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Designing Urban Sustainability Regeneration Projects

Case-study: Augustenborg, Malmö

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Abstract

The use of area-based approaches in urban regeneration is widely accepted in the European community. As these projects are based on the context of the focal area, there is no one-size-fits-all solution on how to design and implement those. The Eco-city Augustenborg project is an environmentally-led urban regeneration project initiated in Malmö in 1998. Today, fifteen years after the project was introduced, the project has earned itself a reputation as an unusually successful one, with hundreds of urban planners visiting the area on an annual basis. It seems, however, that the experiences gained through the process are not being communicated in an effective way within the city of Malmö. By analysing the Eco-city project from two frameworks, one based on guidelines available and the other on networking theory for sustainable development, this research aimed at bringing together knowledge from the experiences of the project. When the Eco-city initiative was lined up with the analytical frameworks applied in this research, certain factors influencing the success and sustainability seemed to repeatedly come up in the discussion. These were the basis for the development of the following six recommendations for future regeneration projects: 1) identify project leader and hub organisation, 2) include the private sector and the local community in the idea selection, 3) create a strong identity, 4) define common goals, 5) ensure external finance, and 6) apply innovative solutions. These general recommendations expect to enhance discussion about how a regeneration project can be designed successfully as in order to ensure for environmental quality and well-being in urban areas.

Keywords: environmentally-led regeneration, Eco-city Augustenborg, sustainable urban development, integrated urban renewal, area-based regeneration projects.

Executive Summary

Area-based urban regeneration projects are one of the approaches applied in the field of sustainable development in urban areas. These projects are designed by considering the socio-economic pre-conditions, the environmental quality, the availability of resources as well as the spatial planning of the area in question. Consequently, the design and implementation of such projects differs both within and between cities. This has somewhat led to the lack of guidelines for designing successful and sustainable urban regeneration projects as the distinctiveness of projects does not allow for a one-size-fits-all solution.

Augustenborg is a neighbourhood in South-East Malmö where an environmentally-led urban regeneration project under the name "the Eco-city Augustenborg" was initiated in 1998. The project was one of the first in a line of area-based regenerations implemented in the city of Malmö, and one of the longest ongoing projects of this kind in Europe. Today, fifteen years after the project was introduced, the project has earned itself a reputation as an unusually successful one, with hundreds of urban planners visiting the area on an annual basis. It seems, however, that the experiences gained through the process are not being communicated in an effective way within the city of Malmö. For those reasons, this research was aimed at bringing together knowledge from the experience of the Eco-city project in order to enhance discussion and understanding of the project with the ultimate aim of creating recommendations for sustainable area-based urban regeneration projects. The research questions guiding the research were thus 1) what are the key factors that influence the success and sustainability of an area-based urban regeneration project, and 2) how can the experiences from the Eco-city project be used as inspiration for future projects.

In order to answer these questions, two frameworks were developed to analyse the Eco-city project and identify the success factors. The first framework was based on general guidelines for area-based regeneration available from national and international organisations and institutions. The second framework summarised the components of successful collaboration for sustainable development as the cross-sectorial collaboration process proved to have utilitarian value in the Eco-city project.

When the Augustenborg initiative was analysed through the two frameworks, it became apparent that the success factors highlighted by interviewees were to a great extent in line with those highlighted by available guidelines as well as the networking theory for sustainable development. These included, among others, the importance of strong profiling or identity creation in regeneration projects. The strong eco-concept developed in the Eco-city project made it easier to market the area and thus improve reputation. This in turn got people interested in the work carried out as well as ensuring continuous interest of powerful actors within the collaboration effort. Another important factor turned out to be the effort made to get the local community involved in the project at early stages. The importance of early involvement of local community, as well as the private sector, was highlighted in the networking theory as a heterogeneous network membership is more likely to result in innovative solutions that fit the complexity of questions related to sustainable development. The same trend was identified in the Augustenborg initiative as residents were involved already in the idea selection. The two frameworks emphasised the significance of strong leadership, a factor that was highlighted as well by interviewees connected to the employment of a project leader at the start of the regeneration. The Augustenborg project furthermore got financial support from multiple actors and programs, including the national Local Investment Programme, the EU Urban programme, the city of Malmö and the district authorities in Fosie, which strengthen the project and allowed for creative solutions to be implemented as suggested by literature.

When lined up with the analytical frameworks set up in this research, general conclusions about success factors for area-based regeneration can be drawn as certain factors influencing the success and sustainability seem to repeatedly come up in the discussion. Some of these factors are reflected in available literature, while others are applicable lessons of cross-sectorial collaboration processes. Those factors are the basis for the following six recommendations that aim to underline important elements that should be considered in the future development of regeneration projects.

1. A **project leader and hub organisations** should be identified and those should be responsible for engage the private sector as well as the local community. The hub organisation should furthermore be responsible for actively communicating the results of an initiative.
2. The **local community and the private sector should be included** already in the idea selection to enhance creative/innovative solutions that fit the context of sustainable development.
3. Creating a **strong identity** makes it easier to access external funding and can increases political support. The identity can also be essential in ensuring the longevity of an initiative.
4. By **defining goals**, the common ground for the actors involved in the collaboration is established from the start. There should also be a built-in mechanism for revision of those in order to keep the project relevant.
5. The local budget is rarely enough to initiate a successful regeneration project. Thus **external finance needs to be ensured** to establish a strong position of the project from the very start.
6. By **applying innovative solutions** the identity can be strengthened while at the same time increasing the attention a project gets and thus increasing the investment and involvement of actors.

So regardless of the fact that each project needs to be designed with the special characteristics and problems of the focal area in mind, there are some general components that should be consider when designing an urban sustainability regeneration project. These are particularly important as planning for success can save time and resources in the initial phases of an area-based regeneration project.

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Abbreviations

CAI – Core Area Initiative

GHG – Green House Gases

KPI – Key Performance Indicators

LIP – Lokala Investeringsprogrammet (Local Investment Program)

MKB – Malmö Kommunala Bostads AB (Malmö's Municipal Housing Company)

PPP – Public-Private Partnership

1 Introduction

1.1 Problem definition

With more and more people moving into cities around the world, urbanisation has become a problem through increased urban sprawl, the building of slums, exclusion or isolation of population with a foreign background and lack of employment opportunities within the city (Ling 2005). The recent rapid urbanisation is threatening the well-being of people in cities including the environmental quality (Ling 2005). Urbanisation causes a great deal of environmental problems as the cities become concentrated spots of high consumption, while resource extraction and production mainly happen outside borders of the cities (Mitlin and Satterthwaite 1996). With a more concentrated population, air pollution issues can become an issue along with other negative impacts of increased traffic and so on.

Area-based urban regeneration projects are projects that focus on improving the physical environment, the well-being or the socio-economic situation in a geographically defined area in an urban environment (Riccardo and de Matteis 2011). The aim of these projects is to minimise the negative impacts of urbanisation on social capital and environmental quality (Ruming 2006). Revitalisation of a neighbourhood can be purely physical or use other means, such as culture, environment or heritage, to drive change to the physical or social capital.

Augustenborg is a neighbourhood in south-east Malmö, in the city district of Fosie. After multiple flooding, following heavy rain falls in the 1990s, there was a clear need for investment in the area. Consequently, an environmentally-led urban regeneration project was initiated in 1998 in order to increase the well-being of residents, create a sense of community, as well as, bettering the outdoor environment (Rolfsdotter 2009). The project, called the Eco-city project, is seen by many as an unusually successful one and has consequently received international attention from urban planners and developers (Malmberg pers.comm. 2013). This also became apparent when the project was awarded the annual World Habitat Awards by the Building and Social Housing Foundation in 2010 (BSHF 2010). One of the reasons behind this success is that the implementation of innovative solutions focusing on upgrading the physical environment was used as a mean to improve the social conditions in the area (Lindhqvist pers.comm. 2013). The project thus showcases interesting integration of social and environmental issues, at the same time as it is one of the longest on-going regeneration projects in Europe (BSHF 2010). Additionally, one of the primary goals of the project was to minimise relocation of residents and gentrification through ensuring that the initiative would not result in higher rents as many regeneration initiative do (Dannestam pers.comm. 2013).

In spite of the claimed success of this individual project, the success drivers and barriers identified in connection to the project have not been effectively communicated within the city of Malmö and the area-based approaches implemented in the city do not seem to be able to use the do's and don'ts from the project in order to plan for success (Lindhqvist pers.comm. 2013). As two out of six cornerstones of the project identified in the initial description address the need to systematically and continuously communicate the learning from the Eco-city to other areas of Malmö, it can be argued that in many ways the project has failed to deliver on these criteria. There is especially a lack of communication regarding regeneration of existing neighbourhoods and it has become apparent that the lessons to be learned from new constructions in Malmö, such as the construction of the environmentally focused area in the Western harbour, are much more effectively communicated both within and outside the city (Graham pers.comm. 2013). This lack of communication and platforms for exchanging experiences is the basis for increased focus by the environmental authorities in Malmö to create an initiative where these learning can be shared, called the Bygga Om Dialogen (the

Rebuilding Dialogue). Furthermore, there is a general lack of defined methods and literature about how to design and implement urban regeneration in existing neighbourhoods (BMVBS and BBR 2007).

1.2 Research question

Officials within the city of Malmö acknowledge that there is a need for increased communication within the municipality. This is in particular true for area-based regeneration projects, as those are usually designed individually and are not directly connected to each other. In line with this, this research strives to bring together knowledge from the experiences of the Eco-city project in order to enhance discussion and understanding within "the Rebuilding Dialogue" in Malmö, with the ultimate aim of creating guidelines that can be used in the design of other area-based regeneration projects focusing on the revitalisation of existing neighbourhoods. In order to accomplish this, the following focus questions were developed:

> Q.1 What are the key factors that influence the success and sustainability of an area-based urban regeneration project?
>
> Q.2 How can the experiences from the Eco-city project be used as inspiration for future regeneration projects?

1.3 Method

In order to answer the research questions identified above, two frameworks were developed in order to analyse the Eco-city project. Firstly, general guidelines for regeneration were summarised in order to compare with the project. Secondly, the components of successful collaboration for sustainable development were summarised as the collaboration process of the Eco-city is of great importance for the progress of the initiative. These two perspectives for analysis and the information from the interviews concerning the Eco-city project were, subsequently used to draw conclusions about the key factors influencing the success and sustainability of an area-based regeneration project.

The execution of this research can be described in three main steps;

1) initial literature review with aim to get to know the Eco-city project,
2) semi-structured interviews with involved actors based on success drivers/barriers,
3) second literature review of
    a) guidelines for urban regeneration projects
    b) cross-sectorial networking for sustainable development

1. Initial literature review

The initial literature review focused on getting to know the Eco-city project, the history of the area, the initial components, main actors involved in the project, the sources of investments as well as the external projects connected or supportive of the Eco-city. The literature review was mostly done through Google focusing on collecting the material that had been published about Augustenborg mainly using search words such as "Augustenborg", "Eco-city Augustenborg", "urban Malmö", "urban history of Malmö" and "sustainable Malmö". It should be noted that most publications about Augustenborg are published by the housing company MKB and the city of Malmö with a few exceptions of academic papers focusing on the open rainwater system as well as the green roofs. The literature collected was both in English and Swedish. As Peter Lindhqvist at the Department of Internal Services and one of the initiators of the Eco-city project, put the thesis research in motion, the interviews taken with him (see Appendix 1) can also be seen as a part of the initial review as they helped

identify both literature and important actors of the project. This initial review is the basis for Chapter 2.

2. Semi-structured interviews
The interviews conducted in relation with the research are listed in Appendix 1. All interviews, apart from one, were carried out in person and were semi-structured and lasted for approximately one hour each. Interviews were not restricted to certain questions but mostly started with the interviewee describing their relation to the Eco-city project followed with a discussion of the success drivers and barriers that they could identify concerning the project in question. The interviews conducted in Copenhagen were an attempt to get a perspective from individuals and organisations that were familiar with the project, but had not been directly involved. One of the limitations of the interviews turned out to be that people were generally more willing to discuss the success rather than the barriers and failures.

3. Second literature review
The second literature review was partly focused on sustainable urban development and guidelines for successful urban regeneration and partly on the cross-sectorial collaboration applicable to questions of sustainable development.

The literature review regarding urban development and the development of area-based urban regeneration projects was to a large extent based on literature from academic journals on urban planning, sustainable urban development, urban strategies etc. These were retrieved through the Lund University search database LUBsearch and are presented in Chapter 3. The search words included "area-based urban regeneration", "environmentally led urban regeneration" "sustainable urban development", "sustainable urban planning", "sustainable urban strategies", "urban pilot projects", "urban renewal", "urban regeneration" and "urban revitalisation". Following that a review of available guidelines was carried out where the search was focused not on academic publications, but rather on publications of national and international organisations and networks dealing with sustainable urban development. The search was restricted to Europe and North-America. In addition to the search words already mentioned, words such as "good" and "successful" were used. This literature is presented in Section 3.2. At this stage it became apparent that the literature available was more focused on direct assessment, assessment tools and indices that reflect the success or the sustainability of the outcomes of such initiatives rather than the process behind it.

Lastly, the literature presented in Chapter 4 was restricted only to the doctoral dissertation made by Zinaida Fadeeva with the title "Exploring cross-sectoral collaboration for sustainable development: A case of tourism". This as it became apparent that the collaboration process in the Eco-city was of great importance to the overall development of the project.

1.4 Limitations and scope

The review of guidelines available for urban regeneration projects is limited to those created by organisations or researchers in Europe and North America. This as the level of development and the problems apparent in other parts of the world are often of a different character and thus the input needed in those areas is very different from the one in Sweden. It should be noted that research on urban regeneration and its outcomes does exist for other areas and there is indeed a lot to learn from those as well, but they fall outside the scope of this thesis work.

The analysis is focused only on the Eco-city neighbourhood, but there are admittedly multiple other area-based regeneration projects going on within the city of Malmö. Additionally, the initial description of the project is the basis for analysis even though some sub-projects that

have started since 1998 are mentioned disregarding that they are not part of the initial design of the regeneration.

The introduction to networking for sustainable development is based only on the literature on networking theory that was introduced in the doctoral dissertation of Zinaida Fadeeva: "Exploring cross-sectorial collaboration for sustainable development". No literature beyond that presented there was used for understanding the structure of networking as the work of Fadeeva was both comprehensive and focused on networking especially for sustainable development.

1.5 Audience

Important audiences are departments within municipalities that deal with sustainable urban development (urban planning, environmental strategies, social integration etc.). For this audience the paper presents an example of how social problems can be addressed through regeneration of individual neighbourhoods. The paper can also provide discussion points for international/inter-regional networking initiatives focused on sustainable development in the urban environment.

Literature suggests that there is a need for increased research on these topics as urbanisation shifts the focus more and more towards the sustainability of urban development. Thus another audience can be researchers within the field of urban studies and planning. This especially as area-based projects are becoming more applied with increased focus on renovating run down infrastructure built after the Second World War. Additionally the issues of urbanisation are becoming increasingly pressing thus demanding new approaches which need to be accompanied by increased research. As the Eco-city project also provides a holistic perspective and cooperation between sectors, the thesis can provide an example of effective networking and project planning interesting for researchers in the field of environmental strategy, planning or sustainable development.

1.6 Disposition

Chapter 1 outlines and justifies the research along with listing limitations and describing the methodology.

In the following Chapter 2, the start and the initial design of the Eco-city project will be presented in order to introduce the project to the audience.

Chapter 3 defines urban regeneration projects and their importance as well as introducing a few guidelines available for the design and implementation of such projects. At the end of the chapter, a summary is made to create a frame for the analysis of urban regeneration projects.

Chapter 4 introduces the value of effective cross-sectorial collaboration and the role it can play in working towards sustainable development. At the end of the chapter, some general conclusions on the components of successful networking for sustainable development are drawn as a basis for analysing the Eco-city project.

In Chapter 5, the frames from Chapter 3 and Chapter 4 are used to discuss the design and development of the Eco-city project.

The research is concluded in Chapter 6 with general conclusions about important components of area-based urban regeneration projects based on the two frameworks along with recommendations for future projects.

2 Augustenborg

2.1 The beginning

Augustenborg is a neighbourhood in South-East Malmö that was constructed between the years 1948 and 1952 by Malmö's public housing company (MKB) (Rolfsdotter 2009). Following the depression in the 1930s and the Second World War there was a huge demand for housing in Malmö, as in the rest of Sweden (Aunér 2009). At the same time the living standards were rapidly improving, thus MKB wanted to make their first housing area of higher standard (Aunér 2009). The company's goal was therefore from the start to construct functional and spacious apartments in an area that would give a feeling of community (Stigendal 1999). These years were the beginning of what Stigendal (1999) defines as the neighbourhood-era in the history of urban planning in Malmö. The influences of the era become apparent when comparing the spatial planning of the surrounding neighbourhoods which were constructed in other time periods (Stigendal 1999). The neighbourhood-era is characterised by smaller infrastructure units surrounded by smaller greener areas while neighbourhoods developed in the "Million Programme Home" era have more of a centralised approach characterised with bigger units of both grey and green areas (Stigendal 1999). This as the focus of national urban policy changed in the beginning of the 1960s as the Swedish government initiated the Million Programme Home following a lack of housing with the goal of constructing one million homes in a period of ten years (Stigendal 1999). In many ways, the physical pre-conditions of marketing Augustenborg as an Eco-city were therefore more favourable than in other areas of Malmö (Dannestam pers.comm. 2013).

As the drainage system from the 1950s had limited capacity, the area was faced with numerous seasonal flooding episodes following heavy rain falls in the 1990s (BSHF 2010). This caused not only degradation of the existing infrastructure, but furthermore created a health risk as the area would withhold untreated wastewater after flooding episodes (BSHF 2010).

As the consumption patterns and living standards evolved over the years, more modern neighbourhoods were developed and became more attractive (Aunér 2009). By the end of the 1990s, Augustenborg was therefore faced with an urban decline that was showcased through high turnover of tenancies, as well as, a high number of empty apartments, as the original population moved away to more modern neighbourhoods (BSHF 2010). Additionally, it seemed that the 50% of residents in the area with a foreign background were struggling to enter the labour market and integrating into the Swedish system (Rolfsdotter 2009). Consequently, the area was faced with a low average income, low employment rates, a high dependency on social support and a relatively high crime rate compared to other areas of Malmö (Malmö City 2013a). These poor socio-economic conditions also led to worse health conditions of the residents (Rolfsdotter 2009). All in all, the neighbourhood had earned itself a bad reputation and was lacking a community feeling. There was a clear need for rehabilitation of the social capital, as well as, the physical one, as the infrastructure was going on 50 years (Aunér 2009).

These conditions were the basis for the start of the Eco-city project in Augustenborg. The idea came from Peter Lindhqvist, who worked at the Department of Internal Services, and was originally focused on creating a green industrial-park around the operations of the city's technology and maintenance facility (Rolfsdotter 2009). His ideas fitted well with the EU-funded URBAN programme that was just starting up in South-East Malmö, as well as the housing company's acknowledgement that there was a need for investment in the area (Rolfsdotter 2009). Through these three forces, it became apparent that many people wanted the same thing at the same time which resulted in the idea of turning the whole

neighbourhood into an Eco-city (Aunér 2009; Nilsson pers.comm. 2013). The project was thus initiated in 1998 by MKB and Malmö city and started with a gathering of officials, housing managers and resident with the aim to create an action plan focusing on the problems the area was faced with and possible solutions of those (Rolfsdotter 2009). This action plan resulted in an application to the national Local Investment Program (LIP) where the 14 sub-projects shown in Table 1 were identified (Malmö City 2013b; Lindhqvist 1997). The "Eco-city" name became the umbrella term for these sub-projects that were to be implemented in the area in the following years (Krantz 2002). As seen in the table, the sub-projects were focused on improving the outdoor environment and the environmental quality of the area, but this was merely seen as a mean to achieve improvement in the socio-economic conditions (Lindhqvist pers.comm. 2013). After receiving 24 million Swedish kronas (SEK) from the LIP programme in 1998, the project came into force as one of the first environmentally-led integrated urban development projects in Malmö (Malmö City 2013b; Rolfsdotter 2009).

Table 1: The 14 original sub-projects of the Eco-city project (Lindhqvist, 1997).

	Project		Project
1	Project management, environmental management and quality control	8	Recreation of cultural environment
2	Integrated open rainwater management system	9	Ecological/green roofs
3	Local waste management	10	Ecologically adapted retirement home
4	Environmentally friendly, electrically driven local transportation	11	Managing an Eco-city
5	Solar-powered sewage treatment plant	12	Green re-construction of parks, squares and other green areas
6	Construction of media- and cultural centre	13	Resource management
7	Environmentally friendly reconstruction of schoolyard and park	14	Other smaller projects

2.2 Goals

The main goal of the project was to "through powerful investments in different areas/projects, under the frame of ecological development, turn around the negative trend and to create a long-sighted, sustainable platform for a better outdoor environment, resource management and communion of the different operations/activities in the area" (translated from Lindhqvist 1997: pp.3). Additionally, the project as whole had quantitative environmental goals stated in the initial description including a certain decrease of: GHGs, water and electricity use, household waste, rainwater leaving the area etc. (Lindhqvist 1997). Quantitative goals were also defined within each sub-project in line with the environmental goals of Malmö City and the twelve national environmental objectives (Lindhqvist 1997). Even if the project had an environmental focus, or theme, it was clear from the beginning that the wanted outcomes of the project were to improve the social conditions in the area using the environment as a mean to those change (Dannestam pers.comm. 2013).

2.3 Financing and stakeholders

As stated above, the Eco-city project was partly financed by the LIP programme. However, the sources of funding were various, including funding from local budgets of different administrative organs within the city, specific EU-projects and private investment from the housing company MKB (BSHF 2010). The inputs of different sources were dependent on the characteristics of the sub-project in question (Lindhqvist, 1997).

Originally it was estimated that the housing company would stand for approximately 30% of the total investment in the project in the starting phase (1998 – 2002) (Lindhqvist 1997). In 2010 it was estimated that around 50% of all investments in the project from 1998 to 2010 came from the housing company which comes down to around 100 million SEK invested by MKB only (BSHF 2010). Logically these investments were from the beginning largely concentrated on the more physical sub-projects focusing on restoring infrastructure, such as recreating the cultural environment (changing facades) and renewal of green areas (Lindhqvist 1997).

From the beginning of the project, the development and funding of sub-projects were interconnected with the EU Urban Programme, where Malmö (and more specifically South-East Malmö) was the only participant in Sweden (UPS 1997). This meant that some of the resources in the more socially focused projects (such as the construction of a media- and culture centre etc.) came from the umbrella of the Urban Programme (Rolfsdotter 2009).

On a local level, there were numerous actors involved in the planning, implementation and funding of the project. These include the district authorities in Fosie, Malmö city's water- and sewage department, the department of roads and transport, Malmö city's internal services, the environmental department of Malmö and the municipal technology and maintenance department (Lindhqvist 1997).

2.4 Implementation of sub-projects

With the financial support of the LIP programme, the implementation of twelve of the fourteen projects listed in Table 1 started in 1998 (Lindhqvist pers.comm. 2013). As the environmentally friendly sewage treatment plant did not receive any funding from the LIP, it got dropped from the action plan (Lindhqvist pers.comm. 2013). The creation of green roofs and an ecological botanical garden did not get funding through the LIP programme either, but was implemented by funding from, amongst others, the EU-Life project (Malmberg pers.comm. 2013).

In the very first steps of the project, a project manager was hired for two and a half years as planned under the first sub-project (Lindhqvist 1997). The decision to hire Trevor Graham as a manager for the whole project was based to a large extent on his experience within the Groundwork programme in the UK (Nilsson pers.comm. 2013). The Groundwork programme focuses on improving livelihood of people through concentrating on the environmental quality and enhancing the dialogue between local authorities, businesses and housing associations (Groundwork 2013). Therefore the experiences gained from the programme were directly applicable to the Augustenborg context. Additionally, the initiators of the Eco-city project saw it as a great advantage to employ an individual that was not from the lines of local authorities, thus had the potential to create a certain feeling amongst the population that the project was bigger, or more important than usual top-down interventions (Nilsson pers.comm. 2013). The project manager was placed within the district authorities of Fosie (Graham pers.comm. 2013).

The flooding in the area was one of the problems that called for immediate attention which resulted in the idea of implementing an open rainwater system to locally filtrate, withhold and finally channel the rainwater from the neighbourhood (Lindhqvist 1997). The system not only reduced the likelihood of flooding but furthermore reduced the pressure on the treatment plant, as well as, being a part of the overall improvement of the outdoor environment (Lindhqvist 1997). The implementation of the project included the construction of around 6 km of canals, dams and other infrastructure that was able to collect and channel rainwater through the neighbourhood (Malmberg pers.comm. 2013). This water management solution

has become one of the most iconic and well known parts of the Augustenborg project as the implementation of such a system is not common and the visual appearance is quite unique.

The third sub-project was focused on enhancing the possibility of waste separation with building of recycling facilities and introducing waste bins for separation for households, as well as, schools and office spaces (Lindhqvist 1997). From the beginning of the project, the amounts and composition of waste were measured and documented in order to monitor if the goal of 90% separation would be achieved (Bernstad *et al.* 2012). Biological waste has also to been separated in the area since 2000 and is currently transported to a biogas facility (Dannestam pers.comm. 2013). After the initial implementation phase (1998-2002), the housing company MKB has invested in continuous improvements of the waste separation system and communicating recycling practices to the residents. Thus the recycling system and facilities are somewhat more developed than in surrounding neighbourhoods (Dannestam pers.comm. 2013). Recently they have focused on recycling solutions for small kitchens and in a 2009-2010 initiative those were introduced to the residents through a door-to-door campaign (Dannestam pers.comm. 2013).

The sub-project focusing on electrically driven local transportation was implemented through the introduction of two electric trains that were to connect residential areas with service areas, while minimising the environmental impact and the noise pollution of transportation (Lindhqvist 1997). The project was given the name the Green Line and the two electric trains started running in Augustenborg in April 2000 (Wettermark 2000). The trains drove mostly on bike paths where the speed would not exceed 15 km/h (Wettermark 2000). After running for two years, the Green Line was shut down as it could not be proven to be economically feasible (Rolfsdotter 2009).

At the Augustenborg primary school, the development of a cultural centre was already in action at the start of the project (Lindhqvist 1997). With the introduction of the Eco-city project, the centre took on increased responsibilities with the role of communicating information regarding the process and implementation of the initiative to residents (Lindhqvist 1997). The goal of this sub-project was to create printed material, web pages and TV-documentation in multiple languages in order to actively inform the residents of progress being made etc. (Lindhqvist 1997). The school was furthermore involved in the project through the reconstruction of the schoolyard and surrounding park, which was also a part of the canal- and dam-system constructed as a part of the open rainwater system (Malmberg pers.comm. 2013). The decision to construct a music park, or a musical playground, was inspired by the musical profile already established at the primary school through extra focus on musical education within the school (Nilsson pers.comm. 2013).

In the 1980s, a few houses in the neighbourhood were renovated by covering the facades with metal plates as a way to minimise energy losses from the buildings (Lindhqvist 1997). In the beginning of the Eco-city project, it was decided to change five houses back to their original appearance as it turned out the metal plates did not improve the indoor climate in those houses (Lindhqvist 1997). Additionally, the original and special appearance of the neighbourhood would be somewhat regained (Dannestam pers.comm. 2013).

As mentioned above, the idea of constructing green roof in connection with the operations of Malmö city's technology and maintenance facility located in Augustenborg did not receive funding from LIP. The project and the start-up of the first botanical roof garden in the world as well as of the Scandinavian Green Roof Institute was made possible by funding from the EU LIFE-programme, which funds projects that focus on solutions that minimise the impact of human activity on the environment, along with the Swedish Ministry of the Environment

and the city of Malmö (SGRI 2013). The benefits of constructing green roofs were made clear in the initial project description, as they would decrease the proportion of hard surfaces in the area while increasing the biodiversity, filtrating rainwater and insulate the infrastructure (Lindhqvist 1997). Work carried out by the Scandinavian Green Roof Institute and the operation of the world's first botanical roof garden has resulted in a high number of visitors from all around the world (SGRI 2013). On an annual basis, the institute welcomes around 300 visitor groups, mostly students and public officials within the field of urban planning (Malmberg pers.comm. 2013). The institute uses the area to implement and test innovative solutions regarding the greening of urban areas and through that attract both investments and researchers in the area of urban planning and environmental technology (SGRI 2013).

One of the few new constructions included in the initial action plan was the construction of an ecologically adapted retirement home (Lindhqvist 1997). The design of the building was to minimise the environmental impact of the actual construction, as well as, the consumption patterns of the residents (Lindhqvist 1997). Green roofs were installed on the top of the building, area was set aside for urban farming and there was a focus on a user-friendly system for separation of solid waste (Lindhqvist 1997). After the construction, a senior café, Café Sommaren, started up in the facility creating a meeting point for residents (Rolfsdotter 2009).

Eco-city Augustenborg furthermore included investments in reconstructing open spaces, squares, yards and parks using natural materials focusing on improving the outdoor environment with minimum environmental impact in the process (Lindhqvist 1997). There was also an intervention directed at minimising the use of water, heat and energy both focusing on public spaces as well as increased information to the residents concerning more sustainable consumption patterns (Lindhqvist 1997). This resulted in 25% reduction in heat and water consumption in the neighbourhood (Rolfsdotter 2009). Additionally, under the Eco-city umbrella, funding was set aside to recreate a management and maintenance plan that fitted the new solutions implemented in the area as well as the implementation of a few smaller projects (Lindhqvist 1997).

2.5 Current situation and on-going projects

As the Urban Programme and the Local Investment Programme were both temporary projects, the resources made available for the Eco-city project by the city of Malmö decreased when those ended. Additionally, other areas within Malmö were demanding attention as social conditions were getting worse and thus the municipality started focusing on areas in need for uplifting (Dannestam pers.comm. 2013). For those reasons, the main driving force for the continuous existence of the eco-concept since the end of the initial implementation phase has been MKB. As the company owns around 90% of the apartments in the neighbourhood, they see a great market value of profiling the area as an Eco-city and have chosen to use the neighbourhood as a testbed for environmental technology solutions (Dannestam pers.comm. 2013). These test-projects include ecological laundry rooms, involvement in the EU CLICC project, which focuses on greener consumption, increased focus on solar power and the construction of "Greenhouse" – an environmentally friendly apartment building where innovative solutions can be tested (Dannestam pers.comm. 2013). Since 2008, the company has also been responsible for the Eco-city day where the hope is to inspire residents and local businesses to engage in the eco-way-of-thinking (Rolfsdotter 2009).

The district authorities in Fosie and the department of road and transport have also invested in the construction of a multi-functional sport arena through the EU-project focusing on South-East Malmö (SÖM) with the goal of encouraging youngsters to engage in sports and activities as well as to create meeting points for residents in the area (Nilsson pers.comm. 2013).

Additionally, successful bottom-up initiatives in the neighbourhood have been highlighted in literature as good examples of community involvement (Aunér 2009; ErufEko 2011; Malmö Stad 2010; RCE 2010). One of the bottom-up initiatives is the after-school facility Gnistan started up by Safija Imsirovic in 1998 (RCE 2010). The aim of the Gnistan project was to decrease the unemployment rate and the dependency on social subsidies through creating opportunities for parents to leave the house in order to actively search for jobs (Imsirovic pers.comm. 2013). The activity adopted the eco-concept from the start, introducing for example a rabbit hotel were the kids are taught both about nutrition cycles by involving them in the growing of carrots using the manure from the rabbits as fertiliser (Imsirovic pers.comm. 2013). Moreover the connection between the social, environmental and economic spheres are emphasised as the rabbits are then traded to a pet store in exchange for feed (Imsirovic pers.comm. 2013). In 2001, the residents in the area started up a car pool that is still running (Rolfsdotter 2009). There has also been an increasing interest among the residents in urban farming and, with support from the Green Roof Institute and MKB; the residents are now participating in an active urban farming organisation (Malmberg pers.comm. 2013). At the start of the project, a senior theatre group also started up in the area revitalising the old theatre hall (Aunér 2009).

3 Successful urban regeneration

The issue of sustainable urban development has been given increased focus within the European Union since the mid-1990s with decisions such as the Lille Action Programme (2000), the Urban Acquis (2004), the Bristol Accord (2005), the Leipzig Charter (2007), the Marseilles Declaration (2008) and, most recently, the Toledo Declaration (2010). It is fully recognised that the socio-economic pre-conditions, the environmental quality, the availability of resources and the spatial planning differs enormously both between and within cities, and thus the goal of these actions has not been to create a one-size-fits-all solution, but to create general goals and guidelines shared by the EU community (BMVMS and BBR 2007).

Urban regeneration projects are a tool to achieve sustainable urban development and can thus be any type of project that seeks to increase the level of development in a geographically defined area in an urban environment (Ruming 2006). Many of these projects are undertaken in social housing estates or in areas where the bad condition of real estate etc. has led to low prices of estates that ultimately has resulted in "local concentrations of social disadvantage, welfarism and powerlessness, stigma, poor access to services and facilities, isolation, transience, crime and vandalism, and fear and poor public safety" (Ruming 2006: pp.6). The goal of these projects is thus usually to better the living environment for people in the area through initiatives that focus on improving the economic, social and physical environment in these specific quarters with the final aim of increasing the well-being of inhabitants (Riccardo and de Matteis 2011; Ruming 2006).

In literature, different names are used for projects with this goal, depending on what they involve, and more specifically in what decade they were implemented (Roberts 2000). As the urban problems changed between decades, the policy focus and thus the economical, physical, environmental and social focus, changed accordingly (Roberts 2000; Tsenkova 2002). Since the 1990s, the word regeneration has been increasingly used as the focus has shifted from physical improvements towards more integrated approaches involving physical, as well as, economic, social and environmental issues (see Table 2). At the same time the desired outcomes of such projects have moved away from traditional quantitative measurements of social conditions (such as employment, educational level) towards softer, more qualitative themes (such as sense of belonging, empowerment, well-being, happiness, community feeling) (Colantonio and Dixon 2009).

Table 2: The eras of urban regeneration (adapted from Roberts 2000).

Period	1950s	1960s	1970s	1980s	1990s
Policy type	Reconstruction	Revitalisation	Renewal	Redevelopment	Regeneration
Strategy /orientation	Reconstruction (following 2nd world war) of older areas often based on a "masterplan". Suburban growth	Extension of reconstruction: suburban and peripheral growth	Still focus on border areas: focus on in-situ neighbourhood schemes	Numerous major re- development schemes. Flagship projects started to appear	Movement towards a more comprehensive policy. Increased focus on integrated approaches

The process of regeneration is thus more comprehensive and long-sighted than the more physical focused reconstruction/renewal as it focuses on "community-based, social economy approach" (Colantonio and Dixon 2009). This genre of urban development projects are thus increasingly focusing on social sustainability defined as "development (and/or growth) that is

compatible with harmonious evolution of civil society, fostering an environment conducive to the compatible cohabitation of culturally and socially diverse groups while at the same time encouraging social integration, with improvements in the quality of life for all segments of the population" (Polese and Stren 2000; pp.15-16). From an environmental point of view, social sustainability is of great importance for numerous reasons. First of all, in line with the definition of sustainable development, social (or socio-economical) questions should not be looked at in isolation from the environment as these are interconnected (Colantonio and Dixon 2009). Secondly, social preconditions in an area have to be at a certain level in order to effectively work towards environmental sustainability (Chiu 2003). Thirdly, increased well-being and sense of community are likely to affect the involvement and investment of residents in their local environment (Chiu 2003).

3.1 Available guidelines for urban regeneration projects

Following is a description of general guidelines available for urban regeneration projects. These are limited to the design and development of a project rather than the physical components that should be included and the desired measureable outcomes. As noted by Tsenkova (2002), regeneration projects can be assessed either by looking at the outcomes of a project or by looking at the factors that lead to the outcomes (Tsenkova 2002). One could draw up guidelines based on assessment frameworks or indices, as the indicators defined in those reflect in some ways what should be thought of in the development and procedures surrounding a project. However, this thesis work was limited to looking at guidelines of general components that defined successful projects and summarising those. Additionally, the guidelines presented below are limited to those based on European or North-American experiences, as the level of urban development is comparable to that in Sweden.

3.1.1 The Directorate of Culture and Cultural and Natural Heritage Guidance on Urban Rehabilitation

A series of meetings of a committee of experts within the area of cultural urban rehabilitation, known as the Lisbon Debate, were initiated in 1998 to set guidelines for urban rehabilitation in European cities based on the cultural regeneration of Lisbon (DCCNH 2004). As it was acknowledged that the 1992 cultural rehabilitation project in Lisbon had been implemented effectively by emphasising public participation and increased well-being of residents, the project was used to create these guidelines (DCCNH 2004). It is made clear that the basis of these projects needs to be the principles of democracy that have been the fundamental principles for any project in the EU since the 1960s (DCCNH 2004). More specifically these projects need to a) respect human rights, b) allow for democratic debate, and c) follow democratic procedures and institutions.

The guidelines themselves, published in Guidance on Urban Rehabilitation (DCCNH 2004), are presented as seven general action points that should be emphasised in any kind of urban regeneration project in order to plan for success (see Figure 1). These are a basis for the three major phases of rehabilitation processes: analysing a project; developing strategies; and implementing a regeneration project.

The means of action

1. The rehabilitation project must be an integrated part of urban policy,
2. Public authorities must be the driving force,
3. There must be a technical operational team to provide back-up,
4. The population must be involved,
5. There must be appropriate legal instruments,
6. There have to be available financial resources,
7. The time factor must be taken into account.

Figure 1: The Directorate of Culture and Cultural and Natural Heritage means of action to be included in the planning and implementation of urban regeneration projects (modified from DCCNH 2004).

These action points are very general, as it is apparent that areas differ enormously and thus the points need to be kept flexible allowing for customisation depending on the pre-conditions and the local context in which a project is to be implemented (DCCNH 2004). Following is a description of the seven means of action based on the Directorate of Culture and Cultural and Natural Heritage (DCCNH) 2004 publication.

1. The rehabilitation project must be an integrated part of urban policy

The series of actions implemented under the umbrella of a regeneration project and the identified goals should not be seen in isolation from the urban policies on municipal, regional and national level. Even if the starting point of individual regeneration projects should be the problems and pre-conditions identified at a neighbourhood level, it is beneficial to have those in line with the general policy goals of the city etc. in order to easier access resources available at the city/regional level. Increased integration of the city's long-term urban policy into the individual project increases the political support of a project. Political support can be the sole component that decides if a project is successful or not as this, in many ways, decides the resources made available for the project. It is also important to be aware of the urban development in the bigger area so that actions identified under the project do not go against actions that are to be taken in the city as a whole. An example of such is that the transportation policy within an individual project needs to go hand in hand with the action plan identified in the region, as the solutions are of a holistic genre.

2. Public authorities must be the driving force

As mentioned above, the regional/national urban policy needs to be integrated into project design and implementation. In order for this to be a reality, the public authorities need to lead the regeneration project. This as the knowledge about national and regional policy goals exists in the public sphere. Furthermore, the public authorities/administration works under the policy set by politicians and thus political support is already the basis of the public sphere. The public sector, therefore, has the position to effectively manage coordination within an integrated neighbourhood regeneration project. This coordination is identified on three levels:

1. The horizontal level: formation of multidisciplinary teams and coordination of their many interacting skills;
2. The vertical level: coordination of actions carried out at the various levels of power (European, national, regional and local) and respect for the complementarity of these levels of power (principle of subsidiarity); and
3. Spatial level: area-based approaches to ensure productive interaction between a project and an area; co-operation between neighbourhoods and neighbouring local authorities (DCCNH 2004: p.109-110).

Even if it is stated that the public authorities are best fitted to ensure coordination, it is important to emphasise that this does not mean that the public sphere is not an important player in regeneration projects.

3. There must be a technical operational team to provide back-up

In order to achieve the goals of a project, a technical operational team needs to be in place to design the practical solutions. The team should include specialists in areas both concerning the physical environment, the economic prerequisite as well as the social conditions and preferably be located within the geographical boundaries of the project in order to increase the collaboration between the team and the residents. In addition to the technical specialities of the team, there is a need for a certain understanding and appreciation of the area's social qualities. Thus the roles of the team are also to 1) listen to the residents, their ideas and solutions; 2) understand the connection between the stakeholder involved; 3) inform the residents of the process and be available to suggest roles that they can take; and 4) support those families that are faced with difficult social conditions and create a process in which these families can seek solutions to their problems.

4. The population must be involved

The importance of political support and technical expertise has been stressed above. Regardless of that, the success of a regeneration project is somewhat limited to the level of public participation. A top-down project imposed by the public authorities along with a technical team will not be successful if the residents are not involved in the project. Regardless of the design of the participation, there is a clear need for a communication platform in which the people living in the area in question can influence and take part in each stage of the renovation in the neighbourhood. The community needs to be given a "co-producer" place within the project, acknowledging that there is a lot of knowledge to be found within the human capital of an area. Preferably, the residents should not only have a possibility to communicate their opinions but furthermore utilising their potential to be a part of the solution. As rehabilitation impacts the daily life of people in the area, the project cannot be seen in isolation from the needs and will of the residents.

5. Appropriate legal instruments must be in place

For apparent reasons, the legal requirements connected to a certain renewal project need to be fulfilled. In the development process it is important to include a review of the legal instruments that can influence the design of the project. These can include for example property rights and land-use policies, land-use plans, urban planning/town-planning regulations, building and demolition permits, auctioning of projects, monitoring unauthorised work, as well as, following regulations regarding notification to residents when work is to be carried out.

6. Financial resources have to be available

The sources of financing for each action within a project need to be clear already in the design phase. In order to create a stable ground for the project, the investments need to come not only from the local authorities but a private-public-partnership (PPP) needs to be in place as well as communication with possible NGOs and European/international partners involved in the project. The financial input of regional, national and European bodies can be acquired if national urban policies (action no.1) have been integrated in the project in the development phase. The public sector often takes over the project in later phases, but it is important that the public sphere is constantly involved in order to ensure that the well-being of the residents continues to improve and to ensure that the market forces are not the sole power directing the project. Additionally there is a need to ensure for a stable financing for projects that seek to

diversify the housing offered in these areas in order to create a demographically varied population.

7. The time factor has to be taken into account

Residents, as well as the elected representatives, need to be informed about the project and to be given time to reflect upon it and express their opinions and thoughts. If a project would to be implemented without giving stakeholders the opportunity to form views and develop attitudes toward the series of actions planned to be taken, it would only consist of technical solutions which increases the risk of those not fitting the problems seen in the neighbourhood. Furthermore, it needs to be acknowledged that even if a project is in the implementation phase, it can (and should) still be developing and new solutions or problems might become apparent. The method chosen thus needs to allow for flexibility and openness when new information or skills surfaces. Lastly the actions taken need to have a clear time frame in which a certain result should be achieved.

3.1.2 Urban Regeneration through Cultural Activity

In the book "The Art of Regeneration: Urban Renewal through Cultural Activity" the authors investigate fifteen examples of successful culture-led urban renewal projects in Europe with the aim of emphasising important factors that need to be considered when designing and implementing such projects (Landry *et al.* 1996). Even though culture-led regeneration projects include a specific genre of actions taken, the general conclusions concerning what makes a town or a neighbourhood a successful one can still be of great interest in the context of this thesis. Moreover, it is thought that culture-led urban regeneration has a trickle-down effect increasing the well-being in areas where implemented (Bailey *et al.* 2007). Thus eight success factors highlighted by Landry *et al.* (1996) (Figure 2) will be briefly presented in order to deepening the analysis of what defines a successful urban regeneration project.

Success factors of culture-led urban regeneration

1. Strong leadership
2. Create identity and distinctiveness
3. Utilise local strengths
4. Turning weakness into strength
5. Go beyond corporate style
6. Get people involved
7. Broadening the scope of planning
8. Create balance between buildings and activities

Figure 2: The eight success factors of urban regeneration implemented through cultural activity presented by Landry et al. (1996).

1. Strong leadership

Through their analysis of fifteen case-studies, Landry *et al.* (1996) identify that creative and determined individuals played key role in successful projects as the main driving force for change. Encouraging individuals, especially within the political sphere, have the possibility to transform towns or neighbourhoods by creating the conditions needed to enhance innovation and creativity. Additionally, entrepreneurs among residents or within companies in the areas can spark bottom-up initiatives that give life to decaying neighbourhoods. With strong leading figures and clear political will, the projects implemented had a bigger potential to create positive outcomes.

2. Create identity and distinctiveness

It has been acknowledged by numerous publications concerning culture-led urban renewal that a strong identity of a town or neighbourhood is an important part of creating a sense of belonging (Bailey *et al.* 2007; EAHTR 2007; Montgomery 2003). The identity can be in various forms, from distinctive architecture to unique activities. Making a neighbourhood stick out "…is about creating a distinguishing character, one that is not imitative but draws on the unique nature of a place and its people" (Landry *et al.* 1996). Furthermore it seeks to identify the strengths or soul of the area in question in order to lift that up as a way of marketing.

3. Utilise local strengths

Identifying strengths within an area can be useful not only for marketing, but those should also be the core of activities carried out through regeneration. It should be acknowledged that each quarter has its own culture and traditions that have been shaped through the years and, by emphasising those through regeneration activities, residents are more likely to feel empowered. These can be hard to spot as they can be not only of physical form but intangible as well.

4. The art of turning weakness into strength

In the context of culture-led projects, this usually refers to finding new use of abandoned/deteriorated infrastructure. Through revitalisation and new functions, unattractive parts of a neighbourhood, such as deteriorated infrastructures, parks, etc., can be a part of the solution instead of sources of problems. In the analysis of case-studies, this was shown through multiple examples in European cities.

5. Go beyond corporate style

In order to create the distinctiveness and feeling of belonging, it can be of great value to move from architectural trends and uniform solutions to more local and creative solutions. This does not only include new buildings and infrastructures but also covers types of benches, lamp-post, bridges, and traffic-lights that tend to be uniform within and between cities.

6. Get people involved in the renewal

As the goal of any regeneration project is to better the well-being as well as the habitat of residents, involving them in all stages of a project is an essential piece of the puzzle. It is important to encourage the public to be a part of the solution and give them multiple platforms to take part as this increases support and thus ensures the longevity of a project. Top-down solutions usually create grudge and negativity as they are usually imposed without sufficient information to residents. Simultaneously, the public holds great knowledge about the most urgent problems to be addressed as they spend their leisure time in the area in question.

7. A broader scope of planning

It is clear that those making decisions about urban development are usually urban planners, technicians, architectures and other experts. This often results in development- and infrastructure-led plans that tend to miss how the physical environment can and needs to support social interaction. Regeneration projects can thus often be "limited by professional constructs and political constraints" (Landry *et al.* 1996). By increasing involvement of residents, as emphasised in point six, the risk of this can be minimised. Thinking outside the physical blue-print of an area is more likely to create a lively area where people want to spend time.

8. Striking a balance between buildings and activities

Lastly, Landry *et al.* (1996) mention that there needs to be a balance between focusing on renewing buildings and on supporting and planning activities. It is pointed out that even if renovating existing infrastructures can be a visible indication of investments in the area, there is value in increased cultural activities as they have low initial cost that can pay off fairly quickly with increased reputation and an appreciation of the area.

3.1.3 INHERIT – Heritage-led urban regeneration

INHERIT is an EU-funded Interreg project that aims at showcasing how investing in heritage and heritage-led urban regeneration projects can be of great value for the well-being of a city (EAHTR 2007). Restoring or re-inventing culturally and historically important quarters can create a positive social, socio-economic and environmental outcome (EAHTR 2007). The INHERIT "Guide to Successful Urban Regeneration", published by the European Association of Historic Towns and Regions (EAHTR), introduces 24 factors to consider under the umbrella of 4 general recommendations (Figure 3). These are in its turn based on visits to eight cities that are a part of the INHERIT project.

Guidance to success in heritage-led regeneration
1. Think and act strategically
2. Focus on identity and diversity
3. Invest in regeneration
4. Work in partnership

Figure 3: The four umbrella recommendations for successful heritage-led urban regeneration projects (modified from EAHTR 2007).

1. Think and act strategically

The recommendation addresses the strategic approach applied in regeneration. It is emphasised that there needs to be a strong leadership with a good overview over the project, the stakeholders and the organisational structures involved in the project. These need to ensure that the concept (in this case heritage) is incorporated into strategies and policies on a higher level and link it to national/international goals as well as lobbying for increased understanding of the role heritage can have in driving change. In addition, it is pointed out that a project needs to have clear goals and these need to be monitored.

2. Focus on identity and diversity

In the first steps of a project, an audit should be carried out in order to define the specific character and identity of the area in question, this as a strong identity can be the decisive factor in the support of residents and visitors. Regeneration needs to go beyond the physical components and focus on cultural activity and diversity in form of mixed use of facilities, activities and new sustainable solutions. Lastly there is a need to emphasise that the actions taken lose their value if quality is not put first on the agenda from the start.

3. Invest in regeneration

The public sector needs to acknowledge that investments in public spaces can play a key role in increased quality of life and in bettering a perception of an area. This can be done through improving the physical environment, as well as, reviving public spaces through cultural activity.

4. Work in partnership

First of all, it needs to be established that local authorities play a leadership role. Authorities should through its leadership promote horizontal public partnership as a way to diversify

investments. It is of great important to include the private sector as well and encourage ownership of schemes as a mean for promoting regeneration and increase investment opportunities. The process of public-private-partnership (PPP) needs to allow for innovation, both in terms of cooperation and outcomes. The value of community engagement needs to be recognised, and the community, the private sector and the public sector should be involved in a project already in the planning/development phase.

3.1.4 Learning from British urban regeneration experience

In the publication "Urban regeneration: learning from the British experience", four case-studies in the UK are the basis for identifying the five key factors shown in Figure 4 which are thought to be essential for successful urban regeneration (Tsenkova 2002).

Key factors instrumental for success

1. Partnerships accelerate the process of change
2. The public sector has a key role in providing strong leadership
3. Public investment is a catalyst for change
    a. Should attract private investments
    b. Creates opportunities for community involvement
4. Regeneration of people, rather than places
5. The outcomes need to sustainable

Figure 4: The essential components of success based on the British experience (Tsenkova 2002).

1. Partnership as a driver of change

The report draws up examples of private-public-partnerships (PPP) that played a core role in the regeneration of the four case-studies. Most importantly, active and effective PPP creates a more stable ground for such projects as the resources made available are not restricted to the public sphere (or a single private actor). Thus creating an effective partnership between actors is a way of risk management. Additionally, as the goals of the actors overlap to a certain extent, resources can be used more effectively if the common vision is clear.

2. The public sector provides strong leadership

The public sector has the potential to provide a project with strong leadership that ensures that the implemented activities/strategies produce positive outcomes. This in particular as the public sector has the role of ensuring the well-being of inhabitants and is thus not in theory a self-serving entity.

3. Public investments can drive change

Public investments in the initial steps of a project can be a key in attracting private investments. The initial investment sends a message that private initiatives will be supported by the public sector and is thus likely to attract private investments. Additionally, the input from the public sector sends a positive message to residents as it shows a certain level of commitment to regeneration in the area.

4. Improving well-being of people not places

Even if most regeneration project (especially flagship and pilot projects) focus somewhat on improving the physical components of a neighbourhood, it should be clear from the start that those improvements are only a mean to improve the well-being of residents. Thus the physical improvements should not be the primary goal of a project but rather a way to achieve the goal of social sustainability.

5. **The outcomes of every project should be long-sighted and holistic**

It has become apparent that commitments to long-term, continuous improvements are beyond the capacity of most public and private bodies. To counteract the short-sighted characteristics of both politics and profit-driven companies, there needs to be a strategy in place to ensure available resources for maintaining the level that the change has achieved. This is especially important in terms of maintaining the identity created through the activity.

3.1.5 The Winnipeg Core Area Initiative Approach

In a study carried out by Layne (2000), literature surrounding urban policy is combined with practical experiences from the inner-city regeneration project in Winnipeg known as the Core Area Initiative (CAI), in order to answer the question of what constitutes success in urban regeneration efforts as well as to create an analytical framework for the success of the initiative (Layne 2000). Even if the CAI was initiated back in 1981, it provides some additional conclusions about success in urban regeneration.

Principles underlying successful urban regeneration efforts

1. An area-based approach
2. A multi-sectorial strategy
3. A broad long-term perspective
4. Clearly defined objectives
5. A model or structural framework supportive of goal attainment
6. The pursuit of partnership
7. Coordinated information and monitoring systems
8. Recognition of the value of incremental change

Figure 5: Principles underlying successful urban regeneration projects based on a comprehensive literature review along with the case of Winnipeg's Core Area Initiative (Layne 2000).

1. **An area-based approach**

Focusing on a geographically defined area makes it easier to develop a thoughtful project that is designed to fit the needs for that particular area. The approach does not (should not) undermine "the value of universal education, employment, housing and social assistance programs" but rather fits those within the local context.

2. **Multi-sectorial strategy**

By applying a multi-sectorial strategy, the resources put into a programme can be used more effectively as the decisions made are more dependable and supported by a larger number of people. Additionally it prevents duplication as the problems different actors in the same area are facing can overlap and thus the solutions are shared by multiple stakeholders. It has also been shown that moving away from single-sector activities creates a snowball effect as the input spreads faster and to a higher number of people/residents.

3. **Application of a broad long-term perspective**

Regeneration activities need to be in line with the broader long-term policy focus of a city/region as whole. The report also highlights that as an area-based project with a long-term perspective limits the resources available for other less prioritised areas. Thus a long-term perspective approach does not necessarily mean that the investments and other resources put in to a project should carry on at the initial level, but rather that there needs to be a plan in place for the time when the resources start mobilising towards other areas.

4. Clearly defined objectives should be in place

There is a correlation between how clearly the objectives are defined and articulated and the actual outcome of a project. Accordingly goals should be clearly articulated in the beginning of a project.

5. A supportive model/ framework should be in place to support goal attainment

The report suggests that local level agencies are most likely to succeed in the leading role for an urban regeneration project. This especially concerning the potential of local agencies to integrate the area-based project and the overall urban policy as well as overcoming inter-disciplinary barriers. There is also a need to implement not either top-down or bottom-up approaches but to allow those to co-exist.

6. Striving towards partnership

The benefits of inclusive and participatory approaches to urban development are increasingly recognised both by researches and practitioners. Layne (2000) defines those benefits both from an operational and a financial perspective. From the operational perspective, increased partnership between government, private entities, non-profit organisations and the local community increases the likelihood of justified and support decisions while at the same time utilises expertise and local strength. By diversifying the sources of financing a project becomes less vulnerable and makes the project more attractive for possible future investors. Furthermore, a project that doesn't involve residents often creates opposition as the activities are forced upon the local community without their involvement.

7. Coordinated information and monitoring systems

Leading authorities need to be aware of the situation on the local level, thus monitoring systems need to be in place to inform them. The better information channels there are, the better equipped the authorities are to develop urban strategies that fit the local context.

8. Recognition of the value of incremental change

In line with applying a long-term perspective to a project, it is important to realise that change can take a lot of time. This is especially true with a) issues as complex as sustainable urban development, b) project that require community involvement and c) project based on multi-stakeholder funding. In many cases it has become evident that outcomes of regeneration have not been apparent until 15 years after the start of a project. For these reasons it is also crucial to ensure long-term investments in the project and not interpret lack of positive outcomes in the first years as a failure.

3.2 Summarising success factors for area-based urban regeneration

Given the literature presented in Section 3.1, some general conclusions about the ingredients of an urban regeneration project designed for success can be drawn. Table 3 summarises the key factors highlighted in Figure 1 through 5 in order to create a structural framework as a basis for the analysis of the Augustenborg project presented in Chapter 5. The numbers in the table identify what element of the guideline in question addresses the given success factor.

Table 3: A summary of the success factors highlighted in Chapter 3.1.

	The DCCNH Guidance on Urban Rehabilitation (Section 3.1.1)	Urban renewal through cultural activity (Landry *et al.* 1996) (Section 3.1.2)	INHERIT, heritage-led urban regeneration (Section 3.1.3)	The British experience (Tsenkova 2002) (Section 3.1.4)	The Winnipeg CAI Approach (Layne 2000) (Section 3.1.5)
Effective PPP and	(3) There must be a technical	(7) Broadening the scope of	(4) Work in partnership	(1) Partnerships accelerate the	(2) A multi-sectorial

cooperation within the public sphere	operational team to provide back-up	planning		process of change	strategy (6) The pursuit of partnership
Emphasise the strength of the area in order to create identity	-	(2) Create identity and distinctiveness (3) Utilise local strengths (4) Turning weakness into strength (5) Go beyond corporate style	(2) Focus on identity and diversity	(5) The outcomes need to sustainable	(1) An area-based approach
Involve local community	(4) The population must be involved	(6) Get people involved	(4) Work in partnership	(3b) Public investment as a catalyst for community involvement	-
Public authorities need to show strong leadership	(2) Public authorities must be the driving force	(1) Strong leadership	(1) Think and act strategically (4) Work in partnership	(2) The public sector has a key role in providing strong leadership	-
Financial resources need to available, diverse and long-term	(6) There have to be available financial resources	-	(3) Invest in regeneration	(3) Public investment is catalyst for change (5) The outcomes need to be sustainable	
A long-sighted approach should be applied	(7) The time factor must be taken into account	-	-	(5) The outcomes need to be sustainable	(3) A broad long-term perspective (8) Recognition of the value of incremental change
Acknowledge the value of non-physical regeneration	-	(8)Create balance between buildings and activities	(2) Focus on identity and diversity (3) Invest in regeneration	(4) Regeneration of people rather than places	-
Project should be in line with regional and national urban policy	(1) The rehabilitation project must be an integrated part of urban policy (5) There must be appropriate legal instruments	-	(1) Think and act strategically	-	-
Project should have clear objectives and monitoring	-	-	(1) Think and act strategically	-	(4) Clearly defined objectives (5) A model or structural framework supportive of goal attainment

					(7) Coordinated information and monitoring systems

Based on this, an urban regeneration project designed for success would include/address the following nine issues:

1. Effective public-private-partnership as well as cooperation (horizontal and vertical) within the public sphere
2. Emphasise the strengths of the area in order to create identity
3. Involve local community
4. Public authorities should show strong leadership
5. Financial resources need to be available, diverse and long-term
6. A long-sighted vision should be adopted
7. The value of non-physical regeneration should be acknowledged
8. The project should be in line with regional/national urban policy
9. The project should have clearly stated objectives and ways to monitor/measure those

These nine headlines will therefore be the basis of the analysis and discussion of the Augustenborg Eco-city project in Chapter 5.

4 Networking for sustainable development

Multi-stakeholder networking has been reported to have the potential to deliver numerous benefits both to the public as well as to the actors involved (Poncelet 2001). As summarised by Fadeeva (2003), collaboration between stakeholders or interest groups can result in:

1. increased room for innovation;
2. outcomes being delivered in a more cost- and time-effective manner;
3. outcomes of higher quality than otherwise;
4. outcomes having a bigger stakeholder support; and
5. solving of issues and stakeholder conflicts that might otherwise hinder problem resolution in line with environmental sustainability.

In regards to issues of sustainable development, an effective networking and collaboration of stakeholders can provide the governance structure needed to deal with such complex, interconnected, and sometimes not clearly defined problems (Fadeeva 2003). This especially as it brings together individuals and organisations that have diverse knowledge and practical experience that can be the key in solving such issues which in its turn allows for creativity and flexibility in problem solutions (Jänicke 1997). Given the benefits of a successful collaboration process, the following section will focus on providing an introduction to networking theory and a summary of factors that are important to the success and the sustainability of a cross-sectorial collaboration in order to create a frame to discuss the collaboration process in the Eco-city project.

4.1 Introduction to structural characteristics of networks

In her doctoral dissertation Fadeeva (2003) investigates what characteristics are essential for a successful cross-sectorial collaboration for sustainable development (Fadeeva 2003). She points out that the key structural elements of networking are the relations among actors as well as their positions within the network (Fadeeva 2003; Rowley 1997). The fact that stakeholders react differently within a network than they would if acting in isolation emphasises that the position of an actor in a collaboration is somewhat determined by the relationship and tie that actor has with other actors within the collaboration (Rowley 1997). The stronger relationship an actor has to the other network members, the more likely he is to benefit from the collaboration through a) a stronger individual position within the network, which in its turn can lead to increased power, and b) a better relationship with the other actors increases the possibility of effective exchange of knowledge, values and information (Rowley 1997). The number of relationships within a network in it turns leads to increased resistance to stakeholder pressure as the collaboration provides a certain support (Burt 1992). However, this support is vulnerable to changes in individual positions of actors as such change can initiate a snowball effect of changed positions and ties throughout the collaboration (Fadeeva 2003).

The outcomes of a multi-sectorial collaboration depend on the members that are active within a network as they step out of the specific institutional rules that usually guide their actions (Fadeeva 2003). With a mixture of heterogeneous network members, the solutions, ideas and interpretative frames lead to diverse and creative outcomes (Fadeeva 2003). Even if networks provide certain openness that allows for increased creativity and diversity in problem solving, a heterogeneous membership "…might, however, make the process of agreeing on the common goal and principles for achieving these goals more resource demanding" (Fadeeva 2003: pp.64). Thus homogeneous networks have the benefits of a more efficient implementation of ideas at the cost of innovation and diversity (Fadeeva 2003).

The importance and strength of individual positions are not distributed equally between actors within a network, which in most cross-sectorial networks leads to the establishment of a hub organisation, or an organisation that takes a leadership role (Sydow and Windeler 1998). Hub organisations are thought to be an essential part of effective networking through provision of information as well as strong relations to all actors involved (Halme 2001).

The types of relationships that occur within a network impact the outcomes and effectiveness of the network (Fadeeva 2003). Granovetter (1973) defined relationships as either **strong or weak**. Which type of relationships is more beneficial for cross-sectorial network depends on the undertaken mission of the network (Granovetter 1973). Strong ties in well-established networks are thought to decrease uncertainty while weak ties are sometimes a valuable source of innovated and unexpected ideas and solutions (Granovetter 1973). Another way of classifying relationships is that they can be either **tight or loose** (Weick and Quinn 1990). Tight network relationship mean that an action of one actor influences the actions of another, while in a loose relationship the actions of one has no direct impact on the actions of another thus there is no correlation between changes of various components (Weick and Quinn 1990). Tight relations are beneficial in an environment of high turbulence and a low level of change while loose relations have the opposite characteristics (Weick 1982). Loose relations within a network can be important when "preserving network's flexibility and adaptability in the situation of required change" (Fadeeva 2003: pp.66) on the expense of the ability to ensure the production of the desired outcome (Weick 1982).

Moving away from the characteristics of relationships and position of actors within a network, Human and Provan (1997) identify networks by the function of the network structures. Within the administrative structure the network is characterised by defined responsibilities of actors and a good connection between actors and their administrative organisation that leads to the implementation of activities as well as an effective work towards established objectives (Human and Provan 1997). The interactive structure then consists of non-formal relations between actors that are unrelated to the administrative organisations of the actors in question (Human and Provan 1997). The interactive structure creates subtle relations that can work as the basis for effective cooperation, consensus and innovation (Human and Provan 1997). Both these structures, **the administrative and the interactive**, exist within a network simultaneously, but the development level and activity differs between networks and between time periods in a network's lifetime (Human and Provan 1997).

4.1.1 The link between structural characteristics of networks and the networks contribution to sustainable development

The characteristics or design of a network is in most cases not a pre-formulated one that stays the same over the lifetime of a network (Fadeeva 2003). That does, however, not mean that some conclusions cannot be made in terms of how a network should be structured in order to maximise the likelihood of a successful collaboration for sustainable development. Fadeeva (2003) concludes that the structure of a network depends on the stages of networking along with the task that the network takes on (Fadeeva 2003). Because of the complexity and multi-disciplinary characteristics of sustainable development, cross-sectorial networks for sustainable development should preferably start off as "a well-developed interactive structure, based on loose coupling and weak ties to the outside of the network" in order to produce innovative solutions to unfamiliar problems (Fadeeva 2003: p.67). If the problem, as well as the task, is well defined and familiar "a strong-administrative structure with tight coupling" is preferable (Fadeeva 2003). When establishing a network for sustainable development it is therefore often desirable to strive for the interactive structure in the design phase where new, innovative ideas are of great value and then move towards a more administrative structure when the actions

that the network wish to undertake have been defined and are to be implemented (see Figure 6) (Fadeeva 2003).

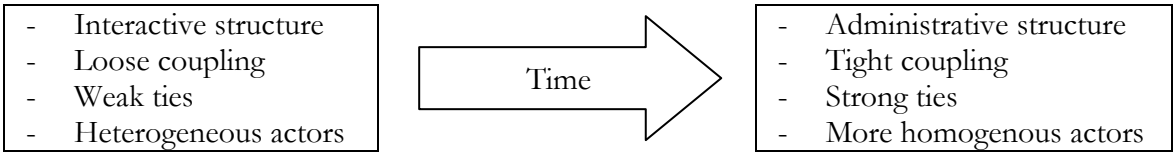

Figure 6: The preferable network structure for sustainable development should somewhat change with the time, or the phases of a project in question.

It should be pointed out that networks are of a flexible form and should be continuously redesigned in order to maximise effectiveness (Fadeeva 2003). Thus such visualisations are only to make some generalisations and should be taken with a great deal of caution.

4.2 Introduction to the dynamic characteristics of networks

It is recognised that describing networks by looking at the structural characteristics has some benefits, but fails to acknowledge the place of networks as a continuously developing process (Fadeeva 2003). As modern society moves forward, increased areas of specialisation create a fragmentation of society where each area is compartmentalised with establishment of institutions (Callon 2001). This fragmentation leads to overflows and overlaps of conventional eras, which is the root of the establishment of inter-organisational networks as they "build activities around issues falling outside the concerns of established institutions" (Fadeeva 2003: pp.69). As the basis of networks is an on-going process of new framing leading to overflows - which in it turns leads to new framing – the rules of the networking game are constantly being established (Fadeeva 2003). As such, inter-organisational networks fit well with the notion behind sustainable development as they have the potential to address those issues that often fall outside the frame of established institutions through exploring new ways of dealing with those (Callon 2001).

Given the volatile characteristics of networks, the process can be very vulnerable to the "positions of individual actors, quality of their interactions and conditions surrounding these interactions" (Fadeeva 2003, pp.70) and can thus be faced with unexpected changes as they develop. This vulnerable process can be investigated through focusing on the idea selection and the implementation of those ideas (Fadeeva 2003). The process of idea selection is strongly connected to the experience, knowledge and reality perception of individual actors where those actors more experienced or specialised tend to have a bigger potential to influence the decisions made by the network (Fadeeva 2003). Additionally, the idea selection and implementation is constrained by the power or status of an actor within their own institutional field. This as support from a higher positioned actor within a specific field is important to the possible strength of the idea selection. Thus the outcome and dynamics of the network are not solely depending on the relations among actors within the network, but furthermore by the relationship each actor has within his specific field (Fadeeva 2003).

When analysing the outcomes of networking for sustainable development, the focus should be broad enough to include not only if a) the stated goals were achieved, but furthermore b) how these outcomes contribute to sustainable development, c) the level of change and/or innovation that was achieved through the collaboration and d) how satisfied actors within the network are with the outcomes (Fadeeva 2003).

4.3 Success factors in networking for sustainable development

Based on the introduction to cross-sectoral networking for sustainable development presented above along with a case-study analysis of eight small tourist destinations, Fadeeva (2003) summarises the critical factors affecting sustainability networking. These factors are identified through looking at what factors were shown to have the ability to critically affect the networking process through the individual cases and are categorised as either affecting a) the process of networking, b) the idea selection, or c) the implementation (Fadeeva 2003). A simplified summary of the general factors highlighted through Fadeeva's analysis can be found in Table 4.

Table 4: Factors that can critically affect the networking process, the idea selection and the implementation of ideas in cross-sectorial collaboration for sustainable tourism (modified from Fadeeva 2003).

Factors affecting the network process
1. Power 2. How results matter 3. Network structure and strategies
Factors affecting the idea selection
4. External factors 5. Available expertise 6. The context of networking and problem definitions
Factors affecting the implementation process
7. Network membership 8. Network relations and structures 9. Power relations

These factors will be described briefly to establish a basis for discussion of the networking in the Eco-city project in Chapter 5.2.

1. Power

A "start-up of a network is a simple testimony to the success of powerful initiators and supporters…" (Fadeeva 2003: pp.97). This points out that the initiation of a networking process is strongly influenced by the internal and external power of the actors (Fadeeva 2003). To address the influence of power on the process of networking one has to, however, look at the continuity of the support of powerful actors. From her case studies, Fadeeva (2003) concludes that as long as the networking process has a moderate demand on resources from the powerful actors, they will continue to be involved and interested in networking. At the same time, the likelihood of active involvement of those actors depends on their power within the network, as decreased relative power increases the chances of an actor to withdraw from a networking activity (Fadeeva 2003). Additionally, in order to maintain a relationship and support with the powerful actors, the networking process cannot jeopardise the activities of important actors through competition (Fadeeva 2003). Lastly, the support and involvement of powerful actors/initiators was more likely to continue after the initiation if the networking continued to introduce relatively unique and innovative solutions or solutions in relatively new or inexperienced fields of disciplines (Fadeeva 2003).

2. How results matter

As noted above, it is important to look past the actual outcomes or the achievements of stated goals when discussing the effectiveness of network initiatives. The results are important not only as the results, but the visibility of results to the involved actors which can play a big part in maintaining the networking practices (Fadeeva 2003). At the same time, by actively communicating the results of the networking process to external actors and external community, the meaning and importance of the initiative itself can become apparent to other

actors thus bettering the external reputation and increasing external support of the networking process (Fadeeva 2003). In its turn, increased external acknowledgement of the collaboration encourages actors to continue the work that they are carrying out. On the other hand, lack of results or bad communication of outcomes can result in decreased internal and external interest in the collaboration initiative (Fadeeva 2003).

3. Network structure and strategies

Networks are usually initiated through the realisation of a common goal or a common problem faced by the involved actors (Fadeeva 2003). However the goals and conditions can change over time threatening the future of network initiatives. In certain cases an original goal shared by the networking actors can change as the conditions in the area and the common problems change (sometimes as a result of the networking intervention) thus a common base does not ensure continuation of efforts (Fadeeva 2003). The same can be said about common goals interpreted differently by the networking actors as different priorities and different level of ambitions can be discouraging for actors. The process and future of a network can also be jeopardised by unclear goals that are hard to work towards, but in many cases such initial failures can be managed through including a feedback process in the networking structure (Fadeeva 2003). So even if common clear goals can be the initial step in a networking process, it needs to be supported by a "long term strategy and decision-making structure independent from the preferences of the power actors" (Fadeeva 2003).

4. External factors

When it comes to the idea selection, it can be influenced to a great extent by external factors such as where the financial resources are coming from or the frame in which a network is defined. An example of these are EU-funded project as the ideas selected by the network need to be in line with the financing mechanism and thus will be highly affected by those. In general, the sources of funding do highly affect the ideas selected within a network as in most cases the source will control the direction of the development (Fadeeva 2013). Another external factor can be when an initiation of a network is based on some kind of competition where the goals and idea selection of the network needs to fit with the criteria for an awards etc. (Fadeeva 2003).

5. Available expertise

The ideas selected within a network are obviously dependent on the expertise that exists in a network. So called idea bearers have an important role in the idea selection as they bring new interpretation and special knowledge to the table allowing for exciting and innovative visions (Bizer and Julich 1999). As power and expertise do not necessarily go hand in hand, the structure of the network can influence if the potential of idea bearers is recognised and the ties between the bearer and the powerful actors can decide if those ideas are allowed to be the basis of the networking initiative.

6. The context of networking and problem definitions

The actions a network selects to focus on in the initial phase of a network depend on the context the network is working in. These conditions include the "time of their establishment, the importance of [the issue] in the country where the networks emerged, the level of legislative and infrastructural development, embeddidness of the networks in the local community, and the public awareness of the societal problems" (Fadeeva 2003, pp.112). Consequently, the ideas selected are steered somewhat by the problem perception of the actors involved and thus connected to the desirable situation in the area in question. In the specific case studies addressed in Fadeeva's doctoral dissertation it became apparent that the initiation and idea selection of a network were in all cases driven by defined problems rather than the acknowledgement of opportunities in these areas (Fadeeva 2003).

7. Network membership

The idea implementation of a network reflects the membership of the network, that is what actors and what kind of actors are the most active ones. The membership is usually either dominated by private or public actor and at the same time the network is usually led by a private or public actor, though there are examples of initiatives led by both sectors together (Fadeeva 2003). As the development of vision and strategy of a network is a negotiated between the two sectors, the characteristics of the membership can highly influence the chosen activities and strategies for implementation (Fadeeva 2003). As suggested in Figure 6 a more heterogeneous mix in a network is more beneficial in the initial idea selection, but when moving into the implementation of those ideas, a more homogenous membership can provide a more stable ground (Fadeeva 2003).

Regardless of whether the leadership was in the hands of a public or private actor it is recognised that the whole networking process is influenced by the personal qualities of the individual in the leading position. Some of the factors that can contribute to a successful network leadership are "familiarity with the local conditions, charisma, devotion to the job and neutrality" (Fadeeva 2003, pp.117). The leader of a network can make or break a network initiative as he provides a certain support to the smaller, less powerful actors through balancing the heterogeneous characteristics of the actor's vision and goals.

8. Network relations and structures

As mentioned in Chapter 4.1, the function of a network can be described as administrative or interactive (Human and Provan 1997). Which structure is beneficial for an individual network depends on the membership as well as the phase of the initiative. Fadeeva points out that in certain homogeneous networks, the actors involved are in competition with each other and thus the administrative structure where responsibilities are defined is beneficial while if there is little competition within a network, an interactive structure creates space for innovation (Fadeeva 2003). The case studies analysed therefore support the gesture that even if both structures should exist simultaneously, the interactive structure is more beneficial in idea selection while the administrative structure should be dominant during the implementation.

9. Power relations

The study of the tourist industry "confirmed the observation that formulation of the network agenda, [and] choice of implementation of the network actions depend on the internal dynamics of the power and expertise of the network members" (Fadeeva 2003, pp.120). These power relations are related both to the relative power and relations between actors within a network as well as the relation and power of an actor within his own organisation or institutional field (Fadeeva 2003). In most cases, powerful actors do not dominate the idea selection or the implementation strategies, but incidents of important actors using veto-power were identified (Fadeeva 2003). Additionally, the power of an actor somewhat reflects his role in financially supporting an initiative as a network is reliant on a stable source of income.

5 Analysis

The analysis will assess the Eco-city project from two angles; to begin with it will look at the components of the Eco-city project in line with the guidelines available (as presented in Section 3.2), secondly it will address the collaborative networking surrounding the project (as presented in Section 4.3).

5.1 The components of the Eco-city project

The following assessment and discussion of the Eco-city project is based on the success factors presented in Chapter 3.

5.1.1 Effective public-private-partnership as well as cooperation (horizontal and vertical) within the public sphere

When discussing public-private-partnership (PPP) in the case of Augustenborg, it is clear that if compared to other area-based projects in Malmö or other cities this cooperation is much simpler than elsewhere (Lindsay pers.comm. 2013). To begin with, MKB is the by far dominant property owner so an analysis of the PPP mostly describes the work and relationship between the public sphere; Malmö city, district authority Fosie etc.; and MKB presenting the private sphere (Dannestam pers.comm. 2013). This cooperation is significantly simpler than in most other area-based regeneration projects, as not only are there much fewer stakeholders, but additionally the dominant private actor is owned by the municipality. The housing company does however not rely on direct finance from authorities and is thus driven by the rules of the open market.

From the very beginning, MKB saw great value in engaging and investing in regeneration in the area as the turnover of tenants was high and many apartments stood empty (Dannestam pers.comm. 2013). Thus the company was one of the drivers for the project with the CEO of the neighbourhood office in a leading position (Rolfsdotter 2009). As the private and public sector agreed on the desired outcomes of the project, both human and financial resources could be used more effectively and the responsibilities for the sub-projects could more easily be identified thus minimising risk as it was divided between a large number of people (Lindhqvist 1997).

As the project was initiated by individuals in good positions within their respective organisation, the vertical cooperation within the public sphere came quite easily. These individuals were not only strategically well located, but furthermore creative and able to make resources available for the project (Graham pers.comm. 2013). Having the initiating forces coming from high positions also increased political support which in its turn is a key for both horizontal and vertical cooperation (Nilsson pers.comm. 2013). As the operations of the administrative bodies involved in the project span a big field, the project brought together individuals from very various disciplines (Lindhqvist pers.comm. 2013). As an inter-disciplinary effort, the project thus brought together ideas and objectives of multiple organisations and individuals knowledgeable in the policy/political field as well as those dealing with technical solutions and urban planning (Lindhqvist pers.comm. 2013). However, even if it seemed like the actors from different fields had common goals, it became apparent that even if they used the same terminology, in many cases they had different understanding of what certain terms involved (Graham pers.comm. 2013). This also emphasises one of the downsides of large inter-disciplinary efforts, as the initial phase of getting the actors on the same page can be quite time-consuming.

5.1.2 Emphasise the strengths of the area in order to create identity

The importance of identifying the local strengths in an area, to create identity and to turn weaknesses into strengths was somewhat the main theme of Landry's "Art of Regeneration" (Landry *et al.* 1996). Such measures are seen as a key factor in the success of culture-led regeneration projects or "regeneration through art" projects.

Looking at the Eco-city projects, this component was defined by most interviewees as one of great importance for the success of the project (Dannestam; Imsirovic pers.comm. 2013). The work that has been carried out in the last fifteen years has truly changed the reputation and the identity of the neighbourhood (Lindsay pers.comm. 2013). The decision of using the word "eco" as the umbrella term and as a way to promote the area was a strategic move to create identity and better the reputation which not only fitted the pre-conditions in the area, but furthermore was a "catch phrase" at the time (Berggren; Imsirovic; Stigendal pers.comm. 2013). Using the eco concept was a strong marketing move, which resulted in increased outside focus, possibilities for more diverse funding, as well as, increased political support (Dannestam pers.comm. 2013). The same trend has been apparent in the Climate Quarter project in Copenhagen, where the use of the word "climate" has made it easier to achieve political support while at the same time it has opened up more diverse funding opportunities (Berggren pers.comm. 2013).

When looking at the sub-projects and the solutions implemented in Augustenborg, the three factors considered within this umbrella, that is a) turning weaknesses into strengths, b) creating identity and distinctiveness, and c) utilising local strength, can be identified in many of those.

To start with, the integrated open storm water management system is a prime example of a weakness turned into strength while at the same time creating identity. As mentioned above the area was faced with numerous floods in the 1990s. By introducing the open rainwater system, that problem was solved in an innovative way that resulted in great interest in the area (Lindhqvist pers.comm. 2013). Because such rainwater systems are not commonly applied, introducing the technology was not only a way to solve the flooding problems, but furthermore added great value to the project per se, as it is the basis for the international attention and the numerous visitors the area has witnessed since the start of the project (Dannestam; Zinkernagel pers.comm. 2013). It, consequently, played a great role in establishing the reputation the area has today. At the same time, local strength was utilised in its essential meaning as the idea of constructing such a system came from one of the residents during the initial community meetings (Graham pers.comm. 2013).

The ecological roofs and the creation of the first botanical roof garden also seem to play a more important role when it comes to creating and maintaining the distinctiveness of the area than when it comes to the actual benefits of constructing green roofs. Especially as the green roof concept fits perfectly in the eco-concept and thus strengthen the profiling of the area as an environmentally friendly one (Dannestam pers.comm. 2013). The same can be said about the electric train (the Green Line), that is, the attention it got was perhaps more valuable than the environmental benefits as such. These creative initiatives attracted attention from the outside community as people were interested in seeing the results (Zinkernagel pers.comm. 2013). This testing of environmental solutions played an important role in creating the feeling of pride as the increased attention from outside actors creates a certain acknowledgement that the work carried out, and thus the neighbourhood, is interesting (Lindsay; Nilsson pers.comm. 2013). A certain level of courage is needed to implement such innovative solutions as many of them, such as the Green Line, were hard to prove economically feasible (Nilsson pers.comm. 2013).

The identification of local strength can also be seen in the creation of the Music Playground in connection with the environmentally friendly reconstruction of schoolyard and park. The theme of the playground originated in the primary school as it has already established a music profile, or a music tradition (Nilsson pers.comm. 2013). By extending this profile to the physical surroundings, the profile as such was highlighted and thus made stronger.

Another sub-project worth mentioning in the context of identity creation is the reconstruction of facades. In the guidelines for heritage-led regeneration (EAHTR 2007), returning to the original appearance of infrastructure is highly beneficial. This as the heritage and history of an area is an important part of the development of a neighbourhood and thus should be preserved if possible. The introduction of new facades was implemented with the goal of recreating the physical appearance of the 1960s as a way to go back to a more uniformed appearance of the infrastructure and its surrounding and to preserve the original attraction, and thus identity, of the neighbourhood (Dannestam pers.comm. 2013). This preservation of the area's specialities was important in strengthening the distinctiveness of the area and increased the feeling of belonging (Imsirovic pers.comm. 2013).

5.1.3 Involve local community

The importance and added value of involving local community in the development of an area-based regeneration is emphasised throughout literature (Deakin 2012; Holt-Jensen 2003; Judd and Randolph 2006). In relations to the Eco-city project, it became clear through interviews that one of the biggest successes of the initiative was the level of community involvement achieved and the methods used to getting people involved (Dannestam; Graham; Imsirovic; Lindhqvist; Lindsay; Malmberg; Nilsson; Zinkernagel; pers.comm. 2013).

Getting people involved was, however, not a simple or an easy process, especially as the concept of integrated bottom-up approaches was quite an innovative process at the time (Graham pers. comm. 2013). The authorities were not used to talking and listening to the public and thus had to adapt to more creative means of communication (Graham pers.comm. 2013). Adding to that, the authorities were quite disconnected to the neighbourhood, meaning that their perception of the area and its social situation was perhaps not in line with reality. The authorities estimated, for example, that a lot of investments would be needed to get over the language barriers they perceived to exist in the area (Graham pers.comm. 2013). As the work in the neighbourhood started it became clear that this barrier was exaggerated by the authorities. At the same time residents did not necessarily see a reason to get involved, as the usual method for interventions was that the idea selection and implementation lay solely in the hands of the public authorities (Graham; Imsirovic pers.comm. 2013). For that reason, they were not used to get the opportunity to express themselves and furthermore not used to authorities actually taking in what they had to say (Imsirovic pers.comm. 2013). It was therefore tricky to get people involved from the beginning, which can be seen by the 10% of the resident population that showed up for the initial round of meetings (Krantz 2002). To start with it became obvious that even if there were opportunities to participatory democracy, these were not fully utilised and certain groups were often left out, such as immigrants and youngsters (Krantz 2002).

Some of the obstacles mentioned above were overcome partly through hard work focused on new communication approaches, partly relying on getting the authorities, as well as, the housing company to be visual and active in the area. A door-to-door campaign was initiated to inform people about the idea of an Eco-city and encourage them to attend a series of resident meetings held in the phase of idea selection (Graham pers.comm. 2013). The door-to-door method in communicating with the residents was shown to be more successful than printed material and more successful if the individuals carrying out the campaign had something

physical to present to the community (Dannestam pers.comm. 2013). For example when developing new solutions for waste separation in small kitchens in 2009, MKB used the opportunity to present those to the residents but at the same time made themselves visible to the tenants (Dannestam pers.comm. 2013). The housing company has also in the later years focused on planning gatherings of residents and authorities in courtyards and other open spaces as a way to get people out of their houses as well as planning community activities such as planting etc. to create opportunities for unofficial communication with people in the area (Dannestam pers.comm. 2013). To furthermore increase the impact the residents can have on their neighbourhood, MKB follows a policy where they need to ensure that at least 50% of the residents in the area approve of an investment so that the residents are ready to take on the possibility of a higher rent due to the investment (Imsirovic pers.comm. 2013).

Around 10% of the residents showed up for the initial round of brainstorming meetings where the idea selection was opened up which resulted in the initial project proposal (Graham pers.comm. 2013). One of the keys to using the resident meetings for idea selection was that individuals in high positions within the city and within the housing company did not have authority over residents, but instead the hierarchy pyramid was flattened allowing for equal, open and creative discussion about what needed to be done in the area (Imsirovic pers.comm. 2013). The meetings, along with the on-ground-work of the project manager, also allowed for the identification of driving spirits which in some cases were given increased responsibilities (Graham pers.comm. 2013). An example is Morten Ovesen, who was interested and knowledgeable about open rainwater system and thus became one of the spokespersons and craftsman for the construction of the system (Rolfsdotter 2009). Thus in some cases residents became part of not only the planning but the doing as well (Nilsson pers.comm. 2013).

By involving the residents already at the idea selection and design level, the project automatically gained support as the residents got the feeling of ownership and thus became more likely to be interested in the success and the continuation of the project (Zinkernagel pers.comm. 2013). The project demonstrates the benefits of early community involvement, which was in this case realised from the very start as the early involvement was identified as one of the cornerstones for success already in the initial proposal (Lindhqvist 1997). It was stated that effectively including the community and operations within the community, the planning and implementation of change would be easier, faster and better (Lindhqvist 1997). In comparable projects within Malmö, the residents are often invited to brainstorming meetings where they can express their opinions only after public authorities have identified the problems in the area and the applicable solutions (Zinkernagel pers.comm. 2013). In contrast, the community involvement in Augustenborg allowed the residents to identify the problems and the focus areas where investment was needed.

5.1.4 Public authorities should show strong leadership

To ensure a strong leadership, a project manager was hired in the beginning of the project and placed within the local authorities (district of Fosie) (Graham pers.comm. 2013). The original objective of the manager was to involve the residents in the implementation and design of the goals identified in the LIP application and to develop strategies to give the residents a bigger management role and include them in the practical part of the project (Graham pers.comm. 2013). The leadership was thus in the hands of public authorities, but with finance from the frame of the project (thus both from numerous public organs as well as MKB and the LIP). Interviewees mentioned the importance of a strong leader that is both encouraging, knowledgeable and most importantly has experience in getting people involved and working with local communities (Imsirovic; Nilsson pers.comm. 2013). However, if was also noted that if that person was stuck in a top-down mind-set or was not able to create a sense of equality between himself and the residents, resident involvement and support would never be achieved

(Nilsson pers.comm. 2013). The project leader is still working within the city of Malmö, which is quite beneficial for the project as some of the knowledge retrieved through the project is preserved within the city at the same time as his ownership of the project might play a role in continuing the work and communicating the achievements etc. (Nilsson pers.comm 2013).

5.1.5 Financial resources need to be available, diverse and long-term

It has been emphasised that in order to produce change through a regeneration initiative the local budget will rarely be sufficient (Nilsson pers.comm. 2013). In the beginning of the project, the investment sources for each sub-project were clearly defined (Lindhqvist 1997). The sources were furthermore diverse as the project relied on financial resources from MKB, numerous public organs within the city, local authorities, various national initiatives such as LIP and Storstadssatsningen, as well as, international (EU) projects such as Urban and LIFE (Nilsson pers.comm. 2013). With a strong collaboration between departments of the municipality, the financial resources made available were thus quite diverse. As for long-term investments, it was clear from the start that a big portion of the initial investments were not permanent and thus a "post-2002-action-plan" was already being developed when the project started (Graham; Nilsson pers.comm. 2013). It has, however, become clear that in order to implement a successful long-term project, a lot of time and resources need to be invested in ensuring continuous investment flow. As most investment opportunities on national and international level are individual projects with a clear objective, their design does not allow for long-term investment as each project is limited to a certain amount of years (Graham pers.comm. 2013). In Augustenborg the sources of finance from the LIP and the Urban (which were a big part of the initial investment) were restricted to around four years. The organisational structure was thus in many ways not designed for the long-term perspective adopted and defined through sustainable development. It is quite rare that such projects still exist after fifteen years, but in this case that has been possible in the later years with the involvement and investment of a sole actor, namely MKB.

The fact that MKB owns almost all properties in the area (or around 90%) has made cooperation much easier than in other similar projects as the number of property owners in other neighbourhoods can go up to a few hundred and thus the stakeholder dialogue is more complicated and time consuming (Dannestam pers.comm. 2013). In terms of investment this can, however, be a problem as the project becomes more vulnerable to changes in a single stakeholder position. This became apparent in the Eco-city as with new individuals in executive positions within MKB, the project was no longer seen as a valuable investment for the company (Graham pers.comm. 2013). As a private actor, MKB needs to base their idea selection on economic calculations/feasibility studies and the budget available for the project highly depends on the position of the policy makers within the company (Dannestam pers.comm. 2013).

5.1.6 A long-sighted vision should be adopted

As mentioned in Section 5.1.5, already at the beginning of the project a "post-2002-plan" was in the making as it was clear from the start that a big portion of the financial resources would not be available after that (Graham; Nilsson pers.comm. 2013). The next phase of the project was focused on energy efficiency and energy production (Graham pers.comm. 2013). However, it became clear that ensuring the longevity of a project is hard when the financial environment is short sighted. The four year phases also create ending points in which it is likely that some of the actors involved who do not any longer see the value of a project draw themselves out of the collaboration. Additionally to the difficulties ensuring for a stable flow of money into a project, the political/policy sphere is also restricted by time as the focus of the city can turn as political orientation shifts. Thus it is difficult to create an environment

which can support a long-term solution and longevity of a project. In the Eco-city, such a solution was never identified and thus the project became quite vulnerable to changes in the organisation and the position of involved actors (Graham pers.comm. 2013). It also turned out that the very foundation of the project relied on creative individuals, and as the organisations in which these individuals operated, as well as, the environment in which the organisations operated were not creative, the project was vulnerable as normally happens in such cases (Graham pers.comm. 2013).

The biggest challenge in implementing a long-sighted approach seems to be, as mentioned before, the fact that the process of ensuring continuous funding is very resource demanding and thus can take focus from the actual work that needs to be carried out. This can be seen through most investment schemes supporting regeneration projects, both on a regional, national and international level (Graham pers.comm. 2013). An example of this is the "Områdesprogram" (Area Program) in Malmö where an area-based approach for regeneration is applied with funding ensured for the period of three years (Malmö Stad 2013) as well as the Swedish Delegation for Sustainable Cities which funds projects on a year-to-year basis (DHS 2013).

5.1.7 Acknowledging the value of non-physical regeneration

Based on the description of sub-projects in the first phase of the project, it is clear that the project is a lot focused on rehabilitation of the physical components, in particular the outdoor environment (Malmberg pers.comm. 2013). The acknowledgement of the connection between the quality of open/green spaces and well-being is thus quite apparent through the initial project description (Lindhqvist 1997).

There seem to be no direct investments in cultural activities or in the construction of public spaces for mixed activities. However, as the Urban programme in Malmö was interconnected with the project, the goals of the Urban program were to strengthen the social and economic structures in the area and the UrbAct program that followed was focused on the creation of meeting places and mixed-use facilities (Nilsson pers.comm. 2013). One can therefore conclude that there has been a certain acknowledgement of the value of non-physical regeneration in the area because of the Urban and UrbAct programs even if those were perhaps not directly a part of the Augustenborg initiative. Additionally, some grass-root organisations and establishments have started in the neighbourhood after the start of the Eco-city. These include the theatre group Augusten, the local urban farming organisation, Gnistan afterschool and café Sommaren at the retirement home. These organisations do fit well with the eco-concept; however, they do not get direct support from the umbrella project as such.

The housing company has recently introduced the position of a biosocial developer who is to deal with and enhance the cooperation and communication between the company and local organisations, the schools, art-hotels and other stakeholders that are involved in the social development in the area (Dannestam pers.comm. 2013). The position is a way to create a platform, or a connection, between the company and the social activities in the area as well as to support social initiatives in the community.

5.1.8 The project should be in line with regional/national urban policy

At the time of the project start, the city of Malmö had just developed general goals in line with the national environmental programme as well as the twelve environmental goals defined by the national authorities (Lindhqvist 1997). The project was defined as one that would be a part of achieving the goals identified for the city where the main goal was that the municipality would be one of the leading areas in terms of longsighted sustainable development

(Lindhqvist 1997). In terms of sustainable urban development, the policies applicable to such projects are quite general as is apparent in the EU decisions mentioned in Chapter 3. The same can be said about regional and national urban policies in Sweden as the policy environment and goals concerning sustainable urban development are more there to identify the direction in which this development should be going rather than suggesting measures towards achievement. However, project plans already in place in the city of Malmö at the project start were included in the project as the inclusion of administrative public authorities involved in the project and the position of individuals involved in the initial design ensured for informative decisions in lines with those (Nilsson pers.comm. 2013). In many ways it can be concluded that by effective cooperation within the public sphere and with political support, the project should consequently be in line with the regional policies which then in its turn should be in line with the national policies.

As mentioned before, the housing company is the dominant private actor in the area and the project was consequently in line with the maintenance plan of MKB (Dannestam pers.comm. 2013). As the company is tied to the municipality, the partnership between the private and public can in this case increase the level of alignment between the project and the regional policy as the company itself should be operating under the policy umbrella of the municipality. In projects which are initiated by a bottom-up approach, this component can be of a greater importance to emphasise as community-led initiatives can easily disadvantage from not aligning an initiative with national and/or regional policies.

5.1.9 The project should have clearly stated objectives and ways to monitor/measure those

From the start a part of the resources were made available for the follow-up and monitoring of the area, especially concerning the achievement of the stated objectives (Lindhqvist 1997). The decision to apply for funding from the Local Investment Program (LIP) drove the architects of the project to create measureable objectives and goals (Dannestam pers.comm. 2013). Because of this, the specific project has somewhat clearer goals when compared to other area-based initiatives in Malmö. The legitimacy of the objectives can be discussed, mostly as even though the goal of the project was from the start to improve the living standards and well-being of residents, the project mainly has quantitative, measureable goals focusing on "hard" values concerning the physical environment and the environmental performance and does not state softer, qualitative objectives concerning social sustainability (Stigendal pers.comm. 2013). This is in line with the notion from Tsenkova (2002) that physical improvements should not be the primary goal of a project but rather a way to achieve the goal of social sustainability.

Key Performance Indicators (KPIs) have been monitored in the area since the beginning of the project and surveys have been carried out amongst residents. However, some question how much such measures say about the progress in the area as socio-economic indicators do not necessarily reflect nor capture softer indicators such as happiness, well-being, feeling of belonging and sense of community (Lindhqvist pers.comm. 2013). The success of the initiative tends to be described through statistics and the analysis of numerical data rather than surveys focusing on resident satisfaction, how well the ecological perspective is communicated to them, sense of community and so on. Thus the suggestion that the project needs to have clear, measureable objectives should perhaps be taken with a great deal of questioning of what the measurement of KPIs actually means to the health of the neighbourhood. Additionally, focusing too much on such measurements can exclude important information such as if the residents these statistics describe are the same as in the beginning of the project or if they are describing a completely different population as the initiative has made the area more attractive thus displacing the initial residents which were in need for the revitalisation (Stigendal

pers.comm. 2013). As the goal of the Augustenborg initiative was that the project should not lead to increased rents, the risk of relocating of the low-income residents was minimised (Dannestam pers.comm. 2013). It is however clear that a big portion of the original residents will have moved away for whatever reason in the fifteen years since the project started. Regardless of that, focusing on KPIs can exclude valuable information about the development in the area. However, there are frameworks and indices available to better assess and evaluate both the outcomes and the process of the project, but there has been a lack of such measures of documentation. Thus some information has been lost (Stigendal pers.comm. 2013). An example of this is the documentation of the resident meetings during the initial phase of the project where with the documentation available it is not clear who attended the meeting etc. (Krantz 2002).

Other more innovative methods for monitoring and measuring the outcomes of regeneration projects do exist even if the acceptance and understanding of such might be lower as the focus on hard values and numerical measureable outcomes has been the trend within organisations for a long time. Following the UrbAct programme in Malmö and the SÖM Fosie project, the idea of a follow-up-researcher following the project from the start was introduced and used in order to better understand the impact of the intervention (Nilsson pers.comm. 2013). In addition, a strong community involvement and increased focus on interacting with the resident can give authorities and project managers a hint about how people view an intervention and if the "softer" values are developing in the neighbourhood.

5.2 Networking throughout Augustenborg

The following discussion is based on the factors affecting networking for sustainable development presented in Section 4.3 and summarised in Table 4.

5.2.1 Power

The continuity of the support of powerful actors is said to partly depend on how demanding the networking process is on time and resources of those actors. It seems in the case of Augustenborg that most actors accepted the time and resources the initiative demanded in the beginning of the project as it was still exciting and innovative. However, as time passed fewer actors were engaged in the project. After the financial resources, as well as, the focus of the city of Malmö moved away, the leadership moved more or less over to the private sector, namely MKB (Nilsson pers.comm. 2013). In the network theory displayed in Chapter 4, the idea of a hub organisation is presented as an organisation that takes a leading role within a network (Fadeeva 2003). As a project moves away from the initial idea selection and project plan, it is a normal development that the role of a hub organisation moves away from the public sphere into the private sector (Fadeeva 2003). As the project settles into a more administrative structure, the private sector can provide an organisational structure were responsibilities and relationships are well defined (Fadeeva 2003). As a hub organisation needs to have the support of actors with high positions within the respective institution, the fact that MKB took the role of a hub became a problem as powerful individuals within the company withdrew themselves from the Augustenborg initiative resulting in inactivity by MKB for around five years (Graham pers.comm. 2013).

The shift of the leadership role from the public to the private can, however, not be described directly as the withdrawal of powerful actors (in this case the public sphere) but rather as the network's structural change over time. It should thus be noted that since the private sector is represented by mainly MKB, the power play within the network and possible losses of powerful actors are minimised. Thus the notion that active involvement of powerful actors is more likely to continue if; a) the networking process is not too resource demanding, and b) if

the network continues creating innovative ideas that attract attention from the external community, should be highlighted as most networking activities do not have the benefits of such a simplified picture of involved private actors (Lindsay pers.comm. 2013). It has been identified in other area-based initiatives in Malmö where the cross-sectoral collaboration includes hundreds of property owners that these two statements do apply as it has proven to be hard to keep the private sector interested in these projects (Zinkernagel pers.comm. 2013). Moreover, as the number of revenue-driven actors increases, their individual relative power decreases as it is divided by more actors.

5.2.2 How results matter

The fact that the Green Roof Institute receives such a high number of visitors every year emphasises the meaning and importance of the initiative itself as it becomes more known to the external community (Malmberg pers.comm. 2013). This increased external acknowledgement of the initiative increases the faith residents and other actors within the collaboration have in the project (Zinkernagel pers.comm. 2013). In this specific case the results are also quite visible to internal actors as the visitors of the Institute are guided through the area, thus making the visitors visible to residents and businesses in the area (Malmberg pers.comm. 2013). This has increased the involvement and the investment in the collaboration, as it has worked as an encouragement to internal actors to continue to be active in the project.

One of the first decisions made within the regeneration project was to put the neighbourhood on the map with positive publicity, with focus on positive news in local newspapers etc. (Lindhqvist pers.comm. 2013). The notion of showcasing the results both to the internal and external community was then put on paper with the idea to include a media centre in the first phase of the project (Lindhqvist 1997). Alongside that, it was decided to document the process in the area in cooperation with a local TV station. It seems like the efforts put on communicating the results of the project did either not successfully reach out to the rest of Malmö, or that the efforts were restricted to the initial phase of the project and thus declined after the year 2002. This can be seen both through the low percentage of visitors to the Green Roof Institute that are Malmö citizens, as well as, through the general notion that few citizens recognise the Eco-city term.

5.2.3 Network structure and strategies

With a change in the goal and conditions of an initiative, or in this case an area, the foundations of the initial gathering of actors are challenged. As the Eco-city project developed, the resources allocated for the project started to improve the conditions of the area, including minimising damage due to flooding, better living standard etc. As the problems the area was facing were somewhat the spark for investing in the area in the first place, the common ground that the network actors had identified started disappearing when the problems were solved (Dannestam pers.comm. 2013). As suggested by Fadeeva (2003), the common goals did thus not ensure continuation of efforts in the area. As this happens there needs to be some kind of a feedback mechanism built into the networking initiative in order to re-identify the challenges and discovering new opportunities (Fadeeva 2003). It should be clear from the beginning that the resources will shift if collaborations turns out to be able to catalyse changes in the area, thus there needs to be a structure in place to facilitate the continuous rediscoveries and new rounds of idea selection. It also needs to be acknowledged that the resources, and in this case especially the financial resources, will naturally decrease with time if the outcomes are somewhat achieved and thus a more moderate action plan should be developed in each phase. In relations to the Eco-city project this can somewhat be identified through the initiatives started up by MKB in later years such as the ecological

washing rooms, the Eco-city day and the CLICC project along with projects such as the multi-functional sport arena initiated by the district authorities (Dannestam; Malmberg pers.comm. 2013). These projects have been more spread out and are thus of a less resource-demanding character than those before with the ultimate aim of maintaining the identity of the neighbourhood, the external and internal interest in the area as well as striving to keep emphasising continuous collaboration (Dannestam pers.comm. 2013). In a best case scenario there should be a mechanism ensuring for these continuous projects to happen, which was not the case in Augustenborg as these were more depending on empowering individuals and organisations that saw value in these investments.

5.2.4 External factors

As discussed in Section 5.1.5, the financial sources of a project can influence the process and outcomes of a project. Looking at the external financial resources in the Eco-city project, it has already been established that the funding came from various sources including both national and international projects (Nilsson pers.comm. 2013). The idea selection, or the initial sub-projects that were chosen in the Augustenborg initiative were strongly influenced by the source of financial resources as the initial goals of the project as well as the sub-projects needed to be in line with the LIP in order to receive funding (Dannestam pers.comm. 2013). Consequently the idea selection and thus the basis of the project, even if based on an inclusive community approach, can be traced back to the source of funding. An idea selection based on the sources of finance does not necessarily have to be a bad thing as it has already been identified that stable financial sources are one of the cornerstones in keeping a project alive. From the networking theory presented above it can however be concluded that these external factors can in many cases work against the creativity that the interactive networking structure can provide for the first phases of a networking process.

5.2.5 Available expertise

The power of idea bearers in a network is quite similar to the identification of driving spirits discussed in relation to utilising local strengths in Section 5.1.2. The sub-projects chosen in the Eco-city are definitely influenced by the individual experts or knowledgeable individuals both in the public sector as well as within the community (Lindhqvist pers.comm. 2013). The case of the open rainwater system shows that the powerful actors were both open to ideas from less powerful actors as well as they did not utilise their power to monopolise the idea selection. In addition it seems that the broad cooperation including the community, technicians, engineers, officials and individuals from the administrative body resulted in a quite broad mixture of expertise and idea bearers as the sub-projects are of quite various character.

5.2.6 The context of networking and problem definitions

The Eco-city is an obvious demonstration of how the idea selection is correlated to the context in which the network is developing in. As mentioned in the introduction, the urban planning of the area was quite favourable for the marketing of the neighbourhood as an "eco" neighbourhood (Dannestam pers.comm. 2013). This as the area already had intimate green areas between the infrastructure units as well as the problems faced in the area were of an environmental nature (Lindhqvist pers.comm. 2013). At the same time the city of Malmö, as well as the national authorities, were focusing more on sustainability issues in urban environments (Dannestam pers.comm. 2013). Thus the time of establishment was of importance as well as the problems defined in the neighbourhood. The idea selection in the Eco-city was driven by problem definition rather than realisation of opportunities. The method of designing area-based initiatives around problems defined in the area is widely applied in the city of Malmö and has recently been defined within the "Dialogue Fosie" as an

essential step in the idea selection, with the following steps being identifying solutions and identifying how the actors can be a part of the solution (Malmö stad 2010; Nilsson pers.comm. 2013). Thus the fact that the idea selection is influenced by the context in which the network is working in is not a problem as long as the problems identified are well thought through and are not contradictory to the context of the city etc. as discussed in Section 5.1.8 (Malmö Stad 2010).

5.2.7 Network membership

The membership of private and public actors has already been discussed in Section 5.2.1 focusing on the shift of power from the public to private actors. Furthermore it has been suggested that the idea selection as well as the implementation is influenced by the network membership or the mix of active and/or powerful actors.

An important part of a successful networking project is the qualities of the individual that is given the responsible position of a leader. As identified by Fadeeva (2003) a leader should be in a relatively neutral position within the network, he should be familiar with the conditions in the area as well as being charismatic and invested in producing the best possible outcomes. As discussed in Section 5.1.4, the decision to hire Trevor Graham as the project leader was a strategic move exactly because of his former experiences with integrated area-based approaches (Nilsson pers.comm. 2013). As he first came into the project, he carried out on-ground-work to get to know both the area itself as well as the people living there in order to better be able to identify the needs, problems and opportunities (Graham pers.comm. 2013). Through his work in the area along with residents meetings he managed to identify individuals and smaller, less powerful actors in the area that had good ideas and could contribute to the idea selection and implementation and give them an opportunity to utilise their expertise within the frame of the project (Graham pers.comm. 2013). By hiring an individual that had not been working within the city's administrative structure nor with the housing company, certain neutrality was achieved although he had well defined objectives to work towards. Additionally, taking in a person from a different academic and cultural background increases the innovation as ideas and experiences will be from a new context.

5.2.8 Network relations and structures

The structural characteristics of networks presented in Chapter 4 supports the idea of early community involvement. This as the study of networking for sustainable development suggests that in order to create innovative solutions fitting the context of sustainable development, a heterogeneous group is ideal for the process of idea selection (Fadeeva 2003). As for the Augustenborg initiative, the public authorities made great investments in order to encourage the residents in the area to get involved in the development (Graham pers.comm. 2013). Even the younger generations, students at the Augustenborg primary school, were included in parts of the idea development leading to sub-projects focusing on revitalising playgrounds and the school yard (Nilsson pers.com. 2013). There needs to be an understanding that there are valuable resources hidden within the local community as the residents play not only the role of residents, but furthermore each individual has his own field of studies, experiences etc. that can be a valuable contribution to the development of ideas. It seems that the level of administrative structure did increase as the project developed with well-defined responsibilities of sub-projects, which is in line with the suggested successful development of networking structure over time. However responsibilities were not taken by organisations but rather by individuals, thus the question remains if the project would have been less vulnerable if the responsibilities had been given a better defined place within an organisation.

With numerous public organisations as well as only one private organisation, the coupling in the network became quite loose as the actions of one network actor did not necessarily affect another as the activities of their institutional organisations were not directly connected. Such a coupling would be much harder to achieve if there was a higher number of powerful, business driven actors as in a competitive market or if the public actors were directly competing for budget funding. In such a situation the actions of one actor often impact that of another. Additionally, as the initial idea of the Eco-city seems quite coincidental and the initial gathering of actors more based on interest rather than on line of work, it seems like the project is based mostly on weak ties as those had not been developing within organisations before the initiation of the project.

5.2.9 Power relations

As former chapters have suggested, the process, idea selection and implementation of an initiative are dependent on the internal power dynamics of a network. Initially, individuals who are more experienced and/or specialised tend to have a bigger influence on the outcome of the collaboration (Fadeeva 2003). This could be one of the reasons for the difficulties in getting people involved that the initiators of the project were faced with at the beginning of the project. The fact that those working in the field of urban planning or urban development, such as the technicians and politicians of the multiple public authorities, are more experienced in the questions to be addressed, might be discouraging to the local community as they would not be able to see what they can bring to the table. Thus the local community perceives their relative power in the collaboration as quite low. The early community involvement thus needs to focus on increasing the power of the local community in the initial step by moving away from the top-down enforcement approaches and opening up the discussion from the start, allowing for a more equal power distribution. A high level of power of actors within their institutional field can however be important in mobilising resources, so even if the residents and relatively less powerful actors need to be given more power within the network there are great benefits with actors that are well connected and powerful within their organisation.

The issues brought up in Section 5.1 and Section 5.2 are the basis for the recommendations given in Section 6.2 as well as the general conclusions drawn in Chapter 6.

6 Conclusions

In this thesis work, the environmentally-led regeneration project implemented in Augustenborg was discussed through success factors identified in a literature review of available guidelines, as well as, through success factors concerning collaboration processes for sustainable development. It becomes apparent that a share of the proclaimed success of the project is coincidental and/or depending on the spatial planning, the local socio-economic pre-conditions, the environmental quality and the availability of resources in the development area. As Augustenborg was built in an era of urban development were space was made for smaller patches of green areas, the area itself can essentially provide a certain level of community feeling as intimate meeting places exist. Moreover, the time of the intervention accounts for some of the accomplishment, as it was initiated before area-based approaches were widely implemented in Malmö, while at the same time sustainable urban development was a "hot topic" increasingly being underscored by the international community as well as the national government. As the biggest problem faced in the area at the time was flooding, the innovative solutions that were an important part of the attention the area received were highly influenced by external factors. The municipality's technology and maintenance facility was furthermore located in the neighbourhood, placing individuals with the ability to mobilise financial resources regularly in the area.

Even though the Eco-city project has been used as a case for the purpose of this research there is evidently no such thing as a perfect regeneration. As the process is quite volatile, especially the inclusive collaboration processes that depends on the support and involvement of multiple actors, there are always some risks involved. This was seen in the Augustenborg project as the number of involved actors made the project vulnerable to some extent and it became dependent on the involvement and investment of a single actor.

The individuality of Augustenborg before the implementation of the regeneration project is, however, true for any neighbourhood, as each area has its own characteristics, problems and conditions. Consequently regeneration projects need to be designed with the given neighbourhood in mind. There is therefore no such thing as a one-size-fits-all solution. The Eco-city project should hence not be copied directly, but when lined up with the analytical frameworks set up in this research, there are some general conclusions that can be drawn as certain factors influencing the success and sustainability of area-based regeneration seem to repeatedly come up in the discussion. Some of these factors are reflected in available literature, while others are applicable lessons of cross-sectorial collaboration processes. Those factors are the basis for the following recommendations that aim to underline important elements that should be considered in the future development of regeneration projects.

6.1 Recommendations for future projects

It becomes apparent through the analysis and discussion in Chapter 5 that the guidelines for general components and the networking theory overlap to a great extent when applied to area-based urban regeneration. When creating recommendations, the key factors influencing the success and sustainability are based on those components that were identified in the Eco-city project that were in line with the success factors reflected in the general guidelines presented in Chapter 3 as well as the factors affecting the sustainability of collaboration efforts presented in Chapter 4.

1. **Identify project leader and hub organisation**

It is hard to over-emphasise the value of a driven individual in a leadership role. The neutrality of a leader can somewhat be secured by hiring an individual from without the geographical/political borders of the project in question. This individual can at the same time

be an important idea bearer. In the initiation process of a project, the goal of the leader should be to find ways to engage the private sector as well as the local community. The overall objectives of a project leader should then be not only to oversee the development and implementation of the project. More importantly the leader needs to be charismatic and have social skills that allow him to actively balance the power of a collaboration effort.

The role of a hub organisation should be identified and preferably lie in the hands of a public organ to start with but as the project moves into implementation it should move to one of the active actors within the private sector moving the network from an interactive structure towards an administrative one. The role of the hub organisation should be to communicate the results of the project and possibly to actively work towards better reputation.

2. Include the private sector and the local community in the idea selection

The early involvement of the private sector as well as the local community can contribute to increased internal support with a bigger feeling of ownership. Furthermore, when addressing issues concerning sustainable development, a heterogeneous membership is beneficial as the complex issues benefit from innovative solutions. In order to actively utilise the local strength, certain power equality is needed at the stage of idea selection. This makes it easier for actors, especially those within the local community, to put their ideas forward. By actively including the private sector in the idea selection, it is more likely that powerful actors will later on take increased responsibilities following the ownership of certain ideas.

3. Create a strong identity

A strong identity, or a catchy concept, that fits the distinctiveness of an area can increase the market value. Strategic selection of an umbrella concept can ensure external funding and political support, at the same time as the communication and the revitalisation of the reputation is made easier. Increased communication in its turn leads to increased external attention, which can lead to increased feeling of pride by the internal actors, which in its turn leads to increased involvement and investments by the internal community. A good marketing of an area is also important in ensuring the longevity of a project as the value of the brand can be strong enough to ensure continuous involvement of powerful actors.

4. Definition of goals

The collaboration should identify both common overall goals of the intervention, as well as more specific goals for individual projects, and ensure that the actors involved understand those. In order to ensure political support, the overall objectives need to be in line with regional policy as well as channelled to the general urban development of the region. The goals should not be restricted to quantitative and measureable objectives but furthermore include qualitative objectives focusing on softer values even if those can be hard to monitor. The results of the initiative and the achievement of goals need to be communicated to internal and external actors as a key to increasing the value of the project, such as by using available performance indicators and indices. Initially identified goals should be revised in order to keep the project active ensuring the longevity of the initiative.

5. Ensure external finance

To create a strong identity, there is a need for external finance in the start of the project. Ensuring finance from national or international project at the beginning of an initiative plays a role in creating a project that makes a big enough difference to ensure continuous involvement of powerful actors. By focusing all resources at starting up a project, a strong enough position of a project can be achieved to ensure that the private sector sees a market value in future investments in the project. However, a long-term plan of financing also needs

to be in place to be prepared when external funds start diminishing at the end of the respective funding programmes.

6. Apply innovative solutions

By applying innovative solutions, alongside basic physical improvements and community activities, the identity can be both sustained and strengthened. In addition, the application of innovative solutions minimises the risk of the withdrawal of powerful actors by increasing the attention from external actors. Innovative technological solutions can be a way to attract funding in the later stages of the project while at the same time keeping the project relevant.

6.2 Concluding remarks

The research questions addressed in this research were 1) what are the key factors that influence the success and sustainability of an area-based urban regeneration project?, and 2) how can the experiences from the Eco-city project be used as inspiration for future regeneration projects? The recommendations presented above list some key factors that influence the success and sustainability of an area-based urban regeneration project and are furthermore inspired by the work carried out in Augustenborg. Thus they, along with the analysis, present answers to the listed research questions. Hopefully the recommendations can be used as a basis when initiating future projects or as a basis of further discussion in lines with the Rebuilding Dialogue in Malmö.

Of course these approaches are not the only ones available for regeneration projects. However, integrated area-based regeneration projects have been defined in the Urban Acquis (2004) as an important key in the work towards more sustainable living patterns in the cities. As these are designed based on the neighbourhood in question, the design can become a random process as there are no direct guidelines for how to go about. In order to save time and resources, it is therefore important to consider how to design for success instead of inventing the wheel each time such a project is implemented. With the increased pressure urbanisation is putting on the environment, it is important to enhance communication concerning approaches dealing with minimising the environmental impact of urban areas. The revitalisation of existing infrastructure is especially interesting from a sustainability perspective as it minimises the pressure on primary resources needed for new construction. The focus of urban planning has recently focused mainly on exciting environmental technologies and applications in new constructions, disregarding the sustainability benefits of redeveloping existing capital. Additionally, with increased focus on improving the physical infrastructure through technology solutions, the fact that people have to live in these areas is often forgotten leading to the development of low impact areas that do not support social interaction. In lines with the notion of sustainability, the focus needs to be not only on the environmental performance, but additionally urban areas must support the needs of the people living there. If successful, environmentally-led urban regeneration projects should therefore ensure for a sustainable urban development that takes into account not only the environmental performance but furthermore the well-being of the people living in the cities.

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Appendix I

Name	Place of work	Connection to project	Date/place of interview
Peter Lindhqvist	Department of Internal Services of the City of Malmö	Brought up the idea of an Eco-city, developed (among others) the original sub-projects. Initiated the thesis work.	17 January, 22 February and 17 April 2013. Serviceförvaltningen Malmö
Roland Zinkernagel	Environment Department of the City of Malmö	Project leader at the environmental department in the city of Malmö. Involved in area-based regeneration initiatives in Malmö.	27 Februar 2013. Malmö Miljöförvaltning.
Jonatan Malmberg	Green Roof Institute	The head of the Augustenborg Botanical Roof Garden. Offer tours around the area with focus on the botanical roofs and open rainwater system.	4 March 2013. Green Roof Institute.
Bertil Nilsson	Former co-ordinator of Urban Malmö. (before headmaster at Augustenborg primary school)	Worked on the Swedish Urban Program in Malmö, involved in developing the sub-projects.	6 March 2013. Garaget meeting point Augustenborg.
Åse Dannestam	MKB	Environmental project manager at Augustenborg since a few years back.	12 March 2013. MKB Augustenborg.
Trevor Graham	Environment Department of the City of Malmö	Hired as project leader – thus has been working with the project from the start.	12 March 2013. Malmö Miljöförvaltning.
René Sommer Lindsay	Områdesfornyelsen Skt.Kjelds	Involved in the Climate Quarter project in Copenhagen where some physical environmental solutions were inspired by Augustenborg.	10 April 2013. The climate quarters office, Sankt Kjelds.
Henriette Berggren	Centre for Park and Nature in Copenhagen Municipality	Involved in the Climate Quarter project through her involvement in the climate adaptation team in the city of Copenhagen.	10 April 2013. Teknik og miljöförvaltningens mödecenter
Safija Imsirovic	Gnistan	Initiated Gnistan after-school project. A good example of innovative thinking and the role of driving spirits in a community.	12 April 2013. Gnistan, Augustenborg.
Mikael Stigendal	Malmö University – Urban Studies /Sociology	Published a series of reports concerning (among others) segregation, urban development, urban history with focus on Malmö and its neighbourhoods (especially Fosie).	3 May 2013. Via telephone.