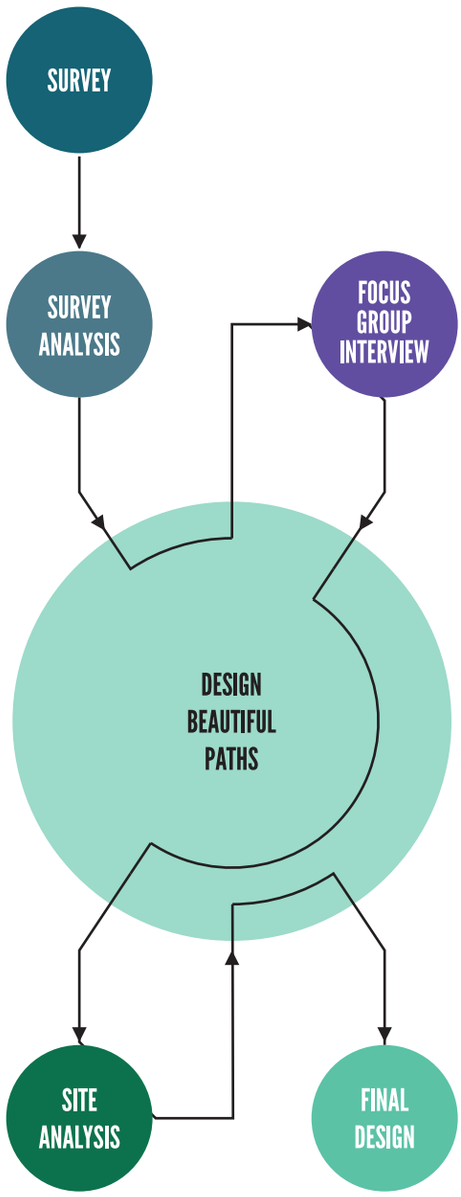


Figure 2.102. Process Loop

SURVEY

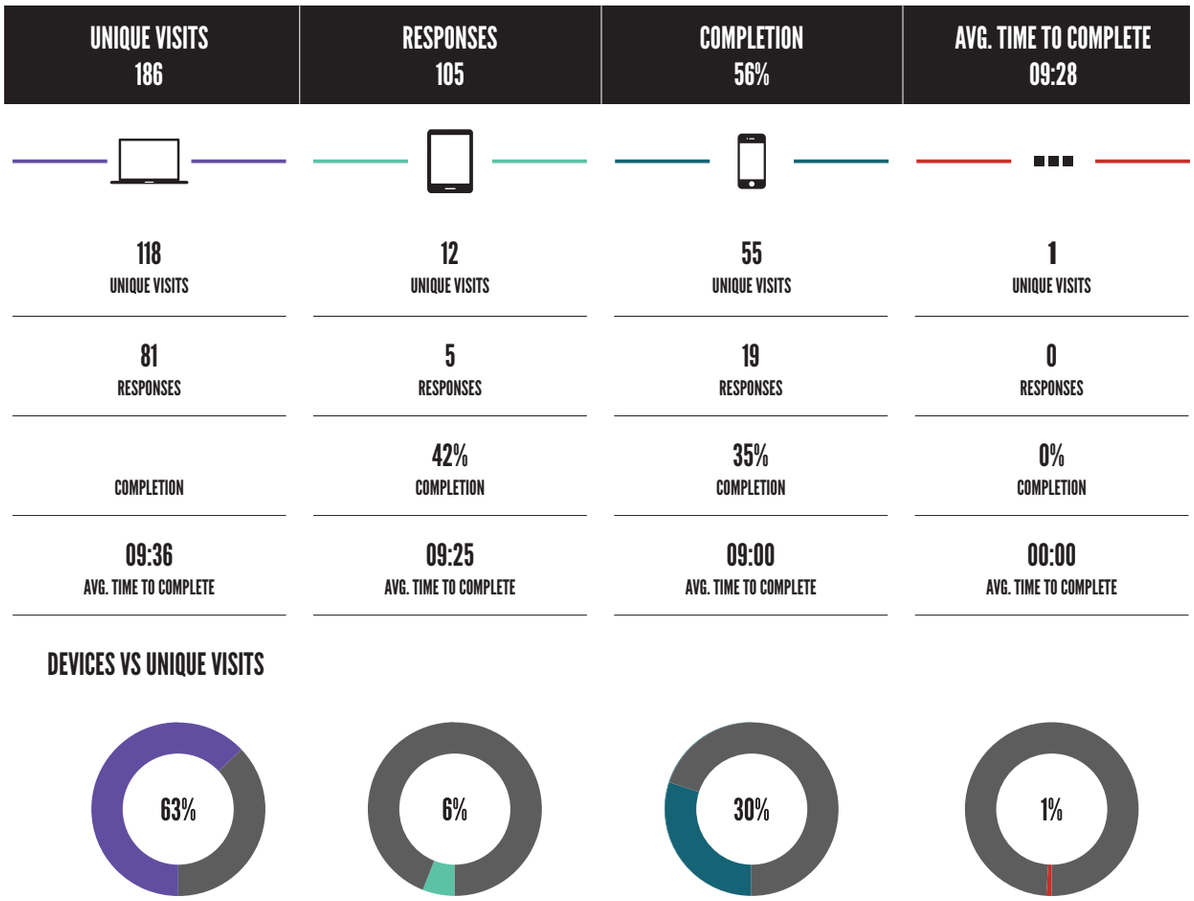


Figure 2.103. Survey Devices and Unique Visits

The survey has been created in order to evaluate the formal and symbolic qualities of the city and was divided in two parts: one that addresses the users' background and issues of interest to the thesis and one that uses the image choice method.
The survey had 105 responses, out of which one was invalid and eight incomplete. The incomplete answers were either missing answers to certain questions or containing invalid ones. Given that the nine answers were not taken into consideration, 96 remained valid and were further analysed.

The electronic survey was distributed in two ways, by handing out and displaying flyers and posters **(See Appendix A)** in the city centre and sharing the web link on various social media environments (Facebook groups like Arkitektur og Design, Aalborg University, International Aalborg). The survey could have been accessed on the PC, with the help of a web link or on the mobile phone or tablet, by scanning a QR code. The amount of the unique visits was almost double the number of answers **(See Figure 2.103)**. A possible reason why this has

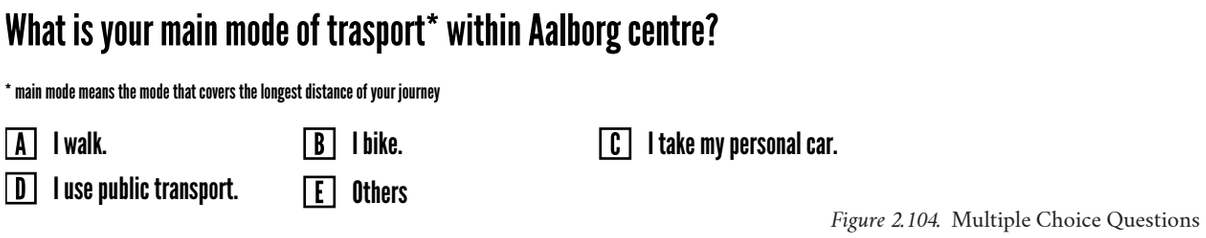


Figure 2.104. Multiple Choice Questions

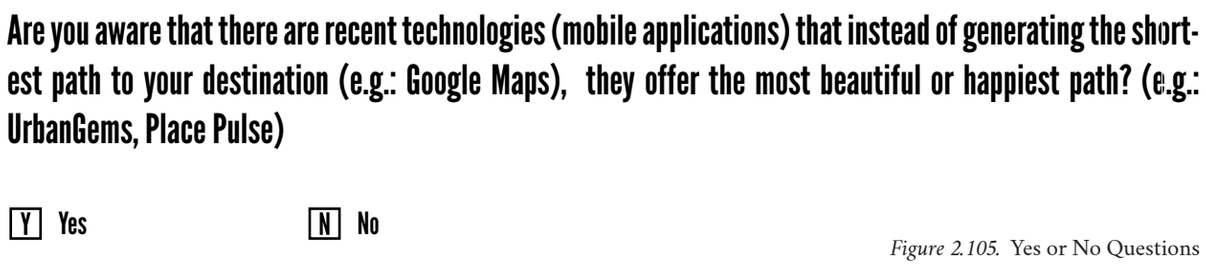


Figure 2.105. Yes or No Questions

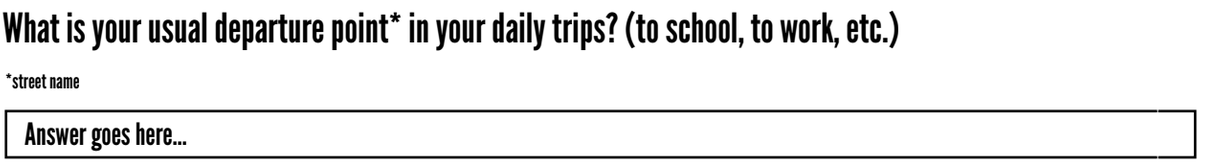


Figure 2.106. Open Text Box Questions

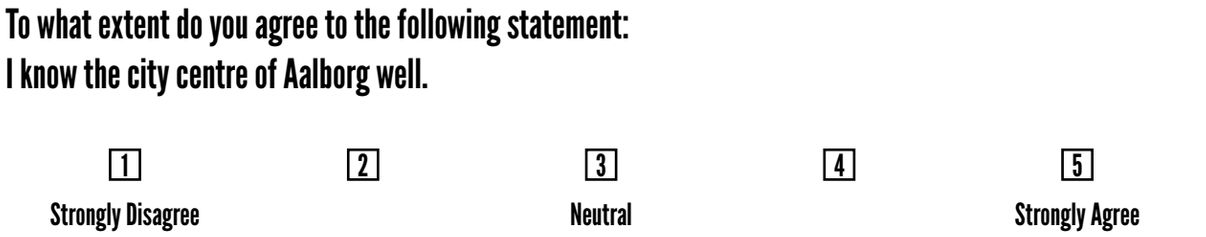


Figure 2.107. Statements

happened is given by the fact that the survey is developed on a site that is running on a slow working platform, especially on the mobile phone. Other explanations can be given by the performance of the mobile phones and the quality of the internet connection, the respondents' lack of commitment or the lengths of the survey that was taking in average 10 minutes to complete.

The survey contained questions that could have been answered in various ways: multiple choice questions **(See Figure 2.104)**, yes or no questions **(See Figure 2.105)**, open textbox ones **(See Figure 2.106)** and statements **(See Figure 2.107)**.

While the background questions addressed the gender, age, main mode of transport and years of living in Aalborg, the questions of interest have focused on route choice factors and the use of certain mobile technologies **(See Appendix B)**.

The latter category is given by the following questions and statements, whose purpose will briefly be described:

A "To what extent do you agree with the following statement: I know the city centre of Aalborg well." (statement)
As it will be seen further in the project, the level of acquaintance with the city becomes relevant when it comes to the urban formal and symbolic qualities.

B "What is your usual departure point* in your daily trips? (to school, to work, etc.)" (Open text box)
"What is your frequent destination* in Aalborg centre?"
These questions are meant to identify point A and point B in the daily routes of the respondents that will become relevant in the design part.

C "What is influencing you the most in choosing your daily route?" (multiple-choice)
Here respondents had to choose from various options given by route choice factors. This question represented a way evaluate some of the main theoretical hypotheses.

D "To what extent do you agree with the following statement: I usually take the shortest route towards my destination*." (statement)
This statement represents a way to evaluate the position of efficiency in the route choice factors ranking and identify a tendency in the practice of pedestrians.

Which place do you find more beautiful?

A

B

Figure 2.108. Image choice

E "To what extent do you agree with the following statement:
I prefer a beautiful path rather than a short one*. (statement)
While the previous question focuses on a singular factor that is influential in the daily pedestrian route choices, this statement puts two main factors into comparison. Another difference to be noticed between the previous question and the current one is that the first illustrates a practice and the second a preference.

F "Give 2-3 examples of urban spaces or streets that you consider beautiful in Aalborg centre."
In order to assess the aesthetic component of the project from the urbanite's point of view, the respondents were requested to come up with spaces that enter their standards of beauty.

G "Let us say you have to go from A to B. While the A-B path is the shortest, the A-C-B path is the most beautiful. How many minutes* are you willing to sacrifice when choosing the beautiful path?"
This question introduced a third party element as a coefficient to be used in the comparison between two elements.

H "Are you aware that there are recent technologies (mobile applications) that instead of generating the shortest path to your destination (e.g.: Google Maps), they offer the most beautiful or happiest path? (e.g.: UrbanGems, Place Pulse)"
"Do you use such technologies?"
"Would you be interested in using such technologies?"

In the end, respondents were addressed questions regarding the recent mobile technology supporting pedestrian mobility, in order to test their awareness in that respect. The awareness is not the only aspect that was tested, but also the usage and willingness to use such apps.

Having examined some of the addressed questions in the survey, in the following part, the image choice method within the survey will be explained.

The image choice method is inspired by the crowdsourcing site UrbanGems launched by Daniele Quercia and his partners that will be further described in the Section 3.3. The image choice method is simple. Two pictures are laid out and respondents have to choose one that is corresponding to a stated question, in this case "Which is more beautiful?", thus having aesthetical qualities **(See Figure 2.108)**.
Before receiving the image choices, each respondent had to choose a zone that he mostly walks in on a map corresponding to the project site **(See Figure 2.109)**. According to the zone he has chosen, a set of 10 image choices coming from that area were shown (expect Zone 2, that had allocated 8 image choices). After answering all image choices, the respondent had the possibility to choose another relevant zone for their daily trips and answer 10 more image choices **(See Appendix B)**.

There are a number of aspects to be taken in consideration when analysing the results obtained with this method.
First of all, the fact that two images are put in comparison can influence the results, as one of the pictures might turn out to be beautiful only because the other one is not:

Interviewee B: "I think it's more beautiful because it's next to another picture."
Interviewee E: "But it's also funny when you think about "What is more beautiful?", because maybe I will say A is more beautiful but I don't think I would perceive A as beautiful if I didn't have B."

Second, having two images that are depicting two urban environments with different purposes or

In which zones do you mostly walk in Aalborg centre?

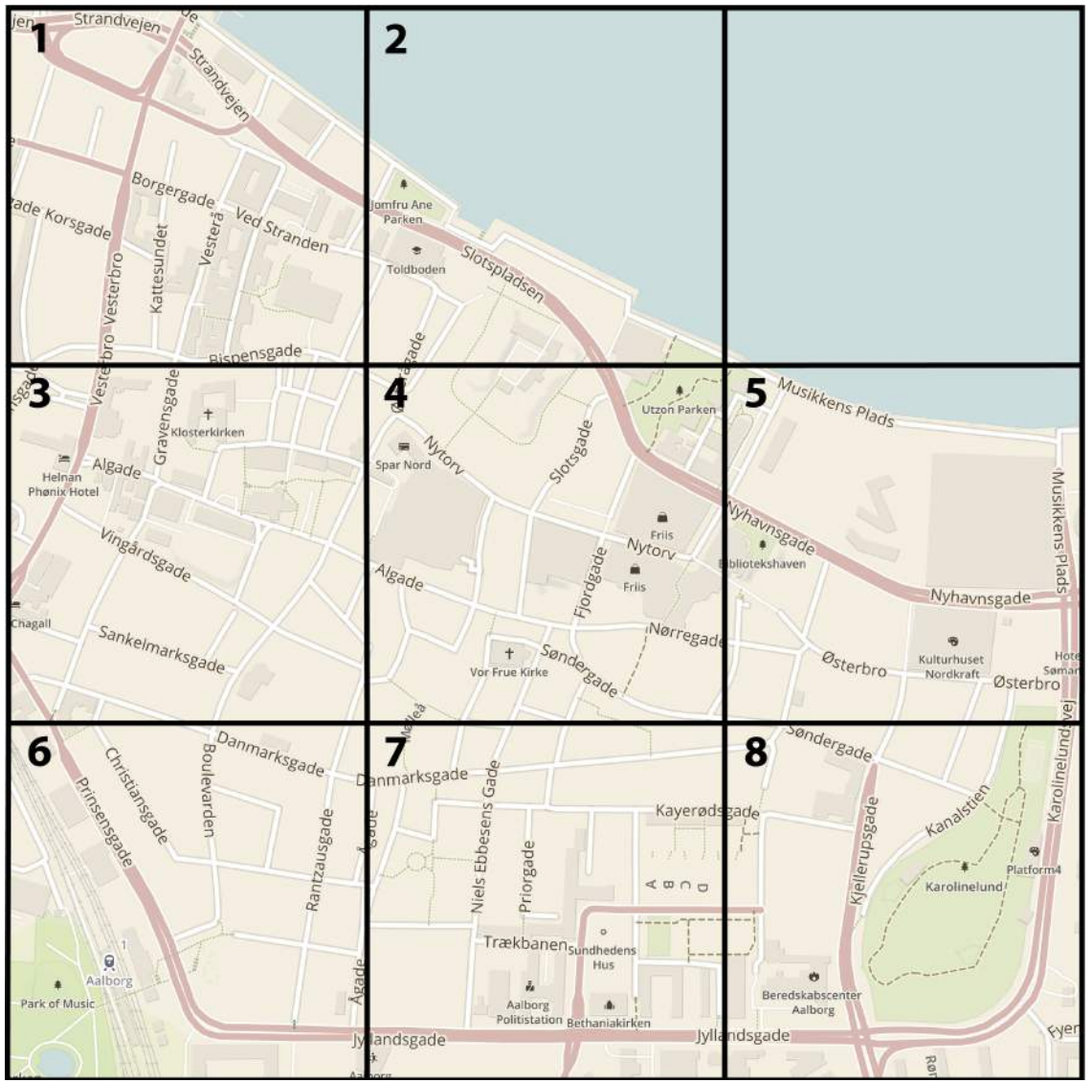


Figure 2.109. Zone choice

characters makes it difficult to choose a picture:

Interviewee B: "It's hard to compare a square with a stretch of road."
Interviewee F: "So different spaces, that it's really hard to compare them."

The lack of a neutral option in case uncertainty exists when choosing an image also forces respondents to make a decision:

Interviewee E: "But I think it's great to have both in the city, they are both beautiful."

The context and the identity of a space depicted also become important in choosing an image. The respondents and the interviewees can relate to some of the urban environments illustrated, making it challenging not to assess them holistically:

Interviewee D: "I think that picture A shows that it's not the passage in itself, but also what it is in connection to the passage."

Interviewee B: "Knowing that this is Mølle Plads, than I already think it's more beautiful."
A last aspect that might have influenced the respondents when choosing the images was the composition and angle of the pictures:

Interviewee D: "I think it's also about the composition of the pictures. A is really full, whereas B is more open and divided in 3 so it's much more for the eyes to read it."
Interviewee A: "The other street (A) has a lot of history, it is a mix of different styles from different periods, but it's well done from this angle."

Nevertheless, the image choice method is relevant for this project as it works with visual cues and it's one of the closest methods of aesthetically evaluating an urban space without being in it. With the help of the image choice method within the survey, visual cues were identified for the urban paths, most of them being confirmed later in the focus group interview, which will be described as a method in the following lines.

FOCUS GROUP INTERVIEW

In the project process, the focus group interviews had the purpose to confirm or deny the information provided by the survey and test various ideas stated in the theoretical chapter.

Two focus group interviews have been conducted, each having four interviewees (five men and three women). The interviewees were all students belonging to the age categories 0-24 and 25-40. While six students were having Urban Design and Architecture degrees, two of the interviewees were studying in non-related fields. All respondents were contacted by the mail that they have provided at the end of the survey.

The interviews were divided in four parts:

A Draw your daily route in the city centre
B Why do you think this image is more beautiful?
C Beautiful versus Short Paths
D Questions about urban beauty and city acquaintance

In the first part, the interviewees were asked to draw their daily route from home to school/work and mark along it the things that attract them, things that they do not like, things that grab attention or distract or whatever makes their daily route distinct. The outcome of this first part is given by eight drawings that are schematic. The interviewees used plans, sections and/or 3D drawings to illustrate their routes **(See Appendix C)**. This method was inspired from Gitte Marling's book called Urban Songlines (2003), a method "that has been developed in order to present urban qualities experienced by ordinary people. It is a tool, which supports researchers and urban designers in removing themselves from the role of expert in order to see the city through the lens of ordinary people." In the case of this project, the purpose of this method is a bit different, the drawings representing an attempt to discover urban qualities that are appealing to the urbanite.
In the second part, the interviewees were asked why they think some of the images were voted as being more beautiful in the survey (the percentages for each picture were presented). For the purpose of this, ten sets of image choices were selected from the survey in order to evaluate issues like the presence of parking and cars in the city, passages, greenery and disrepair, urban qualities like scale, openness, density, order. During the first focus group interview, the first five were discussed, while in the second interview, eight were addressed. Questions like: "What attracts you? What repels you in the picture? Why do you think people voted it as more beautiful? What features are missing to make it pleasant?" were asked.

For the third part of the focus group interview three types of materials have been presented to the interviewees in order to depict compared short paths (generated by Google Maps) and beautiful paths (generated within the scope of this project): maps showing the routes (accompanied by distance and time values), serial visions **(See Appendix D)** and short time lapses along the routes to illustrate the atmospheres of each route (presented on the attached digital source). After presenting all the materials, questions like the following were addressed:

"Would you use the short or the beautiful? Why?"

"What do you like and do not like about them? Why?"

"Do you consider the time difference between the two routes significant?"

In the end of the focus group interview a more open discussion was carried out, on subjects like aesthetics and acquaintance with the city. As mediator, I have asked questions like:

"Do you think that, when getting used/acquainted with a town, you still feel the need to explore it or you follow your daily route?"
"What do you understand by beauty and aesthetics in the city? Can you define them?"

The transcripts of the two focus group interviews will be found in **Appendix** E.

While the survey was good for collecting general information about the Aalborg users and the way they walk in the city centre, the focus group interviews helped in understanding the walking habits and the urban aesthetic preferences at a deeper level. Thus, the survey has represented a more quantitative method and the focus group interview a qualitative one.

This chapter has represented an important one, as it illustrates the process behind the project, meaning the journey of this thesis. Numerous other ways could've been explored, but this combination of frameworks (theoretical, analytical and design) was chosen as supporting the research the best. They are rich in content and methods, methods that have different levels of approach (in general or in detail) and various focuses (on the user or on the space). The frameworks will be addressed in the order that they have been presented in this chapter, meaning that the theoretical narrative follows, creating the basis for this thesis.

Une ville sur le corps. Fabrice Clapiès

THEORY

"Above all, do not lose your desire to walk.
Every day I walk myself into a state of well-being and walk away from every illness. I have walked myself into my best thoughts, and I know of no thought so burdensome that one cannot walk away from it." (Kierkegaard in Gehl, 2010)

SECTION 3.1

HOMO MOVENS

This section will focus on the mobile human ("homo movens") and his behaviour in the city. There are two types of urban mobile humans: The Determined and the Drifter.

On one hand, the determined is the pedestrian that focuses on the destination in his daily trips and is driven by distance and time efficiency. On the other hand, the drifter is the pedestrian that focuses on the routes of his daily trips and not so much on his destination. The pleasantness and the urban aesthetics matter in his route choices. These are not the only factors that influence people in their everyday life mobility and they will be explored in this section, both individually and in their complex relationships.

Today, with one out of two inhabitants of the planet living in cities, I question how this lifestyle impacts our everyday lives. Is it possible to see living and travelling through an urban context as more than just a transitional thoroughfare? If so, how could this contribute to changing our mind-set from thinking "this is the city" to "this is in fact, my city?"

(Sallé-Osselin, 2012)

It is true that nowadays, various types of mind-sets in the urban environment start to be distinguished given the spaces that the city dwellers move in and the relationship that they develop with such spaces. The choices made by pedestrians in their daily trips in regards to their routes define them as distinct entities in the city, with different goals.

The determined and the drifter

"People have very concrete reasons for where they walk downtown, and whoever would beguile them had better provide those reasons." (Jacobs, 1958) People do have concrete reasons for where they walk and towards what, which makes it easy to distinguish two types of movement in the city: the instrumental movement and the non-instrumental one.
It first has to be understood that these two types of movement represent "ideal types" of movement in the city, where an ideal type represents an "one-sided accentuation of one or more points of view"(Coser, 1977:223). The two ways of movement have been constructed for pure theoretical reasons and their nature is purely fictional, as they "cannot be found empirically anywhere in reality". (Weber 1904/1949:90)
The instrumental and non-instrumental movements will rarely be found in their true essence in the urban environment.
Firstly, on one hand, the instrumental movement refers to a movement that is driven by its destinations, having distance and time efficiency as main factors in route choice and the route as an experience placed in a secondary plan. In this type of movement, the destination represents the main purpose, the urban actor being a determined one, as Jensen (2014) has identified it. The determined mobile user of the city will be practical in his daily route choices, being influenced by duration, distance (the directness of the route, which will be discussed in the following section) and also stick to its daily habits.

On the other hand, the non-instrumental movement is the movement of the flâneur or the drifter. The flâneur is "the modern urbanite enjoying the freedom and cultures of the metropolis, […] a drifter in the metropolis consuming the city with an aesthetic gaze." (Jensen, 2013:67) In this type of movement, distance and time efficiency no longer serve as a main focuses, the scene belonging to pleasantness and aesthetics. The aesthetic gazer will experience the city at any given time, without constrains of practicality and habits.

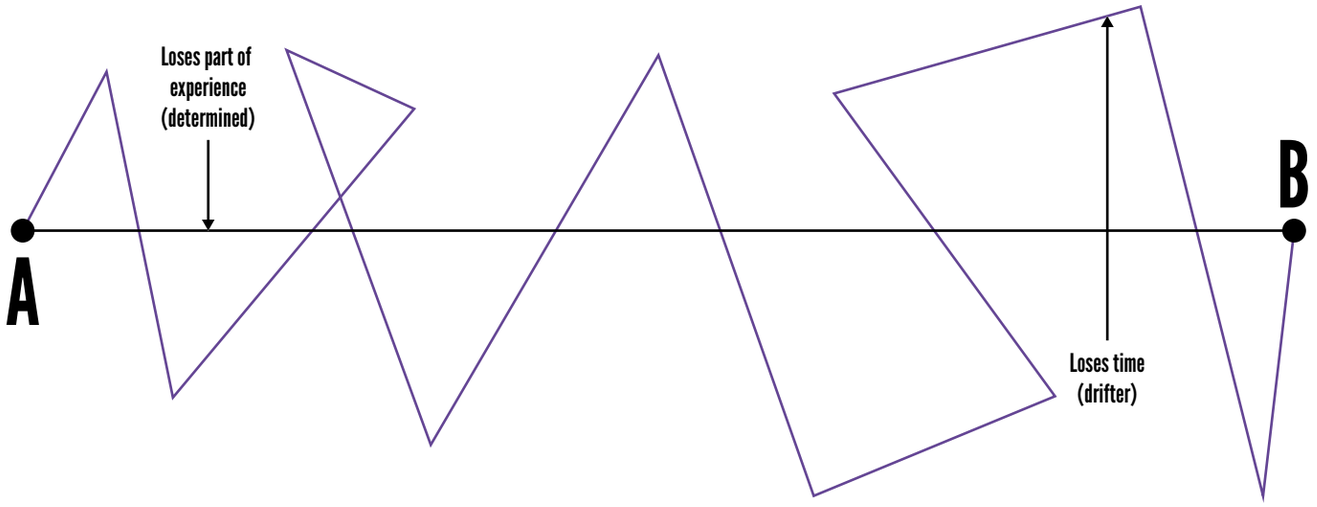


Figure 3.101. From A to B

The two urban actors can be clearly identified as antagonistic characters of the city, one driven by efficiency, while the other is driven by the urban beauty. Thus, while one might lose a part of the experience in the city, the other one ends up losing time **(See Figure 3.101)**.

But how is the real urbanite of the twenty-first century moving in the city? What if efficiency (in terms of distance and time) loses power and beauty gains it? More than that, what if they both gain equal shaping powers in the city? Before answering these kinds of questions, there is a need to explore more the factors that influence people in their daily route choice, in order to distinguish better what is characteristic for an instrumental movement and a non-instrumental one.

The mobile human and route choice

There are numerous factors influencing the pedestrians and their daily movement. According to Hoogendoorn and Bovy (2004), the main factors that influence pedestrians in the daily route choice are directness and pleasantness, while other factors that have an impact are given by habits, number of crossings, noise and pollution levels, safety and weather conditions. The factors that influence pedestrians also influence cyclist's behaviour in the route choosing process, almost in the same manner (Westerdijk, 1990). An explanation for this can be given by the fact that that both walking and cycling are 'muscular powered mobility modes' (Jensen, 2014:40), determining a similar sensorial experience, but at a slightly different speed (pedestrians have an average speed of 5 km/h, while cyclists 15 km/h).

Directness is one of the most common reasons in choosing a specific route and it not only refers to the length of the route, but also to its complexity. Thus, pedestrians frequently select the shortest path in their trips, minimizing the distance, but also the travel time. (Hoogedoorn, Bovy, 2004) This behaviour in the city is seen as an "effort-minimizing" one (Borgers, Timmermans, 1986). So nowadays, in the city people focus on an instrumental movement, a movement that gets things done.

Even though distance is considered to be the most important attribute in the pedestrians' route choice, as it has been proved in many studies (Hoogedoorn, Bovy, 2004; Borgers, Timmermans, 1986; Westerdijk, 1990), when it comes to estimating it, the accuracy of the data fades. "Pedestrians vary considerably in how accurately they estimate the distance of a regular walk trip" (Schlossberg, Agrawal, Irvin, Bekkouche, 2007). For example, when it comes to preferred spots in the city, like favoured shopping streets, streets that are having the same direction towards home and frequently visited ones, pedestrians tend to underestimate the distances (Borgers, Timmermans, 1986). Thus, the findings on the walking distances that are usually reported should be carefully assessed, even in the case of routine trips and short ones.

Despite the fact that survey responses in many studies indicate that the pedestrians' primary goal when choosing a route is to reduce distance and time, aesthetic considerations are also important to them (Schlossberg, Agrawal, Irvin, Bekkouche, 2007). Hence, the second most important factor, pleasantness refers to the route's quality of having many shops and trees/greenery, while being enjoyably crowded (Westerdijk, 1990). Thus, some of the urban qualities and amenities become important as well in people's route choice, qualities that a drifter aspires to. The presence of the shops can be argued with the fact that "activities occur on the move" (Urry, Sheller, 2006) and an occasional window shopping might be the case. The presence of many shops also attracts many citizens and the fact that the urban actors enjoy the presence of others is no surprise, as "large numbers of people entertain themselves, off and on, by watching people's street activity" (Jacobs, 1961:35). Trees are known as well

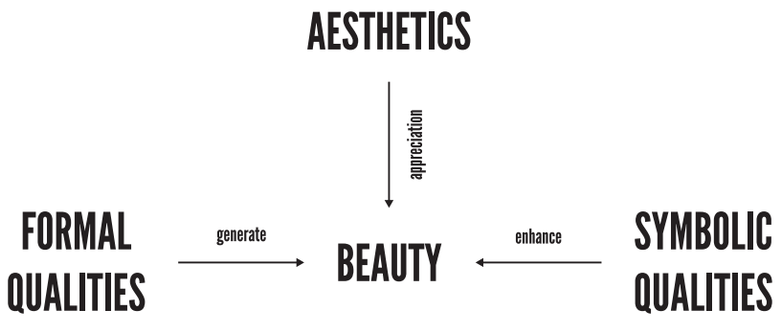


Figure 3.102. Aesthetics and Beauty

for their properties of increasing attractiveness, as well of adding "visual diversity or complexity to the urban environment." (Smardon, 1988)

Ergo, here we can talk about elements that are pleasing to the eye, elements that contain beauty and attract. In this sense, we can also talk about aesthetics. For the purpose of this thesis, aesthetics will be treated in accordance to Oxford Dictionary (2015) as "a set of principles concerned with the nature and appreciation of beauty", where beauty is seen in the classical way, as "a combination of qualities, such as shape, colour, or form, that pleases the aesthetic senses, especially the sight". Put together, the relationship between the different concepts relating to aesthetics can be noticed in **Figure 3.102**. In the next section the formal and symbolic qualities of the city will be further discussed.

Although the operation of building spaces for walking seems simple, great challenges come with characterizing the urban environment from the pedestrians' point of view and the "understanding of both the distance people are willing to walk to access a location and the characteristics of their preferred routes" (Schlossberg, Agrawal, Irvin, Bekkouche, 2007). These subtle urban design characteristics of the environment that can link the walking behaviour to the nature of the built environment, according to the MTI Report 06-06 (Schlossberg, Agrawal, Irvin, Bekkouche, 2007) can relate to the measurements of imageability (e.g. the number of plazas, courtyards and parks), enclosure and human scale (e.g. the number of long sight lines), transparency (e.g. the proportion of windows at the street level) and complexity of the design (e.g. the number of basic building colors). These factors gain more importance when the pedestrians are engaged in urban strolling, rather than when they are determined and they engage in "walking as an efficient mode of travel to access particular destinations such as a transit stop" (Schlossberg, Agrawal, Irvin, Bekkouche, 2007).

The factors that have an impact on pedestrians' route choice must be understood in their complex interdependence, rather than being treated as separate spheres, because when being connected, "some attributes can be played off against each other" (Westerdijk, 1990).

A factor influencing the hierarchy of the factors impacting the route choice are the weather conditions. Of course, when the weather conditions are bad, distance can hardly be played off by other factors, transforming most of the city users into determined ones. Safe paths, also during bad weather conditions, are usually used if the distances are short and the quality of pavement high. (Westerdijk, 1990) In the big dispute between distance and pleasantness, the second "can be played off more easily against distance during good weather conditions" (Westerdijk, 1990). This can also happen when average weather conditions are present, the pleasantness of a path being able to compensate for the greater distance of it.

Safety also plays an important role in the way pedestrians choose their daily route. Westerdijk (1990) emphasizes that "an important safety implication of this is that the use of safer routes can be encouraged by making the routes more attractive, even if the routes are a little longer". The correlation between safety and the aesthetics of an urban environment is also emphasized by Peterson (1967), who has found that safety and beauty are collinear when it comes to the preference of an urban scene.

At some point, this play off between the different factors influencing the route choice becomes measurable. Again, Westerdijk (1990) has revealed that the distance's value can be rescaled according to other attributes. In a study, where distance was estimated metrically and pleasantness was expressed with the help of a 7-point scale that was raging from very unpleasant to very pleasant, it was revealed that pedestrians were willing to extend their

trips with an average distance of 160 meters for one extra point on the pleasantness scale. (Westerdijk, 1990) This indicates again the non-existence of pure instrumental and non-instrumental movements in the city, as a willingness to explore while also reaching the daily destinations and goals exists.

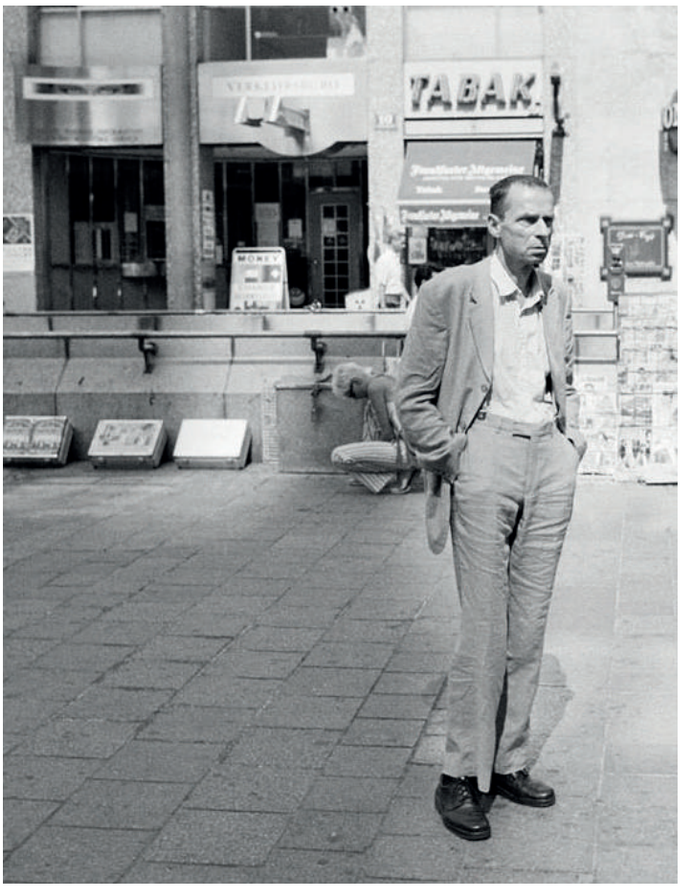
Nevertheless, the extent to which all these factors influence the route choices depends also on some context characteristics of the everyday life of pedestrians like "familiarity with the environment, longer walking distances, and trips for personal business and social activities" (Guo, Loo, 2013). These also play an important role in the pedestrians' willingness to explore alternative routes. (Guo, Loo, 2013)

Firstly, some route choice factors start to fade out according to the level of the pedestrian's acquaintance to the urban space. While in an unfamiliar territory for the pedestrian, the senses start to sharpen, being more aware of the surroundings, in a familiar territory, the senses begin to dull (Whiston Spirn, 1998), determining an unconscious process of the route in the pedestrian's head (Hamid, Jensen, Andrade, 2012). Secondly, in trips that are oriented towards personal and social activities (recreational trips), as it has been mentioned above, scenery represents a very important factor, while it can play no role at all in the trips that are work-related. (Hoogedoorn, Bovy, 2004:2) Last, but not least, when dealing with a longer distance, pedestrians can feel encouraged to explore alternative routes, having a great range of paths to choose from, as opposed to the possibilities in the case of a shorter distance.

Exploring the pedestrians' behaviour in relation to these factors remains a slightly subjective issue in the urban landscape, which is hard to quantify and generalize, as most of the data is qualitative and the relationships between the factors are characterized by high complexity. Also, "the psychology of mobility is a house of mirrors where what we want, what we do are rarely the same choice" (Montgomery, 2013:181), so the reality might not be always reflected in these studies, aspect that should generate awareness.

In all the studies that have been explored in this theoretical part, an important outcome is the fact that pleasantness can outrank distance under certain circumstances, meaning that the pedestrian subjects are willing to walk further in order to have a route that is more pleasant, transforming themselves into drifters. Also, safer routes are in a strong interdependence with the pleasantness of them. Thus, in the city, the presence of mobile users that are focused on pleasantness can prevail. For that to become a reality, the urban qualities of the city, qualities that a flâneur would appreciate have to be present. These qualities will be further explored and described in the section that follows. As Walter Benjamin has described it, the flâneur becomes a tool to analyse the urban life, as in the eyes of this urban explorer lies the real urban life. (Stephen, 2013)

Clocks. Canary Wharf
Reference to the determined user of the city, driven by time efficiency



A man of the crowd. Matthew Buckingham
Reference to Edgar Allan Poe's first text on the drifter:
The man of the crowd.1840

SECTION 3.2

HOMO MOVENS et CIVITATEM

In this section the formal and symbolic qualities of the city will be explored, qualities that can encou - rage pedestrians to linger more in their own city and to experience it in different ways rather than the habitual ones.

Small streets, short streets, lively streets, streets that remind us of something pleasant, green streets, streets that are characterized by diversity. These are the kinds of streets that appeal to the urban pedestrians. And these are the kind of streets a drifter would walk on, being attracted like a magnet.

"Above all, do not lose your desire to walk. Every day I walk myself into a state of well-being and walk away from every illness. I have walked myself into my best thoughts, and I know of no thought so burdensome that one cannot walk away from it." (Kierkegaard in Gehl, 2010:5)

There are two problems in the urban mobility nowadays: people do not maximize the happiness in their commutes and first and foremost, the majority chooses to travel with an expensive, polluting and place-destroying mode, which is the car. (Montgomery, 2013:188) Nevertheless, as Kierkegaard has pointed out, happiness can be born in the urban trips; in these urban trips, one group of commuters enjoys themselves more than others. "Their route to happy mobility is simple. These are the people who travel on their own steam […] They walk." (Montgomery, 2013:186)

Why are they happier? Because walking in the city represents an experience in itself; an experience at velocity, where "we glide past on the way to somewhere else" (Montgomery, 2013:181). As it has been seen in the previous chapter, there are various ways of moving in the city: "the quick goal-oriented walk from A to B, the slow stroll to enjoy city life or a sunset, children's zig-zagging, and senior citizens' determined walk to get fresh air and exercise or do an errand" (Gehl, 2010:227). But what "moves" the modern urbanite while he moves through the city? This section is meant to explore the urban qualities that encourage movement and make a city walkable.

What's out there and what's not?

Before exploring the qualities of the city that pedestrians prefer, there is a need to understand the different ways in which they perceive the urban environment; two ways are particularly interesting here, one that addresses the physical aspect and one that focuses on the symbolic part of the city. While the physicality of our environments allows and limits our movement, their symbolism activates our brain or imposes mental barriers. In our urban movement, we are subjective at every step, because "every urban landscape is a collection of memory and emotion activating symbols" (Montgomery, 2013:165).

Humans' interaction with the city also represents an "interaction between its features and the individual's knowledge" (Nasar, 1994), which means that when situated in a space, a person is not resuming only to what it sees, but its' brain also activates earlier memories and knowledge of the area to create a mental map. (Montgomery, 2013:162)

Another theory also suggest that pedestrians experience the city's elements as metaphors, where, for example, physical warmth can be perceived as social warmth and being situated in an elevated part of the city can activate a higher sense of ethics and generosity. (Montgomery, 2013:161) Thus, the city's image goes beyond its' physicality, while its' moving citizens attribute meaning to it.

What moves us while we move?

"The street works harder than any other part of downtown. It is the nervous system; it communicates the flavour, the feel, the sights. It is a major point of transaction and communication." (Jacobs, 1958) And it's not only downtown where streets "sweat", because all the urban streets and paths support movement and urban walking, which "is by its very nature a transformative practice because the moving body and the plurality of spaces it inhabits are constantly conjoined and decoupled in new ways that come to reveal the metropolitan world in its manifold dimensions" (Macauley, 2007).
This plurality of spaces that Macauley (2007) talks about emerges from the city's formal diversity, from shape to proportion, from rhythm to scale, from complexity to order, from illumination to shad-

owing, from hierarchy to spatial relations, from incongruity to ambiguity, from novelty to surprise and so on. Out of all the formal qualities, only some of them attract pedestrians, qualities that have been identified by urbanists like Jacobs, Gehl, Speck and Nasar. These qualities will be further discussed in the next part.

Firstly, when it comes to the shape and proportions of the paths and spaces people move in, the theorists mentioned above seem to agree on the same "ideal" dimension. While Jacobs (1958) describes these spaces as "small, sharp and lively, and not large, empty and boring", Gehl (2011) attributes to small spaces the quality of being intimate and warm. Thus, when looking at the paths, Jacobs (1958) prescribes narrow streets "if they are not too narrow […] and are not choked with cars." All these small dimensions emphasize, in fact, a human-scale design, which becomes friendlier for the pedestrians, having also "low buildings [that] are in keeping with the human horizontal sensory apparatus" (Gehl, 2010:82).

Nevertheless, a condition in the case of the dimension of the paths remains a pleasurable and comfortable walk, meaning that the path must offer "room to walk relatively freely and unhampered, without having to weave in and out and without being pushed and shoved by others" (Gehl, 2010:229).

Even though, the small proportions are seen as qualities for better working spaces, that does not mean that all the streets should be narrow in the city; "variety is wanted in this respect too" (Jacobs, 1958). Diversity is also needed in the case of paths' length, because "if ground floor façades are rich in variation and detail, our city walks will be equally rich in experience." (Gehl, 2010:190) Ground floors are the ones that can contribute to the pedestrians' experience and interest. For that, the facades should be characterized by transparency and openness, where pedestrians are able to see the goods on display, high level of interaction, offering interesting opportunities and impressions, appeal, given by richness in details and good materials and variety, as it has been mentioned before. (Gehl, 2010:152)

Diverse facades are not the only solution when it comes to cancelling the boredom of a long path. "Streets that have an end in sight are often pleasing." (Jacobs, 1958) And if there's no sight of the end, focal points can always be the solution; "a focal point can be a fountain, or a square, or a building– whatever its form, the focal point is a landmark, and if it is surprising and delightful, a whole district will get a magic spillover" (Jacobs, 1958). Diversity can also be expressed in the style of the buildings, as Jacobs emphasizes: "Think of any city street that people enjoy and you will see that characteristically it has old buildings mixed with new." (Jacobs, 1958)

Another way to break the monotony of the street is to have punctuations of all sizes and shapes that appear little way ahead pedestrians, urban objects that are different, either large ones or small details, like greenery, churches, clocks or windows set forward. (Jacobs, 1958) For example, green elements can represent such punctuations. As it has been noted in the previous section, greenery possess a value that is symbolic in the city : "the presence of green elements passes on a message about recreation, introspection, beauty, sustainability and the diversity of nature". (Gehl, 2010:339)

There is no doubt that greenery has that impact, as there is no doubt that it also has aesthetical value. "Aesthetics matter. We walk farther when streets feel safe and interesting." (Montgomery, 2013:194)

But what does make the streets interesting and safe? Gehl and Jacobs have noticed that what contributes to these aspects is the presence of other people, thus "to consider a city aesthetically is to not only [to] judge its buildings and architecture, litter and

noise, but also include […] social elements as part of its total sensory package." (Kaminska, 2007) When it comes to walking in the city and when people are faced with choosing between a lively street, populated and a deserted one, pedestrians would choose the first one (Gehl, 2010:56), as it is tied directly to other types of public life (Jacobs, 1961:57). In the end, "it is the presence of people that bring these spaces to life." (Kamiska, 2007)

The presence of people is also the one that increases the feeling of safety along the street. Jacobs (1961:35) is the one that emphasized that in order for people to feel safe on the streets, eyes must be upon them and also the sidewalks must have users on it in a fairly continuous rhythm, no matter the hour of the day. People feel safe in the presence of other people, knowing that someone is watching, just in case danger emerges. "As they fear [the streets], they use them less, which makes the streets still more unsafe." (Jacobs, 1961:30)

Thus, the purpose of city planners is to make the streets socially attractive, even though "antisocial spaces are as common in the city as blank walls. In fact, black walls are a part of the problem." (Montgomery, 2013:165) What also rejects people in the city is the sight of disrepair, garbage and graffiti, leading to feelings of depression and alienation. (Montgomery, 2013:165)

Ultimately, the city and its streets have to be generators of "positive sensory experiences" (Gehl, 2010:342), and in order to obtain that the presence of good design and detailing, greenery and natural elements and fine views is needed. These elements have to be thought also in terms of the speed at which we perceive them. The "5km/h architecture" (Gehl, 2010:312) is the architecture destined for pedestrians, speed at which they can experience the details and the other people. Walking in these favourable conditions offers ample time to experience all the urban information, from ground floors, social life to architectural details etc. When "walks become more interesting and meaningful, time passes quickly and distances seem shorter" (Gehl, 2010), which means that when people have an enjoyable environment to walk in, they are willing to walk farther, as it has been mentioned above, but also feel the time in a compressed way.

Perceived compression of time also leads to a perceived compression of distance. Studies have proven that what pedestrians find acceptable as a walking distance is about 500 m, but that means that not "just the physical path length comes into play, it is also very much the perceived path length". (Gehl, 2011) So the length of a trip that people find acceptable much depends on the quality of the environment and the route as well. For example, if the pavement has a good quality and the route chosen seems interesting, people would take into account a considerably longer walk. On the other hand, if a route is not interesting and the conditions of walking are not favourable, the time will "enlarge" and a walk of only 200/300 m will feel like a long way, even though in reality it takes less than five minutes to walk it. (Gehl, 2010:229) Pedestrians will also find ways to adapt their trips, to make them shorter according to their need, thus "making new, extra paths for themselves, through mid-block lobbies of buildings, block-through stores and banks, even parking lots and alleys." (Jacobs, 1958)

Here, the nuances between the public and the private can be discussed and the impact they have on the way pedestrians move in the city. While Jane Jacobs (1961) sees the "clear demarcation between what is public space and private space" as a condition for the feeling of safety on the streets, Gehl (2010) sees the fluidity between the two kind of spaces and a condition for emphasizing the need of a physical as visual connection, that could lead to greater confidence, sense of belonging and responsibility for both residents and pedestrians. The interplay between public and private, between

the functional and the spatial qualities all lead to diversity, but also enjoyable surroundings that can either generate pleasantness, excitement or calmness (Nasar, 1980). Here, pleasantness should be no longer understood as a route choice factor, as in the previous section, as Nasar (1980) uses it here to describe the feeling of being pleased in an urban space.

While pleasantness relates to the pure evaluation and scanning of the spaces we walk in, the excitement and relaxation are a mixture between evaluation and arousal. "Exciting places rouse higher level of pleasantness and arousal than boring places. Relaxing places evoke higher levels of pleasantness and calmness than do distressing ones." (Nasar, 1980)

Putting it all together, you obtain a walkable city: a walkable downtown, walkable paths and streets and people stimulated at every step by designing paths where a walk can satisfy four main conditions: useful, safe, comfortable and interesting. "Each of these qualities is essential and none alone sufficient." (Speck, 2013:11) These conditions are mainly fullfilled if the urban characteristics already introduced in this section are present **(See Figure 3.201)**.

"Streets and their sidewalks, the main public places of a city, are its most vital organs" (Jacobs, 1961:29), because while walking in the city, the pedestrian is invited to direct, diverse and multi-sensorial experiences, but also he is left with room to be involved in spontaneous events and opportunities like "exchanging smiles and glances". (Gehl, 2010:61) "The aesthetics of the city is an aesthetic of engagement", in which the conscious body of the pedestrian is in constant conversation with the environment." (Kamiska, 2007)

As a result, there is an inherent potential to work with visual and aesthetic urban elements, because, for pedestrians, to walk through beautiful spaces with carefully planned urban qualities represents an experience, embodied experience which will become an attraction in the urban environment, as "what attracts people […] will invariably be other people. Activity in human life is the greatest attraction in cities." (Montgomery, 2013:155)

Making streets walkable is maybe not as hard as it seems. There is a need of looking at how people use them and understanding "how places, crowds, views and architecture and ways of moving influence the way we feel" (Montgomery, 2013:78). After that, there is a potential in reinforcing them, by working with quality and time rather that quantity. (Jacobs, 1958)

"We live in systems that shape our travel behaviour" (Montgomery, 2013:199) … and our travel behaviour shapes the systems and others travel behaviour. A system that can influence our travel behaviour is given by the mobile technological layer that is emerging in the city, which will be treated in the next section.

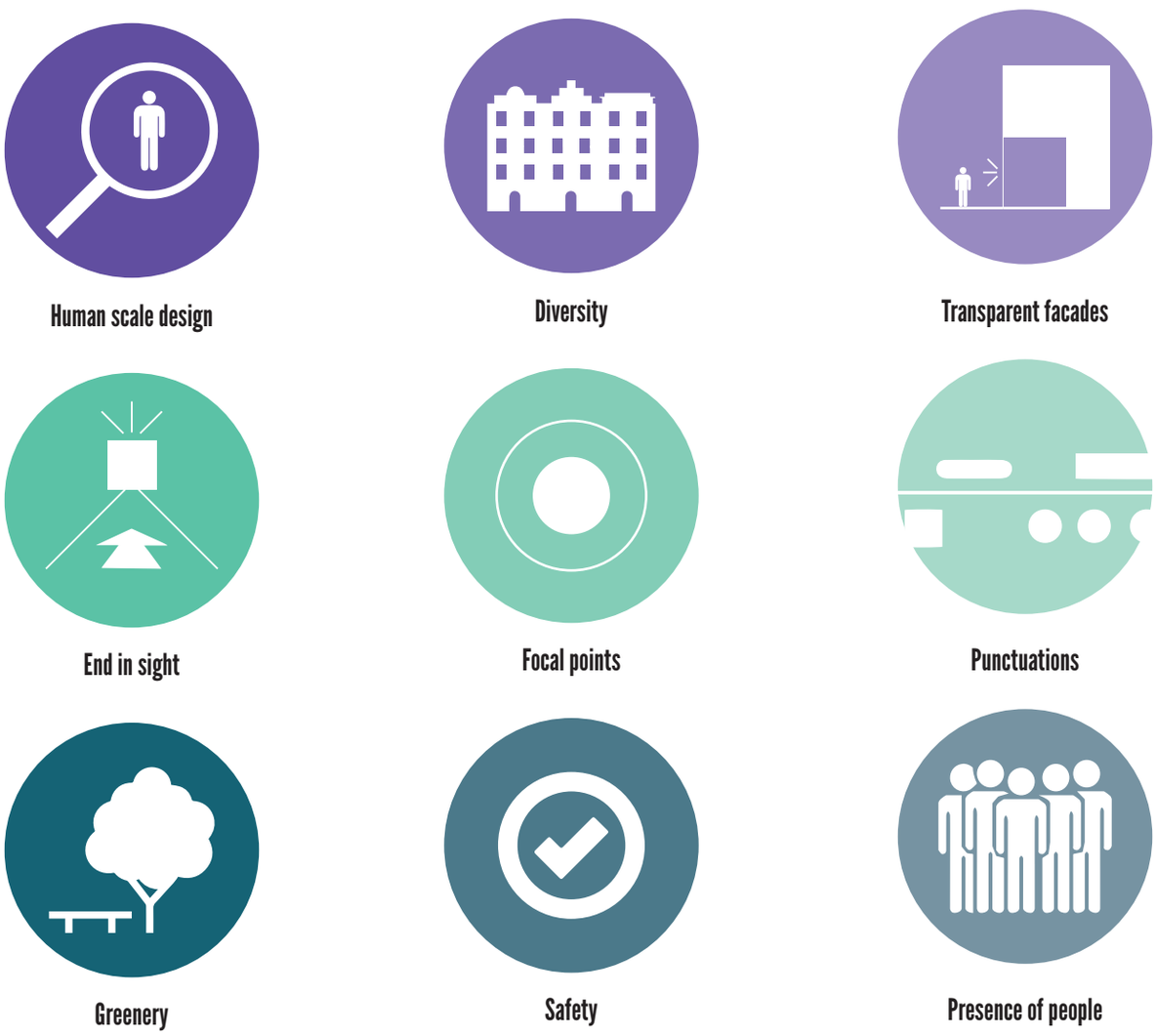


Figure 3.201. Appreciated urban characteristics

SECTION 3.3

HOMO MOVENS et TECHNICAE

In this section, the new invisible layer that is emerging in the city is introduced: the ICT (Information and Communication Technology).

These networked technologies determine new dynamics in the city, but also become new tools of exploring the city. Moving in the city is now very much impacted by the presence of information technology in the city.
While most of the technology (mobile applications) encourages the presence of the determined mobile user in the metropolis, there are some that put emphasis on the drifter and his experience while being on the move. In the end of the section, a state-of-the-art review will present some of these existing and successful mobile applications.

"We have entered a new age, the Information Age." (Castells, 2004) We are now living in a city that beholds "spaces of flows" and "spaces of places". While the spaces of flows are the ones that are linking electronically separate locations into an interactive network connecting people and activities in different geographical contexts, the spaces of places are the ones that organize activities and experience in the context of locality. (Castells, 2004)

The emergence of the space of flows determines a rejection of the classic concepts of distance and time, a structuring and destructuring of the city at the same time (Castells, 2004) and also the birth of the Smart City, a place "where information technology is wielded to address problems old and new". (Townsend, 2013:248) This invisible layer emerging in the city, even though not physical (if we do not think about the infrastructure of it, but just the concept), reinvents the way in which we relate to and perceive the physicality of the city.

Nowadays, the "symbiosis of place and cyberspace" (Townsend, 2013:6) makes it impossible to conceive city life without the presence of our gadgets, that are now governing "the metabolism of our urban lives" (Townsend, 2013:6). The information technology has become, as mentioned above, a new way of addressing all sort of urban issues, for example, of social or economic nature, by introducing it as a tool in fields like architecture, infrastructure, planning and so on. Batty (2012) sees the potential in the development of technologies in the city. He sees it as an opportunity to ensure fairness and equity, a better city life quality, an informed participation and to provide a greater and effective mobility for the urban population and access to opportunities.
In such ways, technology is a tool that can be shaped for reshaping our cities, but this is a process that has to be developed with precaution, as the future metropolis can either be a "rich, living organism" or a "dull mechanical automaton". (Townsend, 2013:15)

There are, in fact, two trends developing in smart cities: "Ask an IBM engineer and he will tell you about the potential for efficiency and optimization. Ask an app developer and he will paint a vision of novel social interactions and experiences in public." (Townsend, 2013:15) While these two camps, the "Smart and Efficient" and "Smart and Human-Centered" one, fight to turn their "utopian visions of the city into code" (Townsend, 2013:151), it is extensively believed that personal media technologies detach the urbanite from what is meaningful, creating a general de-sensing and suppressing face-to-face contact. Nevertheless, it is thought that a mobile and context-sensitive interface for such technologies can lead to new visions for the urban space. (Jørgensen 2011:19 in Jensen, 2013:135)

Technology is, after all, a 'happening in the world' (Rabinow 1999:180 in Mackenzie 2003b), a new form that emerges in the city and becomes a catalyst for previously existing things: urban actors, spatiality, time, movement, creating "new modes of existence" and unveiling new capacities and ways of understanding the metropolis." (Rabinow 1999:180; cited in Mackenzie 2003b) In order for technology and the urban planning and design to work together in obtaining these new modes of existence, there is a need of a "toolbox" to mediate them.

ICT (Information and Communication Technology) Toolbox

The smart city can be defined in many ways. No matter if it is called the intelligent city, the virtual city or the digital one, this future city is a city where ICT is the central component in the process of urban operation. (Batty, 2012)

The ICT toolbox is defined by Jensen (2015) as an instrument for planners and designers that "should contain three dimensions: hardware (technological devices), software (operative code) and a manual

(here understood as a theoretically informed conceptualization of the socio-cultural embedding of these networked technologies)." The "manuals" are the ones binding the two disciplinary fields, as planners and designers can use them along with the existing technology and software. There is a need for such a toolbox for various reasons as Jensen (2015) emphasizes.

Technologies are already spreading massively, and have become a part of the city that can no longer be ignored by designers and planners. Not only are they spreading, but they are also producing data related to the city, that depict the city and its dynamics and become relevant in the process of urban planning and designing. Another relevant aspect are the opportunities that the technologies offer in interacting with the urban public, old or new and in facilitating "online" public participation process. It is true that another discussion emerges here, as we are dealing in the city with "digital illiteracy", because of some segments of the population (like the elders) not being accustomed with the networked technologies. Nevertheless, technology should be seen here as a complementary tool for the previously existing participatory methods. A last reason why an ICT toolbox is necessary is that the new technologies in the city start to gain a creative facet, as artists start to test how technologies can afford "new aesthetic sensations, cultural interchanges, social and playful experiences." (Jensen, 2015)

Interesting attributes of technology for this project are given by the participatory and creative aspects and the software that supports them. As in has been mentioned before, the networked technologies are starting to have a huge impact in the pedestrians' travel behavior, but how what types of software address mobility, urban participation and creativity at the same time? This is a question to be answered in the following lines.

"Pali, pali" or not?

"Pali, pali" ("Hurry, hurry"), a Korean saying, seems to have become an "ubiquitous incantation" (Townsend, 2013:25) of the urban life and mobility. The technology industry has made a commitment to the city and that is to provide a greater urban efficiency. It seems like the future depicted for the metropolis is clear: focused on effectiveness and efficiency and without taking into account "the role an empowered human and social capital could play in transforming our cities" (Roche, Nabian, Kloecki, Ratti, 2013). As it has been seen in Section 1, in a "time-pressure" society, efficiency has started to play a huge role in the way we move across our cities and sometimes, the technology enabled in the urban environment by R&D corporations ("Smart and Efficient" camp), does nothing else than turning the urbanites into de-sensed "robots", moving from A to B in their daily trips. But city trips do not have to be like that.

On the other side, "smart-city hackers" (Crowley in Townsend, 2013) are fighting for a movement in the city that has other priorities like resilience, sociability, delight and serendipity. (Townsend, 2013) Their technology puts people in the centre of smart cities, and unlike the R&D corporations, that produce global solutions; the social hackers' technology is deeply connected in the local plan, encouraging creativity and citizen participation.

This can be seen as both an advantage and a disadvantage, as civic hackers only solve the problems of a small group of people and "lose sight of the larger world" (Townsend, 2013:166), while the R&D corporations behold the clarity of their purpose. Smart-city hackers' "bottom-up vision", a vision that involves people in the process, represents a great challenge as it has to respond to "countless local variables and idiosyncrasies". (Townsend, 2013:231) There are numerous mobile technologies and apps today that assist us in our daily trips,

as drivers, cyclists or pedestrians. For example, the mobile applications for pedestrians have to be deeply rooted in the locality, as there is a need at first to understand the street culture of a city or a country (Townsend, 2013).

While there are mobile applications that get you from A to B (Google Maps, Bing Maps etc.) and have "pali, pali" as a mantra, always providing you with the shortest paths towards your destinations, some apps (Place Pulse, Urban Gems.org) become a tool to explore the urban realm, attaching meaning to the routes from A to B. Rooting for mobile applications that are focused of experiencing the city, rather than efficiency is a movement that comes from bellow and it is staged by the city hackers and the people, who relate to the idea that "efficiency isn't why we build cities in the first place" (Townsend, 2013:160); we build cities so they can ease human interactions, so people can connect, share interests and collaborate.

The smart-city hackers' mobile applications, that, as mentioned above, are involving people in the process and empowering them, stand under the name of crowdsourcing apps. A state-of-art review of such applications will put an end to this section, proving that the need of an ICT toolbox for planners and designers has become mandatory.

Crowdsourcing applications

Crowdsourcing represents "an online, distributed problem-solving and production model that leverages the collective intelligence of online communities to serve specific organizational goals" (Brabham, 2013). The crowds, the online communities, are offered the chance to share opinions and get involved in organizational activities. The crowdsourcing technique has become so popular and successful, that it has migrated to various disciplinary fields like commerce, urban planning and design, transport and so on.

In the field of urban planning and urban design, the crowdsourcing apps have become a tool to take back the city, a tool that would help the urban actors of any city, for example, in making their area better (Townsend, 2013). Crowdsourcing apps have become techy, participatory tools, that "help like-minded people find each other and do stuff." (Townsend, 2013:159) These mobile apps provide benefits sideways, as the crowd will feel rewarded with the satisfaction of social belonging and skill development, while the crowdsourcer will obtain information and insight that he will further use for helping the crowd.

To better understand the way these crowdsourcing apps function in the name of urban planning and design, a review of some of the most popular and successful ones is following.

State-of-art review

There are a lot of crowdsourcing apps out there, that address numerous problems of the metropolis, related to the environment, the social and community aspect, the economics and so on. These technologies become "complex assemblages crafted to solve the everyday needs." (Townsend, 2013:249)

The crowdsourcing apps that have been chosen for the state-of-art review are addressing the quality of life in the city (Skal din by) and the urban qualities while being mobile (Place Pulse, UrbanGems).

The first three mobile applications are interactive, but passive ways of crowdsourcing, as it does not necessary require direct involvement with the environment that is within the scope of the participatory process. That means that they can participate from the comfort of their homes, offices and so on, but they can also share their opinion while in the specific environment. Here, prior knowledge and memories of the citizens are also enabled.

The last mobile application is not a crowdsourcing application per se. Why the "intruder"? Serendipitor is an app that can be born out of crowdsourcing apps. It is a mobile application that encourages the pedestrians to explore their city. In that regard, it is a mobile application that is interactive and dynamic, provoking people to engage with their cities. It is no longer an application that focuses on how people perceive the city; it invites you to perceive it in a different way rather than the habitual one and then share your experience.

Nevertheless, all the presented mobile applications have two things in common: they are participatory and they are creative. While three of them are trying to reveal the urban qualities of the city from the point of view of the citizen, one invites the citizen to discover them on his own.

"**Skab din by**" ("**Create your city**") has represented an experiment project developed by the Technical Department in Copenhagen. Due to the fact that Copenhagen aspires to be CO2 neutral, relying on green transport modes, the municipality has brought its citizens into the discussion, in order to achieve new ways of thinking. Via the website skabdinby.dk and the corresponding app and blog, the municipality has created a forum for dialogue and exchange of views on, inter alia, favorite places in Copenhagen. Here, residents have been able to post comments and upload pictures and movies with tips on good places in the city. Copenhagen's everyday knowledge about the city was put into play and through the filter of professional understanding.

By establishing 10 experiments throughout the city, the way in which the city is planned and used would be challenged and rethought. Create your City has been built on a city map, where users of the site have been able to mark their favourite places, routes they use in the city, interesting places that they consider to be underused, etc. (Skabdinby, 2012) For the municipality of Copenhagen, with the help of the crowdsourcing site and app, good technology and participatory techniques become tools to create great places. **(See Figure 3.301)**

Place Pulse (2014) is a crowdsourcing app developed by the MIT Media Lab team led by Phil Salesses and its purpose is to help cities into building cities that are more representative in terms of the citizens' desires and more flexible. Place Pulse is built as a game, where players are shown two side-by-side Google Street View images and being asked various questions that are meant to identify the urban qualities of the places depicted in the images: Which place looks safer/ more beautiful/livelier/ more boring? Players click on the image that answers the question, and over time, Place Pulse starts to convert the users opinions shared in the game into perception scores for each place shown in the images, thus, developing a way to quantitatively measure the urban perceptions of the city. Scores are then mapped and used to identify the areas that need improvement. **(See Figure 3.302)**

Urban Gems, developed by Daniele Quercia's team at Cambridge's Computing Laboratory, is a digital software that functions on the same principle as Place Pulse, only this time, the aim of the gathered information is different. "With a comprehensive list of aesthetic virtues at hand, we would be more likely to systematically understand and re-create the environments we intuitively love"(Daniele Quercia, 2012). The team has developed a prototype technology that would reintroduce the modern flâneur in the urban landscape, by encouraging the actors to use beautiful paths, rather than the shortest ones (types of paths generated by Google Maps).

This is not the only similar technology emerging in the urban landscape (Serendipitor, Drift, Random GPS etc.) that could potentially have an impact on the way people move, impact that can represent a game changer in urban planning and design. There

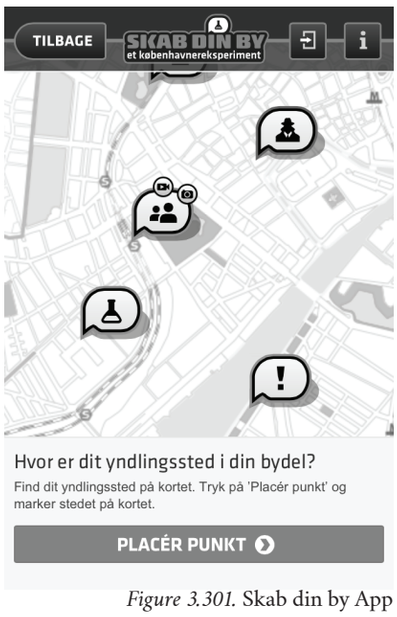


Figure 3.301. Skab din by App

are though, issues with these types of studies, as people' votes might be influenced by the image quality, the reputation and history of the places, the user's position in society, so, it is hard to generalize data without going further into details. **(See Figure 3.303)**

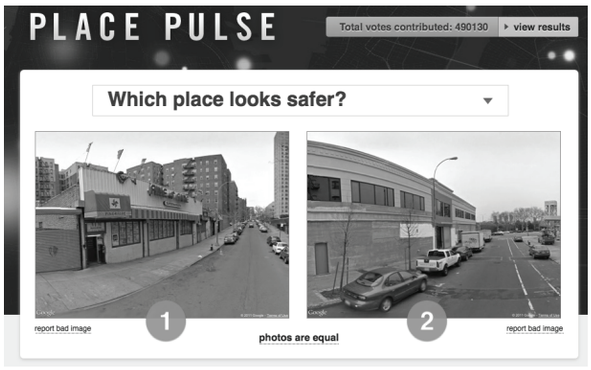


Figure 3.302. Place Pulse Website

While Place Pulse and Urban Gems are still confined in locality, **Serendipitor**, with the help of Mark Shepard, has become global. "With smart phones, smart cities, and endless tools to maximize efficiency and minimize travel time, the possibility for serendipitous encounters or discoveries is diminishing" (SpontaneousInterventions, 2010). Architect Mark Shepard has created the mobile app Serendipitor, as a response to the diminishing serendipitous travels. How does it work? Users select their destination, and Serendipitor provides new, inventive, directional routes, and not the most efficient ones, encouraging users to explore and find something new and surprising. Users can set the complexity of the route, depending on the time they have available. **(See Figure 3.304)**

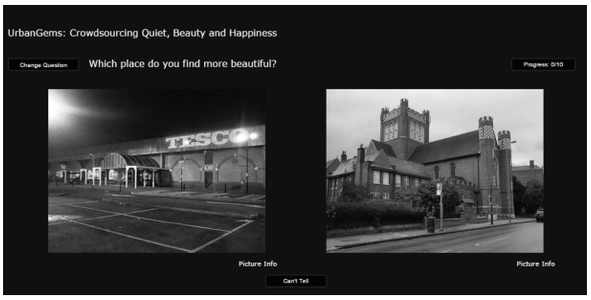


Figure 3.303. Urban Gems Website

"Crowdsourcing is a way of tapping and directing the inherent sociability of cities." (Townsend, 2013:308) By involving the social dimension and enabling the urban expertise, the mobile technologies can amplify the presence of tactical interventions in the city. The apps presented have also proven that as technologies do more and more in the process of observing the city, "intangible aspects of urban life" (Townsend, 2013:282) can start being capable of measurement.

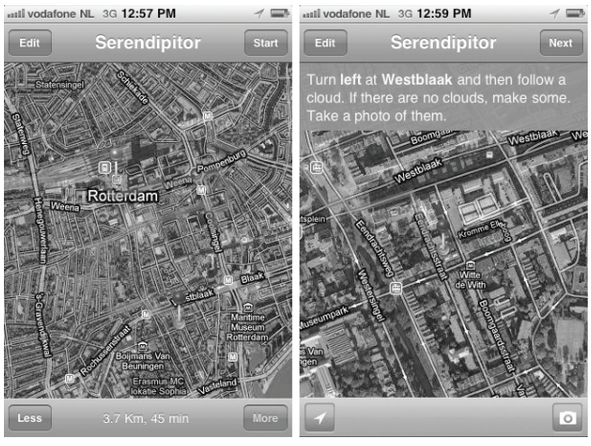


Figure 3.304. Serendipitor App

VISION

As pedestrians, we are influenced by various elements as we move through the city. While some of us are engaged in a direct and unconscious movement, influenced by distance and time efficiency, thus by directness, others are strolling in the city, being drawn by enjoyable formal and symbolic urban characteristics of the city, thus by the pleasantness of the environment.

While the instrumental movement mostly manifests itself under the influence of our daily habits, the non-instrumental movement is a way to break the habitual manifestation. Both movements have various reasons of manifesting themselves in the city. While the instrumental movement becomes essential when good weather conditions and safety lack, generating a sense of rush, the non-instrumental one is enabled through enjoyable urban scenery, with greenery, people and characterized by diversity. The instrumental movement focuses on the destination. The non-instrumental movement focuses on the route.

They are both not to be found in their pure form in the urban environment. People speed up and slow down while walking and being engaged in their daily routines. We already found out what makes them speed up (time pressure, lack of safety, disrepair, garbage, etc.) and slow down (lively, sharp, diverse streets, etc.).

Most of the people are in fact speeding up, influenced by directness in their daily trips, preventing them from enjoying and exploring the city. How can we make the determined mobile user of the city become a drifter, engaging with his environment?

ICTs come as an answer. But, like in every two-sided story, there are technologies that focus on encouraging an efficient and direct movement and others that support the behaviour of a flâneur. There are R&D corporations that develop mobile applications like Google Maps and Bing Maps that direct you through the city in the shortest ways possible and there are smart city hackers that create applications like Place Pulse, Urban Gems and Serendipitor that invite people to explore the city, while also being participatory and creative tools.

But the question remains:
"How can mobile technologies become a tool in the mobilities and urban design field and determine a shift in the pedestrians' focus from routine and efficiency to urban aesthetics and qualities?"

In order to explore that, going beyond the theory that has been presented in this chapter and summed up in **Figure 3.401**, the downtown of Aalborg will be analysed in this perspective. Aalborg centre and its pedestrians become the case to be studied in the attempt to reveal a part of the complex relationship between mobility, urban design and technology.

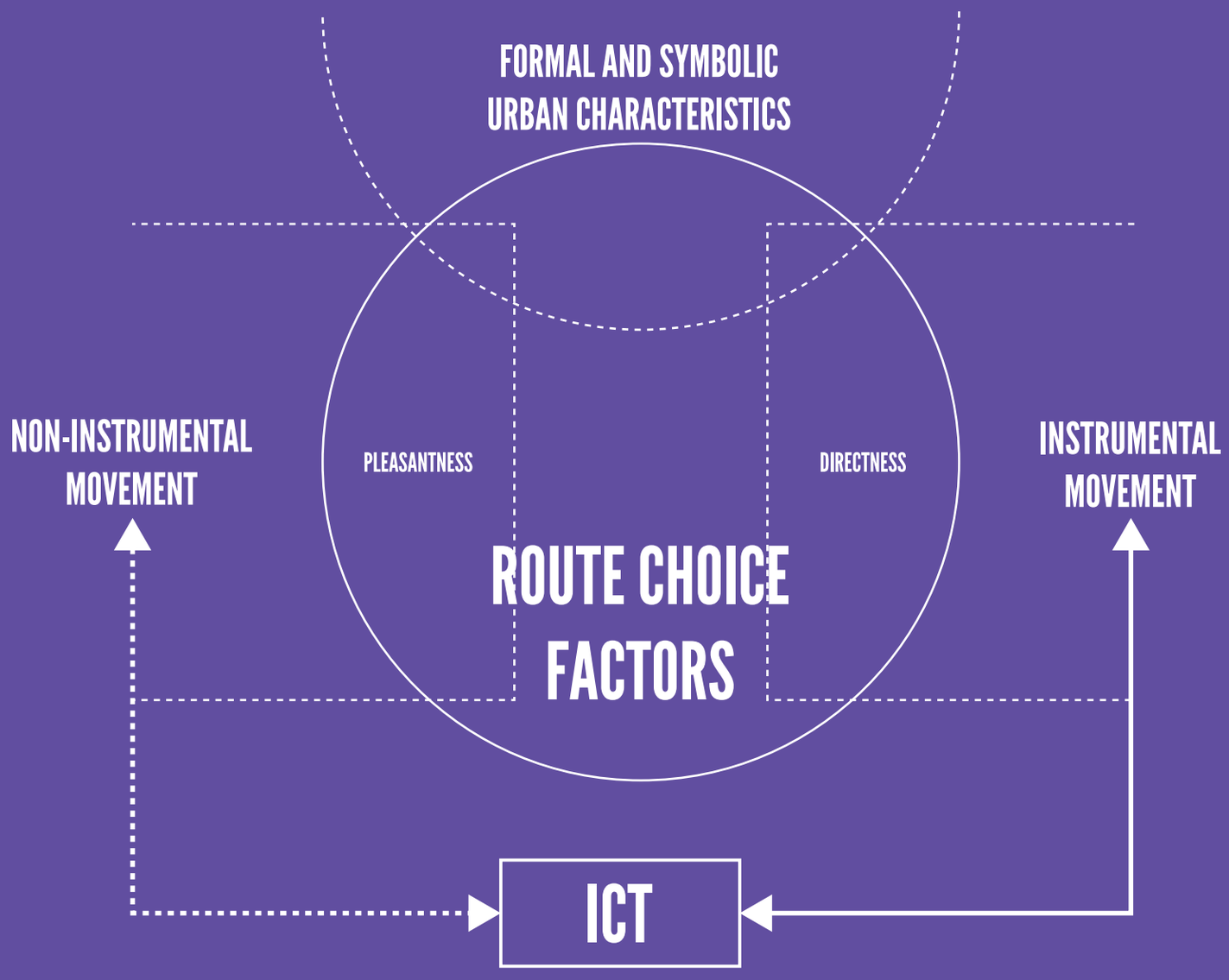
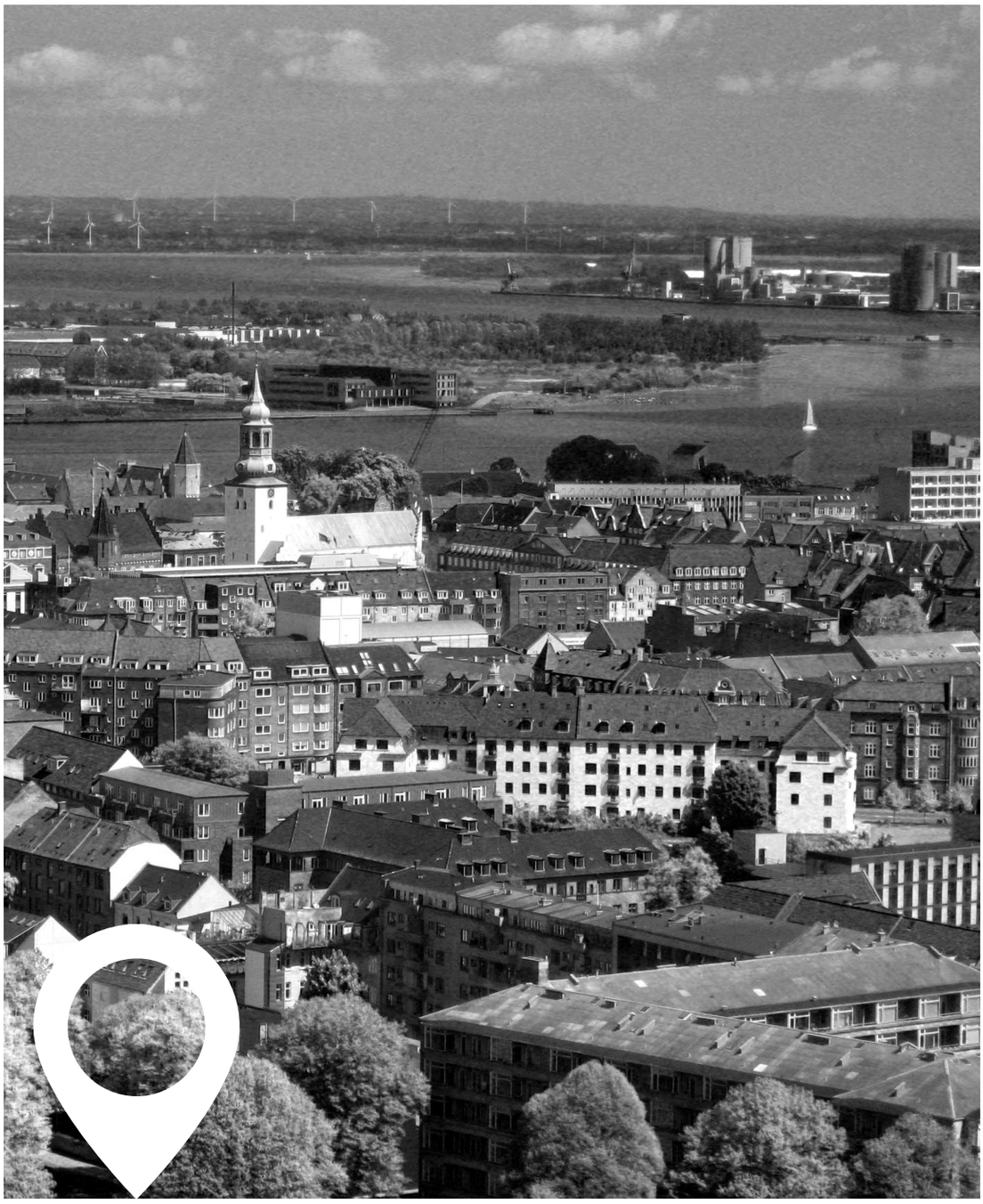


Figure 3.401. Theoretical diagram



Aerial vision of Aalborg

ANALYSIS

"I think that walking around the city, you also get a relationship to it, with the different paths and squares and routes. It's about making a routine that you think it is both fast and beautiful. It has to be practical also. For me, getting from A to B is mostly just about getting there, but there's definitely some paths in the city that I prefer to walk, because I have some kind of relationship to them and I think they're beautiful." (Interviewee A, Appendix E)

SECTION 4.1

MEET AALBORG CENTRE

In this section, the city of Aalborg and its centre, the site for this master thesis, are introduced. As it has been noticed in the theoretical chapter, people also choose their daily paths according to the urban qualities and atmosphere they have to offer. So in order to understand how pedestrians move in the city centre, the various characters of the network of paths must be examined.

Aalborg is a Danish city, situated in Northern Denmark, with a population of 206,000 citizens. The city and its centre went through great changes in the last years, under the framework of the 2005 Vision of the Municipality:

"We are aiming from an industrial city to a 'knowledge and culture' city... We wish to have a diverse city with active urban life... The eventful city with a great variation of attraction and sensory impressions" (Kiib, 2007: 26)

Thus, Aalborg underwent a design strategy where the aim was to create a dense pedestrian friendly city and also concentrate the focus on brown fields and underdeveloped areas. Even though the city is still under development, the changes produced since 2005 have started to attract a new population given by numerous students, employees, and nonetheless, tourists. These changes not only served a new population, but also improved the quality of living for the old citizens.

The Centre of Aalborg represents a glimpse of the "eventful city" (Kiib, 2007: 26) and is situated along the fjord **(See Figure 4.101)**. It is characterized by diversity in terms of architecture, urban spaces, atmospheres, paths, as it will be illustrated in the further analysis.

Aalborg centre, as it has been delimited for the scope of this paper, lies within the limits of Vesterbro and Prinsensgade (West limit), Jyllandsgade (South limit), Karolinelundsvej (East limit) and Nyhavnsgade and Strandvejen (North limit). The urban qualities of the city and its paths will be analysed within these limits **(See Figure 4.102 on next page)**.

Figure 4.101. Location of Aalborg centre

Figure 4.102. Location of Aalborg centre

Figure 4.103. Functional zones

Zones with character

As it has been mentioned above, Aalborg centre is characterized by diversity, as a number of zones with different predominant attributes can be identified. Looking at **Figure 4.103** it can be noticed that five types of zones can be distinguished, according to their dominant functional character: the harbour area, the green areas, the residential area, the cultural-educational area, the shopping area and the mixt one.

Figure 4.104. Harbour area

The harbour zone **(See Figure 4.104)** is represented by leisure areas that are stimulating various activities among the citizens, from running to enjoying a walk along the fjord, from sunbathing to playing football or basketball on the sport fields, from swimming to having a picnic in the summer. According to Jensen (2013), this area can be thought as "mobile sociopetal", as it is a site that is inviting people to go there for transiting from an urban area to another, but also simply to enjoy viewing others. The harbour area is "well-tuned in getting people to go there and unfold their activities" (Jensen, 2013:196).

The green areas are represented by one of the two major parks in Aalborg: Karolinelund and Slotsparken (Aalborg Castle Park). While Slotsparken represents an historical site, accommodating the Aalborg Castle, and an area meant for recreation and meditation **(See Figure 4.105)**, focused on preserving the natural habit, Karolinelund is an urban park and an active area **(See Figure 4.106)**, with playgrounds, skate parks, sport courts and a cultural venue (Platform 4). Thus, Slotsparken is a space where the urbanite can contemplate nature, while Karolinelund is destined not only for walks, but also for various activities.

The residential area has housing as a dominant function, while services and shops are spread around at the ground level of the buildings. Here, two types of space can be identified, the public and the semi-private and private one. The public space is given by the network of paths connecting the area, while the semi-private and private one is re-presented by the numerous buildings' courtyards, with a strong community character **(See Figure 4.107)**. Their qualities will be discussed later, when characterizing the paths present in Aalborg centre.

The cultural-educational area is part of the 2005 Vision Development, with buildings like the Music House, the City Campus and Nordkraft. This area is part of a "culture-oriented urban regeneration, facilitating infrastructure for new knowledge based industries" (Kiib, 2007: 25). Large scale architecture, open spaces and concrete are predominant in this zone, making it into a space that lacks human scale **(See Figure 4.108)**.

The shopping area is given by the predominance of commercial streets, which make it a really attractive and active zone, with lots of people on the street roaming around the shops and the cafes. Most of the paths in this area are pedestrian friendly: paths exclusively for pedestrians or shared spaces. The shopping streets are characterized by crowdedness, which, as discussed later in this section, can be both bliss and burden **(See Figure 4.109)**.

The mixed zone incorporates recreational areas, with cafes and restaurants, shopping streets, cultural venues, residential blocks and so on, making this area rich in atmospheres, architecture and services.

Figure 4.105. Green area

Figure 4.106. Green area

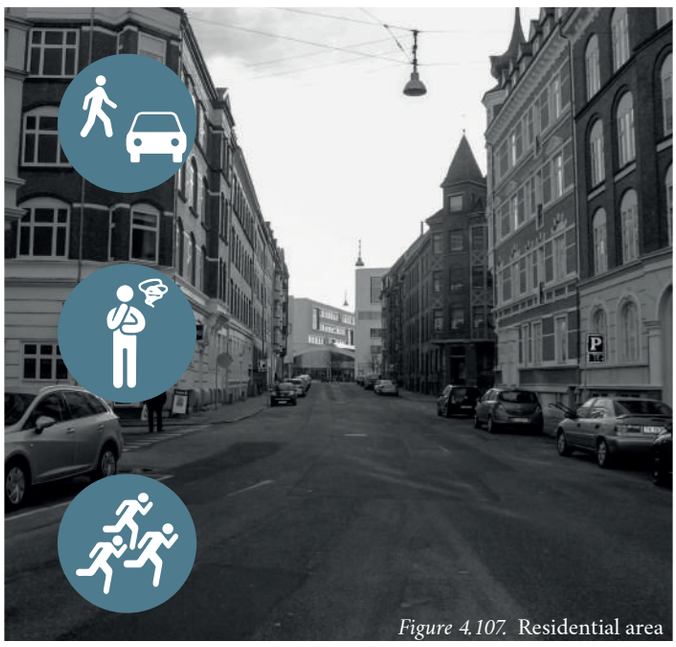


Figure 4.107. Residential area

Figure 4.108. Cultural-educational area

Figure 4.109. Shopping area

Being a multi-purpose zone, citizens' daily walks and activities are concentrated here, as the survey has also shown. When being asked where they mostly walk in Aalborg centre, the respondents chose Zone 4, with 45% and Zone 1 and 3, with 15%, respectively 15% **(See Figure 4.110)**.

It can be noticed that the respondents walk the most in the shopping area (Zone 4) and the mixed area (Zone 3 and 1), while the other zones are more passive, according to the survey **(Appendix F)**.

Another explanation for the preference of Zones 4, 3, and 1 can be given by the presence of bus stops in Aalborg centre. As seen in **Figure 4.111**, it can be noticed that in the frequent zones of walking, the bus stops are more concentrated, delivering students and employees from all the surrounding areas of Aalborg. The bus stop works as a "mobile sociofugal" space for pedestrians which, as opposed to the sociopetal spaces, "<<pushes>> people away or distributes them from its centre of gravity" (Jensen, 2013:196).

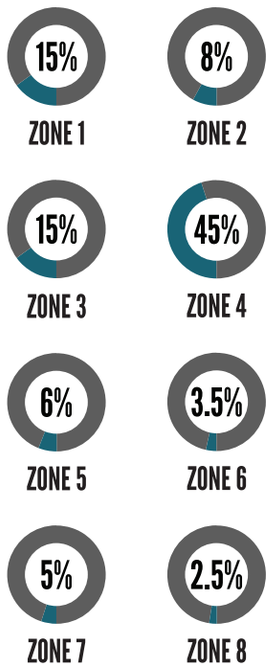


Figure 4.110. Zone frequency

Figure 4.111. Bus stops in Aalborg centre

Paths with character

Areas with different characteristics also give birth to paths with different qualities and specific atmospheres. The diversity of the paths, as seen in Section 3.2, is given by their purpose and physical properties like scale, proportion, rhythm, scale, complexity, order, illumination and so on. For the purpose of the current paper, ten types of pedestrian paths have been identified: distribution roads, local streets, courtyard paths, shopping streets, urban square paths, waterfront paths, green paths, alleys, parking lot paths and arcades (**See Figure 4.112**).

Figure 4.112. Paths with character

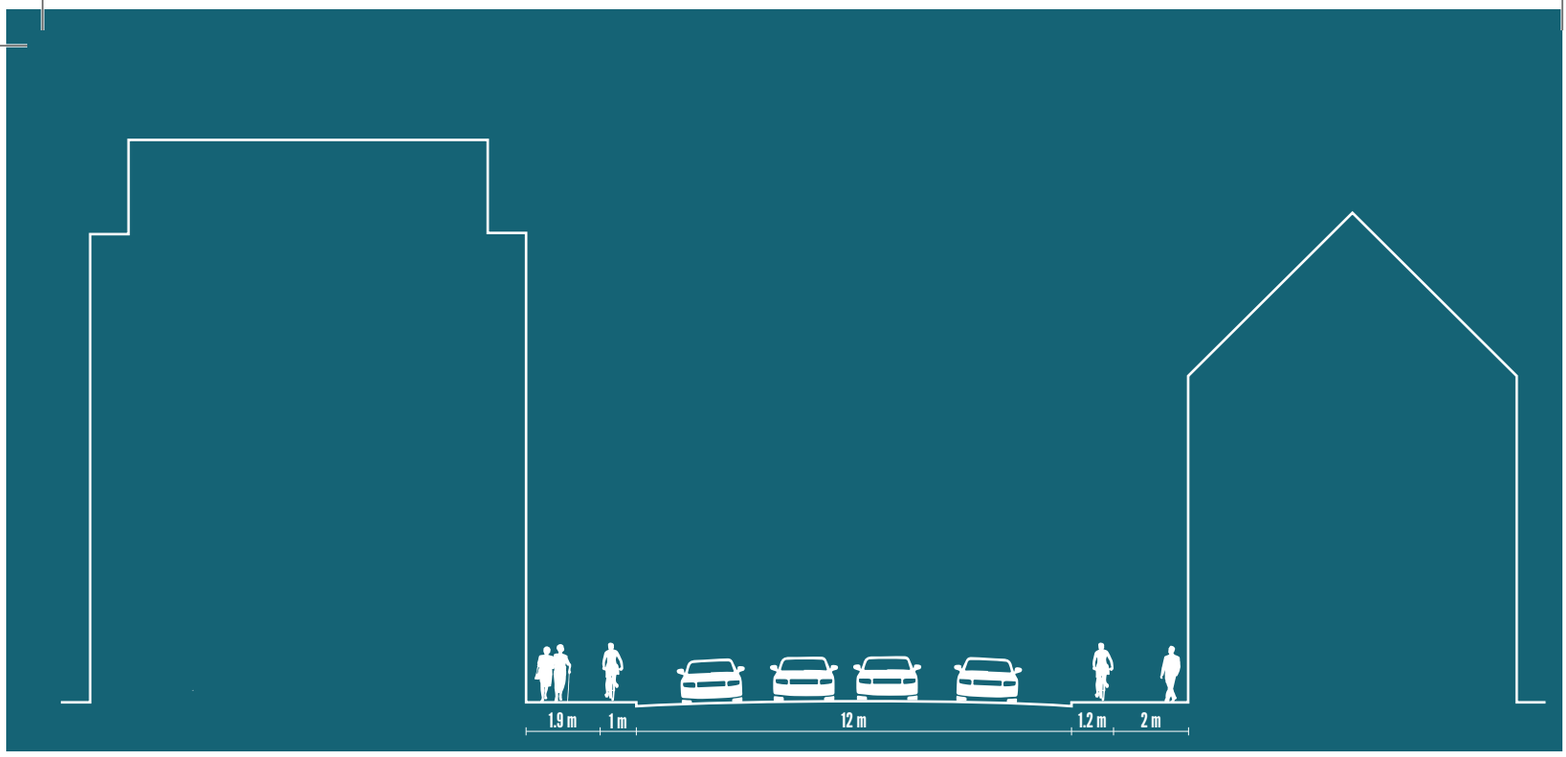


Figure 4.113. Distribution streets (I category) 1:200

There are two types of distribution streets, according to their total width and scale: one that is around 24-26 meters wide (Vesterbro, Jyllandsgade, Karolinelundsvej) and one whose width varies between 12-18 meters (Borgergade, Ved Stranden, Boulevarden etc.).

Despite their wide character, the first category of distribution streets has narrow sidewalks (1.2 – 1.9 m), that generate a lot of pedestrian friction, increase walking discomfort and decrease the security feeling, by forcing pedestrians to step on the bike lanes **(See Figure 4.113)**. Jyllandsgade is an exception as the sidewalks are around 3 meters wide, and a line of trees is separating the car and bike traffic from the pedestrian one.
These qualities increase the pleasantness and the safety of the pedestrian path. In terms of building scale, while in the denser built areas along the streets the buildings are 5-6 stories high, in less dense areas buildings are 1-2 stories high. Except Vesterbro, the distribution streets are not characterized by high transparency, thus lacking experience richness in this regard.

Nonetheless, the architectural style can also make a difference, as already mentioned in Section 3.2. Vesterbro has a unitary functionalist style **(See Figure 4.114)**, whereas Jyllandsgade has a variety of architectural styles **(See Figure 4.115)**. Even though the streets are long stretched and do not necessarily have an end in sight, they have focal points and punctuations **(See Figure 4.116)**. These streets get busy during morning and afternoon, when people are going and coming back from work.

Figure 4.114. Vesterbro - functionalist style

Figure 4.115. Jyllandsgade - architectural variety

Figure 4.116. Jyllandsgade - trees, bike parking

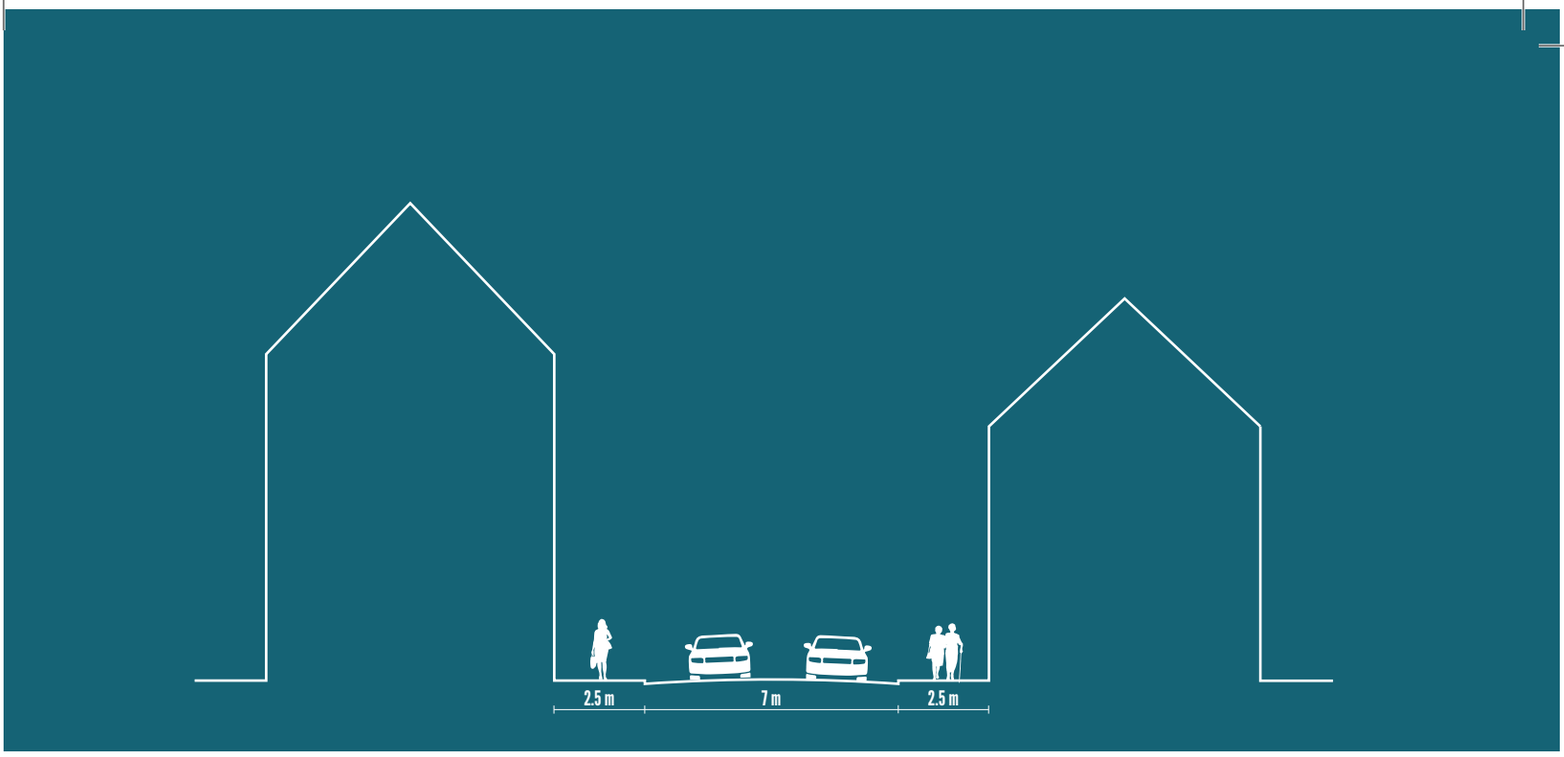


Figure 4.117. Distribution streets (II category) 1:200

The second category of distribution streets has different proportions when it comes to the pedestrian pavement, as it has an average width of 2.5-3 meters (exceptions being Borgergade and Ved Straden) in some places reaching the width of 10 meters (Nytorv) **(See Figure 4.117)**.

In this way, the pedestrian movement has less friction, but it is also implies that the paths are safer. Nevertheless, these streets are busy most of the day, as they cater numerous activities given by shops, cafes, small urban pockets, bus stops and so on **(See Figure 4.118)**.

Thus, the presence of people is higher on the second category of main streets. The higher presence of cafes and shops indicates that there is a higher level of transparency, compared to the first category of main streets. The streets are still too long to have an end inside, but, like the first category, some have punctuations and focus points **(See Figure 4.119)**. The architectural style along the streets is not uniform, except on Boulevarden.

Figure 4.118. Boulevarden - high friction

Figure 4.119. Nytorv - punctuation (Gabels Torv)

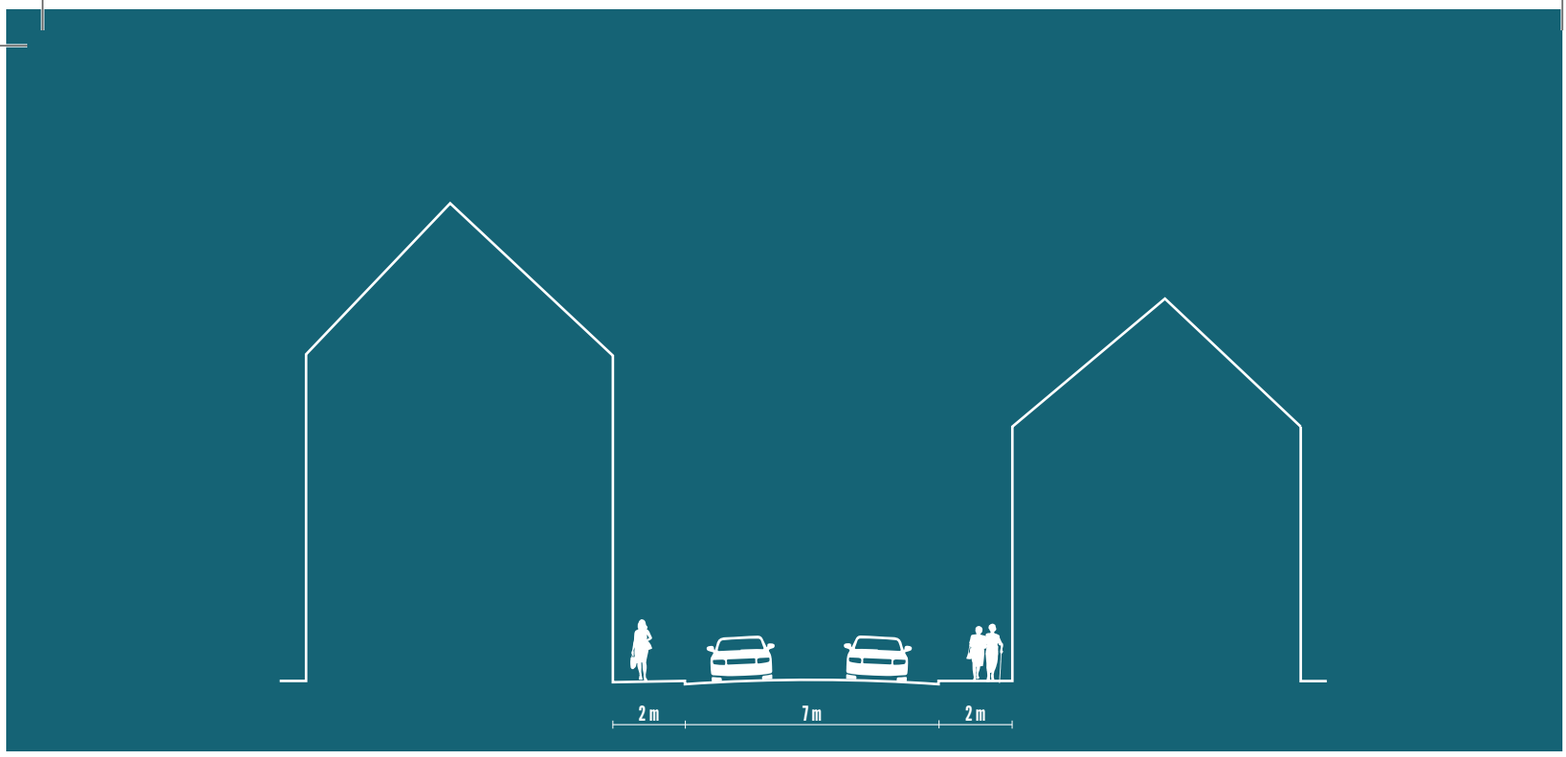


Figure 4.120. Local streets 1:200

The second category of paths is given by the local ones. These are mostly situated in the residential zone and are serving their immediate surroundings. In consequence, a lot of these streets have cars parked along the path. The pedestrian sidewalks vary between 2 - 2.5 meters **(See Figure 4.120)**, which is enough given that during the day, these streets are not so walked, as it has been noticed also in the survey.

Figure 4.121. Louisegade - end in sight

Thus, this implies that the streets have a level of security. In terms of scale, the buildings along the streets are generally 3-4 stories high. Being shorter, the local streets have an end in sight most of the times **(See Figure 4.121)**, but do not have as many punctuations as the main streets. Transparency is also lacking as the buildings are mostly residential and shops are not very present along the ground floors. Exceptions in the local streets typology are the streets in-between Bredegade and Danmarksgade, which are around 6 meters wide and have along them houses that are 1-2 stories high **(See Figure 4.122)**. Their narrowness, human scale factor and colourful facades contribute to a feeling of pleasantness and coziness.

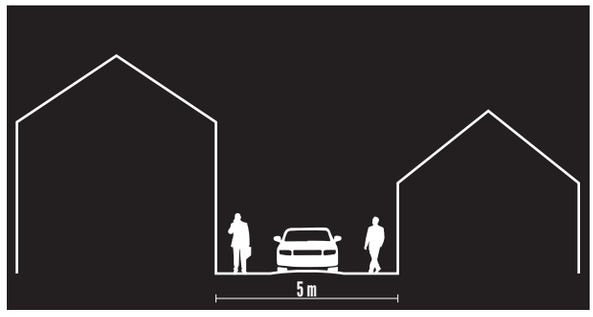
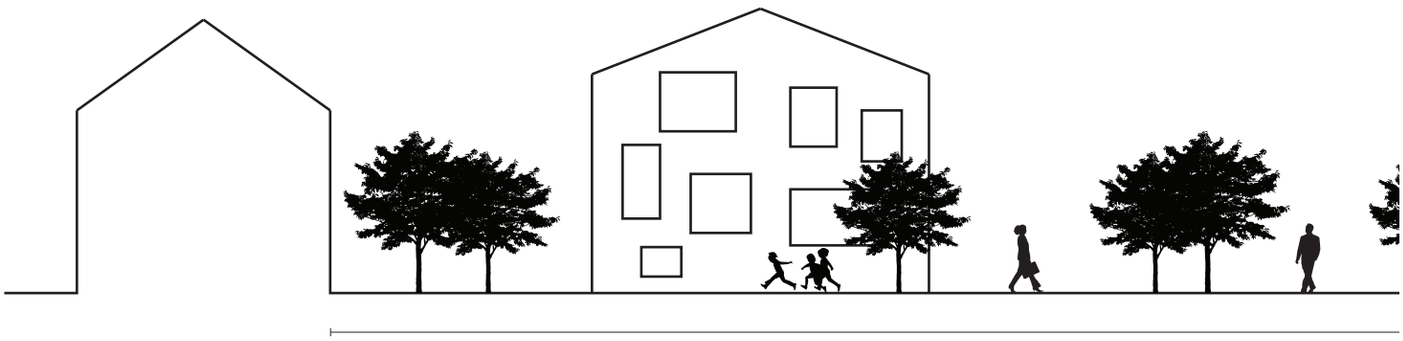


Figure 4.122. Local streets - exception 1:200



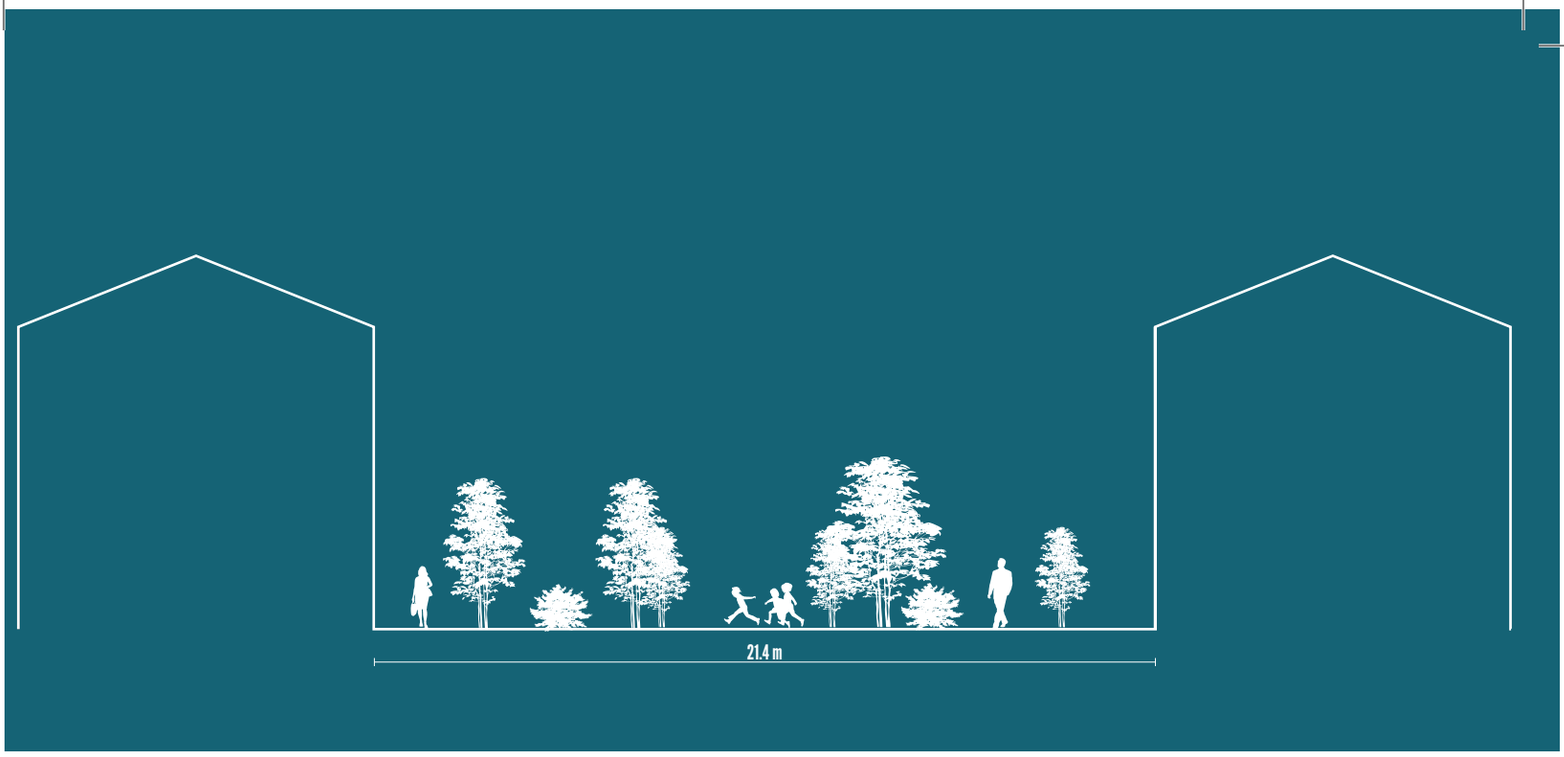


Figure 4.123. Courtyard paths 1:200

The courtyard paths are also mostly present in the housing areas and are part of the residential blocks. Within the block walls, most of the paths are narrow (under 2 m), sinuous and surrounded by greenery.

There are 2 types of courtyard paths: one that goes through small, intimate courtyards and the other that passes bigger and more diverse courtyards **(See Figure 4.123 and 4.124)**.
The shortness of these paths makes the discussion about end and focus points futile. Nevertheless, the courtyard paths have small punctuations along them like sculptures, small ponds and outdoor arcades **(See Figure 4.125)**.

These paths are characterized by a community feeling, where you only meet the locals that are using their backyards in various ways (taking care of flowers, walking the dog). Even though the courtyards have a private character, anyone can walk here during the day.
The pleasantness and the contrast with the exterior of such spaces make the courtyards an alternative of walking in the city.

Figure 4.125. Courtyard paths - pond

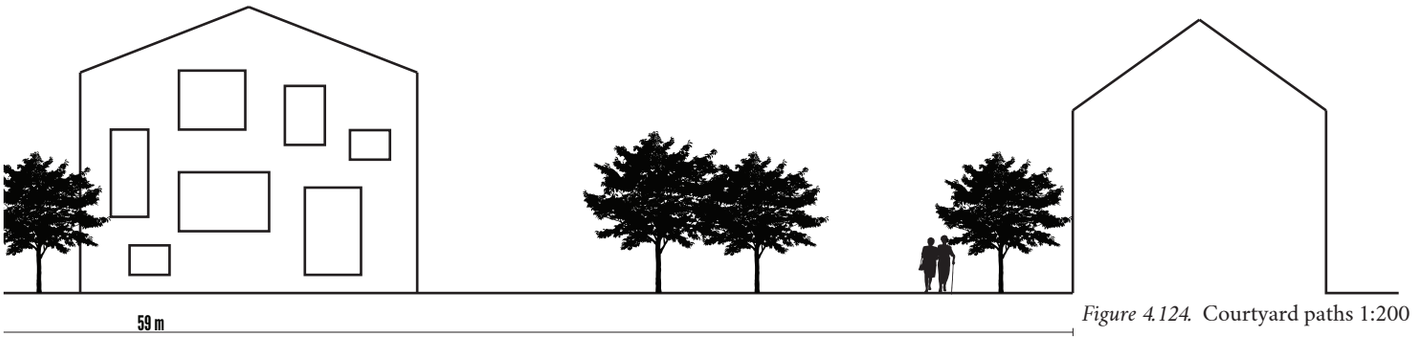


Figure 4.124. Courtyard paths 1:200

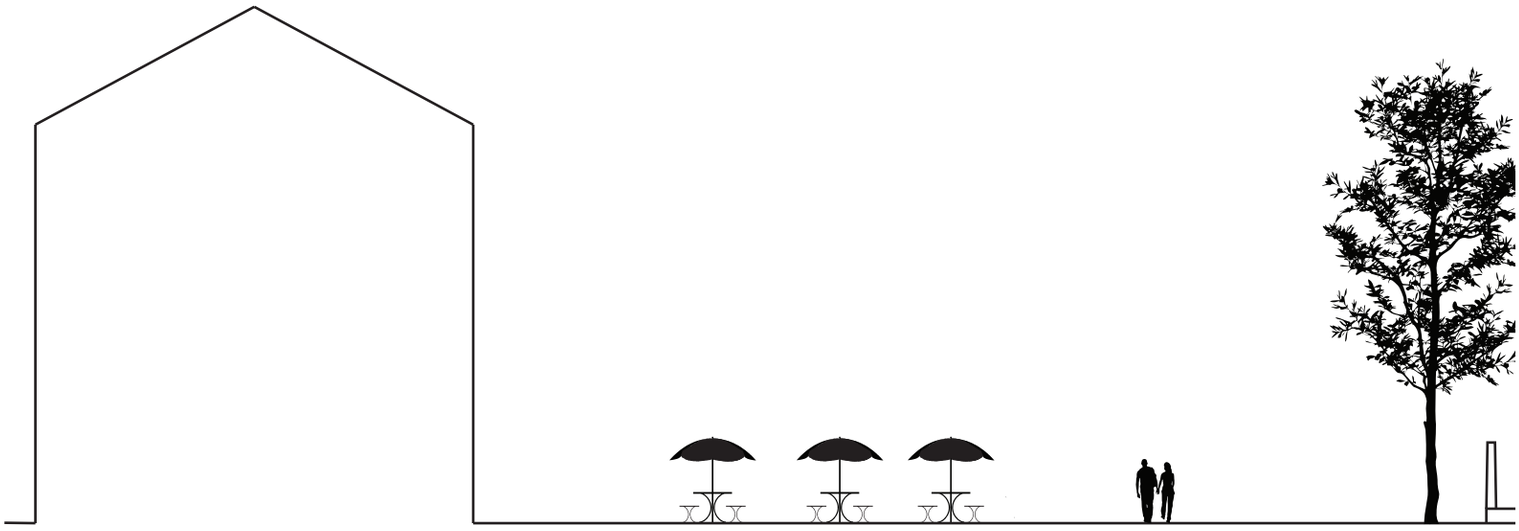
Figure 4.126. Shopping streets 1:200

The shopping streets are the busiest of them all. From the moment the shops and cafes open until they close, the streets are having a constant presence of people. As it has been mentioned before, crowdedness is both bliss and burden for pedestrians as it is a pleasure to walk in a very active area, but at the same time the pace is slow and there is a lot of friction between the flows of people.

Figure 4.127. Shopping streets - display windows

The shopping streets have an average width of 8-10 meters **(See Figure 4.126)** and are bordered by buildings that are 2-3 stories high. Aside being busy, these paths also have the highest level of transparency as 90% of the facades are open, which cancels any possible dullness of the long stretches of street. The window shops can be quite attracting as punctuations along the street **(See Figure 4.127)**, as it has been noticed in the focus group interview:

Interviewee E: "I always take the shopping streets, because then I can look at the windows and dream about beautiful dresses."



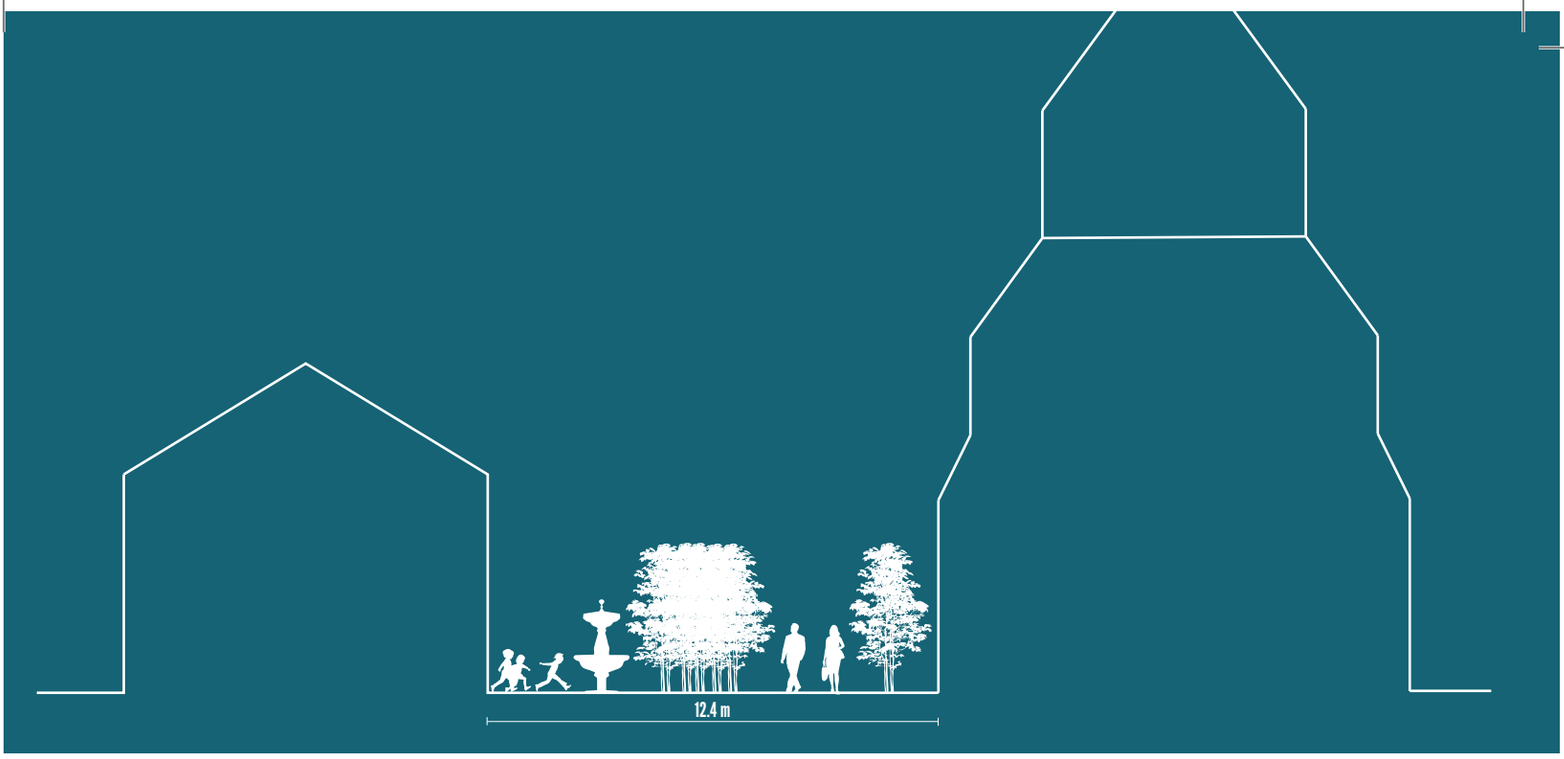


Figure 4.127. Urban square paths - Vor Frue Plads 1:200

The urban squares paths are not paths per se, as they are not defined physically and pedestrians can have various trajectories across such spaces that are open and destined for pedestrians.

The paths, like in the case of the courtyard ones, can either go through small, intimate spaces or large scale squares, designed for public events **(See Figure 4.127 and 4.128)**. Depending on the area which they belong to, the squares are either populated (J.F.K Square, Gammeltorv) or not (Louiseplads). One of the reasons for the variation in crowdedness is given by the level of openness and transparency of the facades. Focal points and punctuations are also present in the urban squares **(See Figure 4.129)**. Each square has its own character and style, due to the different periods of time they were designed in.

Figure 4.129. Vor Frue Plads - trees, fountain

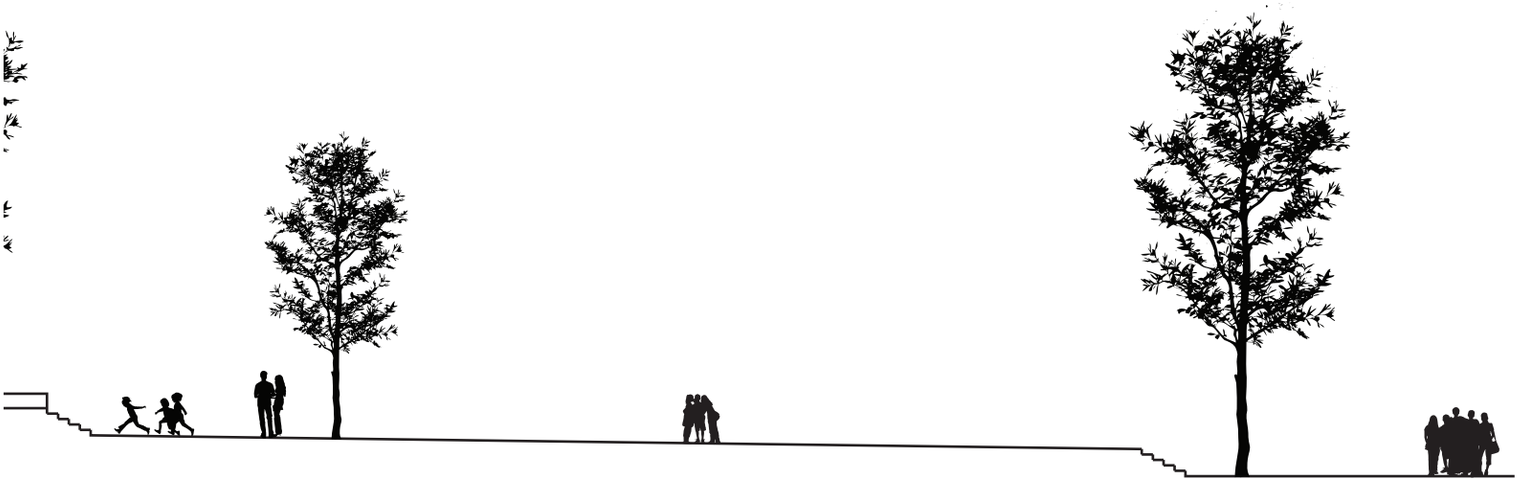


Figure 4.128. Urban square paths - Gammeltorv 1:200

Figure 4.130. Harbour paths 1:200

The waterfront paths are to be found along the fjord. These are recently built spaces, part of the new development of the harbour area, already described above. The paths are part of an active area, meaning that activities are unfolding most of the time, in particular during the weekends, were the path are even more populated.

The paths are wide, having 8-10 meters **(See See Figure 4.130)**. Thinking of the long stretch along the fjord, there is no end in sight, but there are numerous punctuations and focus points **(See Figure 4.131)**. The spaces are characterized by openness and lower density.
The water and green elements that are along these paths intensify the pleasantness and calmness of the space.

Figure 4.131. Harbour paths - punctuations

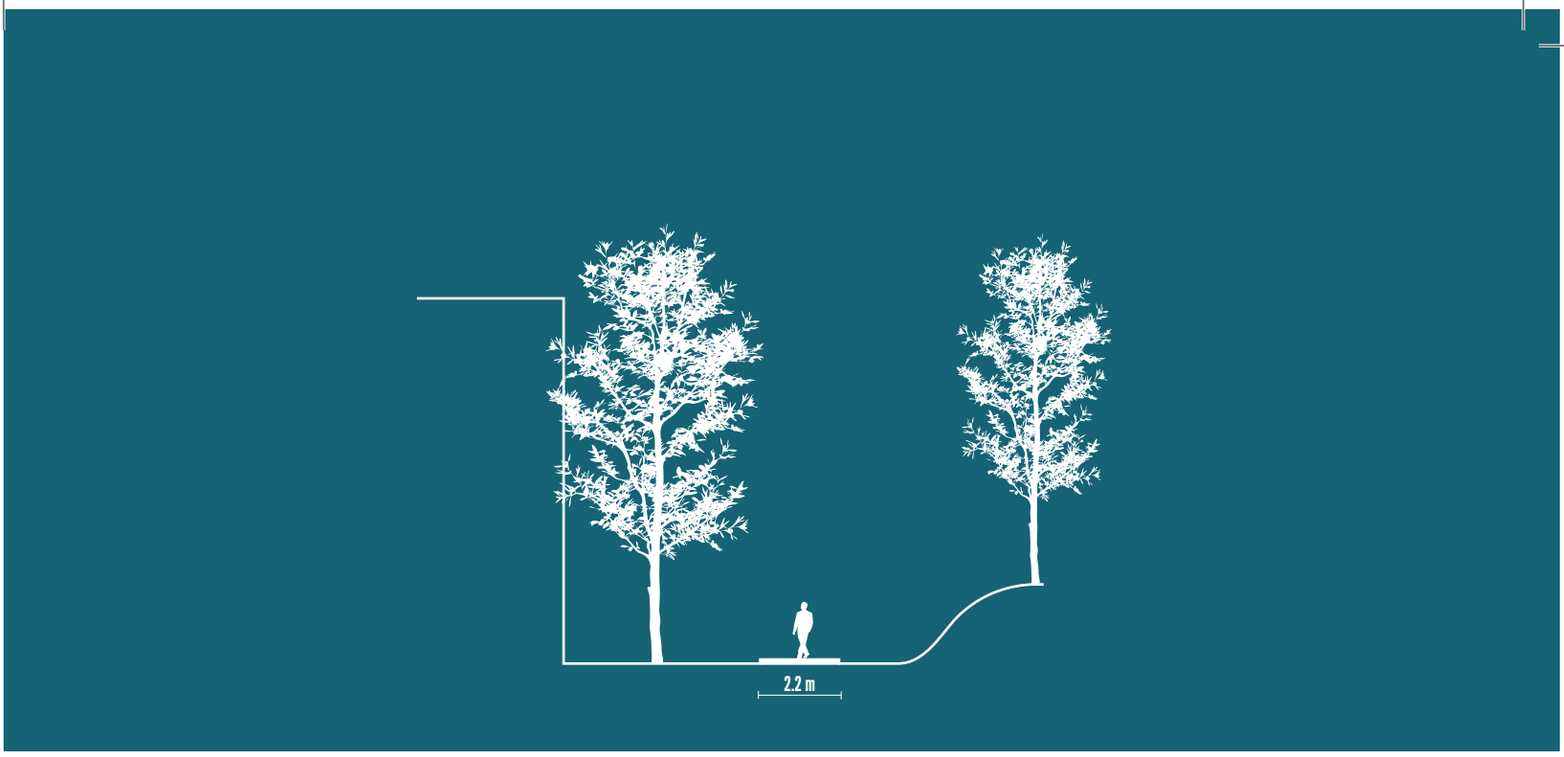


Figure 4.132. Green paths 1:200

The green paths are the ones that are found in the green areas (parks). As it has been presented above, the parks are either passive or active recreational areas which means that they either induce pleasantness and calmness or excitement, quality inhereted by the paths as well.

The width of the paths varies between 2 or 4 meters **(See Figure 4.132)**. Again, like in the case of waterfront paths, the green paths are more populated in the weekends.
Either short or long, the green paths are having punctuations like as sculptures, small activity pockets, small hills and so on **(See Figure 4.133)**.

Figure 4.133. Karolinelund - punctuations

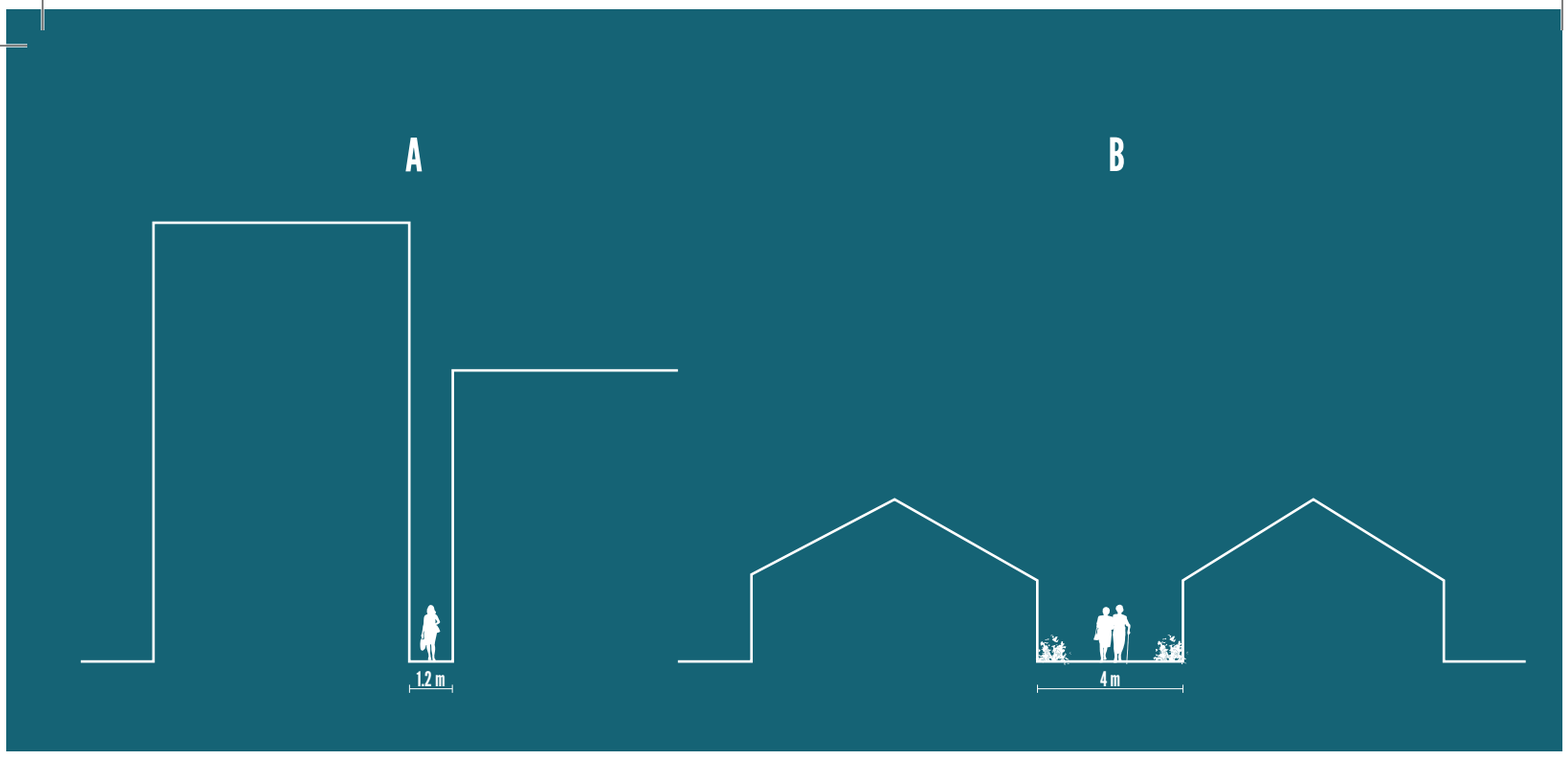


Figure 4.134. Alleys 1:200

The alleys are a category of narrow paths, under 4 meters, dedicated to pedestrians and which run between or behind buildings.
There are 2 types of alleys, depending on the proportions of the space. There are either very narrow paths, under 1.5 meters, surrounded by buildings that are 3 stories high (A), or less narrow ones that are bordered by one-story buildings (B) **(See Figure 4.134)**.

Figure 4.135. Alleys - disrepair

Nevertheless, in both cases, the alleys have their unique character and pleasantness, despite occasional signs of transgression (graffiti) and disrepair **(See Figure 4.135)**. The alleys are mostly found in the old parts of the city centre, with buildings dating even from the 16-17th century. A glimpse of the end in sight makes these alleys attractive and exciting, but they are not crossed too often and people tend to forget about them, as it has been noticed in the focus group interviews:

Interviewee D: "For me it came clear that I know all the streets and the alleys you have shown, but it was nice to be remembered about, because I have forgotten about some of them."

Figure 4.137. Parking lot paths 1:200

Parking lot paths are considered the grey areas and non-places of the city **(See Figure 4.136)**. Yet, people end up using them as shortcuts through the urban environment. Depending on the person, cars can either be a negative or positive image in the city. The focus group interview has revealed both aspects, as one likes the presence of the cars in the city and the other doesn't, as it can be noticed in the following quotes:

Figure 4.136. Municipality parking lot

Interviewee E: "I don't like the discussion about not having cars in the city. I'm a really big fan of cars. It's a dynamic component and it tells you something about the time of the day."

Interviewee F: "[…]there's a lot of cars running there and it's annoying when you have to cross and you can't."

The parking lot paths, as in the case of urban square paths, are not physical paths, pedestrians having numerous possibilities to walk. The spaces to walk are fairly wide, around 7-8 meters, and characterized by openness **(See Figure 4.137)**. In terms of safety, the level is not that high, as cars go in and out.

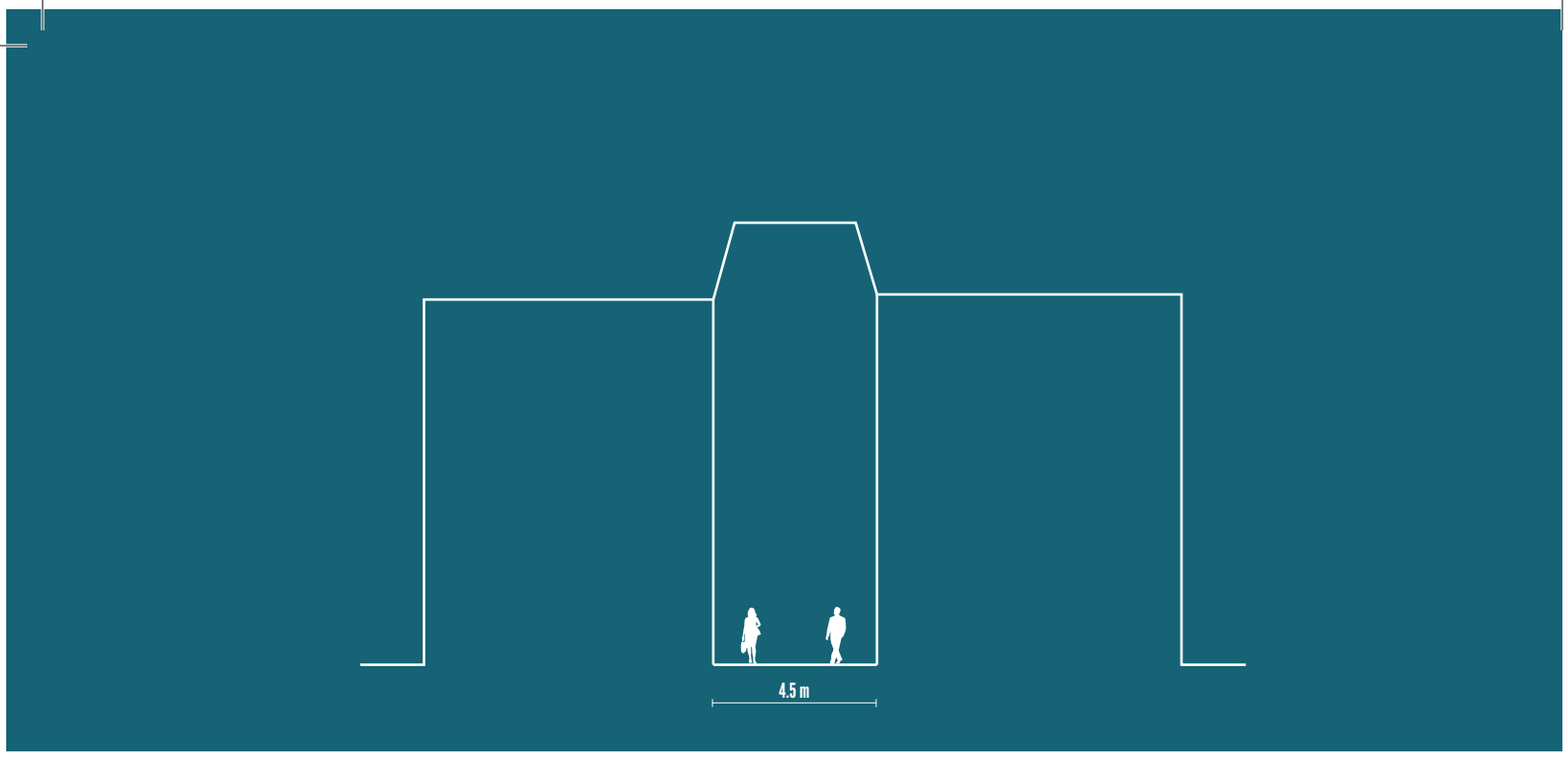


Figure 4.138. Arcades

The last category of paths is given by arcades, which are covered paths within buildings. There are two arcades in Aalborg: Møllea Arkaden and Bibliotek Arkaden. They are both 4.5-5 meters wide and around 12 meters high **(See Figure 4.138)**.

What differentiates them is their architectural style and function, but they are both contributing to the pleasantness of the path. Møllea Arkaden has higher transparency, as it shelters shops and restaurants, while Bibliotek Arcade covers the library and the city council. Both arcades are occasionally used during the day. While in Møllea Arkaden the end is in sight, in Bibliotek Arkaden it is not, but there are punctuations along the way **(See Figure 4.139)**.

Figure 4.139. Arcades - punctuations

	Average width	Average width of pedestrian paths	Average height of buildings	Transparency	Punctuations	Style	Safety	Presence of people	Atmosphere	End in sight
Distribution streets	24 - 26 m / 12 -18 m	1.2 -1.9 m / 2.5 - 3 m	5 - 6 stories / 1 - 2 stories	low / medium	yes / yes	diverse	no / yes	in the morning and afternoon/ most of the day	hectic, traffic	no / no
Local streets	5 - 12 m	2 - 2.5 m	3 - 4 stories	low	no	uniform	yes	low	quiet, parked cars	yes
Courtyard paths	-	< 2 m	varies	none	yes	varies	yes	low	green, private, community feeling	yes
Shopping streets	-	8 - 10 m	2 - 3 stories	highest	yes	diverse	yes	most of the day	crowded	varies
Urba square paths	-	-	varies	varies	yes	diverse	yes	varies	from quiet to eventful, from cozy to lively	yes
Waterfront paths	-	9 - 15 m	-	-	yes	-	yes	most of the day	active, green, water	no
Green paths	-	2 - 4 m	-	-	yes	-	yes	varies	green, calmness or excitment	no
Alleys	-	< 4 m	1 - 3 stories	none	no	diverse (old)	yes	low	cozy	yes
Parking lot paths	-	7 - 8 m	varies	low	no	diverse	no	low	open	yes
Arcades	4,5-5 m	-	12 m	medium / high	yes	uniform	yes	low	cozy, quiet	yes and no

Figure 4.140. Path characteristics - overview

To get an overview of the various paths' qualities, a table with key characteristics has been made (**See Figure 4.140**). Each path has qualities that either repeal or attract pedestrians and while some of them can offer interesting sensorial experiences, others cannot.

In this section, the centre of Aalborg and its paths have been examined at a more general level. The type of zone also gives the character of the path, but it does not define it entirely, as there are details that make each path more attractive and more beautiful or duller and unattractive. It is not only the physicality of the space that speaks to the people, the history and the memory of the space intervenes too. Before addressing these details in the third section, it is also important to see how the citizens of Aalborg move around the centre and what influences them in their daily routes, issue that follows.

SECTION 4.2

HOMO MOVENS in AALBORG

Section 4.2 presents the factors that influence people in their daily route choice in Aalborg centre. While these factors are described, other issues concerning route choosing are emerging like as the discordance between the practice and the preference of the pedestrians in the city, the overvaluing of time, the contrast between knowing a city and forgetting about it and so on.

Figure 4.201. Girls on bycicles in Copenhagen (1950s)

The Danish cities have embraced the cycling and walking culture a long time ago **(See Figure 4.201)** and since then the Danish municipalities have focused on developing an infrastructure that is pedestrian and cyclist friendly. Aalborg is no exception, thus people have been more and more encouraged to walk and bike, as the survey also showed. When being asked " What is your main mode of transport within Aalborg centre?", 50% of the respondents claimed that they bike, while 32% chose walking. Only 17% of the respondents use public transport and the personal car within the city centre **(See Figure 4.202 on next page)**.

For the scope of this thesis respondents that bike and walk are equally relevant. As seen in Section 3.1, the route choice factors that influence cyclists and pedestrians, along with their sensorial experiences, are similar, the only notable difference being speed. The route choice factors are given by time efficiency, length of the route, habits, aesthetics, weather conditions, number of crossing, safety, complexity of the route and noise and pollution level.

The survey has shown that time efficiency and the route's length are the factors that influence respondents the most in their daily trips **(See Figure 4.203)**, with a percentage of 65% and 64% (multiple choice question). The urbanite's habits also matter in the daily route choice, as 39% of the respondents chose the option. Aesthetics and weather conditions play a role in the choice of routes as well, being voted by 31%, respectively 23% of the responding persons. The other factors follow as seen in **Figure 4.203.**

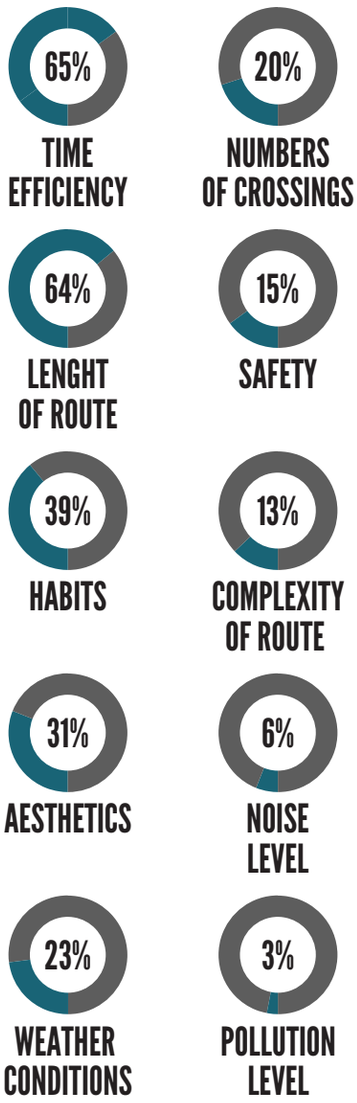


Figure 4.203. Route choice factors

Figure 4.202. Main mode of transport

As already predicted in the theoretical chapter, time efficiency and the length of the route are the main factors impacting the daily route choices of pedestrians, while a habitual behaviour is also influential. Pleasantness and aesthetics come into play as well, while the other factors gain less importance, but must not be ignored, as they can impact the main factors' ranking.

In regards to time efficiency and distance, when asked to what extent they agree with the statement 'I usually take the shortest route towards my destination (regardless any of the factors that influence your route choice)', 67% percent of the respondents agree to this statement, while only 6% disagree **(See Figure 4.204)**. These results depict the presence of the determined user in the city that is driven by distance and destination. It depicts a pedestrian reality in Aalborg, where the urbanite is precisely scheduling his every movement, under the pressure of time and directness.

Habits that were ranked third in the route choice factors' scale are influenced by the time period of living in the city, the level of acquaintance with it and daily rituals. The years of living in Aalborg become relevant for the level of acquaintance with the city and the level of curiosity in terms of exploring. On one hand, it can be noticed in **Figure 4.205**, that most of the respondents have been living in Aalborg for 1 to 5 years, with a percentage of 65%. On the other hand, 19% of them have been living in Aalborg under a year. As it has been mentioned in the methodology chapter, most of the respondents are students, so the results are mirroring that, as university studies last between 2 and 5 years. An aspect to be taken in consideration here is that people that are new in town feel more encouraged to explore, while the "veterans" in the city enter a habitual mobility.

Nevertheless, it is easy to fall in a routine as you become acquainted with the city, fact that has also been pointed out in the focus group interview:

Interviewee G: "I think after you get to know the city you get in a routine as well, having a lot more activities and your life really moving at a faster pace. You don't really have the time to take very long detours, but given a sunny day and a destination farther away, I think I would explore more."

New comers might also feel safer in walking along simpler routes, without a high level of complexity, and along main streets so there is no risk in getting lost in the city. In the focus group interview, when discussing alternative routes in the city, the number of turns and the complexity of a route got criticized a couple of times in this regard:

Interviewee H: "Maybe it's too complex. If you don't know the city, you might get lost."
Interviewee G: "There's a lot of back and forth."

In terms of acquaintance with the Aalborg centre, out of 96 respondents, 80 of them claim that they know it well, while only 5 deny it **(See Figure 4.206)**, which means that there is a predisposition for laid out patterns of movement, preferred routes and habitual movement, as it can be noticed also in the focus group interview quote:

Interviewee A: "For me, getting from A to B is mostly just about getting there, but there's definitely some paths in the city that I prefer to walk, because I have some kind of relationship to them and I think they're beautiful."

This interviewee's answer brings us to the aesthetics as a route choice factor. As in has been seen in the ranking of the route choice factors, aesthetics came in forth. But the realm of aesthetics is so wide and there are so many possible definitions for this term, that the question "What is aesthetics in the city?" needed to be answered. According to the interviewees aesthetics in the city is equal with:

To what extent do you agree to the following statement: I usually take the shortest route towards my destination.

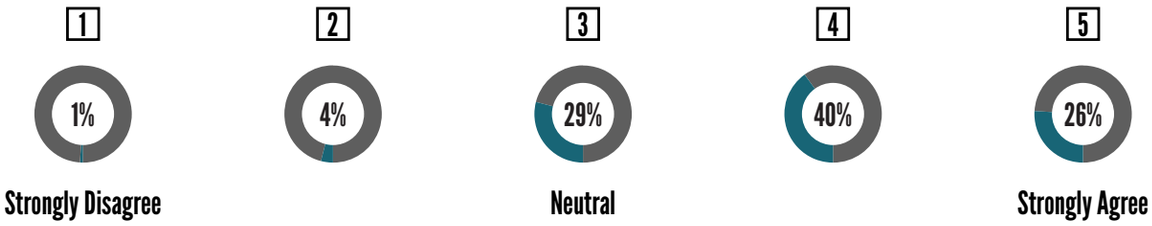


Figure 4.204. Shortest route

How many years have you been living in Aalborg?

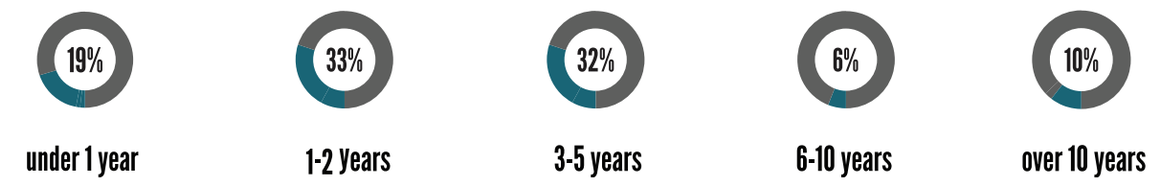


Figure 4.205. Years of living in Aalborg

To what extent do you agree to the following statement: I know the city centre of Aalborg well.

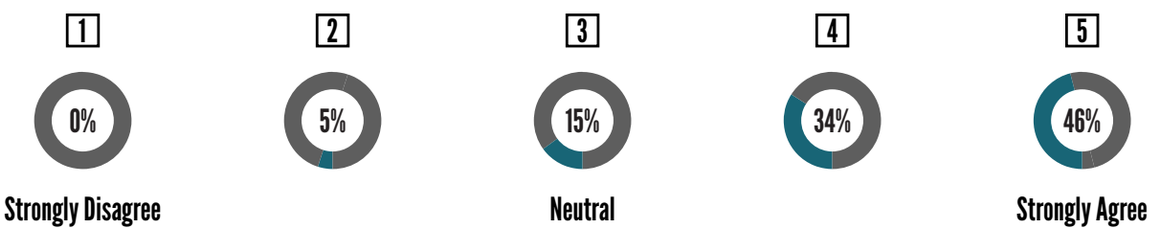


Figure 4.206. Level of aquaintance

The greenery and landscaping

"I would choose a place where I am in touch with nature, green spaces."

The architectural aesthetics

That is concerned with is pleasing to the eye in terms of architecture

The holistic character of a space

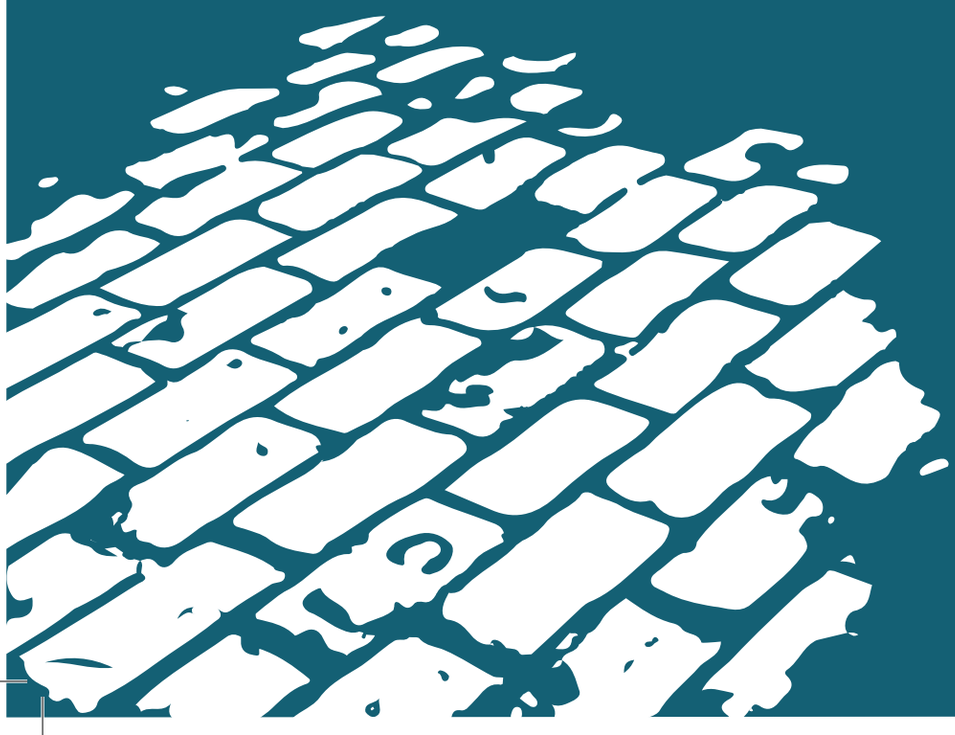
"I think for me it's also about how well planned a street or a square is, if it's well done, I enjoy that."

The form and functionality

"I would also say the form of the city space and its relation to the function."

The details (pavement)

"The differences in pavement are always interesting in relation to the environment in Aalborg."



The experience

“The experience, what are you are being exposed to, with all your senses. It’s not only visual, but it’s the atmosphere of a space: the people there, the smells, the warmth of the sun.”

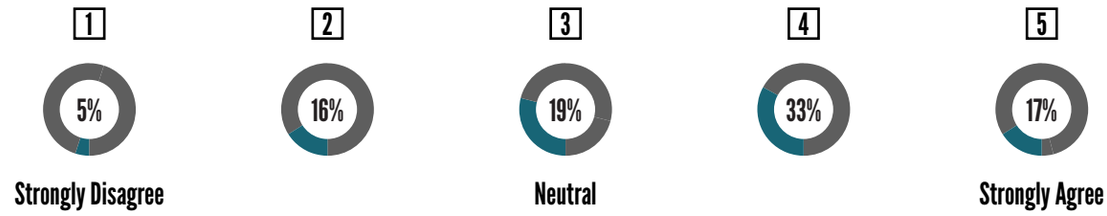


Figure 4.207 Beautiful vs short route

Such diverse definitions and visions upon aesthetics suggest that people are aware of what attracts them in the city. But aesthetics is still a more preferred factor in the daily route choices, rather than one that is applied, as it has been underlined in the survey.

If looking at **Figure 4.207**, it can be noticed that compared to the previous statements evaluated in the survey, this one ('I prefer a beautiful path rather than a short one') is referring to a possible preference of movement in the city.
The overlapping between our practice and preference is rarely happening in the city, as there are numerous factors impacting our behaviour, idea that has also been underlined in the focus group interview:

Interviewee B: "When I choose aesthetics for my routes, it's really something that I wish, not something that I have the time for or being capable of."

Nevertheless, as some of the studies presented in Section 3.2 already show, pleasantness and aesthetics can play off distance in some scenarios. So, in terms of preference, 60 % of the respondents would choose beauty over shortness, while 21% would not.
As it has been mentioned before, it is possible that aesthetics can play off distance under certain conditions, but the pattern noticed with the help of survey responses is not so strong, given that only a bit over half of the respondents see that as a possibility.

Here, the other factors influencing route choice come into stage: weather conditions, safety and noise and pollution level. As mentioned above, weather conditions were chosen as the fifth most important route choice factor, with 23%. Weather conditions, as seen in the focus group interview, can lower the chances of time efficiency being the main route choice factor:

Interviewee G: "I wouldn't mind 5 minutes longer, just to walk in the sun."

Thus, pleasantness can overcome time efficiency and distance if the weather conditions are good and a route or a street can become nice "because the sun is always shinning on it" (Interviewee G).

Another factor that influences in the battle between time efficiency and pleasantness is safety. As seen in the theory chapter, safety makes a route more attractive. It has been noticed in the focus group interview that safety issues in the city are discussed with displeasingness:

Interviewee F: "It is so narrow and full of buses and there's these roads coming out from the car parks so you don't know when you can get hit down by I car because it's also really hard to see. It's so heavy traffic […] It shouldn't be unsafe."(description of Borgergade Street)

Despite of that, safety was only voted by 15 people out of 96, which means either that there are not so many safety issues in the city, or that as soon as you get acquitted to a certain city and its gears, the basic feeling of unsafety disappears:

Interviewee E: "I come from Aalborg and I lived in the city as a kid, so my parents were telling me, <<You go here, because this is the safe street!>>. So for me in some ways the city is like home, I never feel unsafe. I just walk around these streets because I have known them all my life."

The noise and pollution level can determine where the urbanite walks daily also. These levels become essential to certain types of walks, and are less important in a hurried move, as they were only voted by 9% of the respondents. If you walk and talk with someone, a quieter and less polluted route is preferred. When you are in a hurry, moving from A

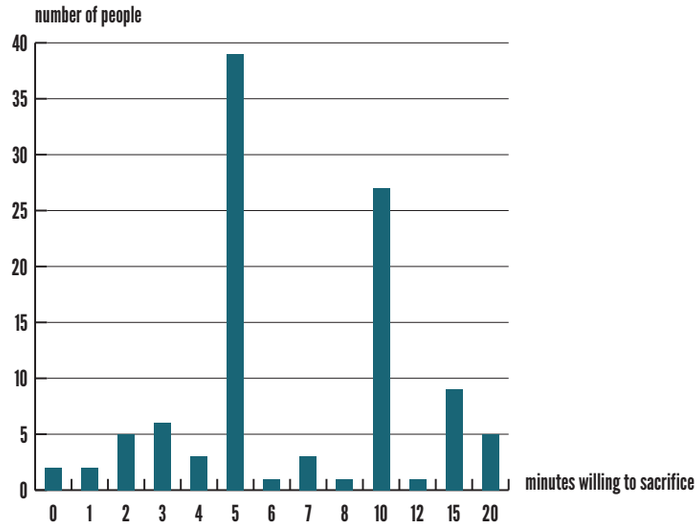


Figure 4.208. Time willing to sacrifice

to B, noise and pollution matter less. Nevertheless, noise can also turn places into soundscapes, spaces worth remembering in the city and that can play an impact on the daily route choices:

Interviewee F: "The thing is that you can almost hear Budolfi ringing, the car noise and they are all melting together. It's a soundscape. It's vibrant."

All these factors in various combinations with pleasantness can enable the presence of the drifter in Aalborg, the possibility of walking with a sense of not being familiar with the city, the walk as an experiment to discover the individualities of a route.

Ultimately, pleasantness, in a relation with time efficiency, revolves around the question "How much time are you willing to sacrifice?". The survey has shown that the average time that people are willing to sacrifice for a more beautiful and longer route is 8 minutes **(See Figure 4.208)**. Nevertheless, when the interviewees were confronted with this information, the reactions were either for or against it, depicting the antithesis between the drifter and the determined:

"Do you think 8 minutes it's too much in your daily routine?"
Interviewee E: "No, not for me."
Interviewee D: "But 5 minutes in difference is big, if I am in Aalborg, I think 5 minutes is the maximum I would sacrifice to reach my goal. If I was in a bigger city, more than 5 minutes is also ok."

Another idea that emerged in the focus group interview when discussing about time was the fact that time tends to be over or underappreciated, as most of the interviewees were surprised to see that a detour that has more aesthetical qualities and seems longer on the map takes only a couple of minutes more:

Interviewee D: "What I normally do when I navigate in the city, I constantly think of the shortest route. So it really triggers me to think, ok, a new experience is only 3 minutes longer. That is kind of interesting."

Interviewee E: "And I actually like to see it's only 3 minutes because maybe I will do it more now. It seems longer when you think of it."

In fact, looking at **Figure 4.209 (on next page)** it can be noticed that 16 minutes are enough to go across the city centre, which means that 3 or 5 minutes of detour sometimes can be insignificant in relation to what the urbanite can receive back from it: an experience, a possibility to explore the city.

This kind of information and observations triggered the interviewees not only during the interview, but also after. Meeting some of them after the focus group interview, they have declared that they have tried exiting the "sleepwalking" mode and started trying different routes at least once, sacrificing a bit more time. A conclusion here would be that there is a lack of awareness, both in the case of time evaluation and in the case of the existence of beautiful alternatives of walking in the city that can contribute to the urban experiences and a decay of the daily routine. A routine is not something that can be broken easily, but awareness in the city can contribute to that.

Figure 4.207. Radius of walking

In this section, the various route choice factors and their interdependency were discussed. Pleasantness and aesthetics are playing an important role in choosing daily routes and can outrank directness under the right conditions. The biggest challenge in making that happen is the contradiction between practice and preference. The city dwellers, as far as it has been noticed, are aware that, while they would prefer to explore more the city, it is not something that they practice out of various reasons. Nevertheless, old or new in the city, tourist or local, expert or non-expert, the need of exploring should exist in the city because a new experience on a route can connect the urbanite with the city, a memory along the route can reconnect him with it, feedback regarding routes can enable others' wish to discover and planners' awareness in case of improvement.

But what are the urban atmospheres, formal qualities, memories that enable a pleasant walk for the citizen of Aalborg and what would influence him is switching his mind set from the determined to the drifter? These are some of the points that will be further explored in the next section.

SECTION 4.3

HOMO MOVENS et AALBORG

Aalborg centre is a site of contrasts, in terms of physical and symbolic qualities, going from large streets to very narrow paths, from dark alleys to sunny waterfront ways, from beautiful street art to transgressive graffiti, from calm, green courtyards to hectic, vibrant shopping streets.

Out of all these urban qualities and spaces that are present in the city centre, some more than others attract the citizens with their formal and symbolic characteristics. Firstly, the symbolic features of the city will be addressed.

The memory and experience of a space

The memories and experiences linked to an urban space affect the way is perceived that space, even before we are completely aware of it. "As you move into a space, the hippocampus, the brain's memory librarian is put to work immediately. It compares what you are seeing at any moment to your earlier memories in order to create a mental map of the area, but it also sends messages to the brain's fear and reward centres." (Montgomery, 2013:162)

In **Figure 4.301 (on next page)**, a few of the interviewees' memories and experiences of various spaces in Aalborg centre have been collected. In the two focus group interviews, 7 places have emerged as places associated with memories, but with certainty, they are not the only ones. As seen on the map, the places mentioned are Bispensgade, Gabels Torv, Mølle Plads, Louisegade Plads, Sakt Hans Gade, Kanalstien and Teglegards Plads.

The memories and experiences of these places are related to the presence of other people in the space, physical objects and settings that activate different moods (shop windows, traffic), the discovery of new places and rediscovery of old ones, the coziness and assurance of usual places. The memories of a space determine a connection between the urbanite and that space. Here, it depends if the memories are pleasant or not, because in this way, the places either attract people, making them walk there, or repeal them, determining the citizens to avoid those spaces. An example here can be Jomfru Anne Gade, which is a beautiful path, but the memories of it (crowded and dirty), determine the people to avoid it:

Interviewee C: "I think it is also a question of how clean a route is. There might be a lot of architectural aesthetics in Jomfru Anne Gade, but most of the day you don't really want to go in that street."

The atmosphere of a place

As it has been mentioned before, Aalborg centre varies in terms of atmospheres that are generated by the formal characteristics and their history, the presence of humans or of cars **(See Figure 4.301)**. The atmosphere of a place includes sensorial experiences such as noise. Budolfi Plads is described as a soundscape, the Gammeltorv passage is seen as a quiet space while Gabels Torv as a noisy one. Formal qualities also influence the atmosphere. Narrowness and enclosure determine a cozy atmosphere on Adelgade, the typology of the buildings on Østergravensgade make it look like a part of Santa's village, pointing out that people not only resume to the assessing the place, but also finding terms of comparison for it. This is also the case of Kanalstien that gets compared with a ghetto area. History of the space is also important as it contributes to an old and cozy atmosphere and also defines the identity of a place or a city, like in the case of Klokkestobergade.

Putting together memories, experiences and atmospheres of the city center, it begins to be obvious that Aalborg's central area image is not only built on the physicality, going beyond that and gaining meaning.

As already seen in the theoretical chapter, there are a series of formal characteristics that are appreciated in the city, making people linger and relate to a certain space. These characteristics are given either by proportion, scale, diversity, complexity, rhythm, order, illumination, hierarchy, novelty and so on. The characteristics were identified with the help of the survey, by giving the respondents image choices to make, and the focus group interviews.

Figure 4.301. Memories and atmospheres of spaces

A 86%

B 14%

Figure 4.302. Image choice illustration - narrowness

"Moving" characteristics for moving people

The formal characteristics will be presented with the help of survey materials. In the image choice method, already described in Section 2.2, each image got voted. The image that got more votes was considered more beautiful, according to the respondents, meaning that it also had more attractive urban qualities. In this section, the image that got voted the most will be marked according to the diagram **(See Figure 4.302)** and accompanied by the percentage it won with.

First of all, the theory, the survey results and the focus group interviews all support the same characteristic when it comes to scale and proportions. The spaces that are preferred are small, narrow and characterized by a human scale **(See Figure 4.302)**:

Interviewee F: "In A you don't get that much sun, but I like the narrowness of it."

As opposed to it, places that are open and empty, with a lack of vibrancy are not seen as well as the narrow paths in the city and this is the case of Mølle Plads **(See Figure 4.303)** in other seasons than summer:

Interviewee A: "It's not a square that you might cross a lot. It really depends where you're going. The space feels really empty when it is not summer."

Of course, there is a limit to how narrow a path should be. If the paths' width leads to unsafety and crowdedness, creating discomfort for pedestrians, it's not a walkable and preferred environment anymore **(See Figure 4.304 on next page)**:

Interviewee F: "The small walking path is annoying in A, it's so narrow. But you can walk on the street here, while in B there's traffic and you can't do that."
Diversity becomes a keyword in the urban land-

A 77%

B 23%

Figure 4.303. Mølle Plads characterised by openness

A 86%

B 14%

Figure 4.304. High narrowness leads to unsafety

scape as well. Either it's transparent and open facades or colourful ones, buildings with various scales, paths with various and contrasting characters; diversity is appreciated in Aalborg and considered a factor contributing to the aesthetical value and the walking experience, aspect that can be noticed in the following quotes as well:

Interviewee E: "I think there's a lot of different scales, different things to take into consideration and different kinds of beauty, from the tough to the planned park."

Interviewee B: "I like the contrast between interior and exterior, the private and public, to create this drama in a simple walk."

Interviewee G: "I could see why people voted for A, because it's more colorful, whereas the other one is a little bit more dull and only grey." **(See Figure 4.302)**

Interviewee B: "There's also no diversity. It is very monotone." **(See Figure 4.306)**

Diversity along a path that is long can cancel the monotony of a street, but this is not the only way to do that. As it has been seen in Section 3.3, the street that has an end in sight can be pleasant, creating a sense of anticipation:

Interviewee A: "I would still like to see what's on the other side (picture B) going through it."

A path that has focal points **(See Figure 4.306)** and punctuations **(See Figure 4.307)** has also proven itself pleasant to the respondents of the survey.

The presence of greenery also represents another attractor in the cities. Either we think of aligned trees on avenues, small green pockets or large parks, the green elements contribute to the pleasantness of a route and are favoured in Aalborg according to the survey **(See Figure 4.308)**, idea that has been later consolidated in the focus group interview:

A 100%

B 0%

Figure 4.305. Studenterhus passage - grey and dull

A 0%

B 100%

Figure 4.306. Budolfi Kirke as focal point

A 35%

B 65%

Figure 4.307. Trees as punctuations along Strandvej

A 40%

B 60%

Figure 4.308. Utzon Park - greenery in Aalborg centre

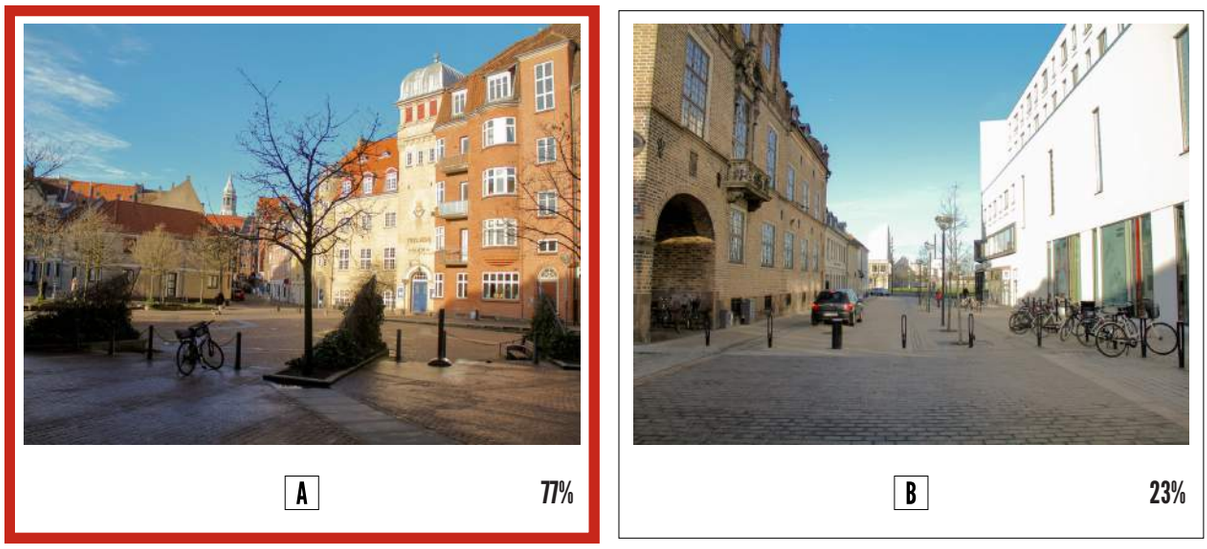


Figure 4.309. Fjordgade emphasizes the dialogue between old and new

Interviewee B: "Picture A is a square with a road passing next to it. Picture B is the same, but with a park. I think in the end, picture B won because it is greener and it relates more to nature." **(See Figure 4.309)**

As already seen in the previous section, another aspect that attracts people in Aalborg is the architectural aesthetics, for example buildings with different styles and the mix between old and new:

Interviewee D: "But looking at this stretch of road as it is now (picture B) it looks interesting to me, because it's the first time that I see the new building relates to the old" **(See Figure 4.309)**

Density has also been mentioned a few times in the focus group interviews. While some see density as a favoured characteristic in the urban environment, some find the beauty in the less dense space:

Interviewee B: "For me, it means a lot if the density is dissolved, in a way. It could be fewer people, it could be more space between the buildings, it could be different things that I find more relaxing. And silent."

Interviewee E: "Nevertheless, I would also vote for A, because I like the density more."

The level of illumination along the path that can be determined by the density of the space can also make a difference. Spaces that are dark are not very preferred in the city, as it has been noticed in the survey and the focus group interview:

Interviewee F: "For me, it's totally the darkness of B [aspect he does not like. The vegetation softens up image A, having a tree and the crawling vegetation." **(See Figure 4.305 on previous page)**
All the urban characteristics identified contribute to place making in Aalborg, places that can function as anchors and attractors in the daily trips of the urbanite. Both the survey and the focus group interview have provided visual cues for Aalborg centre, pointing out once more that it is an area characterized by diversity **(See Figure 4.310 on next page)**.

OUTRO

Aalborg centre is full of contrasts, a place that can offer paths suited for social people, loners, nature or concrete lovers, explorers and so on. Having zones and paths with various characters in the city centre makes it possible to build routes that are pleasant or exicitng for the urbanite.

Aalborg citizens walk. Walk and bike. But they mostly walk driven by efficiency. Nevertheless, pleasantness also plays a role in their daily routes, but not as much as they wish. There is a difference between practice and preference. The reason for that goes to time, weather conditions, habits and other route choice factors. Some of them would walk more if along their routes they would have small, cozy spaces, diversity, greenery, sun and beautiful detailing: routes that could offer an experience.

Not only the formal qualities contribute to the experience of the space, the memories and atmospheres do that as well. The space becomes more beautiful in the eyes of the urban user, if he can relate to the space and associate it with pleasant experiences. This can work the opposite way as well, meaning that if the space is connectted with bad experiences, the image of it in no longer that appreciated.

All these formal and symbolic qualities of the city contribute to the experience of the daily walker. In order to get most out of our daily walks, these qualities should be linked together.

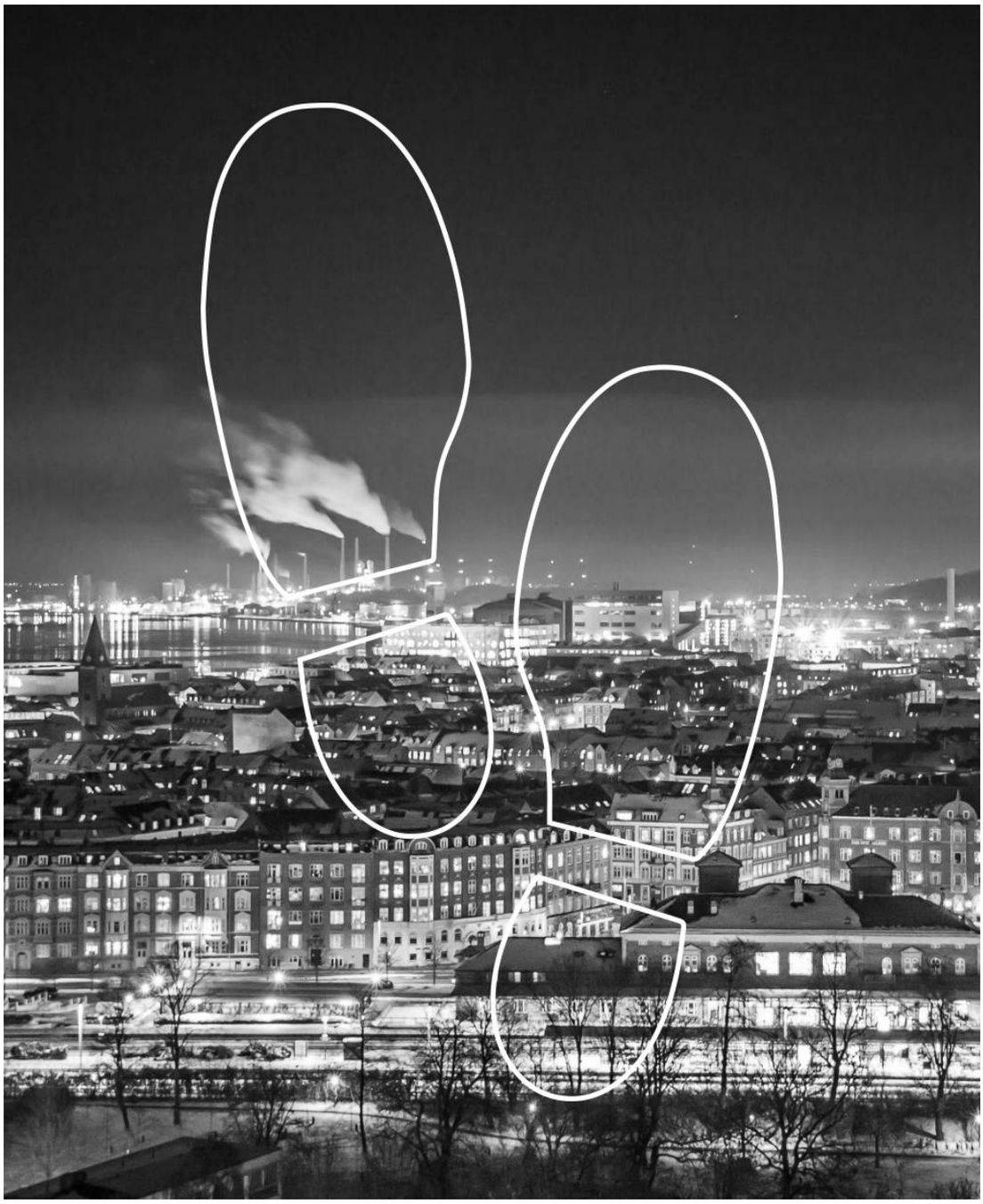
As it has already been mentioned, technology can come as a solution. The spaces with appreciated urban qualities (urban gems) are so spread around the city centre, that it would be impossible to connect them physically. These urban gems will be introduced in the next chapter.

As it has been already seen in Section 3.3, there are mobile applications out there that promote beautiful paths and lead to more urban exploring. In the survey it has been noticed that not a lot of people are aware of the technologies that are encouraging people to explore the city and use beautiful paths instead. Only 20% of the respondents have heard of such mobile applications, while only 5% of them actually use them. Nevertheless, awareness can be created both in the space of flows and space of places, because the interest for that exists, as 85% of the respondents would be interested in doing it **(See Appendix B)**.

How technology can act as a tool to determine a shift in the pedestrians' focus from routine and efficiency to urban aesthetics will be presented in the next section, where the concept of the URBAN SHOES will be introduced.

PROMENADE
DIVERSITY ACTIVITIY
BEAUTIFUL PLANNED ROAD
SINUOUS
PLAYGROUND
WOOD TERRACE
RUSTY TEXTURE
OPENESS BRIDGE
SPECIFIC ARCHITECTURE
IDENTITY
MAIN STREET HEAVY TRAFFIC
SLOPE TRAFFIC
BRICK ARCHITECTURE
BUILDINGS
NARROW PATH TALL
UNSAFE
NARROW PAVEMENT TRAFFIC
BRIGHT COLORS
PARKING
GRAFITTI
DISREPAIR
CAFES TRANSPARENCY BICYCLES
BACKDOORS NARROW
SHORCUT
PUBS ARCHITECTURAL AESTHETICS
GRAFITTI EMPTY WALLS CARS
PASSAGE
SHOPPING CAFES RESTAURANTS CROWDED SHOW-WINDOWS
TRAFFIC OPENESS
PARKING LOT
GREENERY
DIVERSE TRAFFIC
FOUNTAINS
SQUARE
TREES WATER
NARROW COLORS
SHOPS
PRIVATE COZY
PUBS COZY
LINEARITY
ORDER
DIVERSE ARCHITECTURE
COZY
CASTLE
HISTORY
GREENERY
SERVICE ALLEY SHOPS
SHOPS
PEDESTRIAN STREET
ACTIVITIES
COZZINESS
DIVERSITY
ICEING
WINTER
SUMMER CAFES
ENCLOSED
NARROW OLD
HISTORY
MIX OF ARCHITECTURAL STYLES
CURVED
NARROW
MEMORY
DARK DULL
OPENESS LANDMARK EVENTS SQUARE
VIBRANT
LIVELINESS
SLOPED
NARROW PAVEMENT
ARCHITECTURAL DIVERSITY SOUNDSCAPE BUDOLFI CHURCH
COZY NARROW OLD
DIFFERENT SCALES GRAFITTI PARKING LOT
TRANSPARENCY
SERVICE PATH
TRAFFIC NARROW PAVEMENT
SHOPPING STREET CAFES
STREET ART
SHOPS
DIVERSE SCALE
NARROW ENCLOSED
SHOPPING STREET
NARROW
SHOPS
PEDESTRIAN STREET
CROWDED
SHOPPING STREET
SALESMEN PEOPLE
THEATER DISTRICT
THEATER GREYNESS PARKED CARS
PARKING LOT
BUSY MAIN STREET
SLOPE
DIVERSE SCALE CLEAN ORDER
GREENERY SMALL SHOPS
BEAUTIFUL
NARROW COZY
SMALL HOUSES
COZZINESS
LIGHT
SHOPS
CAFES
PASSAGE INTIMATE SPACE
OLD BUILDINGS
BEAUTIFUL GREEN
SLOPED
DIVERSE ARCHITECTURE
SHOPS&CAFES
PARKING LOT MUNICIPALITY
OLD ARCHITECTURE
COZY
PASSAGE
SCALE DIVERSITY
ACCESS
CAFES
DIVERSE ARCHITECTURE AVENUE FEELING TRAIN STATION BUSES
SMALL POCKETS POND SMALL TOWN HOUSES RICH GREENERY
GREENERY DIVERSITY POND SMALL TOWN HOUSES
SHOPS STREET ART
RESIDENTIAL PARKING L
NOT VERY USED
INTIMATE
GREENERY
SOUNDS
GREEN
ARCADES
ANONYMOUS
MARKET
CROWDED TRAFFIC
BUSES
RESIDENTIAL BRICK ARCHITECTURE PARKING
GREENERY
POND
RESIDENTIAL BRICK ARCHITECTURE PARKING
PARKING LOT
BRICK ARCHITECTURE
DIVERSE ARCHITECTURE AND SCALE PLAYGROUNDS
DIVERSE TEXTURES NARROW STREET SIMILAR SCALE ARCHITECTURE
DIVERSE AR
ORDER
UNIFORMITY
COMMUNITY
HEAVY TRAFFIC OPENESS LOW DENS

Figure 4.310. The visual cues of the paths



Aerial night vision of Aalborg

PRESENTATION

"The multiplication of technologies in the name of efficiency is actually eradicating free time by making it possible to maximize the time and place for production and minimize the unstructured travel time in between...Too, the rhetoric of efficiency around these technologies suggests that what cannot be quantified cannot be valued-that vast array of pleasures which fall into the category of doing nothing in particular, of woolgathering, cloud-gazing, wandering, window-shopping, are nothing but voids to be filled by something more definite, more production, or faster-paced...I like walking because it is slow, and I suspect that the mind, like the feet, works at about three miles an hour. If this is so, then modern life is moving faster than the speed of thought or thoughtfulness." (Rebecca Solnit, 2006)

SECTION 5.1

URBAN GEMS

This first section in the design chapter talks about the main outcome from the analytical part, the urban gems, the creative process that will be briefly described and the outcome that is introduced at a general level.

A mobile application and an urban interface will be designed with the scope of gennerating awareness in the city regarding the pleasantness of the paths and determining a positive impact on its users.

According to Rebecca Solnit (2006) technology is somewhat killing the pleasure of walking in the city. Technology is not the only one activating a higher speed and unconciousness in the city. Aalborg dwellers, as it has been noted in the analysis chapter, are aware of the presence of beautiful paths in the city centre, yet, under the pressure of time and commodity and habits, they fall in the same routine everyday, by always taking the same paths from home to school/work/ shops and back the same way. By identifying the urban gems in Aalborg centre, anchors for new possible paths have been identified. The urban gems have been discovered with the help of crowdsourcing methods, so they are coming "from below" (Jensen, 2013).

Why is there a need for new alternatives of walking in the city? As it has been mentioned in the begining of this thesis paper, an urban environment that posseses pleasant qualities is an environment that will have positive impacts on the urbanite. Nevertheless, in the previous chapter it has been noticed that Aalborg citizens, while being engaged in their daily routines, tend to forget about alternatives of walking. Thus, there is a lack of awareness as dwellers forget about the potential of pleasant paths and places, that can consolidate their relationship with their own city.

A design that would remind them of such places and paths could be a solution. For the purpose of this thesis, as an experimental trial, technology was activated. The theory chapter underlined the idea that nowadays city hackers create technology that can empower the citizens and enhance their relationship with the city. The design proposed in this chapter is a design about empowerment. This can also be noticed in the concept diagram **(See Figure 5.101)**. Thus, the crowdsourcing methods helped in discovering beautiful urban spaces (urban gems). The urban gems get connected and promoted with the help of mobile technologies, canceling routine and emphasizing spontaneity and aesthetics. By focusing on people and their preferences, it is hoped that a change in practice will occur, changing the mindset from auto-pilot to explorative mode (drifter) while moving through the city.

The urban gems identified will be used in building beautiful paths, paths that have aesthetical qualities and will focus on offering a certain kind of experience. To make sure that there is no confusion in that sense, building a beautiful path means connecting urban gems within Aalborg centre and generating new routes and not designing new streets or redesigning old ones.
The new routes will have various purposes and will adress two types of city users, as it will be explained in the next section.
The design for this thesis paper will be addressed in two ways: technologically, by creating a mobile application and physically, by designing an urban interface that will work in a similar way as the mobile app. Before the final outcome is presented, the urban gems will be introduced.

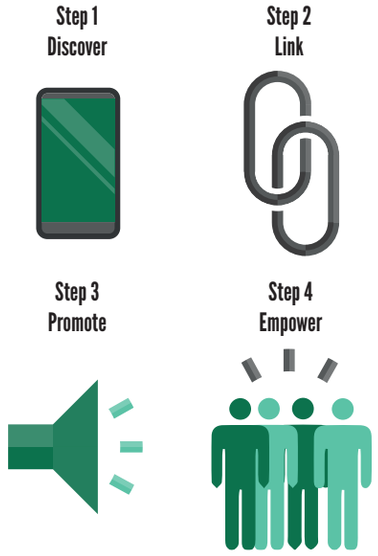


Figure 5.101. *Narrative behind design*

URBAN GEMS

From urban characteristics to urban gems

In this paper, an urban gem is a space or a path in the city worth walking through. It is a place that has one or more of the characteristics presented above. Identifying urban gems in Aalborg was realized in two ways: either asking the respondents for the places they consider beautiful or aesthetically appealing or deducting them from the image choice method. Thus, a map of beautiful gems in Aalborg has been contoured (**See Figure 5.102 and Figure 5.103 on next page**).

The urban gems are either cozy, narrow streets, paths bathing in the sun, green and unique courtyards, meaningful and historical urban squares, open, active or passive parks. With their presence as possible anchors in the city, the dynamics of the city can be changed, by building new urban routes.

For the purpose of the design, the urban gems got divided in categories, according to the atmosphere they cater. Some urban gems have 2 or 3 specific qualities, serving more categories of beautiful paths.

The mobile application and the urban interface will function on an algorithm that generates paths based on the urban gems' presence in the centre, algorithm that is explained in **Appendix G**.


Urban Gem
Place
Path
Atmosphere or specificity
Touristic
Local
Landscaped and green
Calm and quiet
Lively
Cozy
Jomfru Anne Gade
Nytorv
Gammeltorv
FRIIS
Musikhuset
Mollea Plads
JFK Square
Karolinelund
0 m
125 m
250 m
500 m

MENTIONED

1 - BISPENSGADE
2 - VESTERBRO
3 - STRANDVEJEN
4 - NEW HARBOR
5 - JOMFRU ANNE PARK
6 - ØSTERÅGADE
7 - GAMMELTORV
8 - JERNBANEGADE
9 - ALGADE
10 - AALBORGHUS CASTLE
11 - BOULEVARDEN
12 - UTZON
13 - UTZON PARK
14 - PRINSENSGADE
15 - NYTORV
16 - GABELS TORV
17 - MØLLEGADE
18 - HJELMERSTALD
19 - LOUISEPLADS
20 - VOR FRUE STRÆDE
21 - VOR FRUE PLADS
22 - NØRREGADE
23 - NIELS EBBESENS GADE
24 - DANMARKSGADE
25 - KLOKKESTØBERGADE
26 - SØNDERGADE
27 - MUSIKKENS HUS PLADS
28 - NORDKRAFT
29 - KAROLINELUND

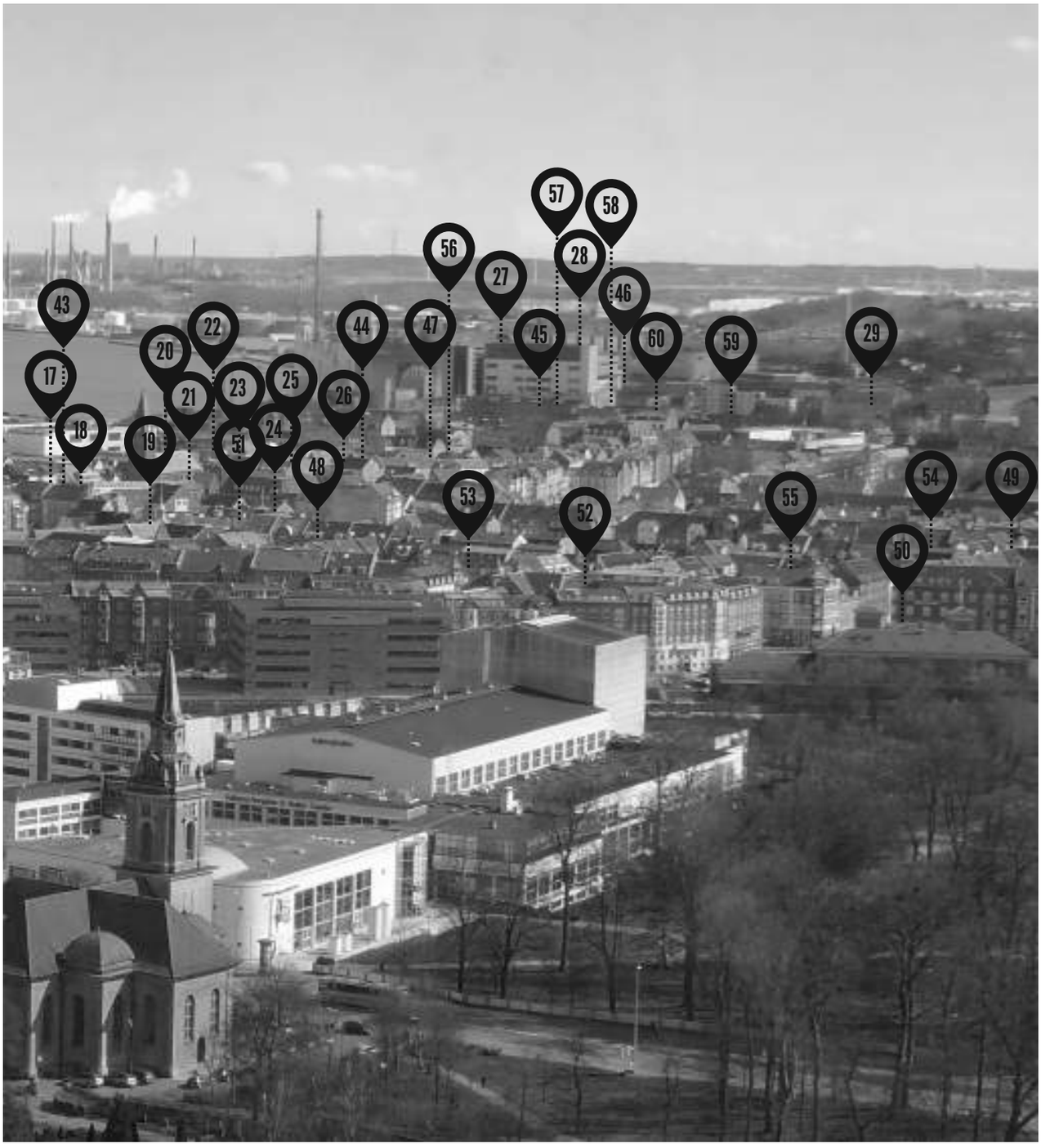


Figure 5.103. Urban Gems - aerial vision

DISCOVERED

30 - VESTERÅ
31 - JOMFRU ANNE GADE
32 - TIENDELADEN
33 - MAREN TURIS GADE
34 - TOLDBOD PLADS
35 - LILLE KONGENSGADE
36 - CORTESGYDE
37 - GRAVENSGADE
38 - LATINERGYDEN
39 - ADELGADE
40 - C.W. OBELS PLADS
41 - LILLE NYGADE
42 - NYHAVNSGADE
43 - MØLLEA PLADS
44 - SØNDERGADE CY.*
45 - LØKKEGADE
46 - TEGLGÅRDS PLADS
47 - ØSTERGRAVENSGADE
48 - LOUISEGADE CY.
49 - ÅGADE CY.
50 - JFK PLADS
51 - DANMARKSGADE CY.
52 - PRINSENSGADE CY.
53 - CHRISTIANSGADE CY.
54 - STEEN BLECHERS GADE CY.
55 - BOULEVARDEN CY.
56 - ØSTERGRAVENSGADE CY.
57 - LØKKEGADE CY.
58 - KJELLERUPSGADE CY.
59 - LANGESGADE CY.
60 - KAYERØSGADE CY.

SECTION 5.1

URBAN SHOES

The second section in the design chapter talks about the design outcome: the mobile application URBAN SHOES and the urban interface attached to it.

The process of designing was based on the theoretical and analytical chapters and their conclusions. The design is meant to encourange the emergence of the drifter in Aalborg centre and enhance the urbanite's willingness to explore the city and build a stronger relationship with it.

MOBILE APPLICATION

We put on our shoes each day to go to work, to school, to the shop or to just go outside and do our daily choires. Before the trip starts, a mindset is chosen, a destination and a route. The destination can be singular or there can be multiple destinations, moment when the route becomes even more complex.

Our feet are carrying us around the city, through various and contrasting environments, through quiet areas, through urban landscapes that not always resonate with our state of mind or offer us an experience. We put on our shoes and set them on auto-pilot most of the times and give the command "Take me on the shortest route!" What we get is not always what we actually need. But what if you could choose what urban shoes you want to wear, shoes that would take you on routes that offer more than an A to B way, but a sensorial experience, experience that would resonate with your state of mind.
If that would be possible, what shoes would you like to wear?

The mobile app URBAN SHOES, the technological part of the design, does just that. Even though it was only developed at a conceptual level, its purpose will be to generate beautiful paths that are in accordance to the urbanite's needs, a number of options being offered. Having identified the urban gems of the city centre, it has been noted that this type of information can be both useful for the permanent dwellers and the temporary ones (tourists, visitiors) Thus, the app is adressing both these city users.

How it works?

First, you will have to choose your destination point. Then, you will have to choose either you want the tourist shoes or the local shoes. While the tourist shoes are represented by 3 categories (sightseer, nightwalker and citizen), the local shoes include pathfinder shoes, rush hour stroller, nightwalker, nature lover and calmness seeker ones.

The tourist shoes are given by either the sightseer shoes, where the anchors along the generated route are urban gems with meaning/history or that are attractive in the city center, or the citizen shoes, where the anchors are given by the beautiful courtyards.
In the case of daily trips, if the user chooses the calmness seeker shoes, he will receive paths that are calm and less crowded. In case of rush hour stroller, the paths generated are lively and diverse. The pathfinder shoes will lead you through paths that are cozy and narrow. Lastly, selecting the nature lover shoes generates paths that offer greenery and landscaping.

After choosing the mood, the user has the possibility to choose the complexity of the route: low complexity (1-2 urban gems along the route), medium complexity (3-4 urban gems attached to the route) and high complexity (over 5 urban gems along the route). The method of how each path is generated is described in **Appendix H**.

Lastly, the buttton "Share or Repair" represents a way to share the paths or the shoes with others and to give feedback regarding the urban gems and other spaces for the municipality or tourist office. The Repair button allows you to share urban concerns with the planners regarding the quality of spaces.

The mobile application had a point of departure in the State-of-art review presented in Section 3.3, where various crowdsourcing and navigation applications and concepts were introduced.

In **Figure 5.201**, the scheme of how the mobile app works is presented, while in the next pages a possible user interface for the URBAN SHOES app is introduced in order to better understand it.

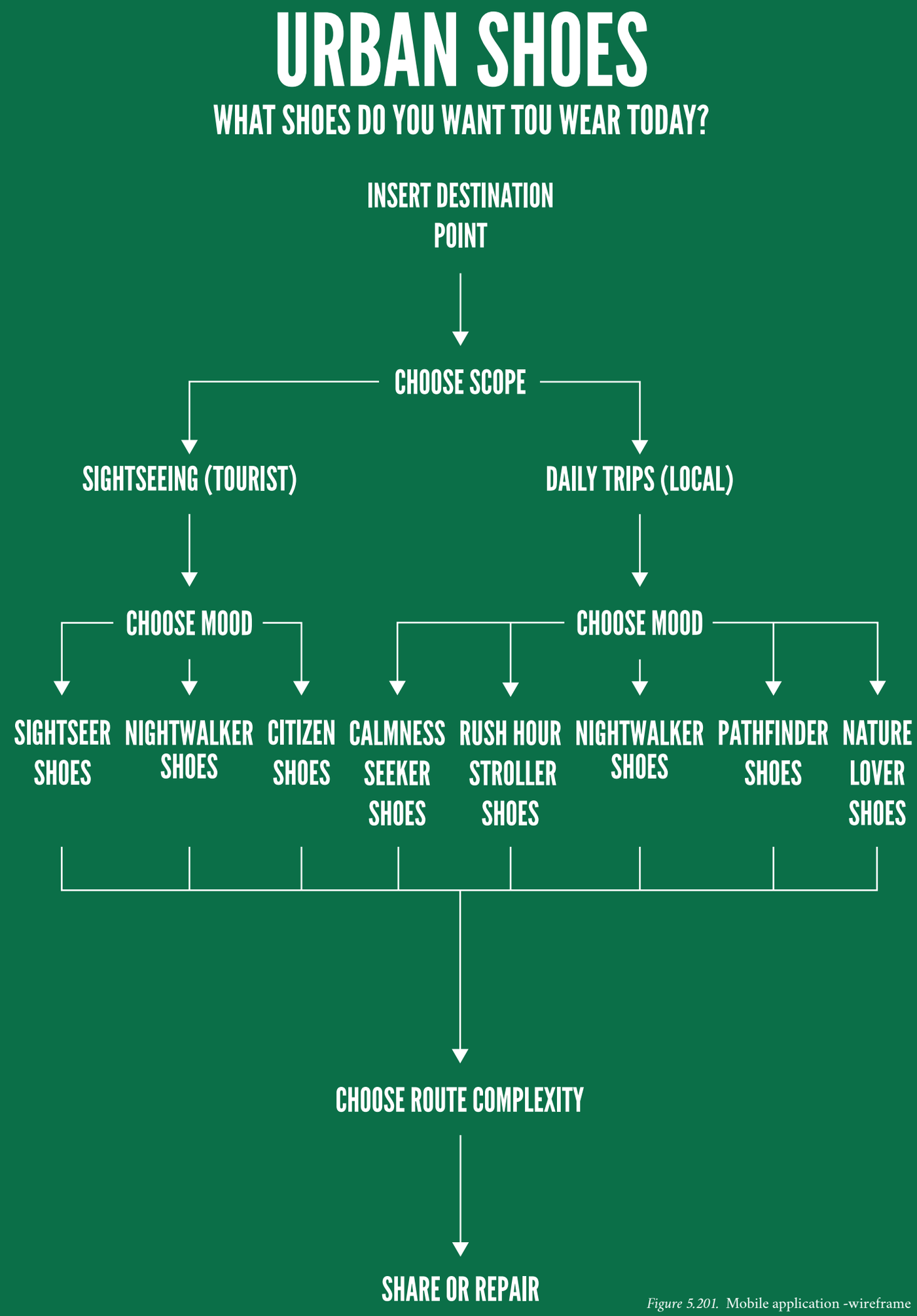
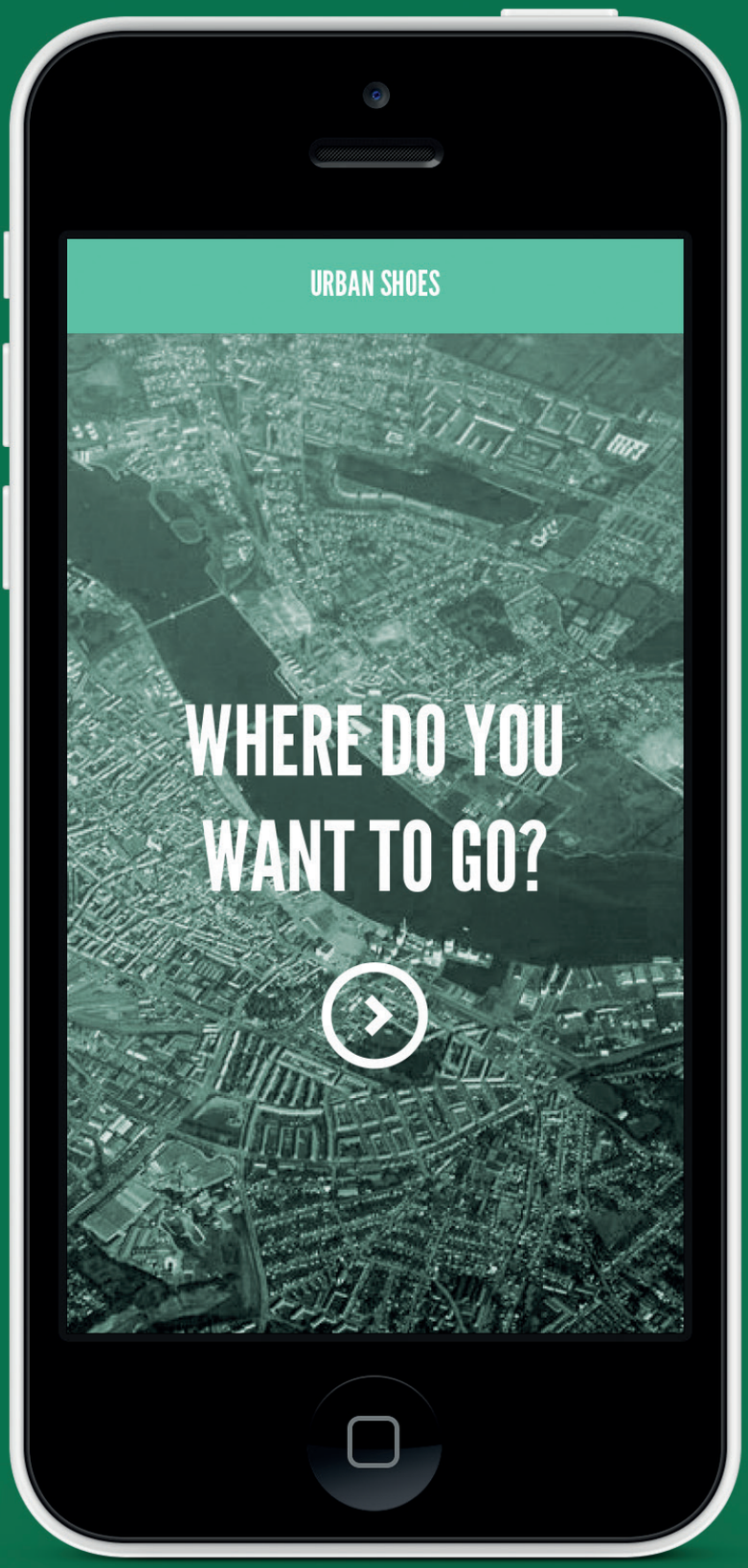
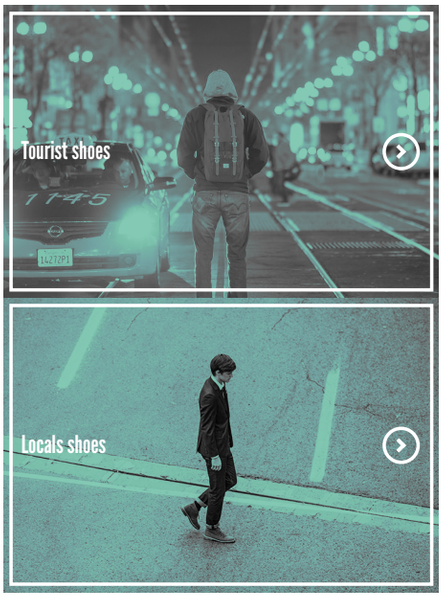


Figure 5.201. Mobile application -wireframe


URBAN SHOES
WHERE DO YOU
WANT TO GO?

URBAN SHOES

Choose path type



URBAN SHOES

Choose path mood

URBAN SHOES

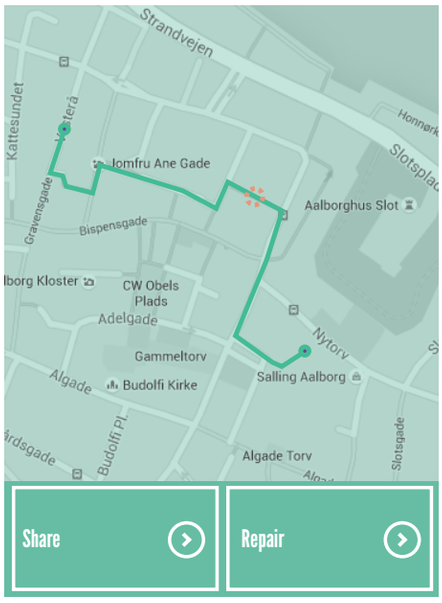
Choose path mood

URBAN SHOES

Choose path complexity

URBAN SHOES

Here is your path!



URBAN SHOES

Citizen shoes lead you through spaces that have a community feeling and give you a chance to get a taste of the local life.

Sightseer shoes are perfect if you are a tourist. You are one button away from the landmarks of the city that lie ahead.

Pathfinder shoes are for the thrill seekers. Narrow, unexpected paths, either cozy or edgy, await to be explored.

Rush hour strolling shoes are for you, the one that cannot go without the lively feeling of the city life. People and activities along your route will fill you up with energy.

Nature lover shoes carry you through the 'oases' of the city, the places that are green and beautifully landscapes.

Calmness seeker shoes could help you after a long day. Avoid crowdiness and noise, by taking paths that posses a calm atmosphere.

Nightwalker shoes can make your midnight walk a bit more interesting, by leading you through contrasting sceneries.

SCENARIOS

In order to better illustrate the routes that will be generated by the mobile application, 14 scenarios have been created. There are 7 types of shoes, so there are two scenarios dedicated to each type. The complexity of the route varies, having the routes shorter and longer.

The users of the application are either students or employees, locals or tourists and each one of them prefers certain types of walk in the city, according to their mindsets. Let us see what the application can offer them.

The departure and destination points were chosen from the survey data. The generated routes represent daily trips in which some of the respondents are engaged on a daily basis.

Each scenario will have attached a map where both the beatiful path and the short path generated by Google Maps will be marked, the distance and time of each route, a persona and its story.

SIGHTSEER SHOES

SCENARIO 1 - HIGH COMPLEXITY

FREDERIKSTORV- VED STRANDEN

John is visiting Aalborg for a short period of time. He wants to see as much of the city as he can so he puts his trust in the hands of the app. He gets to see along his route the local urban pockets, lively squares and popular streets like Jomfru Anne Gade. His walk takes 13 minutes, being 1100 m long. He tries the app once more after taking out some money from a bank on Ved Stranden.

CITIZEN SHOES

SCENARIO 2 - LOW COMPLEXITY

SØNDERBRO - AALBORG BIBLIOTEKERNE

Freja is working at the library. She recently moved to Aalborg so she still feels like a tourist in the city, discovering new places every day. Today, she wants "to wear" the citizen shoes and get a taste of the local atmosphere. As she has not much time before she starts work, she chooses an easy complexity of the route and ends up getting one that is 2 minutes less compared to a regular daily choice of walking, generated by Google Maps.

CALMNESS SEEKER SHOES

SCENARIO 3 - HIGH COMPLEXITY

PRINSENSGADE - VESTERBRO FITNESS

Niels had a long day at work. It's 5 o'clock in the afternoon and he wants to go to the gym. The city is still pretty busy at this hour and he wants a quiet and peaceful walk to clear his mind. That's why, when using the app, he chooses a higher complexity of the route so he can enjoy a calm walk. The route goes through courtyards, quiet squares and cozy paths.
Comparing to the shortest route generated by Google Maps, the new generated route is only 5 minutes and 450 meters longer.

RUSH HOUR STROLLER

SCENARIO 4 - MEDIUM COMPLEXITY

BORGERGADE - RENDSGBURGGADE

Louise studies at Aalborg University in the City Campus building. She comes from a big city and she sometimes misses the rush and the streets crowded with people. The rush hour stroller shoes are a good fit for her. The route goes down the shopping streets and through Nytorv which is almost always crowded during the day. With only 2 minutes more, Louise adds more excitment to her route.

NIGHTWALKER SHOES

SCENARIO 5 - HIGH COMPLEXITY

RENDSBURGGADE - AALBORG STATION

Anne is a student at Medialogy, so her group room at Rendsburggade 14. Due to a deadline that is coming, she stayed at the university longer today. She lives in Aarhus so she has to catch the night train. She is still discovering Aaalborg, so she enjoys the walks here, especially during the night, when she can just put her headphones on and enjoy the city. The nightwalker shoes take her through contrasting environments, from cozy courtyards, through quiet squares and streets with shops and do a bit of window shopping. The route is longer with just 300 meters and just one more song in her headphones.

PATHFINDER SHOES

SCENARIO 6 - MEDIUM COMPLEXITY

VALDEMARSGADE - UTZON CENTER

Elias works at Utzon Center. Every morning he choses the same route, down Strandvejen. He heard about the URBAN SHOES app from the students that study at his work place and decided to give it a try. He likes exploring, travelling and walking through cozy spaces so he chooses the pathfinder shoes.
He's pleasantly surprised by the route he gets, the narrow streets reminding him about his recent trip to Italy. His walk becomes more pleasant at the cost of 2 minutes more.

NATURE LOVER SHOES

SCENARIO 7 - LOW COMPLEXITY

DANMARKSGADE - UTZON CENTER

Lea is a student. She is going to Utzon Center for a new exhibition. She's in a bit of a rush, but she always enjoys a good walk especially if she's surrounded by greenery. The complexity of the route she chooses is an easy one. So she gets to walk through small green pockets and through the Aalborg Castle park. The experience she gets is 4 minutes longer.

SIGHTSEER SHOES

SCENARIO 8 - HIGH COMPLEXITY

FYENSGADE - JOMFRU ANNE PARK

Molly and Jim are visiting Aalborg for a conference. For two days they get to be tourists. The URBAN SHOES app offers them the sightseer shoes and they "put them on". As they are both water fans, a walk along the fjord is pleasant to them. The unique buildings along the harbour also contribute to the beauty of the route.
2 minutes more don't sound that much more, when they had the chance to admire the harbour front and the view, ending up with lunch in Jomfru Anne Park.

CITIZEN SHOES

SCENARIO 9 - HIGH COMPLEXITY

ØSTERBRO - NYTORV

Karla is meeting her Danish friend at Nytorv. She is just visiting Aalborg for a couple of days. She has decided to take a trip in Denmark because she has some friends here. She noticed the URBAN SHOES interface in the city the first day and today she downloaded the app. She wants the local experience, so she chooses the citizen shoes that carry her through lovely courtyards with a community atmosphere and down lively shopping streets. She appreciates getting a chance to see the backstaged Aalborg in comparison to the front staged one and it only takes 5 minutes more to reach her destination.

CALMNESS SEEKER SHOES

SCENARIO 10 - LOW COMPLEXITY

VESTERBRO - BISPENSGADE

It's weekend and Marie needs to buy a present from a bookstore down Bispensgade. To avoid the crowdness of the shopping streets that she does not really enjoy, she hopes for "a pair of shoes" that will lead her on quieter paths. With only 2 minutes more, she gets a path that goes down Jernbanegade and Latinergyden, that are quiet and not so populated. She enters Bispensgade almost next to the book shop.

RUSH HOUR STROLLER

SCENARIO 11 - HIGH COMPLEXITY

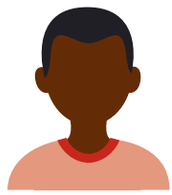
LANGESGADE - BUS TERMINAL

It's summer. Mads is going out of town so he is heading towards the bus terminal. He has 5 extra minutes to kill on the way so he pulls out his phone and launches the app. He likes walking and looking at people so he chooses lively places. It fills him up with energy.
The route generated goes down Østerbro and Nytorv, through Møllea Plads that is active this time of the year, given the cafes and down Boulevarden, where the shops are open and the streets are filled with shoppers and passers-by.

NIGHTWALKER SHOES

SCENARIO 12 - HIGH COMPLEXITY

DANMARKSGADE - JOMFRU ANNE GADE

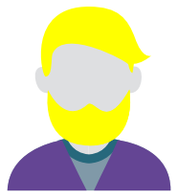


Morten is meeting his friends for a drink on Jomfru Anne Gade. Because he finished getting ready earlier, he decided to have a longer walk. The nightwalker shoes take him through beautiful urban squares and pockets, giving him the possibility to admire the urban landscape, and architecture and imagine how people are spending the night behind blindfolds. His walk will be 12 minutes, only 2 minutes longer than a Google Maps route.

PATHFINDER SHOES

SCENARIO 13 - LOW COMPLEXITY

VESTERÅ - SALLING



Emil is always going to Salling to buy goodies. Whenever he goes there, he always gets bothered by the crowdiness of the streets, given that he lives in a shopping area. His girlfriend introduced him to the app, encouraging him to kill the routine. Even though he thinks it's such a short way and nothing can impress him anymore, he tries it. Walking through Maren Turris Gade represents a nice experience because he enjoys the architecture and the coziness of the space. He never considered it as an option of walking, that is only one minute more.

NATURE LOVER SHOES

SCENARIO 14- HIGH COMPLEXITY

JYLLANDSGADE - ALGADE

Sofie is working at a bank on Algade and she knows she has a busy day ahead of her. The presence of greenery would help her state of mind now so the nature lover shoes take her through environments that offer just that. The courtyards are beautifully landscaped and have other interesting elements like ponds, small statues and so on. The contrast between a street and such courtyards is also relevant, as a variety like that can contribute to the feeling of excitment.
Compared to other routes, this route is shorter that the one generated by Google Maps suggesing that shortness can overlap with beauty. Generating for efficiency and pleasantness at the same time is possible.

URBAN INTERFACE

These were potential paths that can be generated by the mobile application URBAN SHOES. These paths can also be generated by the physical version of the app in the city: the urban interface that was designed and that will be introduced in the next part of the section.

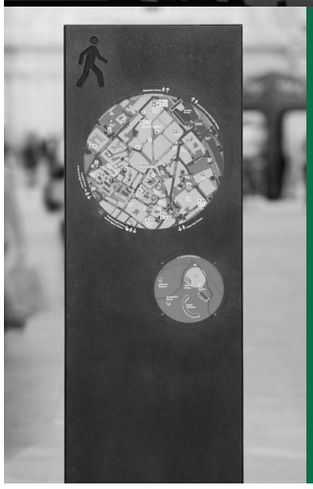
The urban interface URBAN SHOES represents the physical design, part of the thesis paper. It is no longer a mobile technology, but a technology that represents a visible layer in the city. Even though the thesis is focused on mobile technologies, this design is meant to complement them and make the concept accesible for all sorts of users that are maybe not connected to the mobile network.

This interface also represents a way to promote the URBAN SHOES app, making users transfer from the fixed to the mobile technology offered. Nevertheless, the urban landscape is more and more populated by interesting navigation systems, either they are classic, static designs or gadgety, interactive ones.

The design of the urban object was inspired by such existent designs that can be observed in **Figure 5.202**. The concept of the urban interface can relate to another project in Denmark, but a national scale one. "The marguerite route is easy to follow. The route is not the fastest, but it is the most picturesque in Denmark. Follow the signs by the roadside to stop by the best attractions Denmark has to offer" (VisitDenmark, 2014). So the route is meant to encourage people to go more through scenic environments. As the Marguerite route signs, the urban interfaces of URBAN SHOES are placed in keyspots in the city: places that some would expect like populated places (urba squares, touristic points) and places that are unexpected (some narrow and less used paths, in backyards that are worth seeing). The placement of these urban objects are marked in the map in **Figure 5.203** on the next page.

MARGUERITE ROUTE

A route that is not fast, but which offers a picturesque scenery. It is given by a navigation system of signs placed along the roads of Denmark. They represent detours that offer the best attraction. In this project it is used as reference for an intervention that is meant to connect the beautiful spaces at a local scale.



POINTS

Points (illustrated above) is an interactive wayfinding design guiding you according to your chosen destination or wish. The arrows point in the right direction as soon as you choose your destination.

BATH WAYFINDING SYSTEM

Classic design of a wayfinding system for the city of Bath.

Figure 5.202. Design references

Figure 5.203. Location of urban interfaces

The design of this interactive object is minimalistic and aiming to be a transparent presence in the city, "invisible" as the mobile network surrounding us. A point of departure for the design is given by the present bus sheds, situated in Aalborg, that are working with glass and white imprinted drawings.

As it can be noticed in **Figure 5.204** on the next page, the interface is composed of a touch screen and a glass body that has an integrated map of the network of paths in Aalborg centre. This map points out your generated route and lights up during night time.

It is 2.5 meters high and it has the screen situated at eye level. The interface URBAN SHOES is, as the mobile application, meant to create awareness in the city, but it also represents a new way to interact with your urban environment, reminding you to explore more, either as a tourist or as a citizen.

The design of the two components come as a way to answer the research question of this thesis: "How can mobile technologies become a tool in the mobilities and urban design field and determine a shift in the pedestrians' focus from routine and efficiency to urban aesthetics and pleasing qualities within route choosing?" This is one of the many ways in which a mobile technology can affect the urbanite's movement in the city and adapt it to his state of mind.

If these types of technologies can in fact prevail is an idea to be further tested. The principles based on which the mobile application and the urban interface function seem to be in accordance to the interviewees' oppinions and the theoretical narrative. But this is a part of the reflections upon outcome and process. These will be addressed in the final chapter of this paper that follows.

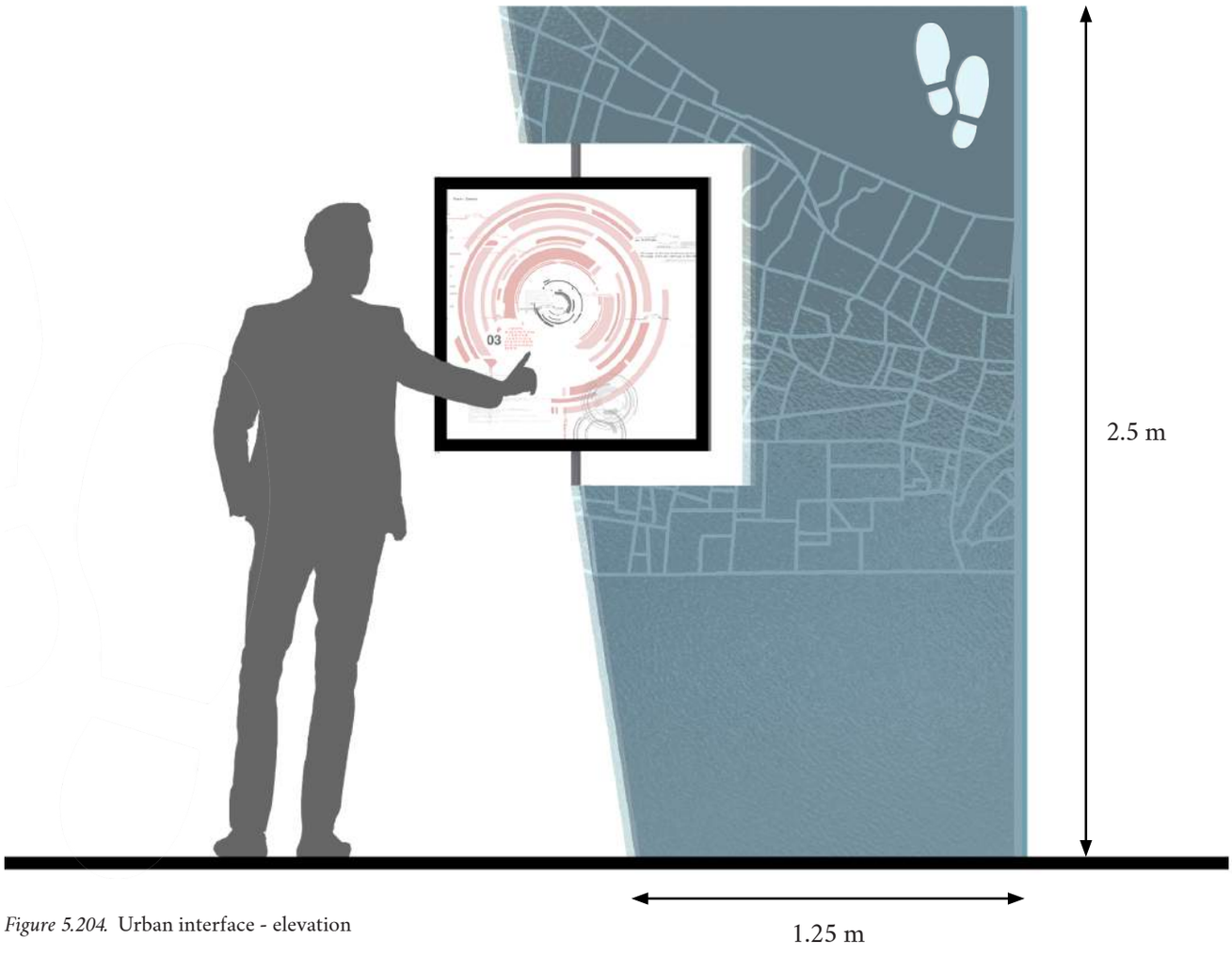
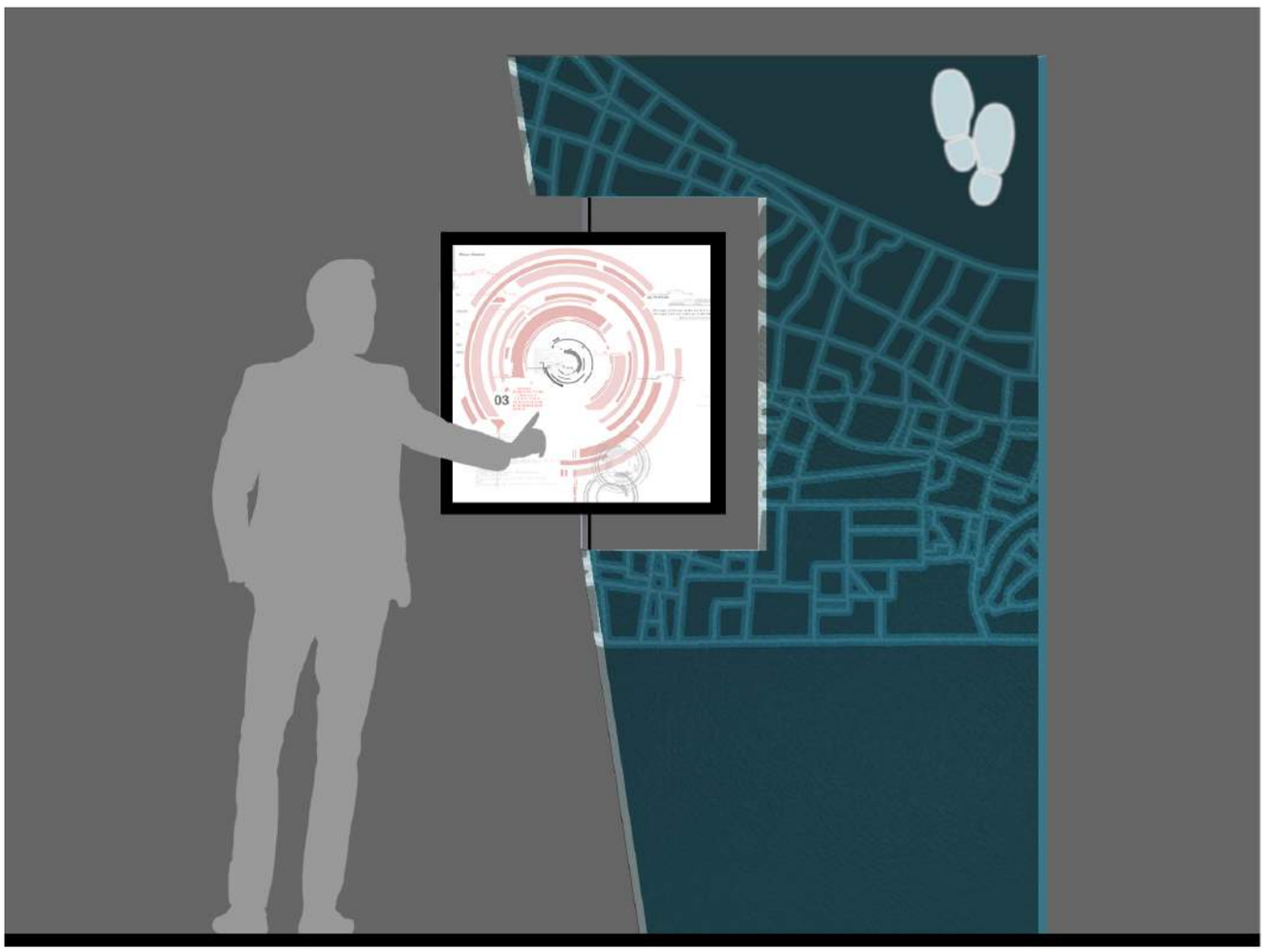


Figure 5.204. Urban interface - elevation




Mommy, let's take the nature lover shoes
I don't feel like meeting people today, so I'll just take the calmness seeker shoes

Guide to getting lost. The Flaneur Society

FINAL REMARKS

"Its about discovering what is right under your feet, in front of you, above you and around you. "

(Flaneur Society, 2014)

CONCLUSION

Walking in the city has attached to it so many actions, from assigning places names to inhabiting them, from attributing aesthetics values to comprehending the symbolic ones, from narrating a city to writing it, from navigating the streets to exploring them. To walk the city implies to observe, to listen, to meet, to feel, to find. The way the city is walked and interacted with determines the two types of pedestrians that have been presented in this paper: the determined and the drifter.

We have seen how the determined is engaged in an instrumental movement, one that is focusing on the destination and how the drifter prefers a non-instrumental one focused on the route itself. So while the determined is driven by efficiency and routine, the drifter is looking for pleasing qualities during his urban walks. At the moment, the determined user represents a stronger shaping power in the city in the case of urban design and planning. There is a risk to that, as it might lead to de-sensing city users.

The antagonism between efficiency and beauty exists, not only in urban walking, but also in the technological branch focused movement. As it has been noted, there are two types of mobile technologies in the city: one made by city hackers that is pushing encouraging the presence of the drifters in the city and one created by big R&D companies like IBM that suppresses it. As in the previous antagonistic relationship, efficiency is a shaping power in the city as well, big companies causing the risk of turning cities into "dull mechanical automatons" (Townsend, 2013:15). So the main research question of this master thesis was:

“How can mobile technologies become a tool in the mobilities and urban design field and determine a shift in the pedestrians’ focus from routine and efficiency to urban aesthetics and pleasing qualities within route choosing?”

In this thesis it has been noted that in order for mobile technologies to determine a shift in the pedestrians' focus from routine and efficiency to urban aesthetics they have to have two main qualities: they have to be embedded in locality, thus site-specific and they have to be human-centred, thus using crowd sourcing and open source methods.

Why site-specific?

There are so many ways in which people move and this depends on the places in which movement occurs. "Feet come to be attuned with the frequency of the asphalt and street" (Bill Psarras,2014). Some spaces encourage a slower pace and some a fast one, some invite people to linger while others are used only for transit. Various sites have different atmospheres that influence the pedestrians' movement, atmospheres that are given by both the physical and symbolic urban qualities. These are also the qualities that determine the aesthetics of a place or a path. But what is beautiful and what is ugly for pedestrians?

Why human-centred?

The pedestrians, the city users are the ones that define the urban environment in terms of aesthetics, dividing it into places that are attractive to walk in and places that are not. So what is essential is to discover these qualities with their help. At the same time, these technologies have a very challenging task: to change a habitual behaviour that has been noticed in this paper. In order to do that, there's a need for the technologies to be user targeted and the users' culture understood.

But what people appreciate in the city and how they choose their routes is also influenced by many other factors. In this thesis paper, the route choice factors were introduced, depicting once more the confrontation between efficiency and pleasantness in the city. It has been shown that pleasantness can

become as important as efficiency in the pedestrians' route choice under the right conditions, meaning that the drifter can become a shaping power in the city as well.

The most important conditions are given by the weather, the safety and the complexity of the route. The presence of the sun on the streets can almost always extend people routes and contributes to the pleasantness of a path. Safety is also enhancing the pleasantness of a route, which means that there is a link between safety and beauty. If a route becomes too complex and also having turns that are in the opposite direction comparing to your destination, the pleasantness of the route might not count anymore when you are engaged in an instrumental movement.

In the opposition of these two route choice factors, there are two main issues that intervene: practice and preference. The problem with walking is that it is "the most obvious and the most obscure thing in the world" (Solnit, 2006). People move from A to B with a purpose, but the experience of movement becomes so subjective, that it is hard to pin down the mobile reality. One of the issues that emerged in this master thesis is that what you get is not always what people do. There is a major difference between practice and preference.

The difference between practice and preference emerged in the survey and in the focus group interviews as well. Finding out that people are attracted in the city by beautiful paths and pleasant urban characteristics did not came as a novelty, but the fact that even though people favour this kind of paths, they are still enrolled in their daily practices, taking the same routes every day and ignoring the fact that some of them are dull and become obnoxious. As it has been emphasized in the theoretical chapter, "the psychology of mobility is a house of mirrors where what we want, what we do are rarely the same choice" (Montgomery, 2013). Beautiful paths are preferred while moving in the city, but that does not mean they are the walked ones.

Some of the reasons behind the difference between practice and preference are given by time pressure, the habitual mobile rhythms of the pedestrians and their level of acquaintance with the city. As it has been mentioned above, it is hard to exit a break a habitual behaviour once you are entering it, aspect that has been pointed out in the focus group interviews. The level of acquaintance with the city is also linked to the up mentioned difference between practice and preference. It's hard to create a relationship with the city and its' paths if you do not know it, but it is also hard to keep your senses alive once you know it too well. Hence the willingness to explore must be present while moving. While time pressure is something that can hardly be excluded from our daily route choices, the willingness to explore can be enhanced by creating awareness: awareness that 50 meters away from your daily route is a more beautiful alternative and the detour will not take more than a couple of minutes. This awareness can be created with the support with the mobile technologies that have in focus places and users.

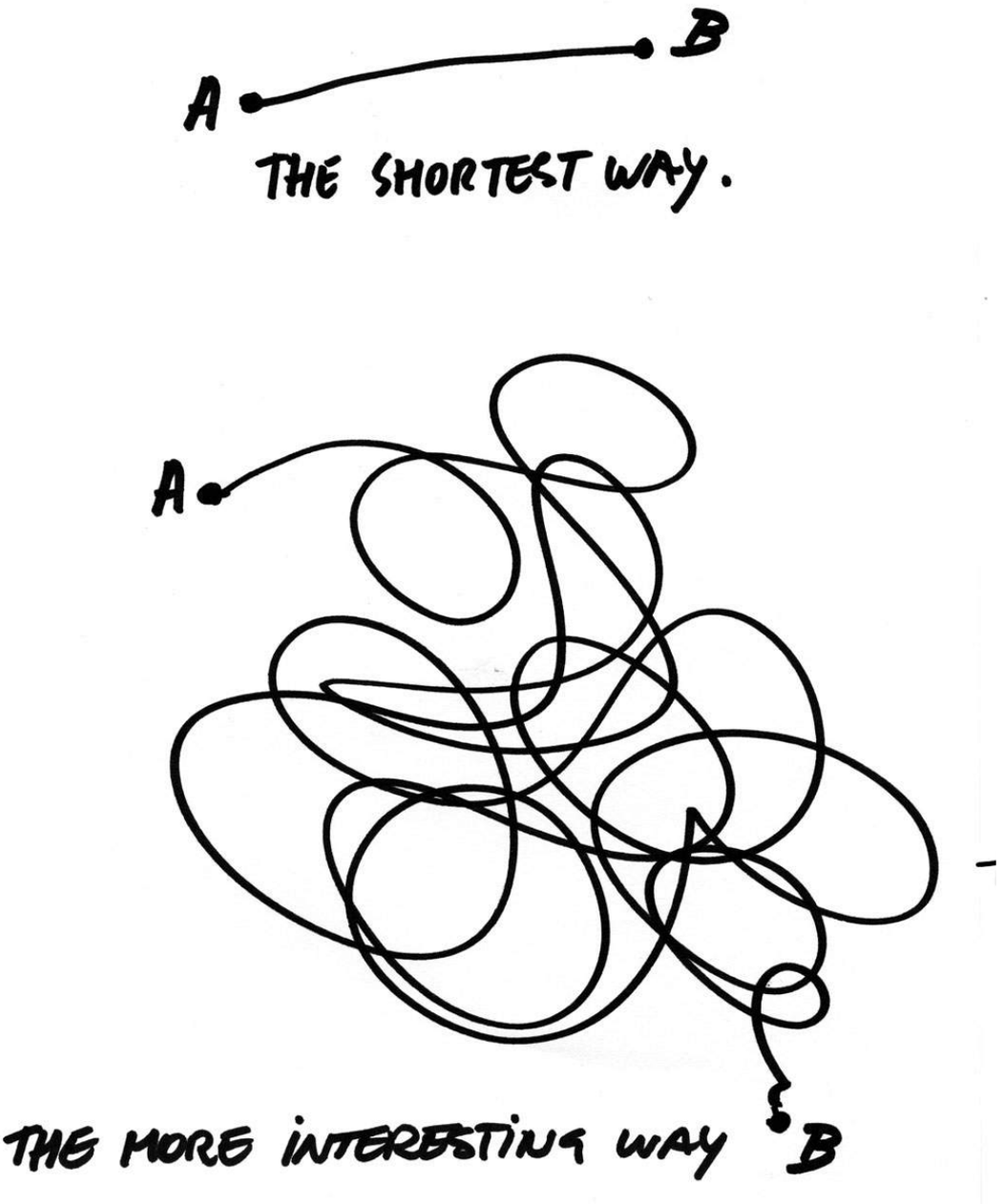
The emergence of such technologies that can empower pedestrians and give them shaping powers in the city can be beneficial in two ways.

Firstly, if the urban designers and planners would be more focused on a design that is situated at the intersection of spaces of flows and spaces of places, such mobile technologies can become useful tools that mediate the relationship between the city planners and users. Planners and designers can learn from the user's knowledge and apply it, while users can become empowered by being involved in the process. So these technologies must be the product of a collaboration between planners, designers, developers and users.

Secondly, the mobile technologies investigated in this paper can offer a feeling of well being to the pedestrians. Having routes that are tuned with their state of mind and are beautiful might contribute to good feelings. Much is still to be learned about how the ways we move in the city influence our feelings and as Townsend(2013) has said "not everything that can be counted counts, and not everything that counts can be counted".

Nevertheless, "counting" how a beautiful path can influence us and build pleasant routes upon that can become possible with mobile technologies that focus on serendipity and delight.

What is beautiful in the city for you?
Go and explore on your way from A to B!



From A to B. Tom Desmet

REFLECTION

Aalborg centre has proven itself to be an interesting site to study in the attempt to decipher the pedestrian route choices, the relation between the drifter, the determined and mobile technologies and it represented a small-scale point of departure in understanding the presented concepts. Nevertheless, the paper had its limitations and challenges in the project process, that should not be treated as barriers but as issues to be further explored.

Outcome

With this master thesis ,I have chosen to depict the soft side of pedestrian mobilities and what "moves" us while we move. Involving aesthetics and beauty, that are concepts hard quantify and define from the point of view of city users has represented one of the challenges that I gladly accepted, as I strongly believe that the platform offered by technologies to collect this kind of data is starting to make it possible. That is if we concentrate, when developing our cities, some of the energy invested in efficiency, on more soft matters of the mobilities (the experience of pedestrians on the move, the serendipity of a route and so on). It is true that in the stream of big data that is coming along with the emergence of technology we lose sight of the "slow data" (Townsend, 213:319), but it is this slow data, coming from the city users, the pedestrians, that has the power to change a mobile behaviour.

Pedestrians have various way of behaving while they are on the move. They rush, they enjoy the environment, they walk on the sidewalk or on the car lane if the sidewalk is too narrow, they jaywalk and they walk through public and private spaces.
I have designed beautiful paths that equally go through public (streets, squares, etc.) and private (courtyards) spaces. This means that some of the beautiful paths proposed have attached to them urban gems that are available only during the day, as most of the courtyards close down their gates during night time. Leaving aside that, people also do not feel encouraged to walk in a space, when there's a huge private sign standing at the entrance. Nevertheless, I saw it as important to consider the courtyards in my project, as they represent contrasting landscapes when put in comparison with the rest of the city, spaces that contribute to the diversity and dynamic of a route. I considered the dialogue between the public and private spaces a coherent one. Considering a transparent delimitation between the two types of spaces, I have opened the courtyards for the pedestrians and welcomed them in.

The courtyards represent some of the spaces where people are invited to walk through in Aalborg centre. But the new offered possibilities of walking are not endless. The size of the site has imposed some limitations on how many beautiful routes I can actually generate. With a limited number of gems and a small space, at some point it is hard to generate new exciting routes for walking each time. The mobile technology designed could function even better in a more dense and large scale, where a pedestrian can feel even more encouraged to act as a tourist in his own city and explore more.

Process

The scale is an issue that was not only important when related to the site scale, but also in the data collection process. In general, there is no right number when it comes to how many answers are necessary in order to start getting a general valid understanding of the object that is evaluated, but the more the better. Having only around 100 respondents on the survey and 8 participants in the focus group interview was not enough in order to start producing general and holistic knowledge.

Nevertheless, most of the theoretical hypotheses got confirmed in the data collection process. It has been shown in the methodology chapter that the survey did have almost double visits, which means

that there were some issues related with that. A slow website and phone platform, lack of commitment from the respondents might be some of the explanations behind that.

After collecting the data, I have started to build up the beautiful paths. Having three factors influencing the process of building beautiful routes (zone ranking, complexity and mood) was challenging, as the set of rules created should be further investigated, in order to not generate paths with errors (for example, make sure that the route is oriented towards the destination and not going the opposite direction).

Future perspectives

In order to say that the paths generated are successful, it would be optimal for these to be tested, along with the mobile technology designed for the purpose of this thesis, but this represent a further step in the process.

Another future approach can be given by further investigations related to the route length and the pleasantness of it. As it has been seen in the theory chapter, Westerdijk's study (1990) puts the two route choice factors in comparison and he finds out that people are willing to walk 160 meters more for an extra point on the scale of pleasantness. And as they walk more, the chances to explore get higher. A longer distance towards a destination is also increasing the chances for a pedestrian to explore more.

Along with the modernism in urbanism, the city user driven by efficiency has emerged. Schedules and time pressure seem to rule his life in the city, but in urbanism it is also about discovering the city. The bigger the city, the higher the maze quality of it. That is where the drifter can prospere, by taking a new route almost every day, enjoying the urban environment, building a relationship with it and escaping efficiency and routine.

LIST OF REFERENCES

Batty M. 2012. 'Smart cities, big data'. Environment and Planning B: Planning and Design, 39(2):191– 193

Borgers, A., Timmermans, H.J.P. 1986. City Centre Entry Points, Store Location Patterns and Pedestrian Route Choice Behaviour: A Microlevel Simulation Model.Socio- Economic Planning Sciences, 20/1:25-31

Brabham, D. 2013. 'Crowdsorcing'. MIT Lab Press

Castells, M. 2004. 'Space of flows, Space of Places: Materials for a Theory of Urbanism in the Information Age'. In: Graham, S, ed. 2004. 'The CybercitiesReader'.Routledge

Coser, L.A. 1977. 'Masters of Sociological Thought: Ideas in Historical and Social Context'. Second edition, New York: Harcourt Brace

Flaneur Society. 2014. 'A guide to getting lost' [online]. Available at: <http://flaneursociety.org/guide.pdf> [Accessed May 2015]

Gehl, J. 2010. 'Cities for people'. Island Press

Gehl, J. 2011. 'Life between buildings'

Guo, Z., Loo, B.P.Y. 2013. 'Pedestrian Environment and Route Choice: Evidence from New York City and Hong Kong'. Journal of Transport Geography, 28/4:124-136

Hamid, S.A., Jensen, O., Andrade, V. 2012. 'Signs in Place: Choreographing Travel Flow in Urban Spaces'. Spaces and Flows – An International Journal of Urban &ExtraUrban Studies, 2/3:115-128

Hector and the Search of Happiness. 2014. [DVD]. Peter Chelsom. Great Britain: Relativity Studios

Hoogendoorn, S.P., Bovy, P.H.L. 2004.'Pedestrian route-choice and activity scheduling theory and models'. Transportation Research Part B, 38:169–190

Jacobs, J. 1958. 'Downtown is for People'. Fortune Classic Magazine [online]. Available at: <http://fortune.com/2011/09/18/downtown-is-for-people-fortune-classic-1958/> [Accessed March 2015]

Jacobs, J. 1961. 'The Death and Life of Great American Cities'. Random House Publishing, New York

Jensen, O. 2013. 'Staging Mobilities'. International Library of Sociology. Routledge

Jensen, O. 2014. 'Designing Mobilities'. Aalborg University Press

Jensen, O. 2015. 'The will to connection: a research agenda for the "programmable city" and an ICT "toolbox" for urban planning'. in Silva, A. Sheller,M. 2015. 'Mobility and locative media. London:Routledge. p. 224-237

Kaminska, A. 2007. ' The Aesthetics of Human Environments'[Review]. Public Journals. Available at: <http://public.journals.yorku.ca/index.php/public/article/viewFile/30272/27806> [Accessed March 2015]

Kiib, H. 2007. 'Harbourscape'. Aalborg University Press, Aalborg: 25-32

Lynch, K. 1981. 'A Theory of Good City Form'. MIT Press

Macauley, D. 2000. 'Walking the city: An essay on peripatetic practices and politics'. Capitalism Nature Socialism. Volume 11, 4:3-43

Marling, G. 2003. 'Urban songlines. Hverdagslivets drømmespor'. Aalborg Universitetsforlag
Montgomery, C. 2013. 'Happy City: Transforming our lives through Urban Design'. Penguin Publishing, UK

MIT Media Lab. 2014. Place Pulse [online]. Available at: <http://pulse.media.mit.edu/> [Accessed April 2015]

Nasar, J. L. 1994. 'Urban Design Aesthetics: The evaluative qualities of building exteriors'. Environment and Behavior, 26:377-401

Oxford Dictionaries. 2015. Oxford Dcitionaries Online. [online] Oxford University Press (UK). Avaialble at: <http://www.oxforddictionaries. com/definition/english/> [Accessed April 2015].

Peterson, G.L. 1967. 'A Model of Preference: Quantitative Analysis of the Perception of the Visual Appearance of Residential Neighborhoods'. Journal of Regional Science, 7/1:19-31

Quercia, D. 2014. Happy Maps, TEDTalks. Available at: <https://www.ted.com/talks/daniele_quercia_happy_maps?language=ro#t-55233> [Accessed December 2014]

Quercia, D. O'Hare, N. Cramer, H. 2014. ' Aesthetic Capital: What Makes London Look Beautiful, Quiet, and Happy?'. CSCW [Conference Paper]. Available at < http://labs.yahoo.com/publication/aesthetic-capital-what-makes-london-look-beautiful-quiet-and-happy/> [Accessed March 2015]

Sallé-Osselin, G. 2012. 'The Flaneur. An updated urban experience'. Master Thesis. Design Academy Eindhoven. Available at: < http://issuu.com/gabrielle24/docs/binder1/5?e=0> [Accessed May 2015]

Schlossberg, M., Agrawal, A.W., Irvin, K., Bekkouche, V.L. 2007. 'MTI Report 06-06: How far, by which route, and why? A Spatial Analysis of Pedestrian Preference'.Mineta Transportation Institute, College of Business, San José State University

Simmel, G. 1994. 'Bridge and door'.Theory, Culture & Society, 11/1:5-10

Stephen, B. 2013. ' In praise of the flaneur' [online]. The Paris Review. Available at: < http://www.theparisreview.org/blog/2013/10/17/in-praise-of-the-flaneur/> [Accessed April 2015]

SkabdinBy. 2012. Skab din by [online]. Available at: <http://skabdinby.dk/> [Accessed April 2015]

Solnit, R. 2001. ' Wanderlust: A History of Walking'. Penguin Books

Speck, J. 2013. 'Walkable City: How Downtown Can Save America, One Step at a Time'. North Point Press

SpontaneousInterventions. 2015. Serendipitor [online]. Available at: <http://www.spontaneousinterventions.org/project/serendipitor> [Accessed March 2015]

Sullivan, K. 2010. Baudelaire and Beauty [online]. Available at: < https://nyuflaneur.wordpress.com/2010/09/28/baudelaire-and-beauty/> [Accessed 1 March 2015]

Townsend, A. 2013. 'Smart Cities: Big Data, Civic Hackers, and the Quest for a New Utopia'. W. W. Norton & Company

Urry, J., Sheller, M. 2006.' The New Mobilities Paradigm. Environment and Planning A2006, 38: 207-226

Vannini, P. 2010. 'Mobile Cultures: From the Sociology of Transportation to the Study of Mobilities'. Sociology Compass, 4/2: 111-121

Weber, M. [1904]1949. "Objectivity in Social Science and Social Policy" in Shils. E.A and Finch, H.A. (Eds. and trans.). The Methodology of the Social Sciences. New York Free Press.

VisitDenmark. 2014. 'The marguerite route' [online]. Available at: [http://www.visitdenmark.com/denmark/attractions/marguerite-route> [Accessed May 2015]

Westerdijk, P.K. 1990. 'Pedestrian and Pedal Cyclist Route Choice Criteria - Working Paper. Institute of of Transport Studies, University of Leeds, UK

Whiston Spirn, A. 1998. 'The Language of Landscape'. Yale University Press

Wrights&Sites. 2006. A Manifesto for a New Walking Culture: 'dealing with the city'. Performance Research, Issue 11.2

LIST OF ILLUSTRATIONS

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Illustration pg. 107 https://farm9.staticflickr.com/8392/8453074741_0909f25e77_o.jpg (edited)
Illustration pg. 107
http://upload.wikimedia.org/wikipedia/commons/a/a2/Mount_Evans_and_Denver_skyline_from_City_Park_Golf_Course.jpg (edited)

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