Promoting physical activities in urban landscapes

A case study of Rosenholm, Karlskrona, Sweden

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Master thesis, 30 ECTS

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“We ought to plan the ideal of our city with four considerations. The first, as being the most indispensable, is health.”

Aristotle, Politics (ca. 350 BC)

“We shape our buildings; thereafter, our buildings shape us.”

Winston Churchill

“The best time to plant a tree was 20 years ago. The second best time is now.”

Chinese Proverb

Forewords
Thank you...
Abstract
Sedentary lifestyle means less normal physical activity, less fitness among the population at large. This may lead to lower health, increased risk of cardiac disease. Less fitness also influences the psychological state of mind, leading to lower self-esteem. To remedy this, more physical activity should be encouraged among the people. To these physical and psychological needs the fact that more and more people live or are in daily contact with cities is added, which means the urban landscapes play a role in motivating physical activity.

Different urban landscapes affect the motivation in different ways. This thesis investigated how physical activity is affected by urban landscapes socially, environmentally, economically and by policies, and how to implement a multifunctional exercise area in Rosenholm, Karlskrona, Sweden. Methods such as literature review, interviews, site analyzes and case studies were made in order to get promote theories based on research to design an “Innovative Complete and Optimal Training-track” in Rosenholm together with a development group initiated by “Blekinge Health Arena”.

Motivating physical activity can be promoted by measures belonging to the field of urban design, by taking physical, economic, social and cultural factors into account together with policies in all levels. Policymaking is an essential way to increase physical activities among the population and to affect the built environment, which is discussed in this thesis.

In order to promote physical activities in urban areas there is no simple solution to apply in order to get results. There is no design to fit them all. Simply creating good opportunities to perform physical activity by means of urban landscapes cannot solve the fact that the public health is decreasing by lack of physical activity. This is as much, if not more, a matter of motivation and change in behavior. But in order to get motivation and to change behavior an environment offering opportunities and possibilities to perform physical activity and at the same time offers socializing is a good start. There are so many dimensions and aspects that need to be considered and are specific in each and every case.

A design proposal was made in the Rosenholm case study where various aspects discussed in this thesis were considered displayed by maps, renderings and images.

Keywords: Rosenholm, Urban Health, Social Sustainable Interactions, Physical Activity, Supporting Environments, Mobile Places, Team Spirit, Urban Exercise, Urban Design, Spatial Planning
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Introduction

Public health and planning

Physical activity is a prerequisite for health and wellness. The human body needs movement to function optimally through life and be resistant to diseases. In the past physical activity was included as part of everyday life but that is not the case anymore. The pattern has changed, as the society is progressing we become more and more still sitting. Convenience leads to clever solutions to streamline daily activities such as dishwasher, washing machine, remote controls, elevators, etc. This together with a sedentary job and increased use of motorized transports means that about 30-40% of the population does not meet the recommendations for physical activity (Schäfer Elinder & Faskunger, 2006).

Sedentary lifestyles are today the fourth most common reason to premature death (Faskunger, 2013, s. 29).

A lifestyle with a more sedentary pattern is globally widespread in developed countries today and great efforts are needed in the society in order to break the trend. Authorities as well as individuals have to strive for a common, goal where attractive and supportive environments for physical activity out compete the passive entertainment available, in order to make physical activity enjoyable and pleasant instead of a thing that must be done to be healthy (Schäfer Elinder & Faskunger, 2006). Physical activity has to return to a daily routine of the people, something you do without thinking about it.

Swedish authorities presented in 2001 the new recommendations for physical activity for adults. “All individuals should, preferably every day, be physically active for a total of at least 30 minutes. The intensity should be at least moderate, such as brisk walking. Additional health benefits can be obtained if increased beyond this daily amount or intensity.” Note that this is the lowest level of physical activity recommended (Nordiska Rådet, 2004).

For children the recommendations are higher. “At least 60 minutes of physical activity every day is recommended. The activity should include both other capital moderate and strenuous activity”. (Nordiska Rådet, 2004). Today statistics display that the amount of children aged 6–16 walking or cycling to school is decreasing (Linell & Richardson & Wamala, 2013, s. 26).

The minimum energy consumption should be 1000-2000 kcal/week, which is reached by 30-60 min physical activity/day, 1000 kcal/week are reached by 8 km of biking in normal speed or 3 x 10 min of speed walking per day. Only half of the grown up population seem to reach these set goals (Faskunger, 2013, s. 11) (Linell & Richardson & Wamala, 2013, s. 26).

The tendency today is though that fewer and fewer children walk or cycle to school and at least one third of the adult population exercises less than 30 minutes every day (Linell & Richardson & Wamala, 2013).
Research in the field shows that the physical environment has a major impact in terms of motivation to exercise or not (Schantz, 2006). There are both internal and external factors affecting our physical activity.

Examples of external factors include the proximity of the stadiums and parks, costs, weather, etc. Two examples of objects that are likely to stimulate physical activity are jogging trails and bike lanes while noise and littering can have the opposite effect. Internal factors affecting physical activity include age, gender, perceived time pressure, interests, motivation, etc. (Schantz, 2006).

**Performing physical activity**

Physical activity is one of the eleven objective domains created by the Swedish National Institute of Public Health in order to improve the public health (Linell & Richardson & Wamala, 2013).

Research in the area of exercising is today showing that performing small doses of physical activity throughout the day can reach similar results as the traditional way of looking at exercise when a tough consisting workout session per day was prescribed (Faskunger, 2013, s. 23). This widens the motivation and the accessibility to people to perform physical activities knowing the exercise matters.

WHO, World Health Organization, is every fourth year making a study on school children’s health habits, Health Behavior in School-aged Children = HBSC (WHO, 2014). Their survey from 2005/2006 indicates that the most common activities among children and youths are watching television or videos and playing computer games (Schäfer Elinder & Faskunger, 2006).

Promoting physical activity in order to improve public health is today a common method by authorities worldwide. Lately research has shown that to further increase the public health targeting groups of people with a certain pattern of physical activity is a must. For instance people with a medium risk of cardiac diseases are easier to motivate than people with a high risk often depending on existing physical health (Faskunger, 2013, s. 24).

**Organized sports and Spontaneous sports**

Social development during the 1900s has meant that more people choose to settle in urban areas. According to Statistics Sweden (SCB), in 2005, 85.1% of the Swedish population lives in urban areas. With urban referred contiguous buildings with a maximum of 200 meters between houses and with at least 200 inhabitants (SCB, 2013).

During the Swedish urbanization sport was developed to one of our largest popular movements (Johansson, 2006). In the outskirts of cities recreational areas and sports facilities were built. Urbanization meant that people came to live closer together and it created a clearer boundary between leisure and work. The proximity between people with more leisure time increased the interest of growing and spreading team sports.
Sports can be divided into two different forms; organized sports and spontaneous sports. Organized sports are based in sports clubs and are often competitive. Spontaneous sports are practiced by your own rules either with friends or individually. Organized sports have more rules and greater demands on the design of the physical environment while spontaneous sports can be practiced anywhere at any time, adapted to personal wishes and temporary conditions, making it more flexible. Rules are created from existing conditions and available resources and all kinds of means are used to enhance the sport on this particular day (Blom K Arne, 1995).

Sports Professor Lars-Magnus Engström (2004) has in a report highlighted that the number of young people in sports and physical activity in overall has declined from the 1960s to 2001, and is still decreasing. Spontaneous sports have been drastically reduced partly because more people are involved in organized sports and partly because less people are physically active. More people find it boring to perform physical activities in spite of the broader knowledge regarding the positive effects of physical activity.

**Summary of the introduction**

Today’s society has changed over the last decades where many infectious public health diseases have decreased, life expectancy has increased, the material standard is higher and our lives are less strenuous. But development has also led to lifestyle diseases due to physical inactivity, poor nutrition, use of tobacco and hazardous use of alcohol. Unhealthy lifestyle habits can have negative consequences for the individual and lead to increased social costs like health care and social security. There are however good opportunities for the community to contribute to creating health promoting and sustainable environments which will help people to a healthier lifestyle. There is both international and national research supporting the fact that changing the living environment affects people’s living habits.

**Conclusions from the introduction**

The daily conditions for a healthy lifestyle need to be improved so that they support changing lifestyles and ensured physical activity may involve access to parks and natural areas and facilities for exercise and sport. This might be done by improving paths and jogging trails so that they are accessible to all. Being active in the outdoor environment is linked to factors such as proximity, availability, variety and perceived safety and security (Statens folkhälsoinstitut, 2013).

**Aim of the thesis**

The general question in focus is how an individual’s physical activity is affected by urban landscapes. This is investigated in a literature review. The specific aim of this thesis is to design a multifunctional exercise area in a specific site, and discuss how its wider effects can be anticipated.

To aid that, cases have been studied in municipalities nearby and internationally.
Research questions

- How do urban landscapes affect individuals’ physical activity by means of exercising and social interaction in the chosen site?

- How can the urban landscape be outlined in a selected site like this in order to make it an attractive and multifunctional place to motivate and perform physical activities?

Method and materials

The method for this thesis was based on a qualitative philosophy. Phenomena and processes were studied rather than results and a finished product (Backman 1998, p. 48). The author is near the object during times of writing the thesis and the social reality could thereby be analyzed (Bryman 1997, p. 59). Research design used in this study consists of a case study, which is presented below more in detail. To study the previously stated purpose both an explanation and understanding have been sought after, whereupon the thesis deals with both positivistic and hermeneutic theories and data.

The location of the case study area is located in Rosenholm, Karlskrona, Blekinge. A case study may consist of one or a few survey units, such as an organization or a project (Halvorsen 1992, p. 67-68). The author was interested in the processes that exist and how to develop or progress by using the specific site as an example. According to Backman (1998, p. 49) the case study is based on that a researcher investigates a contemporary or historical phenomenon in its real context. The main reason why Rosenholm was chosen to be studied was the connection to a real project focusing to develop the area promoting physical activity which suited the purpose of this thesis.

The literature review and the site analyzes were the main sources for collection of the empirical data. The large amount of data available can be difficult to understand and process because the difficulty knowing what primarily should be addressed. Research in the field and theoretical stand points were helpful and therefore the literature review was performed during the whole time of writing this thesis and was placed as the foci point of the thesis. Allowing theories to merge together with the case study was time consuming and therefore an analytical overview was not obtained until when designing the specific case. Qualitative research results are more complex to present than pure quantitative research results. The analyses were therefore presented primarily in text supported by images to support the material and provide greater insight into how the area was perceived and looked like. The analysis was based on the author’s own subjective perceptions, which will be further discussed in the method critique.

Choice of methods

A broad approach of different methods was used in the thesis in order to obtain a qualitative and diverse view of the specific case study area.
1. Literature review.

2. Interviews. There was also a qualitative collection of empirical data through different types of interviews and conversations. Endeavour has been to obtain a broad basis with the voices of various influencers and performers. Interviewees were participants of the meeting regarding developing Rosenholm initiated by Blekinge Health Arena, and physical activity performers in Perth and Malmö.

3. Site analyzes. To complement the qualitative methods quantitative spot analyzes were carried out in order to get inspiration, although these also included qualitative parameters. Initially observations and mapping were in focus (Bryman 2009) that included some documentation and inventory of the site relevant to the thesis. Site analyzes were made at Perth and Malmö and at the specific case study of Rosenholm, where the physical design of the site were analyzed. The site was then evaluated and connected to theories discussed in this thesis.

4. Case study. The use of case studies in urban planning is seen as a helpful tool to get reality based knowledge evaluated in a particular case (Nyström & Tonell 2012, 79). The case study in this thesis is Rosenholm, where conclusions and theories from the literature review and inspirational studies will be implemented in the design proposal.

**Literature**

In order to give a background of the main issue for the thesis, a literature review was conducted upon the anticipated effects that urban landscapes have on the human body and the social interactions. The Swedish book “Fysisk aktivitet och folkhälsa” (“Physical activity and public health”, my translation of the title), written by Johan Faskunger, was used as a reference of how the urban landscapes affect us as we know of. Furthermore literature was reviewed and discussed that varies from scientific books to articles that integrates different use of space together with the social aspects of physical activity.

By studying theories, methods and models from different places around the world, a coherent evaluation was obtained in order to present a concept design that will contribute to a suggestion on expanding the specific site that is investigated in this paper.

In order to design a new multifunctional concept on the chosen site, knowledge about physical activity, motivation and social interaction was needed. Articles about the exercising in various forms in urban landscapes worked as a foundation in order to find a suitable design for the specific site, together with articles about strategies, both policy making and physical implementations.

Finally, literature regarding historical movement regarding physical activity and public spaces was considered in order to design a space for physical activities, regarding layout and functions in the new design on the site.
**Case study**
The case study consists of one case, introduced by Louise Stjernberg (2014), researcher and lecturer at BTH with a PhD in medical science and specialized in physical activity, in cooperation with Blekinge Health Arena in Rosenholm, where a new design will be created. In order to investigate, compare and get background data of the implementations for this case several other sites, both Swedish and international have been used as inspiration. An analysis of motivating and unjustified qualities was conducted and of existing and anticipated problems that afflict the site in the future, regarding social and exercising changes, and opportunities to develop the site further and attract a broader spectrum of people exercising on this site.

To study the case of Rosenholm, a site visit was done at the end of March 2014. The author also participated in a planning meeting with officials concerning development of the site.

**Inspiration studies**
As background a historical article about China and Beijing was used. The article focused on the connection between sports at the grassroots and urbanization in China and in Beijing. As the urbanization in China started later than in western countries the connection could be evaluated as the lack of physical activity has become a threat against public health in modern time.

In order to “think outside the box” Perth was chosen as an inspiration site since it differs much from the Swedish cities regarding climate, geography and culture etc. Perth is also a city founded relatively late and is built as a modern city applying theories about how to plan for physical activity in urban landscapes. Moreover Australia is one of the leading countries in researching about physical activities.

To get some inspiration from a Swedish city with about the same geographical position and climate as the selected site Malmö was chosen. Malmö, the main city of Scania, also has the economical means to be able to invest in promoting the physical activity.

In order to be inspired the author did various forms of exercising by himself in both cities in order to be able to compare them. Furthermore the author had qualitative conversations with a person performing urban physical activity randomly chosen in each city. The author chose to make it more of a conversation than an interview in order to let the interviewee speak from the heart. After the interviews the author wrote down notes of what he thought was important for this thesis at that moment.

**Selection**
As exercising has become a fad in media nowadays, the cities gladly inform about where they have created spaces for various physical activities, and therefore it is easy to check them out. The author tested some cities himself in order to get inspiration. The author gathered all the data that was relevant for the study
himself in order to not rely on any secondary sources. But other sources were also necessary. More important cases similar to Rosenholm was sought after to be able to sort out good qualities and use them in the design.

Inspiration studies were made in two different cities, in order to explore and compare theories and actually experience the physical surroundings by the author himself site visits were made. The cities were sought after to be different in various aspects, such as climate, geography and city planning. Therefore the author went to Perth, Australia, and compared it to Malmö in Sweden.

**Critique**

The main critique of the qualitative research process is that it is difficult to remain entirely external and objective during the observation because the process is dependent on the observer’s subjective interpretation in the analysis (Backman 1998, page 53). This results in great demands on the observer, and the difficulty lies in understanding things the way that others perceive them (Bryman 1997, p 90). Although observation is appropriate when the study concerns small groups or individual projects, as in this thesis, usually these observational studies can rarely be standardized or generalized. Critics argue that the result therefore only is valid for the study area (Flyvbjerg 2006). Case studies are also seen to lead to a projectification of places where they are seen as closed in space and time (Engwall 2002), instead of spreading the knowledge and be seen as a whole, and context, which is not associated with sustainable development. Theoretical knowledge is more valuable than practical knowledge some researchers argue against case studies. Generalization cannot be made from a specific case is another critique meaning that the case study method can only be used to develop hypotheses, whereas other methods are better to use when testing hypotheses and forming theories. Case studies also have the researchers evaluated approach to verification and they are difficult to summarize because they are fundamentally based on stories. Despite this, the case study is considered as a good tool for building knowledge in urban planning. The case study is a necessary and sufficient approach for certain cases, research in social science and its method stands up well compared to others (Flyvbjerg 2006).

When it comes to reliability in this thesis it was sought after to be high. It was mainly influenced by the conduction of the literature review, perception of how true the sources was and how they have been interpreted. Mainly, this consisted of literature from Johan Faskunger among others and scientific articles with a high reliability, from a critical perspective. Another thing that affected the reliability was the choice of methods. More qualitative interviews and more review of inspirational examples of similar projects had been able to bring additional dimensions to the study.

Finally the validity of this thesis was discussed. To some extent this has been the weakness of the thesis, as the qualitative research isn’t based on a highway to a clear goal (Backman 1998, p. 48). Instead, this comprises an open process that can change direction with time, as this thesis has done. An overarching goal was to distinguish what might give new input to motivate performing physical
activity with the help of case study and theory while the various methods succeeded each other in a way that gave rise to new ideas and knowledge in the progress. The research questions were considered answered based on the premises stated in this thesis. The fact that further research is needed was not seen as something negative but rather as a part of the whole, which has been clarified in this thesis.

Study area

![Figure 1: Sweden, Europe, map modified by author (Runespace, 2014).]
Figur 2 Sweden, Blekinge county, Karlskrona, map modified by author (Sveland djurförsäkringar, 2014).
Figur 3 Karlskrona city center at bottom left and Rosenholm indicated by the red dot at the top (Google, 2014).

The study area in this thesis is in Rosenholm, a suburb of Karlskrona, in Blekinge municipality, Sweden. Karlskrona is located in the southeast part of Sweden and was once built to be the new capital of Sweden due to its geographical location when trading over the Baltic Sea. The site is located a little less than 7 km from Karlskrona city center. The closest bigger towns north over are Kalmar (70 km NE) and Växjö (93 km NW). Otherwise Karlskrona is well connected west towards Malmö (177 km) and Copenhagen (200 km) by train connecting through bigger towns such as Ronneby (23 km), Karlshamn (50 km), Kristianstad (93 km). Distances are measured as a straight line from the center of the town of Karlskrona. Moreover Karlskrona is connected to Gdynia, Poland, through daily ferries (Eniro, 2014).

Rosenholm is a former military venue and later between 1984 and 2000, a site for the Karlskrona coastal artillery regiment (KA 2). Rosenholm has recently been converted into athlete facilities. The biggest arena in the area is “Telenor Arena Karlskrona” which is much related to the Rosenholm area. The venue has many opportunities for sport, health and other activities. It is a mixture of sport,
including schools, Swedish sports movement study affiliates (SISU), military, corporate and museum. It also contains Blekinge Health Arena with various development opportunities. The entire venue is designed to be accessible for disabled visitors. Most facilities in the arena area are managed by the municipality in cooperation with unions. Facilities include among others an outdoor gym, jogging tracks, badminton hall, boule courts inside and outside, gymastics including a hall of mirrors, an indoor gym including a weight training room, ice rinks, artificial turf field, running and walking trails, tennis hall and outdoor courts (Karlskrona kommun, 2014).

Rosenholm is well connected to the city center despite the distance of approximately 7 km. Bike paths are easy to follow and buses run three times per hour during daytime. But most of the activities that are being performed at Rosenholm require that proper gear is brought and therefore car is the easiest way to get there. Furthermore to go here self-propelled and back will be hard to motivate if a car is available due to the fact that people come here to exercise. They don’t want to get tired on the way there and might not have the power/motivation after exercising.

**The effects of urbanization illustrated by a Chinese example**

In order to understand the meaning of physical activity, how it was motivated before, today and what is expected to happen in the future, a short review of the historic progression in China was made. Since China’s cities were modernized later than for example the European ones Huan Xiong (2007) was able to make conclusions on how physical activity (sport at the grassroots) was affected by the modern city and the government.

Xiong (2007) writes that there is a strong connection between the Chinese people’s participation in sport and the Chinese urbanization since the 1980s. The
Chinese urbanization has affected the people economically, politically, geographically, demographically and culturally. He also argues that the market oriented principles played a major role when different social institutions came together towards modernity. All of this together made a serious change for the Chinese sport at the grassroots within four dimensions: policy, concepts, forms, and space. Xiong (2007) underlines that these four parts are incredibly connected to each other and a change in one of them indirect affect some/all of the others.

When entering the 1990s Xiong (2007) writes that the sports policy has legislated for mass sport and has also taken people’s own needs into account. Mass sport was earlier forbidden in China since the government saw it as a possible revolt. According to Xiong (2007) this created an institutional environment for a new era in Chinese sport. He further underlines that the foundation of this change was in fact the Chinese people themselves and the human body’s need to be wealthy. The change was needed in other words to be able to live a good life, by exercising and socializing with fellow people.

Before continuing Xiong (2007) writes about the importance of the freedom it meant for the Chinese people that the transformation of institutional structures in Chinese cities took place. This was crucial for the Chinese people to be able to achieve their demands for sport. But as important according to Xiong (2007) was the rearrangement of the physical structure in the cities. This meant accessibility for the people to be able to perform different kinds of physical activities. “With integral forces initiated from urbanization, Chinese sport at the grassroots has been transformed by the introduction of privatization, diversification and commercialization” (Xiong, 2007).

Xiong (2007) furthermore writes about the reform era that occurred after the pre-1980s era. In this new era the Chinese individuals felt they could make their own choices rather than being steered by the government. Xiong (2007) also connect the reform era including the urban development with the encouraged motivation of the Chinese people to pursue their own interests and fulfillment through sport. Factors rising from the reform era such as a more diverse, vivid and free sports climate made sure the amount of “exercising people” kept growing according to Xiong (2007). Ibid states that generally the sport at the grassroots in China has improved in this developing stage. Some of the biggest problems are though “a lack of funding to sponsor mass sport, especially sport in the rural areas, unequal leisure time of social members, a lack of economic capacity for consumption among urban citizen with low income, the unequal development of rural and urban sport, and the self-organized sports group lacking in regulation” (Xiong, 2007). But Xiong (2007) is also convinced that the urbanization will keep driving Chinese sport forward in the 21st century.

Then Xiong (2007) takes up the, at the time of writing, upcoming hosting of the 2008 Beijing Olympic Games. He saw it as a golden opportunity to promote sport in China, not only organizes sports but sport at the grassroots too. Xiong (2007) was convinced the newly constructed sport facilities would solve some of the problems including lacking sports equipment after the Olympic Games, creating
a channel from different resources focusing on the Chinese sports system and administration, encourage the Chinese people to perform physical activity by being motivated by the games and/or an competitor, promoting sport amongst the people as it will be spoken about and will enrich the social life.

This was what Xiong (2007) thought would happen before the Olympic Games: “Olympic Games will advance cultural exchange of Chinese people and people from the other countries in the field of sport. Through this culture bridge China can learn experiences of sports development from the other countries. And finally, Olympic Games will also contribute to an overall development of Chinese urban societies and Chinese sport will be further transformed by the interplay of the elements that comprise the process of urbanization” (Xiong, 2007).

Conclusion: the urbanization in China has directly and indirectly affected the Chinese people’s urban life including physical activities. The cities have grown intensively both in size and scale to be able to host the increasing urban population and the economic, political and cultural functions of the Chinese cities have changed during the urbanization (Xiong, 2007).

**Inspiration studies, Perth vs. Malmö**

As Perth was chosen as one of the inspiration cities a trip there was made by the author in order to gather information and experience it for himself in February 2014, including an interview with the local road biker Paul Claesen (Claesen, 2014). And in order to get distinct diversities in solutions I compared it to Malmö, where the author has spent a lot of time during writing this thesis. In Malmö an interview was done with the local outdoor yoga exerciser Maria Bolin (Bolin, 2014).

In Perth the climate is warm and dry with hot summers and mild winters and most of the time a sunny sky is appearing throughout the year around, which indicates that Perth has a Mediterranean-style climate. It is easy to do outside activities all year around, but during the summer (which appears in the Northern hemisphere’s winter time) during the midday it gets very hot, especially in the sun (Bureau of Meteorology, 2013). Average summer temperatures range from 27-30 degrees Celsius during the day to 15 degrees Celsius minimum at night while the daily temperatures in winter range from 18-21 degrees Celsius to a minimum of 12 degrees Celsius at night. Therefore observations, which were made in summertime, indicated that exercising in public places was most common during the cooler mornings or evenings. Another big reason for this during weekdays is of course the fact that people work during the days. Claesen (2014) confirmed the observations and furthermore spoke of the variations in people exercising depending on the season. In Claesen’s words the “summer exercisers” are by far many more than “the true exercisers” he said.
Figur 6 The author is experiencing one of Perth’s many beaches in summer time.

In Malmö on the other hand the summer was yet to come when writing this thesis and therefore no fair comparison in observations could be done. In Malmö, which has a temperate climate, winters are shorter and milder compared to the rest of Sweden, which is said to have a temperate climate in overall but the climate type changes depending on location in Sweden, with an average temperature above 0 degrees Celsius, while daytime summer temperatures normally range from 15 to 25 degrees Celsius. The air is relatively humid, making warm days feel warmer and cold days colder. Precipitation is more or less common heavily depending on globally created front systems (SMHI, 2014).

When speaking to Bolin (2014, personal communication) who was exercising in “Pilgrimsparken”, which is one of the main parks of Malmö city, she confirmed the relationship between physical activity outdoors and the climate. According to Bolin the same phenomena as in Perth can be experienced during the warmest summer days in Sweden when people choose to stay inside rather than getting exposed by the sun. Therefore the amounts of people exercising in public places in Malmö fluctuate, as does the weather and temperature in Sweden. Maria claims that most people in Sweden choose to perform physical activities indoors, probably because of the unreliable weather in Sweden and therefore might feel insecure to exercise outdoors and moreover outdoor equipment is needed.

In Perth free outdoor gyms popped up near all parks and recreation areas when moving through them. They were well connected by paths for pedestrians and bikers and also along these paths outdoor gym kept popping up. It was an interesting mix of people using them including elderly, parents, young, bodybuilders, beginners etc. Many of the outdoor gyms seemed to be built for old people in order to use their muscles properly using very light weights. Claesen confirmed how accessible the outdoor gyms were, especially near the ocean where most of the people choose to perform their physical activities. In Malmö outdoor gyms are present as well, and they were easy to find online through Malmö city’s website. But they were not as connected as they were in Perth
where no Internet was necessary to find them. Most of the outdoor gyms in Malmö were free and in good condition. Although as Bolin said the weather plays a major role when going to an outdoor gym as it might be bad for the health exercising in precipitation or to cold temperature. Especially since in gyms resting periods are needed between repetitions in order to recover to optimize the training.

![Image](image1)

**Figur 7 Images of the the author testing one of the many outdoor gyms in Perth.**

The city of Perth furthermore provided the beaches and some parks with houses allowing people taking showers, cleaning things from sand and refill water. Water was drinkable directly from the tap and public taps were easy to find all over Perth. Similar to Perth, Malmö’s tap water is drinkable. But public taps were harder to locate, as were public service houses. Bolin wished for public changing rooms in some of the parks in Malmö.

As the surfing culture was very strong in Australia all kinds of boards could be seen everywhere. This is a great way to exercise! Unfortunately skate boarding was prohibited in some parts of Perth, but not many at all. Public skateboard ramps and pools were present in many multifunctional green areas around the city and they seemed popular and were in good condition. On this point Malmö and Perth were very much alike.

Perth’s parks were always containing some people playing cricket. The parks maintenance was focused on getting large areas with fine grass. This supported ball playing of all kinds and therefore supported physical activities. The parks were equipped with excellent barbeques that further made the parks very popular to spend leisure time in. The parks of Malmö were not as good taken care of as Perth’s and lacked barbecue equipment. But they were still excellent to perform physical activities in, in the right weather. Considering exercise running, generally speaking Malmö’s parks actually suited the author better than the asphalt paths of Perth´s parks when testing some of them.

All roads in Perth, even big high ways had a lane for bikers Claesen gladly said. Furthermore pedestrians and bikers had a lot of paths of their own, especially close to the sea where also most people preferred to exercise. On these paths there were no motorized traffic at all, beautiful scenery and relatively clean air. But regarding network of cycle paths, Malmö had an even better solution for the
bikers. Malmö has taken a lot after Copenhagen’s cycle path solutions, Copenhagen which is one of the most cycle friendly cities in the world.

According to Claesen (2014) and Pill (2014) the municipality owned all the roads from the ground up to five meters on both sides of the roads. This means there were always flat areas covered in grass or some kind of pavement that allowed people to get around without a car everywhere. It was also very easy to make sidewalks on this ground if the municipality wanted to. Malmö city has also chosen to not focus entirely on the cars and has excellent possibilities getting around without a car.
Literature review

The literature review has been divided into three main sections namely: physical activity, urban landscapes supporting physical activity and economical and political factors of society.

Concepts

Motivation: forces acting either on or within a person to initiate a behavior and may include the activating properties of the processes involved in psychological motivation. “Motivation is not typically measured directly but rather inferred as the result of behavioral changes in reaction to internal or external stimuli. It is also important to understand that motivation is primarily a performance variable. That is, the effects of changes in motivation are often temporary. An individual, highly motivated to perform a particular task because of a motivational change, may later show little interest for that task as a result of further change in motivation” (Petri, 2014).

Physical Activity; Physical activity is defined as any type of movement that increases energy expenditure (Schäfer Elinder & Faskunger, 2006).

Exercise: A dimension of physical activity which is planned and repetitive to improve physical fitness (Faskunger, 2013, s. 20).

Fitness: Is an indicator of the circulatory system’s working capacity and the function of the physiological components (Faskunger, 2013, s. 20). Better fitness is conductive to better health.

Physical activity

As stated in the introduction the lack of physical activity is becoming a threat against public health. This thesis will not further explain the biological impacts but will instead focus more deeply on motivation and behavioral change.

Motivating fitness

Faskunger (2013, s.27) writes that it isn’t enough to know that physical activity is healthy, we must also know how much that is needed in order to get motivated properly. The law of diminishing return can be associated where you gain most when starting from zero and gain less and less the more you evolve and intensify your training.
With that being said it is important to not just inform people that exercise is good, but how much that is needed to get the positive effects. And the law of diminishing return isn’t really the issue as it is based on people that are already doing physical activities. The diagram is an easy way to show people the gain from increased physical activity/increased intensity and by that motivate them. Faskunger (2013, s.31 and 39) underlines that research undoubtedly connect people with good fitness with a much lower risk of getting cardiac diseases than people with bad fitness. Furthermore he writes about research that indicates that physical activity in many cases help prevent cancer. These facts are also motivating ones to promote physical activity. Even though information is widely spread regarding the lower risk of getting cardiac diseases due to exercising throughout Sweden the result isn’t satisfying. The doctors are forced to ordinate exercise to many patients in order to provide for their health (Schantz, 2006).

Psychological health has also shown to be improved when increasing the physical activities according to Faskunger (2013, s.41). While Linell & Richardson & Wamala (2013) write that the physiological health is better in Swedish cities at the same time as the psychological health is worse compared to the countryside. Urban Swedes are more motivated to exercise which also in many cases improve the psychological health, but living in urban landscape itself affect many peoples’ psychological health in a bad way.

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**Figur 10** Diagram showing the relation between improved health (y-axis) and the amount/intensity of physical activity (x-axis), also known as the law of diminishing return. Diagram made by author, based on (Faskunger, 2013, s. 27).
The intensity of the same exercise is experienced as different intensity depending on the person performing it (Faskunger, 2013, s. 28). The important thing I want to underline here is that everybody has different need of physical activity in order to be healthy, which also means it is difficult with general rules regarding minimum physical activity for a person. This leads to another statement by Faskunger (2013, s 91) where he mentions that it is difficult to measure how physically active we actually are and compare it to others.

Physical activity leads to increased muscle mass that makes the body more solid and especially for old people that might save a fractured bone in a falling accident etc. The balance is also affected in a positive way according to Faskunger (2013, s.40). And as the population gets older it is important that the growing elderly population is in good health(s.145).

**Motivation through team spirit**

Groups of people need to generate a space in order to be seen as subjects. According to Aldred & Jungnickel (2012) this means that this can be linked to properties of moving objects in use. People are not seen as persons when moving in the form of performing physical activities, rather a moving ball etc. The social interaction with people not performing physical activities is in this moment decreased while it may connect individuals exercising at the same time. Khan (2009) writes that doing team sports are encouraged and have shown positive results generally when a person is growing up. But not all are a fit for teams though. In Sweden team sports are very popular and many teams exist throughout the country. Therefore it is important to enlighten the people that don´t like playing in teams about other forms of physical activities. And more importantly make it a choice as equally good as playing in a team (Blom K Arne, 1995).

Aldred & Jungnickel (2012) describe the team spirit by using their sport, cycling. They write that all participants are fundamental for each time specific group. Every individual actively creates and reinforces the group constantly throughout a team cycling session. Their discovering and socializing are encouraged when going to new places without the same individual fear of getting lost. Their exercising and team working skills are put to the test as team cycling is an elastic coordinated link of living movement as they constantly change positions to improve the overall time of the run. “The group intervenes in and manages multiple rhythms of the road, which shift as the group adapts to factors including cars, traffic lights, weather, skills, and fitness” (Aldred & Jungnickel, 2012). These movements create mobile public spaces that are moving around. Roads are transformed from spaces originally predetermined to be used for transport, into living enjoyable spaces used for socializing and leisure. The images of public space are transformed from the increasingly privatized and fragmented to the meeting arena it should be.

Group cycling is a good example of a mobile place according to Aldred & Jungnickel (2012). And the sociality depends on which group you join and local environments among others. As a group more distinct mobile places are created.
As a team the environment play a smaller role than the members of the team that sets the identity of this particular mobile place. Aldred & Jungnickel (2012) bring up the importance of rhythms when exercising in a group. They write how the rhythms often differ for a person when exercising individually compared to within a group. Also here the mobile place can be connected to this. Within a group a mobile place is created including a rhythm which all of the members in the group have created and affect together.

**Social aspects of mobile places**

Man is a flexible creature in nature (Kronenburg, 2007). We move, manipulate and alter objects and appear in a number of different environments. Not so long ago the human development depended on the ability to move and adapt, and these qualities made us survive as a species. Today most cultures include a resident life and sedentary living, but because of the recent trends in the global world flexibility is again an important factor. Transportation between two points has before been seen as meaningless and time consuming but has now changed. Today mobile places are a necessity because we are living mobile lives due to technology such as smartphones etc. New forms for an increasingly nomadic existence are derived for example from newly opened markets, internet and cheaper and faster transport. In a world that is more and more flexible and changeable it is required that the city can adapt to the outside world’s rapidly changing conditions. Mobile living is today of sociological importance and might culturally enrich places (Aldred & Jungnickel, 2012). Castells (2009) has written a journal article about mobile communication named “Communication Power” where he underlines the importance of flexibility, scalability and survivability in today’s mobile living. Information and networking are keys to human activities and organization (Castells, 2009). And nowadays we are able to keep communicating while exercising as smartphones are brought. The connections are seldom broken and so we always live connected in less spatial oriented relationships.
As many forms of exercising include transportation of the body, many mobile places are constantly created. Social identities are created and they vary depending on each mobile place’s unique qualities (Aldred & Jungnickel, 2012). Khan (2009) uses a more personal description as she refers the streets as her playground when wearing skates. “On skates the streets are my playground, rain, shine, summer, winter.” She doesn’t see skating as transportation at all. Khan (2009) writes that movement is not inherently functional. She describes it more as a connection to other people doing the same thing. According to her they are connected because they are in similar state of minds. That feeling somehow motivates the individual to do the physical activity. Xiong (2007) on the other hand underlines the importance of making the physical activity a personal choice. Before the mid-20th century in China physical activities were indirectly controlled by the government. Therefore the citizens felt that is was something

Figur 11 Factors affecting physical activity in various levels made by the author, inspired by (Faskunger, 2013, s. 164) and (Schäfer Elinder & Faskunger, 2006, s. 106).
they had to do instead of something they wanted to do. Khan (2009) points out a big difference though that probably is the difference between the previous statements; play and sport can be the same thing but play is not sport. In contrast to concepts of play and fun, sport is a more serious term and is used as a symbol of self-value (Khan, 2009). Gehl (1971) brought this question up already in the seventies where he did a simple distinguishing between necessary/functional activities, optional/recreational activities and social activities in public spaces in his book "Life between buildings". According to Gehl functional activities have to take place no matter what the environment looks like. Recreational activities have a lot to do with the physical environment including identity affecting how people feel about it, where a good place means more recreational activities occur also resulting in longer visits for both functional and recreational activities. In a successful social physical environment social activities also take place enriching all of the activities creating life in public spaces (Gehl J., 1971).

According to Faskunger (2013, s.10) to “move” has before been seen as the individuals own responsibility. A choice based on lifestyle that was personal and had nothing to do with the society. This is known as “victim blaming” and of course the individual has responsibility, but that is just one piece of the puzzle according to Faskunger. The interesting part for planners is how the built environment affects the motivation of individuals to “move” performing physical activities.

Aldred & Jungnickel (2012) write how mobile places are experienced different depending in which mode we are when creating them, meaning that the same street can be the base to an unlimited amount of different mobile places. And each and every one of the created mobile places may differ due to transportation, rhythm, mode, other people etc.

**Behavior and Behavioral change**

Faskunger (2013, s. 110-111) writes one chapter about changing behavior. He writes about one example where a person is motivated to increase physical activity but still the behavior doesn’t change. Changing the behavior is a process that is more complex than that and requires time. Research in the area also shows that many people have the wrong idea about their behavior towards physical activity and think they live healthy while in fact they aren’t. Motivation is a strong force according to Faskunger (2013, s. 112), but only for a limited time. Therefore motivation isn’t the solution in long term behavioral changes towards a more physically active life, changing the behavior takes longer time than most of the public health programs are scheduled for today. Faskunger (2013, s. 16) underlines the fact that the people that have the most still sitting lives today are the ones that would gain the most from becoming more physical active. But everybody, independent of lifestyle, will become healthier from physical activity. Faskunger further underlines that the exercise doesn’t have to be intense in order to increase the health.

Faskunger (2013, s. 22-23) brings forward research showing how half of the people that started to increase their physical activity quit within a few months.
He brings up two different ways to look at physical activity where one is intense exercise performed in the free time while the other is increasing the daily activities by, for instance, taking the stairs instead of the elevator. And research shows that increasing the daily activities by active choices is easier to maintain. Making active choices in the everyday life is easier to maintain partly because the active choices are present many times a day but also partly because they give small boosts when making the choices. The choices make people feel healthier in their everyday lives where intense exercising may require more dedication in terms of equipment, a specific time and a specific place. This correlates with what Carlson (2001) states in her article about changing a behavior towards a more sustainable lifestyle.

Physical prerequisites have a big impact regarding changing behavior. The easier it is to perform a deed, the bigger influence in people’s behavior (Carlsson, 2001). Besides physical prerequisites Carlson processes legislation and social norms as possible ways to change people’s behavior. Without regulation, people have no incentive to change their behavior. By introducing mandatory measures such as physical barriers, it may be possible to change behavior in everyday life. Social norms means "rules" and obligations as citizens follow even though they are not legislated. The strength of functional social norms is the desire and commitment to achieve a certain goal and behavior according to Carlson (2001). However, every individual knows that her individual behavior makes a little difference in the big picture. Social norms may therefore not be the answer to solve bigger problems. Thus, it is usually easier to change behavior if it is a small and homogenous group involved (Carlsson, 2001).

Although Carlson (2001) is in favor of changing social norms, she wants to downplay the role they can play in change and argues that reducing the thresholds and rates to ease doing "the right thing" is often a more successful method. It should be "easy to do right." When it is required that many change their behavior in order to change a situation and economic incentives are lacking, stricter legislation is seldom enough (Carlsson, 2001). Then it is a way to control creating positive incentives and markets that contribute to change. These instruments can also be designed so that faulty behavior instead is punished by for example a charge.

The conclusion is that the creation of standards and norms is not in itself effective enough to change a behavior that involves great effort or is cumbersome to implement for the individual. Policymakers have better chances to solve these problems if they see to that the change in behavior does not involve an effort of the individual, i.e., make it more convenient and accessible, or using financial incentives to change behavior rather than spending that money trying to influence and strengthen social norms. This is an important insight as to whether there is a change in how the systems look; individuals are unlikely to change their behavior themselves. There are many who know what is good and bad, but still think that it's not their problem here and now today, or that the little that each person contributes is too little to be able to give any difference to the big picture (Carlsson, 2001).
Urban landscapes supporting physical activity

The environment we live in has big impact on our daily lives regarding health. Physical activity is as stated before an essential factor to improve public health, so literature regarding correlation between physical activity and urban landscapes were reviewed.

Supporting environment

Linell & Richardson & Wamala (2013, s. 13) has done research showing how important the environment is for good health including level of education, employment, economic situation, access to health and medical care and surrounding living environments and living habits. And as physical activity is needed for good health the environment is equally important in motivating physical activities. Faskunger (2013, s.13) is convinced that to enhance the amount of people performing enough physical activity to be healthy and to reach groups that would never have been reached supporting environments have to be created. To change the trend from becoming more still sitting towards increase the daily physical activity is a big challenge. As a planner or an urban designer creating these supporting urban landscapes must be sought after.

People's involvement in a public place varies, depending on the stage in life they are in (Jergeby, 1996). In addition to age influences on location perception class membership, resources and material conditions have a significant impact on how people take on a location. These resources provide opportunities to utilize everyday environments, and thus also different social groups have different conditions to be able to do this. Increased availability is the democratic right to be able to move freely and to work in society, even for people with disabilities (Boverket, 2014). The difficult part of this however, is that everyone wants different things and have dreams and goals that differ. The national goal in Sweden is that the community must be accessible to all who reside here (Boverket, 2002, ss. 167-168). Although different factors come into play, as the physical and mental ability of the individual and the economic and social situation they are in, everyone should be able to control their own lives and thus live as independent a life as possible without being put in a tray or being excluded from what is offered in the community. However often the opposite happens, namely that certain groups’ needs and lifestyles are taken into account when planning, while others are excluded.

When it comes to the physical structure of a site the public space can be inviting and accessible, thereby encouraging residents and activities to move from the private to the public environment (Gehl J., 2006, ss. 113-120). Conversely, public space can be designed in such a way that it is harder to reach them, both physically and mentally. Depending on the relationship between the public and private places and the boundary between them places can be inviting or repellent. Heavily marked boundaries make it more difficult to get to a public environment in spontaneous situations. However flexible boundary zones, which are neither private nor public, rather act as a liaison and facilitating both physically and mentally to travel between sites. And as Gehl often states: people attract other people.
According to Xiong (2007) location and costs of the designated activity sites determine which kind of people using them. Accessible spaces must always be presented in urban landscapes to motivate physical activity. This is an important statement, which might be hard for a Swedish citizen to understand. In Sweden the public transportation in general is very good and all places within an urban landscape are often more or less easy accessible. But imagine if we didn’t have the public transportation and not enough money to buy a car. Then we would have to choose a physical activity that is doable in the near neighborhood. But what if the physical activities available in the vicinity are not attractive for you? Then physical activity will be a problem rather than something joyful and healthy.

Aldred & Jungnickel (2012) take up the motorized traffic that is present when using the roads to perform physical activities. They are especially fascinated about how space is claimed from the motorized traffic by using different rhythms than the predetermined. But also that the motorized traffic always has higher priority and the claimed spaces are therefore only temporary. They write about a mobile place which always is temporary but the important fact to remember from this is that space can be claimed from the motorized traffic. Many physical activities need roads to be performed and to those activities it is important to claim space. But for activities not performed on roads the roads themselves may act as barriers due to the fast moving prioritized and motorized traffic. Then it is more difficult to claim space.
The general health conditions are different in Sweden depending on geographical location. According to Linell & Richardson & Wamala (2013) the health is generally better in the south of Sweden than in the north. They also write about the tendency regarding communities where inhabitants of the larger ones including nearby communities generally have better health than the inhabitants of small and isolated communities. Another statement they make is that the physical health is generally better in cities with associated areas than in sparsely populated areas. This tendency is motivated by statistics from diseases where in the sparsely populated areas examples of ill health that are more common include cardiovascular diseases, type 2 diabetes and limb musculoskeletal pain. But when looking at the mental health, it’s the other way around according to them, meaning the mental health is poorer in towns and cities and suburban municipalities than in sparsely populated areas. Mental health in this case is meaning for example stress and worrying (Linell & Richardson & Wamala, 2013). Another interesting fact that Linell & Richardson & Wamala (2013 p. 14) brings up is that educated people generally have better health and perform more physical activities than people that didn’t do higher education. According to Linell & Richardson & Wamala (2013) there is furthermore statistics showing that high income takers sit less still than low income takers. Urban landscapes tend to promote physical activity at the same time as it inhibit the psychological health.

**Space and identity**

Lefebvre (1991) are describing three ways in which space is socially produced; through spatial practices, through spatial representations, and through representational space where the representational space is coherent with practice, perception, and imagination. This arranged sectioning attracts consideration about the relationship of practices to what is “perceived, desired, or imagined”. But it also attracts eventual conflicts between moments and practices (Aldred & Jungnickel, 2012).

Lefebvre (1991) continues to write about different kinds of space. They discuss the difference about concrete and abstract space. Abstract space is the intended space with predetermined functions as planned and imagined by architects and planners. While concrete space is the space of the real site used by people. As a result these two spaces, planned and real, often differ resulting in quiet conflicts (Lefebvre, 1991). For example, pedestrians create their own paths, often the shortest way, instead of the predetermined routes created by the planner. This phenomenon can easily be observed by watching a plaza after new fallen snow.

Khan (2009) is more focused on the individual use of the same space. According to her a space has multiple functions and meanings depending on the situation and allows or prohibits a variety of relations. A park (such as Kings Park, Perth), for example, houses all kinds of people which notice the park’s “size, shape, and uniformity, its curves, slants, smoothness, the preferred angles and trajectories
of pedestrians, and dogs, the clientele it favors (human, quadruped, winged, wheeled), the moments when it is quiet, the way it reacts to rain and the freedom of movement that all of these forces allow” (Khan, 2009). We, us, the human body is the main reference point when understanding and experiencing place and space. Most people experience it different from one another and different uses of the same space happen all the time. Therefore will abstract space always be just a vision for most people performing physical activity in the space between buildings. But also physical activity is a creative state of performing and can use whichever concrete space and take advantages of it. It all depends on which kind of physical activity is sought after.

Khan (2009) is writing about the argument that place and identity is created at the same time. The individually experienced space is already determined in what activities and identities it was intended for and therefore it favors some people more than others. A big meaning of shared space is diversity and therefore shared space must be accessible and welcoming for everyone. Especially since a lot of the spontaneous sports can be performed both individually and together with others. A welcoming space will merge individual performers and hopefully bring them together which will also socially enrich the very same space. Although Khan (2009) writes that the normal way of thinking about cities is surfaces on which movement is determined and regulated. But as she continues to write cites are made for living people creating social moments. “A city that welcomes differently moving people (such as skaters), creates a more equitable society in ways that reaches beyond the visible” (Khan, 2009).

**Mobile places in urban landscapes**

Long have flexible design and architecture been seen as something that only had a specific and limited use and has been less important than the permanent and fixed designs. This is a bias that must be questioned, according to architectural researcher Robert Kronenburg (2007). Mobile, adaptable and flexible design and architecture consists of buildings that are designed to easily respond to change throughout its lifetime. The advantages of this form of design are many because it can be used for longer time, better suit its purpose, taking the user's experience into account, takes better advantage of technological innovations and are economically and ecologically sustainable. It also has greater potential when it comes to being relevant in different cultural and social trends (Kronenburg, 2007, s. 7). Flexible buildings are designed to respond to changing situations through their use, function or location. This architecture form adapts rather than stagnates, transforming itself rather than restricting itself, moves rather than remain static, and interacts with the user rather than creating limits. These principles for flexible architecture can also point to a direction which urban space must be able to handle.

While the flexible architecture is found around the society is the urban space largely represented by static buildings with a single purpose and standardized forms (Kronenburg, 2007, s. 16). Buildings are erected on infrastructure that seems unmovable and unchanging, but this is a misconception. Change occurs constantly through economic, social and cultural pressures that have impact on society. Society is never static, and human civilization has an integrated tendency
to change, usually towards development and improvement. In this welter of change, it is natural to seek stability, although that stability is often relative. The buildings, which are regarded as the most permanent of society, are constantly changing which has great impact on the ecological and economic resources. As in most other cases controlled investments, primarily by the one that has the largest financial winning, proceeds over time. A more flexible structure could take advantage of this because it can continue to be profitable when various purposes are replaced. An increasingly enlightened world understands that what we do today affects tomorrow, but it’s far too often that a short-term financial gain is chosen over other sustainable ways to go. Large parts of the sustainability concept emphasize open-ended processes and turns from a goal-oriented approach (Engwall, 2002). From a consumer and environmental perspective, demolition and new construction is not the right way to go. Therefore, alternative routes, where urban room’s purpose can be adapted to time and place. To the urban environment should be designed for all the unpredictable changes taking place, there is great value in areas not only including a certain type of architecture, fixed rules or immutable objects (Zintchenko, 2009, s. 83). All rooms in the city need to be filled by permanent buildings or solid vision for the future.

**Proximity, availability and usability**

According to Faskunger (2013, s.163) the built environment is directly and indirectly affecting us individually as the home and abstractly as the city. This means that inhabitants’ prerequisites performing physical activities and health are influenced by the urban design. Three important dimensions are underlined in order to promote physical activity when planning urban landscapes; proximity, availability and usability. The entire built environment must be planned in accordance with these three dimensions when planning and building to promote physical activity. But these dimensions are also a question for whom and intended usage of the area? Another way to look at it is to instead of trying to build for these dimensions we can see where the dimensions already are and take the built environment there. Perth lies right by the ocean and according to Pill (2014) water sports have always been very popular here. The access to the beach has been prioritized whatever means of transportation you choose. Surfing, wakeboarding, kiting, scuba diving and snorkeling are some of the most popular water sports. The beaches here have fine powder sand which is a great material for various kinds of sports which want to have a soft impact taking ground such as volley ball etc. (Pill, 2014).
According to Faskunger (2013, s.45-47) built environment that makes it easy, comfortable and safe to be physically active in daily life is essential for sustainable progression. Built environment adapted to physical activity gives a positive socializing in the neighborhood and gives it a positive identity and furthermore it increases the amount of people moving in the area that also leads to increased safety. As the case study is no neighborhood the focus must be more on creating social meeting points and increase movability.

Khan (2009) brings up how the three dimensions may be of certain value to poorer people. Much of the organized physical activities cost money and requires free time to be able to perform. Many people that are in a bad economic situation find it hard to motivate physical activities as the best thing to spend their money on. If the three dimensions are adapted to an economic point of view; proximity to the site means less transportation costs and time spent transporting, availability to the site meaning it is welcoming to everyone without exceptions and usability of the site meaning providing factors to perform intended physical activities.

**Economical and political factors of society**
Internal factors and environment has been discussed to promote physical activity. But in order to create motivation for physical activity decisions and means are a necessity to favor internal and external factors.
Control means and policies

The overall purpose of the European Landscape Convention is to establish a true landscape democracy (Arler, 2008). The difficult part of this is from whose perspective this would be based because there is not a single expert who knows best when it comes to the landscape that we all operate in our different ways. The convention focuses on that the landscape must be qualitative and available to the public. It therefore seeks to take these issues seriously and to do the evaluation and perception of the landscape as democratic as possible. However, there is no predefined method in the convention for how this could be done, but this is left to each country’s authorities to determine because these are believed to vary for different reasons. Democracy is thus not easily defined and one-sided concepts. Instead, a range of values and principles must be considered, where personal freedom and the right to self-determination, co-determination and participation and objectivity and impartiality are some of them. How the evaluation method then will look like depends on which of these points (or others) who have had to stand as the leading and most important in the country where it is used. Through the creation and design of the European Landscape Convention (ELC), new opportunities have opened up for debate on democracy influences regarding conservation, management and planning of landscapes.

By providing intellectual and soft skills, such as socio-economic and cultural values of the tangible and spatial elements and resources in the landscape a greater potential is created for the concept of the right to the landscape (Egoz, 2011). Landscape thus represents something universal and accessible to all by anchoring the concept of human rights in the spatial and socio-cultural peculiarities. By doing so, an inclusive framework is formed that both strengthens the rights of local communities and the minorities, and ensures the physical and mental health.

Faskunger (2013, s.15) brings up how Australia has taken recommendations a step further implementing recommendations to limit the time the Australians should sit still. As earlier written it isn’t enough for people to know that something is good or bad, guidelines are needed, in this case limit the time of sitting still. Faskunger (2013, s.22) writes that every person should only sit still in 30-60 min at a time. Just by standing up and stretch breaks the physical inactivity and all the negative biological processes that are connected with physical inactivity. But to what extent should the physical activities of the people be controlled? Xiong (2007) writes about how involved the government of China was to promote how well their elite sports did in order to bring development in sport at the grassroots. To later change their minds that mass sports was no longer a concern of the government. With all facts today the government should always try to promote physical activities, but not control it. Linell & Richardson & Wamala (2013) summarizes it in a good way meaning that in Sweden the focus when trying to increase the physical activities have been in changing the design of the internal and external environment, changing attitudes and behaviors and make supportive environments more accessible.
Faskunger (2013, s.24) promotes the perspective public health meaning that more people will be informed. The risk groups of people that have been in focus are difficult to motivate while people that are not yet in the risk group have other prerequisites and can easier adapt to a life with more physical activity. More people could be helped to live a healthier life by widening the focus. In order to widen the focus the city of Perth has created a second Physical Activity Plan. “Overall, this Physical Activity Plan addresses not only how to improve participation and access to physical activity infrastructure and services for residents, but also addresses how inner city workers can benefit from the City’s commitment to increasing the level of physical activity integrated into our everyday lives” (City of Perth, 2014).

According to Linell & Richardson & Wamala (2013, p. 20) some of the Swedish municipalities and regions have been working to develop control and payment systems in order to promote physical activities by health accounting and health profit measurement. Region Skåne (including Malmö) is for example running a project on payment models, where payments are made for improved results in the form of changed living habits or better self-perceived health according to Linell & Richardson & Wamala (2013).

Faskunger (2013, s.146-147) brings up the term community interventions as an arena that is in the vicinity of the home. This term implies the built environment and the social environment as an intervention to promote physical activity. A planner can affect the built environment in certain ways. But the “neighborhood is as stated before a social intervention with the people living there which mixed together create the identity. Other social community interventions can be sought after in places like Rosenholm to create the sence of belonging.

Xiong (2007) is underlining the status elite sports have on the international stage. In international competitions being victorious means pride and joy for the people and that specific sport is commercialized in the country. This sport become more popular and more youths start performing it. And therefore mass sports and spontaneous sports always had to fight from the shades. But nowadays all sports have their own stars thanks to the new generation of social networks where it is easy to be commercialized.

The progression of designing and implementing supportive environments varies throughout the country but generally not much has happened during the last decade Linell & Richardson & Wamala underlines. Furthermore the cycle wave is still going strong through the country and counties as well as municipalities are developing cycle plans. Decision makers as well as planners are provided with material containing useful information regarding the physical environment from the stakeholders Linell & Richardson & Wamala continues. Physical Education and Health programs have been arranged in order to motivate and further change behavior and attitudes towards physical activity through the Swedish National Agency for Education. These Physical Education and Health programs are still too young in order to be evaluated regarding results Linell & Richardson & Wamala concludes.
A Swedish program called the “Sports Lift” indicates that groups of pupils are disadvantaged in Physical Education and Health. Reasons may be too much ball oriented education while other minority groups’ interests aren’t considered at the same extent (Linell & Richardson & Wamala, 2013). I say further measures are necessary in order to motivate all groups in physical activities.

Another method frequently used in Sweden is the “Physical Activity on Prescription” method and according to Linell & Richardson & Wamala 9 out of 10 health and health-care centers used this method in 2008 when the “The Swedish National Institute of Public Health” was commissioned by the Government.

The Swedish National Public Health Policy Report
In Linell´s & Richardson´s & Wamala´s own words: “Future measures should focus on changing attitudes and behavior and the design of and accessibility to supportive psycho social and physical environments”.

Recommendations regarding how to promote the physical activity are brought forward by Linell & Richardson & Wamala.
1. “Initiate collaboration between agencies to develop the physical environment with the aim of increasing the level of physical activity in the population” (Linell & Richardson & Wamala, 2013).
Here Linell & Richardson & Wamala focuses on four dimensions: safe, secure, attractive and accessible to be implemented in the urban landscape. Continuing they underline that the gap regarding groups performing physical activity should be reduced.

Research is showing that measurements promoting physical activity are cost effective for the whole population and urban planners and designers need to work together in guidance and tools in order to create safe environments (Linell & Richardson & Wamala, 2013).

A health promoting physical activity plan for urban planners should be commissioned by the government (Linell & Richardson & Wamala, 2013).
2. “Establish national recommendations for physical activity” (Linell & Richardson & Wamala, 2013)
No national recommendations regarding physical activity exists today and is needed, as well as a responsible authority regarding physical activity (Linell & Richardson & Wamala, 2013).

3. “Increase support for municipal efforts to increase physical activity among children in school” (Linell & Richardson & Wamala, 2013).

Measures to promote physical activity in school are important and could include improving the environment in order to increase the quality and quantity of physical activities performed as well as taking minority sports into consideration in order to motivate more people to perform physical activity.

Motivate more people to perform physical activity.
4. “Increase knowledge of physical activity and health among healthcare and school personnel as well as among students in basic education” (Linell & Richardson & Wamala, 2013).

Increase the knowledge by educating all teachers and personnel in the matter so they have the proper knowledge and can spread accurate information to the students.

To summarize the “The Swedish National Public Health Policy Report of 2010” with the interest of urban design the following can be said. Research indicates that the health promoting aspects of our everyday lives needs to be improved. One of the aims is to create safe and attractive environments in urban planning in order to promote physical activities. Another aim is to increase the accessibility to supporting school healthcare environments regarding healthy nutrition and physical activity for the children including their families. New job roles are needed focusing on these matters as well as national strategies (Linell & Richardson & Wamala, 2013).

**Economy**

In order to get means to promote physical activity economy has been studied as a result from increased physical activity. A fact brought up by Faskunger (2013, s.42-44) is that much money would be saved through increased physical activity in for example healthcare, less days off from work, longer lives etc. In the beginning of this millennium calculations estimated the direct yearly costs for Sweden to 16 billion Swedish kronor by means of health care, loss of productivity psychological suffering from still sitting and obese lifestyles.

“*When it comes to overweight and obesity, increased efforts are proposed in terms of supportive environments for more physical activity and healthy eating habits in a number of arenas, such as child healthcare centers, schools, workplaces, the sports community and outdoor recreation associations. The Government also intends to develop community planning measures that enables physical activity in everyday life*” (Linell & Richardson & Wamala, 2013, s. 51).

Faskunger (2013, s.51) underlines the importance of not just seeing the improved health aspects but see it in the big picture in order to involve it in planned and built environments. The economic aspects will always be highly valued as building and planning coasts money. But the project cost can look so much smaller when comparing it to how much it can save municipalities in Sweden.

Faskunger (2013, s93-107) writes one chapter about marketing physical activity as a product and so forth get more people doing it. The risks however when commercializing some companies will always focus to make money, but if the overall effect will be that more people do more physical activities it is good.

The political aspect is brought up by Faskunger (2013, s.180-181) where he writes that municipalities that already have a strong policy for promoting physical activity often are at good will to continue promoting new ideas and
plans for further increase. The municipality of Karlskrona has a policy towards promoting physical activity indicated by for example the Rosenholm area, cycle paths etc., which is good regarding the future of the case study. The Athletic and Recreation Committee of Karlskrona, together with associations offer a variety of recreational activities and outdoor living where spontaneous sports are promoted. The advisory council has a clear direction of public health targeting the municipality’s residents, visitors and prospective local residents prioritizing children and young people between 7 and 20 years (Karlskrona kommun, 2014).

Case study
Rosenholm, Karlskrona, Blekinge.

Blekinge Health Arena
Blekinge Health Arena is a non-profit organization that was formed in June 2013. It is the County Council of Blekinge, BTH Blekinge Sports Federation, Region Blekinge and Karlskrona Municipality that initiated and formed the association. The association’s overall task is to create a long-term infrastructure that supports, promotes and develops a knowledge center for sport, enterprise, skills and innovation and research in sport, physical activity and health - all in order to contribute to public health efforts and long-term healthier people in Blekinge. Part of the association is continuing to develop the physical environment test lab available on Rosenholm in Karlskrona, and to zone it. Tests and models for public health efforts will continue to be developed and spread throughout the county (Karlskrona kommun, 2014).

In the county of Blekinge the level of physical activity is relatively low and therefore the outdoor environments that support and increase physical activity levels can change this pattern. Such outdoor environment would need to meet the requirements for proximity, availability, variety, and perceived security. This could mean that it is positioned so that a larger amount of the population easily can reach it with for example public transportation and bike paths, it is available to all people regardless of individual factors such as age, gender, disability etc, but also that the environment is useable regardless of the season, time of day etc. It also means that the environment is varied to suit everything from professional athletes to recreational athletes and that it is safe to allow elderly people that often report that they feel unsafe can thrive in the environment and perform physical activity there. Such a natural outdoor environment that also is connected to nature which allows taking advantage of its benefits and creating opportunities for recreation and eventually increase the physical activity level and contribute to good athletic performance. If also new technologies and innovative inventions can be established to the environment this could further increase the motivation for physical activity in exercisers and the quality of training for athletes. The natural outdoor environment that enables physical activity might in such a way become innovatively complete and optimal for all in society. (Blekinge Health Arena, 2014)
ICOT – Innovative Complete and Optimal Training-track

There is today no similar outdoor environment that in this way creates optimal and complete conditions to perform physical activities and training. An innovative technique makes it even more unique. The holistic approach, where the environment must be accessible to everybody regardless of physical status, age, gender, disability, athletic affiliation, etc. may therefore be a model to get people physically active while it can boost athletic performance, which will aid athletes but also inspire other people to exercise (Blekinge Health Arena, 2014).

Blekinge Health Arena´s own program for ICOT

This section, starting with Aim and ending Implementation, was translated from Swedish and represent the thoughts and ideas from the Blekinge Health Arena crew regarding ICOT.

Aim
The aim is to establish a physical environment that enables physical activity for all and meets the requirements for proximity, availability, variety, and perceived security. It will be innovative with new technology and be complete and optimal regardless of previous physical activity level (ranging from exerciser to the elite), disability, age, gender or athletic affiliation.

They therefore want to build an innovative complete and optimal training track at Arena Rosenholm linked to Blekinge Health Arena, which partly is in good agreement with the future strategies that are in the Rosenholm area where it should be the hub of the Baltic Sea for physical education and health, and strengthen Blekinge Health Arena profiling it with physical activity, sport and health for both wide range and elite. It would also expand Blekinge Health Arena´s activities from the indoor environment "test lab" to an outdoor environment that creates additional availability to the public (Blekinge Health Arena, 2014).

Target
The training track shall create opportunities for physical activity for all in society. Everybody from those that previously haven’t been physically active to exercisers and athletes with different levels of ambition regardless of disability, gender, age etc. The target audience is broad and profound preparatory work will be required for the environment to meet everyone’s needs and interests. The target group will therefore need to be included and be involved in the whole process. Expertise in physical activity, health and sport is here also important for all audiences to get their needs met so that opportunities for physical activity can be created.

Goals
- Contribute to a healthier population and increased well-being.
- Creating training opportunities for good athletic performance.
- Increase access to training environments outside.
- Increase the opportunity for recreation in nature.
- Increase the ability to perform physical activity in a diverse and optimal way.
- Create a training environment for everyone, regardless of age, gender, disability, etc.
Give Blekinge County and Blekinge Health Arena a strengthened position in the country in the field of physical activity, sport and health.

**Method**
To achieve the goals we want to build an innovative complete and optimal training track to meet the requirements of proximity, accessibility, variety and perceived security. In terms of the training track layout the material used can be a deciding factor for the track's success. The surface should be optimal for running (i.e., that it is gentle on your body to run on), it should be optimal for wheelchair users, and rollerblades, it should be tough and durable, it can be tailored to the seasons (for example that it is possible to do ski trails in winter) and that there are proper drainage system to prevent water accumulation. The track layout is also very important when the length of it should be optimal to many different target groups. Perhaps there should be different distances where parts are adapted to different needs. A possible location for the main part of the track could been around the artificial turf field with extended grooves around the Rose Holm area. The track's surrounding activities are also an important part of the design where the track can serve as a way to tie together existing training facilities at the Rosenholm area while new optimal peripheral activities can be built. Such as a throwing wall, jump pit, beach volleyball court, accessible outdoor gym and coordination and balance path. For athletes, it is also important that there are optimal uphill/downhill gradient slopes and jumping slopes and that it is possible to load run. It will also be important with an innovative technology connected to the circuit to provide measurement of the training. For example; steps, pulse, calories, timing and watts for wheelchairs so that exercisers and athletes can get direct feedback around the track to increase their motivation and quality in training. The technology also makes the track easier to be a research subjects when the data can be more easily stored. The measurement can then contribute to innovative solutions, for example racing with somebody when you run even though you started at different times and locations, which can trigger the motivation. There could also be a control station accessible along the track that offers a "flying medical examination".

It must also be ensured that the environment creates security and availability, for example, with good lighting, benches for the elderly to stay and rest at, free parking space, good bus links, good locker rooms with showers accessible, sauna, ice bath and massage. The track can also be creating opportunities for education in physical activity, sport and health, where schools can educate children and young people and get the variation that is required in physical activity at a young age. It may also be the target of research, for example, the outdoor environment for physical activity. To make the track complete its optimal function it is also important that there are recreational opportunities in connection to the exercise track. Above all recreation in the nature will become an important part as it has big positive effects on stress levels and mental recovery and will therefore provide added value to the training track with a focus on physical activity.

**Implementation**
As an implementation the track and experience from the project will be integrated with Blekinge Health Arena’s regular operations. At the same time the
concept itself may be interesting for other training centers, cities, health facilities etc. which may be interested in purchasing the concept if it is successful.

**Interacting with Blekinge Health Arena**

A meeting was held regarding how to further develop Rosenholm where Blekinge Health Arena is strongly involved in the early stages of the process. In the meeting were also scientists from BTH, representatives from the municipality and members of disabled association. This project still is starting up and no one knows if money can be raised to further develop the area in the near future or not. But some brainstorming was made and the wanted first stage was established by the group. Among other things the following was discussed during the meeting.

The unused areas of Rosenholm are to be developed to further underline the status of Rosenholm as a high-tech training center and to broaden the range of people training there. The goal is to promote public health, make it accessible and easy to use for everyone. Another thing that was brought up is that the site should do something unique and cost effective. But something unique might also lead to difficulties raising the money since no reference objects are available. One solution to fit everybody, by changing the focus from elite athletes to fit all stages of physical activity, is sought after. To encourage physical activity by making new experiences available such as a ropeway disabled accessible by ramp. All these ideas lead to one thing that connects everything, a multifunctional track. The aim for this thesis is to create this track, the starting base, and also create some nice rendered images of it to raise money. When creating this track I have the freedom to put in whatever I see fit to further promote the track. Ideas flying around during the meeting included electronic measurements while exercising such as pulse, transmitter to keep track of moving data, nutrition advice, sloping in various degrees and to pick a material suitable for everything from runners to wheelchairs. And in order to make this place attractive for people connected to the exercising ones going to this area their senses need to be stimulated. It should be an experience to come here by using culture, such as the military history of the site and the facilities, establish starting classes for the new activities and connect personal trainers, but also be a beautiful place to be in. Maybe get a park like feeling for the site to encourage families to come here. And the big thought with everything is to connect the area which today is not very coherent and use all the different activities that are already established opportunities and strengths. For example the military should be involved when building the track since they are located in connection to the area and have expertise in many of today’s popular gym classes. And also the track will get the feeling of being more secure the more people that are using it.

A site visit was made by the author as a result from the meeting where he walked around the area together with representatives from Blekinge Health Arena. The visit started off by a tour inside Blekinge Health Arenas facilities which impressed the physical activity obsessed author. This test lab was built for measuring the body's condition and capacity but also a great place for education in physical activity. During this interaction discussions regarding how sports often are connected with injuries took place. How can these injuries be
prevented was a question that came up? As sports are unpredictable a total prevention is impossible, but by proper training, preparations and knowledge the risk is minimized. The risks involved being an elite athlete came up regarding pushing the body to the physical limits more often than the body is designed for. And the fact that the right to public access in Sweden makes it harder with concepts like this then in other countries where country clubs are a well-established concept.

**Design programming**

The design proposal presented in this thesis was created with three important dimensions in order to promote physical activity namely; proximity, availability and usability. These three dimensions are vital when planning urban landscapes to promote physical activity according to Faskunger (2013). For a sustainable progression these three dimensions should be used when planning and building environments that makes it easy, comfortable and safe to be physically active in daily life. Built environment adapted to physical activity gives a positive socializing in the neighborhood and gives it a positive identity and furthermore it increases the amount of people moving in the area that also leads to increased safety. As the case study is no neighborhood the focus must be more on creating social cross barrier meeting points and increase movability.

In order to motivate fitness to the whole population relevant to the site people must be made aware of the benefits gained from physical activity. To further motivate fitness choices must be created in order to let persons choose their favorite exercise. Even the smallest indication of changing lifestyle into a more physical activity oriented life is a big step in the right direction, as indicated by the law of diminishing return where the gain is most when starting from zero (Faskunger, 2013).

Mobile places will be supported and easily created and sometimes connected to other relevant mobile places. Flexibility will be in focus in order to link mobile places together and/or create an understanding dialogue with immobile places. Mobile places are often a result from physical activity and if we can promote mobile places, physical activity will indirectly be promoted at the same time. To further improve mobile places the technical aspect regarding mobile living which includes less spatial oriented relations when for example networking is interesting. In other words is technology promoted in the design in order to improve mobile places in the chosen site.

The identity of the site should be of a character that everybody can relate to. One way of making this possible is by asking the intended users of the space in order to reduce or even get rid of the abstract space. In other words, the creating process of this site must be a living and adaptable one. Another goal is to create a welcoming space encouraging merging individual performers together to socially enrich the site. By creating a welcoming space teams will hopefully be one of the products of it. Being part of a team often make physical activities more fun by means of the social aspect. The social aspect will be further improved by using technology in the design proposal. But this will also be a place where smartphones are not a necessity in order to perform physical activity. People
that doesn’t can afford or simply doesn´t own a smartphone must not feel excluded.

The environment of the site is very important regarding physical activity. But as this site is made to support physical activity it is more important to focus on which other aspects that needs to be promoted. This includes all of the above mentioned aspects.

In order to even make a site like the chosen one possible it is necessary to get means for it. The government/municipalities have a responsibility towards the population to improve a healthy life.

In order to change behavior, motivation isn’t enough over time to change it, work by the individual is essential. The social dimension in the chosen site must be such a strong reason to make people come back here and automatically perform physical activity.

The three dimensions: proximity, availability and usability should always be taken in consideration! In the chosen site the location was already chosen meaning proximity couldn’t be considered regarding the physical plane to the city of Karlskrona. Availability and usability on the other hand were strong factors to extend the range of people using the chosen site.

**Design process**

Blekinge Health Arena had a vision and a specific site already when I entered the project that unfortunately made many observations unnecessary such as proximity etc. I also wanted to focus on the social and motivating aspects rather than spending time arguing about pros and cons of the already chosen site.

I kept the ICOT vision in my mind as I started looking for inspiration. Literature review was made regarding different dimensions relevant to physical activity from changing behavior to mobile places mixed with interviews and myself testing already existing urban exercise developments. Early on I realized making the optimal outdoor training solution for everybody was impossible thanks to the individual differences. And therefore I also chose to try to adapt the design in the chosen site to promote the social and motivating aspects to further dig deeper into that dimension.

I then looked into the various forms of sports and activities being performed at the Rosenholm area, which today are relatively spread and unconnected from each other, and looked for a way to bring everything together. Also here the answer that came to me was the social aspect.

From there I started designing new activities in the Rosenholm area focusing in promoting the social aspects to promote physical activities.
Figure 1 Map displaying facilities, areas and activities in the Rosenholm area today (Karlskrona kommun, 2014).

Building 01: Ice and Event Hall (Stadium A)

Building 02: Stadium B

Building 03: Badminton Hall

Building 04: Tennis Hall

Building 05: Center court Tennis

Building 06: Recreation Room and cafeteria

Building 07: Gymnastics Hall

Building 08: Boule Hall

Building 09: Gym – Rosenholmshallen

10: Artificial Turf Field

11: Start Jogging Trails

12: Outdoor Tennis Courts

13: Parking
Design proposal

To design the "ICOT-track" I had to take in all the wishes and possibilities and try to fulfill them all together with the outcome of the literature review. I started with a base platform where everything could be evolved from, and in this case the platform was a track through the area connecting the already existing activities in Rosenholm that at the same time would be accessible to everyone. I chose to split the track in two parts running side by side where one part is asphalt, good for wheelchairs and skate/londboarders etc., and the other part suitable for running/walking and biking. The softer part will also be suitable when preparing ski tracks in the wintertime when snow is present. But the grass beside the track may be better if there is little snow. To make the track interesting I wanted it to twist and turn at the same time as it differed in height.

To this track platform I was able to connect various activities correlating to the track. As the activity area took form I had to adapt the track in order to make the activities as accessible and as functional as possible.

Figur 14 New proposal displaying intended activities and sections.

In area nr: 1, located closest to the start of the track, I wanted to create a foci point to invite all kinds of activities in a welcoming way. Therefore I put an area suitable for parkour there. Parkour can be performed by everybody and is exciting to watch and is supposed to get attention from by passers who originally were going to another facility in the area. Added to the parkour area is an outdoor gym and a suitable space for cross fit with the necessary equipment available. In other words is this an area suitable for all kinds of groups performing physical activities as well as the individual performer allowing him to connect with others.
In area nr: 2, including the house up on the hill, a media center took form to house the social promoting but also data displaying technology. Social promoting in this case means through technology such as Smartphones which is connected to the technology available at the track. Examples of what can be had from the system are: lapse times, heart rate, tendency, distance, recommended nutrition etc. An already existing house is used to protect the electrical equipment from the weather and to ad identity to this place.

Area nr: 3. A 400 m long running track around the artificial turf field that is part of the ICOT track passing through the corner of it. This track is intended to by used primary for running and will have a softer suitable material aiding that. This track will be perfect for all kinds of sports to train explosiveness and running technique. Technology available might be cameras recording individual running, analyzing it and thereafter giving advices.

A basketball filed in area nr: 4 located between the 400 m track and the artificial turf field. The location edging to other physical activities to try to socially connect performers together instead of making boundaries between different mobile places created in various intention areas by group/team performing.

To further mix it up I chose to put a cage, suitable for football etc., in area nr: 5. The cage is put close to the road to try to motivate car passengers/drivers to perform physical activity. Hopefully the cage will allow spectators to come close to the action without risking getting hit by a ball and in a small amount feel the excitement of the activity. Also, the other way around, the players in the cage can feel safe to perform maximally without risking disturbing other performers in the area.

In area nr: 6 I wanted to create some motivation in the parking lot by dividing it with a skate ramp. Car passengers that doesn’t perform physical activity today must know that there are unlimited ways of performing physical activity and hopefully one activity they find interesting. My intention is also to give the skaters a unique experience by skating among cars, parked though, without being afraid of them. To give them space from the cars instead of the other way around as it is on most roads today.

Climbing is the activity area nr: 7 is intended for. Two climbing towers separated from the grass by falling friendlier sand pits. The location of the climbing towers is intended to have the same function as the basketball field in the other end. Climbing is already a popular activity in the Blekinge region and hopefully these towers might open up the eyes to even more people. The local already climbing people will probably prefer climbing on nature stones or the climbing walls located at the BTH campus area, but the towers might interest climbers passing by the Rosenholm area.

Area nr: 8 and 9 are intended to be used as running slopes for training with optimized angles regarding different activities. This area is also intended to be used for “military training” where hopefully the real military will help setting up the place. Hopefully this may lead to cooperation with military and the
Rosenholm area. Hypothetically if the military could relocate all of their physical activities to Rosenholm a new relationship with the public could be made. The military could help maintaining the area and in exchange recruit new personnel.

Area nr: 10 refer to connecting the already existing running track with the new ICOT track. This area will also be a connection to the also existing mountain bike paths in this area. It is important to make it easy for performers though to choose the right path.

Area nr: 11 will be part of the ICOT track adapted to the existing nature, making it exploring and exiting, suitable for the whole family as well as the elite athlete. The area has slopes and stones and the track should be laid to minimize natural impact and to promote exploring.

My intention was to create an environment that motivates physical activity and keeps the motivation until a change in behavior is created by the mind. To promote mobile places in a way so they easily can take place here due to the identity of the space, the encouraging space. I also wanted team spirit to be felt by everybody by making the area relatively small. The municipality wants to promote physical activities in the region, and the Rosenholm area is one way to do it by creating a foci point regarding physical activity. As for the three dimensions (proximity, availability and usability) I was able to affect two of them, namely availability and usability in a city scale. But in the Rosenholm scale all three of them were considered.

Transformation
Figur 15 Rosenholm area today.

Figur 16 Proposal of the Reosenholm area displaying structure.
Figur 17 New proposal displaying intended activities and sections.

Figur 18 Section A.

Figur 19 Section B.
Figur 20 Birdview from North.

Figur 21 Birdview from South.
Figur 22 Birdview from West.

Figur 23 Birdview from East.
Figur 24 Illustration of the artificial turf field displaying the climbing towers in the foreground.

Figur 25 Illustration focusing on the variety of activities available at the site.
Outcome expected prior to the study

A design proposal to Blekinge Health Arena in the Rosenholm area created and supported from literature and case studies. Ideally the design will further encourage a broader spectrum of people to the already physical activity oriented site.

Also enlighten fellow planners of my research to help them plan urban landscapes for physical activity.

Planners must also take the future into consideration. How will people behave in the future? Will this site still be useful in 100 years? Try to see through trends and focus on the lasting qualities.

Discussion

Forming the right research question took some effort in order to make it an interesting and relevant one. This thesis started out as a comparison study in order to find good urban qualities that promote physical activities. But comparing cities qualities in order to motivate people to perform physical activity turned out to be a too big task as people’s motivation is individual and thus general rules are hard to find. Instead focus shifted to literature on what has already been investigated mixed with inspirational case studies that were used designing the multifunctional track in Rosenholm.

The general question in this thesis was how an individual’s physical activity is affected by urban landscapes. This was investigated in a literature review backed up by case and inspirational studies resulting in a design regarding a multifunctional exercise area in a specific site.
The research questions sought after in this thesis:

- How do urban landscapes affect individual’s physical activity by means of exercising and social interaction in the chosen site?

- How can the urban landscape be outlined in a selected site like this in order to make it an attractive and multifunctional place to motivate and perform physical activities?

Discussions regarding the literature review and the design proposal will be in focus and furthermore how its wider effects can be anticipated.

**Motivation and Behavioral change**

As Faskunger (2013) writes motivation isn’t enough to change a person’s behavior, but I think it is necessary as a starting point in changing the behavior. Changing the behavior is a process that is more complex than that and requires time according to Faskunger (2013). Motivation is a strong force for a limited time and therefore motivation alone isn’t the solution in long term behavioral changes towards a more physically active life. The public health programs today are good in creating motivation, but they are too short to change the behavior. The public health programs must be recreated in order to consider the fading motivation and to find tools to help changing the behavior in a healthy way. As I see it everybody have different prerequisites and the increase of physical activity must gradually increase from the previous lifestyle, in order not to decrease motivation, to be maintained in the long run. With that being said I think it is important to not just inform people that exercise is good, but how much that is needed to get the positive effects. And the law of diminishing return isn’t really the issue as it allies on people that are already doing physical activities. This information can be displayed in the proposal by the proposed technology in creative ways and further on be individualized to every performer at the site.

In my opinion the lower risk of getting cardiac diseases due to exercising is well known throughout Sweden. But still the doctors ordinate more exercise to many patients according to Faskunger (2013). Why isn’t this motivating? Again the feeling of letting physical activity be a personal choice is taken away by the doctor that ordinate it, at the same time as the increase in physical activity is needed to the individual health. The patients must be made aware of the endless possibilities physical activity implies and choose a physical activity of their own. If the patients feel that they chose the activity by themselves they will be motivated by their choice in itself. This is the author’s interpretation from Carlson’s (2001) article about changing a behavior towards a more sustainable lifestyle. In the proposal the idea was to have as many activities as possible at the same site in order to let people choose the physical activity they seem fit. And hopefully all different activities indirectly attract people knowing someone performing physical activity at the site.

As I see it urban Swedes are more motivated to exercise which also in many cases improves the psychological health, but is the urban landscape itself affect
many peoples’ psychological health in a bad way. As earlier displayed people living in urban landscapes has a decreased psychological health than people living in rural areas in Sweden (Linell & Richardson & Wamala, 2013). Might this be due to more people? More stress? The feeling of not fitting in? Stress from that they have to exercise? But at the same time people in urban landscapes has an increased physiological health compared to rural areas in Sweden (Linell & Richardson & Wamala, 2013). Are urban living motivating physical activities? Is it due to more still sitting jobs in the cities? Or is the decreased psychological health a factor that motivates physical activity? These are questions that should be looked into by future researchers. As Rosenholm is in a suburb area of Karlskrona it could be seen as a mix of urban landscape and a rural area. Will this location imply improved psychological and physiological health to citizens from Karlskrona city and nearby rural areas? As the location of the site was predetermined the proximity dimension was not looked into when designing the proposal. But hopefully this semi urban landscape can increase both the psychological and physiological health by physical activity.

Sports Professor Lars-Magnus Engström (2004) has in a report highlighted that the number of young people in sports and physical activity in overall has declined from the 1960s to 2001, and is still decreasing today. Spontaneous sports have been drastically reduced partly because more people are involved in organized sports and partly because less people are physically active. More people are lacking the interest to perform physical activities in spite of the broader knowledge regarding the positive effects of physical activity. WHO, World Health Organization, is every fourth year making a study on school children’s health habits, Health Behavior in School-aged Children = HBSC (WHO, 2014). Their survey from 2005/2006 indicates that the most common activities among children and youths are watching television or videos and playing computer games (Schäfer Elinder & Faskunger, 2006). The parents have a responsibility to keep their children healthy and house rules regarding limiting the time using technology could be helpful. But in order to be good role models the adults should then also try to decrease their use of technology. Today technology is always with us (smartphones, computers etc.) which demands time and energy of the user of the device. Is this connected to the decreasing rate of physical activity performed in Sweden? In the proposal I had an idea to turn the trend by being connected by physical activity together with technology at the site. And hopefully this can start a motivating trend towards more physical activity.

Some spontaneous sports, such as skateboarding and roller blades, are worked against in many urban landscapes today where they are banned by the city. These activities are often seen as vandalizing activities destroying public places, which make performers believe that spontaneous sports are unaccepted in public urban areas and thus a negative trend is experienced. As Gehl (2006) states, public space can be designed in such a way that it is harder to reach, both physically and mentally, and if we want the city to be available for everyone this is a very important task for the urban developers to handle. As a national goal to promote spontaneous sport to ban boarders is working against their own wish as this activity is a very spontaneous one. In the proposal all spontaneous sports
are more than welcome. As for skaters and roller bladers the ICOT track will have an asphalted lane to facilitate and motivate activities like these.

**Social interaction**

As I understand it people are not seen as persons when moving in the form of performing physical activities by people not performing physical activities. Moving persons are rather perceived as an object passing by, a moving ball etc. The social interaction between people performing and people not performing physical activities is in this moment decreased while it may connect individuals exercising at the same time, sometimes creating social mobile places. I think as a group more distinct mobile places are created. As a team the environment play a smaller role than the members of the team that sets the identity of this mobile place (Aldred & Jungnickel, 2012). The social interaction created when performing physical activity together with others is motivating by itself since time is spent socializing as well. Within a group a mobile place is created including a rhythm which all of the members in the group have created and affect together. The same street can be the base to an unlimited amount of different mobile places. And each and every one of the created mobile places may differ due to transportation, rhythm, mode, other people etc., creating diversity and flexibility making the physical activity exiting which in many cases increase the motivation. Mobile places will be created at the site of the proposal by all different activities being performed there, but I wanted to mix the designated areas up by putting different activities close together with transparent boundaries in order to cross create mobile places and thus elevate the social interaction.

From the literature review indicated by Aldred & Jungnickel (2012) can be said that a social mobile place is always temporary, but the important fact to remember is that this mobile space is claimed from another space. When cycling, for example space can be claimed from the motorized traffic. Many physical activities need roads to be performed and to those activities it is important to claim space. But for activities not performed on roads the roads themselves may act as barriers due to the fast moving prioritized and motorized traffic. Then it is more difficult to claim space. When space is claimed by more than one activity social interaction may be the result, often badly if the space only allows one of the activities to be performed. But many activities may be altered in such a form allowing more than one activity occurring in the same space, or taking turns using the very same space. In the design proposal in the chosen site, Rosenholm, a network of intended spaces were created divided by clear but soft edges, allowing spaces to be co used if wanted. The idea was that everybody can find their own space in Rosenholm in order to feel welcome and belonging.

I think a big meaning of shared space is diversity and therefore shared space must be accessible and welcoming for everyone. Especially since a lot of the spontaneous sports can be performed both individually and together with others. A welcoming space will merge individual performers and hopefully bring them together which will also socially enrich the very same space (Khan, 2009). In the design proposal of this thesis diversity is caused due to the variety of intended spaces and variety of physical activities being possible at the very same
place. Hopefully the individual oriented activities feel the team spirit of other team oriented activities and socialize with other individuals as well as groups.

**Policies and Environment**
The interesting part for me as a planner is though how the built environment affects the motivation of individuals to “move” performing physical activities.

Linell & Richardson & Wamala (2013, s. 13) has done research showing how important the environment is for good health including level of education, employment, economic situation, access to health and medical care and surrounding living environments and living habits. And I think the environment is equally important in motivating physical activities as it is a foundation in good health. As earlier urban landscapes seems to promote physical activity at the same time as it is bad for the psychological health. I wonder if the fact that more educated people live in the cities is connected to that people in cities have better physical health? According to Linell & Richardson & Wamala (2013) there is furthermore statistics showing that high income takers sit less still than low income takers, which generally can be connected to education where higher educated persons earn more money. This could be connected to availability as many attractive physical activities cost money. Also the proximity to cities, where the variety of physical activities is bigger must be taken into the equation. In Rosenholm most of the activities can be performed for free. When getting more serious about your favorite activity some equipment will be wanted, and later needed if continuing to organized or competitive sports etc.

When building and promoting physical activity today competitive sports are often prioritized, this means existing and planned facilities are inappropriate to use by the bigger mass of people (Faskunger, 2013, s. 245). Faskunger (2013) also points out that a common mistake when building a new arena for competitive sports the already existing one’s maintenance are often given lower priority. Can private sport clubs and the public cooperate in greater extent than today in order to get more use of existing facilities and future ones? In the design in Rosenholm no new arena is built, but rather will the existing ones in the area get an increase in usage by new performers passing by the area due to some of the many activities in the area. Cooperation should be started with the military, which is the neighbor area, to further increase activity in the area and raise the competence of performers.

With all facts today the government should always try to promote physical activities, but not control it. Linell & Richardson & Wamala (2013) summarizes it in a good way meaning that in Sweden the focus when trying to increase the physical activities have been in changing the design of the internal and external environment, changing attitudes and behaviors and make supportive environments more accessible. But there is no one to coordinate these factors that all are needed in order to increase the physical activity. Each factor is sought after alone, but how can one factor change the behavior and another one suppose to motivate, these need to work together with all of the factors. New jobs need to be created focusing on promoting physical activity coordinating relevant factors controlled by various institutions. In the design all factors were
considered, but as all factors are individual there is no design to fit them all. More people could be helped to live a healthier life by widening the focus from different institutions. In order to widen the focus the city of Perth has created a second Physical Activity Plan. “Overall, this Physical Activity Plan addresses not only how to improve participation and access to physical activity infrastructure and services for residents, but also addresses how inner city workers can benefit from the City’s commitment to increasing the level of physical activity integrated into our everyday lives” (City of Perth, 2014). A similar plan could be made for Sweden if jobs were created to promote physical activity in order to promote public health.

Faskunger (2013, s93-107) writes one chapter about marketing physical activity as a product and so forth get more people doing it. I am not sure I like to commercialize physical activities or not. When commercializing some companies will always focus to make money, but if the overall effect will be that more people do more physical activities it is good. Blekinge Health Arena was unknown to the author until this thesis was started. But the area is promoted by the Ice rinks and various sports already being performed in the area today. In the design marketing will be made through individuals using smartphones connected to the technology available at the site through social applications etc. The political aspect is brought up by Faskunger (2013, s.180-181) where he writes that municipalities that already have a strong policy for promoting physical activity often are at good will to continue promoting new ideas and plans for further increase. How can the municipalities that doesn’t have strong policies on physical activity be changed is a national question. The municipality of Karlskrona has a relatively strong policy according to the author which might lead to development of Rosenholm.

In order to get means and affect policies in a positive way regarding physical activity statistics displaying reduced health care costs must be presented and accounted for (Faskunger, 2013). In Australia the free outdoor gyms are adapted to the elderly population which is recommended to strengthen themselves in order to protect themselves when falling etc. This is leading to decreased costs in health care and is part of a greater plan in Australia (City of Perth, 2014). Due to the technology in the design Rosenholm can be used as a center for Sweden studying the relationship between physical activity and health care cost in order to develop the Swedish policies regarding physical activity.

**Proximity**

The proximity and accessibility of the preferred activity play a major role, both for motivation’s sake but also from an environmental and economic perspective (Schantz, 2006). If the park or recreation area is located outside the city, there is great risk that the car is used for transportation. The positive effects that the individual achieves from physical activity might be outweighed by the negative effects the car has on the environment. Economy is another aspect that has to be weight in order to get to the preferred site suitable for the physical activity. The location of the site proposing the design was already predetermined and therefore proximity observations were never made. Regarding distance to the bigger population, which is in the city of Karlskrona, more suitable places are
Rosenholm has become a focal point and is in that matter the perfect spot to further develop physical activity amongst inhabitants in the Blekinge region. Due to the location though, a big amount of people using the area will probably go here using cars. This will affect individuals negatively moneywise and affect the environment badly due to emissions. The cycle path is good but will be disregarded by many if a car is possibility as it implies less effort. The bus table should be looked into as well as free busses to and from the area. Free busses can be motivated by reduces health care cost if more people is attracted to Rosenholm performing physical activity.

Proximity, accessibility and usability are three connected factors where all three of them need to be considered when planning for physical activity (Faskunger, 2013, s. 245). These three factors should in theory be equally weighted when planning for physical activity, but in reality other factors may intrude in this ideology. But if one of the factors (proximity, accessibility and usability) is decreased, for example due to adaption to the real site’s location, there is no recommendation how the other two factors should be handled in order to make balance. The remaining two could be increased in order to compensate the lacking third one or they could be decreased in order to stay on the same level as the decreased third one. In the design location was already decided which limited proximity in the meaning of distance to the site. But accessibility and usability were considered as much as possible by the author and designer of the proposal. Accessibility must be further looked into in order to adapt as many of the activities as possible to disabled persons who are as welcome as anybody else to Rosenholm.

**Conclusion**

“Sedentary lifestyle means less normal physical activity, less fitness among the population at large. This may lead to lower health, increased risk of cardiac disease. Less fitness also influences the psychological state of mind, leading to lower self-esteem. To remedy this, more physical activity should be encouraged among the people. This can be promoted/facilitated by measures belonging to the field of urban design” (Gunnar Nyström, 2014).

In order to understand how physical activity may be motivated literature review regarding the human behavior was necessary together with the social aspect. Furthermore urban spaces and places were discussed as the urban landscapes in many cases are the foundation for many physical activities for urban habitants. And to further get a feeling of how urbanization has affected people’s behavior and motivation to perform physical activities a Chinese study is displayed in the “Background” of this thesis together with inspirational studies in various countries. Policymaking is an essential way to increase physical activities among the population and to affect the built environment, which is discussed in this thesis.
In order to promote physical activities in urban areas there is no simple solution to apply in order to get results. There is no design to fit them all. Simply creating good opportunities to perform physical activity by means of urban landscapes cannot solve the fact that the public health is decreasing by lack of physical activity. This is as much, if not more, a matter of motivation and change in behavior. But in order to get motivation and to change behavior an environment offering opportunities and possibilities to perform physical activity and at the same time offers socializing is a good start. There are so many dimensions and aspects that need to be considered and are specific in each and every case. But in this thesis I have discussed and pointed out some of the qualities that hopefully will improve a certain place to perform physical activities in.

**Factors affecting physical activities**

A list was made by Schäfer, Elinder & Faskunger (2006) displaying factors affecting motivation to physical activities and was used as a template when making a list of conclusions to promote physical activity in this thesis. The list is based on physical, economic, social and cultural factors and policies and regards the bigger urban landscape rather than a specific site like in this thesis. In order to improve public health, in this case specifically by increasing physical activity, the lives as a whole must be considered and therefore the list touches more areas than this thesis has looked into.

**Physical factors**

- Safe and attractive residential areas and town centers for walking, cycling and roller skates.

- Safe and attractive parks and green structures.

- Easy accessible and attractive stairs within buildings.

- Green structures and playgrounds in the direct proximity of residential areas.

- Seasons adapted equipment available at playgrounds.

- Facilities regarding physical activity and spontaneous sport in the vicinity of housing.

- Schoolyards and kindergartens encouraging staying outside.

The physical factors focused on in the design include some of the above written statements. As the statements were made for the city and not a specific area some of them must be disregarded. Safety is always important to be able to perform physical activity the way that fits oneself. In my design I used the mixing and proximity of different activities to get the feeling of safety where someone always has a watching eye over you.
**Economic factors**

- Congestion tax or corresponding measures to decrease the motorized traffic in cities.
- Investing in walk- and cycle paths and trails.
- Resources regarding renovating and developing parks and playgrounds.
- Low cost alternatives and free transportation for kids during weekends to swim, parks and sports facilities.
- Subsidized physical activity on prescription from health cares.
- Economic support regarding outdoor recreation.
- The right to perform physical activity during paid working hours.
- Low fees regarding memberships in sports clubs.
- Means to renovate and develop kindergartens and schoolyards.

Economic factors are a key which can be used to increase physical activity. To Rosenholm there are already good walk- and cycle paths but they can always be better. Resources will be needed to further develop Rosenholm. Considerations regarding availability of the area must be taken so all that want to can use the area.

**Policies**

- Action plans to increase physical activity.
- Development and quality assurance regarding the subject Physical Activity and Health.
- Longer breaks during school time.
- Quality indicators for opportunities regarding daily physical activity in school and kindergarten.
- Free use of schools gymnasiums for kids and youths during evenings and weekends.
- Policy regarding educating kids in traffic safety, cycling and swimming.
- Rules regarding commercial sponsoring of youth sport.
- Health consequence evaluations regarding political transportation decisions.
• National goals and mapping regarding physical activity and BMI in our population.

All of the above statements should be applied in Blekinge region but many of them are external factors in my design. Rosenholm could become the physical health center of Blekinge region where new jobs focusing on improving the physical health are created, and as in Australia health plans are created and monitored. The national policy, where doctors ordinate physical activity to clients, is unsuccessful as motivation still is lacking from getting physical activity on prescription. Regionally Blekinge is focusing on spreading information regarding physical activity and its benefits. Nationally, regionally and locally the economy will be considered. Policymaking is an essential way to increase physical activities among the population and to affect the built environment.

**Social and cultural factors**

• Health communication regarding physical activity as a health factor, active transportation and outdoor recreation.

• Campaigns for better school paths and the concept “walking schoolbus”.

• Zero tolerance regarding violence.

• Messages regarding physical activity and health in the media reporting sports, grassroots sports and physical activities.

• Sports stars’ and other role models’ appearances, images and messages.

• Local arrangements regarding grassroots sports, outdoor recreation and other health promoting physical activity.

The Rosenholm area could be the new health communication platform educating teachers and managers in physical activity as a health factor. This is the place where sports stars come to socialize and appear to the public. This is the place where all kinds of arrangements can be made regarding most of the traditional sports but also creating new ones.

**Design proposal**

The general question in this thesis was how an individual’s physical activity is affected by urban landscapes. The design in this thesis is an example of how the urban landscape can be outlined in a selected site like this in order to make it an attractive and multifunctional place to motivate and perform physical activities. There isn’t one big answer but many small ones that connected together can affect individual’s physical activity by means of exercising and social interaction in the chosen site.

The design proposal presented in this thesis was created with three important dimensions in order to promote physical activity namely; proximity, availability and usability. People will be made aware of the benefits gained from physical
activity by the use of technology at the site. To further motivate fitness choices were created in order to let persons choose their favorite exercise. Mobile places are supported and easily created and sometimes connected to other relevant mobile places, which promotes many physical activities. Flexibility was in focus in order to link mobile places together and/or create an understanding dialogue with immobile places. Technology will be available to everyone that wants to use it, by smartphone or displaying screens at the site. The creating process of this site must be a living and adaptable one when building and adapting for specific and unspecific activities.

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Louise Stjernberg (2014)

(Nyström & Tonell 2012, 79)


Karlskrona kommun, specificera källhänvisningarna