NTNU – Trondheim
Norwegian University of
Science and Technology

Achieving Sustainability?

A case study approach for elucidating challenges related to implementing Sustainability in Policy-to-Project processes in the Norwegian Context

Torkil Evjemo Schjetlein

Civil and Environmental Engineering
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Supervisor: Tore Haavaldsen, BAT

Norwegian University of Science and Technology
Department of Civil and Transport Engineering

NORWEGIAN UNIVERSITY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF CIVIL AND TRANSPORT ENGINEERING

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Name: Torkil Evjemo Schjetlein	
Professor in charge/supervisor: Tore Haavaldsen	
Other external professional contacts/supervisors: Jardar Lohne	

Abstract:

The purpose of this study is to elucidate challenges related to policy-to-project processes in the Norwegian context. The study applies a case study approach and analysis from a project perspective. A single case study, the Brøset Project, is selected for the study. The rationale for using only one case is viewing as a "most favourable" case for elucidating general challenges.

Public Policy is seen as the main expression of governmental power, and the decisive factor of our society's quality. Public Policy influences the societal behaviour in a myriad of ways, though it is perhaps most easily framed in the form of "carrots, sticks and sermons". Implementing policy is often done be the use of projects, an increasingly popular way of organising works. These tools of government however, are ultimately means to an end, exponents for some higher vision or goal for the greater societal process. As such, public policy is about providing public utility. At transferring visions into action, one faces the challenge of finding and implementing actual means for providing and sustaining said utility; making the abstract tangible. Such policy-to-project processes are the subject of this study. The point of departure is that of modern project management. This branch of engineering science has its origins in construction, but as an increasing part of public undertakings are conducted as projects, it is perceive to be applicable to an ever-widening field. An important criteria for project success in this view, is the sustained long-term contribution to societal objectives. This expands on the more traditional project success criteria of time, cost and quality. The exponent for success applied in this study is Sustainability, interpreted as achieving objectives for long-term benefits and three-pillar reconciliation.

This study is based on an extensive literature review, and a case study. The selected case is the Brøset Project, an environmental urban development project in the city of Trondheim, Norway. The Case study is conducted by a documentation study and 11 in-depth semi-structured interviews with project stakeholders. The main purpose is to explore the policy-to-project from a project perspective and elucidate how the process has influenced the project results and how the project stakeholders understand it.

The study is presented in three parts: 1) The process report, 2) an Academic Paper and 3) Appendixes

Keywords:

1. Policy-to-project
2. Sustainability
3. Public policy
4. Project management

1 Preface

This document is the sole delivery of and the assessment basis for my Master Thesis. The thesis was developed during the spring of 2015 at the Department of Civil and Transport Engineering (BAT) of the Norwegian University of Science and technology (NTNU). The thesis corresponds to 30 credits (one semester) and is the conclusion of a five-year study program in Civil Engineering with specialisation in Project Management at the NTNU.

The thesis is an exploration of how project management methodology can be applied for evaluating projects not normally associated with Civil Engineering, by a Case Study approach. More specific, a policy-to-project process has been studied from a project perspective. The process in question is the Brøset Project, a project that has developed policy for implementing an environmental urban development project in the area of Brøset, Trondheim (Norway). This case has been studied by interviewing stakeholders and by a documentation study. As the project is quite controversial, the study has been equally challenging, frustrating and (in the end) rewarding.

Differing from the traditional approach to Master Thesis at the BAT-department, this document consists of 1) a Process Report, 2) an academic paper and 3) appendixes. The academic paper is submitted to the 2015 IPMA World Conference, Science Track. The Process Report and appendixes is intended to provide additional substance to the study. The three parts combined constitutes a document corresponding to the more traditional approach. This is a somewhat new approach that entails some challenges to structure and methodology. The writing of an academic paper, an elusive art in itself, was an entirely new experience for me and not without its challenges. However, the increased dissemination of the study trough an academic paper has been motivating. The opportunity to work with my co-writers and others at the BAT-department during this time has been a rewarding and inspiring journey.

I would like to thank everyone involved. I am appreciative of the interviewees for contributing to the Case Study. I would also like to thank my supervisor Tore Haavaldsen as well as Jardar Lohne for guiding my work, challenging me and helping out with the writing. As always, I would like to thank Martin Ystenes for inspiration. Thanks to Tor Medalen, Yngve Frøyen and Bridget Thodesen is also in order. Finally, I would like to thank my family for support and my girlfriend for having something to look forward to.

Trondheim, 10 June 2015
Torkil Schjetlein

2 Summary

The starting point of this study is a belief that methodology for evaluating projects can contribute to evidence-based decision-making and goal-oriented societal development. The purposes of this study is to elucidate challenges related to goal-oriented societal development in the form of policy-to-project processes, by exploring the application of a project perspective. The applied project perspective emphasise goal-hierarchy consistency and Sustainability as success criteria. A policy-to-project process is a process that transfers objectives from a strategic policy level to a project level. The study is focused on the evaluation of a policy-to-project case, the Brøset Project, by project evaluation methodology.

The Brøset Project is a high-profile environmental project selected as the sole case based on a "most favourable case" rationale. The Brøset Project has gained a lot of attention by establishing an unprecedented ambition for CO2 reduction. The project has also been publicly criticised and accused of being unrealistic and not in line with the market demand.

The study has identified the policies that justify the project and evaluated the consistency of the project's goal hierarchy based on the Strategic, tactical and Operational analytic levels. Furthermore, the stakeholder relations of the project have been analysed. The interviews have focused on mapping the policy-to-project process, understanding how the various objectives are prioritised by various stakeholders and how Sustainability is understood and implemented.

The results of this study indicate that the established project objectives do not provide reasonable probability for achieving the ambitions. Additionally, the project seem no to be in compliance with the Sustainability definition applied by this study. The project perspective seem not to be in line with how the stakeholders view the project, as the strategic objective emphasised in this study is not prioritised by the stakeholders. The stakeholders in general do not see sustainable development as practically relevant to the project, and key sustainability principles are deliberately disregarded. These findings represent significant challenges for goal-oriented societal development.

This study, consisting of a process report, an academic paper and appendixes, constitute a Master Thesis in Project Management at the Norwegian University for Science and Technology.

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Part 1: Process report

1 Introduction

This report constitutes Part I of the Master Thesis "Achieving Sustainability? A case study approach for elucidating challenges related to implementing Sustainability in Policy-to-project processes in the Norwegian Context" by Torkil Schjetlein, developed during the spring of 2015 at the Norwegian University of Science and technology (NTNU), Department of Civil and Transport Engineering (BAT). The purpose of this report is to compliment the academic paper (Part II) "Achieving Sustainability? A case study analysis of policy-to-project processes". Additionally, this report augments the study presented in the academic paper by addressing a few additional research questions, extended discussions and proposals for further work. Combined with the academic paper and the appendixes (Part III), this report constitutes the conclusions of a five-year study program in Civil Engineering Project Management at the BAT, NTNU.

This section provides an introduction to this report, including an introduction to the background of the study, the choice of case, objectives and purpose of the study and this report, research questions, scope and the structure of this report.

1.1 Background

This chapter gives a short introduction of the background of the study. The following subchapters present a short recap of the starting point and the choice of case.

1.1.1 The starting point

The starting point of this study is the Project Work "The Policy Conundrum: Public Policy from a Project Governance Perspective" (Schjetlein, 2014) undertaken by the author during the autumn of 2014. The project work is an examination of Public Policy from a project perspective, attempting to bridge the gap between the two and proposing ways of conceptualising the application of project methodology on public policy processes. The purpose was to contribute towards enabling more evidence-based decision-making in public policy. A number of studies show that public policy initiatives are often financed and implemented without any established evidence of achieving the intended impact (Aberbach and Christensen, 2014; Oxman et al., 2010; Parker and Rutter, 2011). Because of this, a lot of initiatives fail to deliver the intended societal benefit (Bendor, 2010; Fotaki, 2010). Wasteful public spending aside, another aspect of limited evidence-based decision-making is the secondary impacts of policy initiatives (Adelle and Weiland, 2012; Hacking and Guthrie, 2006; Parker and Rutter, 2011). A small alteration of a national standard for wall insulation or a seemingly insignificant tax reduction for some industrial sector can have enormous secondary impacts in addition to the intended ones.

> *"We need better ways of ensuring that the policy problem has been fully considered, and the option tested properly."(Parker and Rutter, 2011:6)*

An important influence for the project work was the Norwegian Quality Assurance scheme for large public projects (Finansdepertamentet, 2008; Samset and Volden, 2013) which, according to preliminary results, has radically increased the performance and utility of large public projects in Norway since its implementation. The scheme is

based on a standardized project structure that include external quality assurance of both conceptual solutions and basis for funding as well as political decision-points during. The purpose is to assure that projects subject to the scheme contribute towards national strategic objectives and that the projects stay within budget, by strengthening the evidence basis for the decision-makers. The CONCEPT research program conducting research into the performance of the scheme is based at the NTNU, and the concepts applied in the scheme is a substantial part of the Civil Engineering education that provides the basis for this study. The starting point of both the project work and this study is a belief that these concepts utility is not limited to projects and that they have useful aspects with applications in public policy.

The project work was of a purely conceptual nature and did not include any field research. For the Master Thesis it was decided that the project perspective should be applied on a case. It was decided to limit the study to the key aspects of Sustainability and goal structure consistency. Sustainability is perhaps a dangerous concept to apply as the basis for such a study. It is not universally agreed what Sustainability entails and whether it has any relevance to real world problems (Bond and Morrison-Saunders, 2011; Drexhage and Murphy, 2010; Santillo, 2007). In spite of this, the preferred definition in this study, emphasizing three-pillar reconciliation and achievement of long-term objectives, is a fundamental component for sensible reason-based goal-oriented societal development. Sustainability may be elusive as a concept, but even more challenging and debated is the issue of how it transfers from vision to actual measures (Babalik-Sutcliffe, 2008; Brugmann, 1996; Scipioni et al., 2009). This is highlighted in the case study of The Brøset Project, where an important question is whether or not the project is an exponent for Sustainable Development.

1.1.2 The choice of case: The Brøset Project

The case selected for this study is the Brøset project, an environmental urban development project in Trondheim, Norway. The case is described in the academic paper and more elaborate in section 5 of this report. In this chapter choice of case is explained.

When looking for a case, some attributes of peculiar interest were selected. Firstly, the concept of policy-to-project processes was deemed especially interesting. By policy-to-project processes it is meant the process where a general objective or vision is translated or transferred into actual measures. As the starting point of this study is projects, it was deemed beneficial to start with a policy initiative intended to be implemented by a more typical project. Secondly, given the emphasis on Sustainability, a case where Sustainability (or at least a version of it) was an important factor, was preferred. Thirdly, a controversial case that divides opinion was of interest. As it was, the Brøset Project ticked ass of these boxes. What is called the Brøset Project in this study is actually a policy-to-project process that has been organised as a project. The project output is a zoning plan, a policy basis for a potential future development project. The Brøset Project is about implementing local measures for countering climate change and thus ticks the sustainability box. Furthermore, the Brøset Project is a controversial project that has been widely debated and criticised. The fact that it is not yet implemented indicate that everything is not quite as it should be, and this has certainty increased our interest.

Other advantages of choosing this case is the large amount of available information, the easy access to potential interviewees and the large amount of previous research on various aspects of the project. On the downside, the large amount of available information and complexity of the Brøset Project made the study quite challenging.

1.2 Objectives and purpose

This chapter clarify the research topic study and presents the objective of the study as well as research questions and the scope and limitations of the study.

1.2.1 Research Topic and Purpose

The long-term purpose of this study is to contribute towards increased evidence-based decision-making in public policy. The objective, in this regard, is to explore the utility of project methodology towards this purpose. Thus, the main research topic in this study is the application of project methodology on public policy, or more precisely, the analysis of a policy-to-project process from a project perspective.

1.2.2 Objective and Research Questions

The objective of this study is to explore the utility of a project perspective for analysing policy-to-project processes. The applied project perspective in this study is manifested in Sustainability and goal structure consistency. Sustainability is perceived to mean the long-term achievement of public utility objectives by three-pillar reconciliation (Haavaldsen et al., 2014). Goal structure consistency is a measure of how strategic objectives are embodied in objectives at lower levels (Samset, 2010a). In other words, how implemented policies contribute towards their strategic purpose (if implemented in accord with their specific objectives). Thus, goal structure consistency is seen as a prerequisite for achieving sustainability. Based on this, the main objective of this study has been formulated.

> **Objective: What can the project perspective contribute to implementing Sustainability in policy-to-project processes in the Norwegian context, based the lessons of the Brøset Project?**

For structuring the research, a set of research questions has been developed. As most of the research is conducted through the analysis of the Brøset Project case, most of the research questions are case-specific.

> **RQ1: What policies justify the Brøset Project?**
>
> **RQ2: To what extent is there consistency between various level objectives?**
>
> **RQ3: To what extent does the Brøset Project embody Sustainable Development?**

The first research question is mainly a basis for addressing the second. The academic paper addresses the first three research questions. Though the paper alone should

suffice, there will be provided some additional basis for consideration in this report. In addition, this report will also seek to address two more research question.

RQ4: What are the main challenges towards implementing Sustainable Development in policy-to-project processes in the Norwegian context?

RQ5: What are the advantages and challenges related to applying a project perspective for evaluating policy-to-project processes?

Though touched upon in the academic paper, this report will address RQ4 further. Finally, the work put into the development of the academic paper will be evaluated.

1.2.3 Scope

A case study, by nature, is about depth rather than a broad perspective. For focusing this study it has been decided to limit the scope to the Brøset Project. However, as the Brøset Project is found to be a highly complex project, this study does not go into detail concerning specific measures. This study attempts to provide insight based on general considerations rather than details. The Strategic, Tactical and Operational analytic levels structure much of the analysis. A key principle of the project perspective is that strategic objectives should be at a sufficiently high level to allow for alternative approaches to the perceived problem. This study defines the strategic level somewhat in the middle, not as high as the Brøset project documents but not high enough as to represent the true purpose (this is explained further later). This constitutes somewhat of a superficial objective level, however it is perceived to be necessary for the purposes of this study. One implication of this is that the strategic objectives are considered as absolute. There are grounds for criticizing the strategic objectives, but as this study is about policy-to-project processes, the Brøset Project is evaluated based on the present strategic objectives.

Chapter 4, "applied theory", presents additional explanation for the scope of this study. Other limitations are introduced in relevant chapters.

Some points and limitations:

It is difficult to view to Brøset Project as independent of the Brøset area. Both the interviews and the documentation study are inconclusive regarding the relevance of discussing the project separate from the area. This is relevant both as some claim Brøset is the wring place for the project and related to whether or not the area should in fact be developed as a residential area. It has been decided to view the Brøset area as a prerequisite for the Brøset Project.

The documentation study indicates that the Brøset Project has suffered some delays. As this study focuses on long-term objectives and consistency, time and cost issues of the Brøset Project is not seen as relevant. The municipality covers the main cost of the policy-to-project process (wages, parallel commission, etc.). Cost overruns because of delays is not seen as significant to this study.

1.3 Structure

This report is structured using three levels of headings referred to as Sections, chapters and subchapters.

Section 1 provides a general introduction to the study and presents to purpose and objective as well as research questions.

Section 2 presents the applied methodology, including scientific approach and methods for collecting and using data

Section 3 presents the theoretical framework for the study, including project theory relevant for the project perspective, public policy theory, a presentation of Sustainable Development and some urban development context.

Section 4 presents some applications of the theoretical framework found relevant to this study. Additionally, some models used for structure during the development of the study are presented.

Section 5 presents the Brøset Project case.

Section 6 presents the main findings of the study and addresses the first research question

Section 7 presents discussions concerning the second, third, fourth and fifth research questions

Section 8 presents the conclusions of the study and proposals for further studi

2 Methodology

Scientific Methodology is the tools and guidelines applied for assuring the quality of the conducted research (Grønmo, 2004; Halvorsen, 2008). In this section the methodological basis for the study is presented. The academic paper has a section on methodology, but due to the limited number of pages, this section is proportionally limited. This section provides expanded insight into the reasoning behind the chosen methodological approach and the methods for collecting and using data in this study. The first chapter localizes the study in light of general scientific methodology, and the second and third chapter describe the chosen methods for collecting and using data.

2.1 Scientific Approach

This study is an in-depth exploration of a single case by a qualitative approach. The chosen methodology is due to the nature of the conducted research and the desired data. Opposed to qualitative research, qualitative research use smaller sets of data with higher level of detail (Kothari, 2004; Samset, 2003). The data is often in the form of statements, descriptions and observations that are not possible or beneficial to measure by numbers (Dalland, 2012). This require the researcher to recognize challenges towards validity and reliability stemming from the researcher`s direct interaction with the data (Dalland, 2012). Advantages of qualitative research include the ability to provide new insight and understanding of complex phenomena as well as new directions and surprising results (Bryman, 2006; Samset, 2003). This study has been developed by a hypothetical-deductive method (Ringdal, 2013; Wallace, 1971). A documentation and literature study provided the basis for the research questions. Additionally, the interviews were a constantly evolving process in which the questions posed matured during the process. There were no set answers to choose from and follow-up questions were often used. This flexibility, allowed by the qualitative approach, would have hampered both the validity and reliability of the data if the analysis was to be of a quantitative nature (Olsson, 2011).

As there are found no other study applying this project perspective on policy-to-project processes, it was deemed beneficial to apply a case study approach. Case study research is an in-depth approach for analyzing actual phenomena by analyzing a single or multiple cases (Yin, 2009). Case studies are especially relevant when the research questions are of a explanatory (“how”, “why”, etc.) nature, the research topic is of an actual (real) and contemporary nature and when the research require no control over the studied events (Yin, 2009). As This study seek to explore the topic of policy-to-project processes. This topic is both real and contemporary. Furthermore, the study seeks to understand what is there. Based on this the Case study approach was deemed beneficent to the purposes of the study.

The use of a single case study is based on our view of the Brøset Project as a unique case (Yin, 2009). The perceived uniqueness is due to the composition of stakeholders and the objectives of the project, which stands out, at least in a national context. Additionally, the projects scale and environmental profile (also unique at the time) makes it a very interesting case for exploring sustainability in urban development. In light of Flyvbjerg

(2006), the Brøset Project represents an "as favourable as possible" case for elucidating challenges concerning the implementation of Sustainable Development in policy-to-project processes. Challenges identifies in this case is perceived more likely to be representative as the Brøset Project is presented as a operationalization of strategic objectives concerning sustainability and climate change. Thus, the Brøset Project is viewed to be both a potential for general knowledge and a case worth exploring by virtue of its uniqueness. A single case study makes generalisations challenging to attain and, but in accord with Flyvbjerg (2006), there are basis for arguing that the Brøset Project case is valid basis for addressing the research questions posed in this study. The research is conducted by triangulating multiple sources of evidence (Yin, 2009).

2.2 Data Collection

This chapter provide insight into the chosen methods for collecting data in this study. Three methods have been used: a literature study, a documentation study and semi-structured interviews. As such, this study apply both secondary and primary data (Jacobsen, 2005). The literature and documentation studies consist of secondary data, collected and organised by others for other purposes. The interviews conducted in this study are the primary data, collected only with this study in mind. The data collection in this study can be categorizes in case-specific and not case-specific. The literature study is not case-specific, and was conducted for increasing our knowledge into this scientific environment and for establishing a basis for the research topic (Blumberg et al., 2014). The case-specific documentation study was undertaken to establish an understanding of the case, identify potential interviewees, developing the case-specific research questions and developing the interview-guide. The methodology connected with each is described in the following subchapters.

2.2.1 Literature Study

A literature study has the purpose of establishing the context of the issue at hand by referencing previous works, providing a basis for understanding the issue and identifying the potential utility of this study in light of previous works (Blumberg et al., 2014). The literature reviewed in this study is largely obtained from books, journal articles and conference papers. These have mostly been found through Internet-based sources such as Google Scholar, Scopus, Science Direct, Research Gate, Engineering Village and BIBSYS (NTNU). The University Library at the NTNU has also proved quiet useful for finding (physical) books, providing access to other Internet sources and in a few instances acquiring material otherwise unavailable. A lot of the papers referenced in this study originate from researchers connected with the BAT-department. The works of Knut Samset is extensively used in this study. Much of the literature is found through references in works already used. Some literature has been reviewed late in the process at the recommendation of interviewees. A lot of the literature was found in the Project Work predating this study.

The literature has been reviewed according to the guidelines provided by Blumberg et al. (2014) and VIKO (2015). It has been the intent to use original sources as far as possible, and to emphasise works that are widely referenced. In the fields of Public policy and Projects (including project management, project governance, project development, project methodology, project success, etc.) the available literature is overwhelming in its sheer volume. Thus, the study has tried to "stick with what we need" rather than seeking to provide a comprehensive picture of the scientific fields.

2.2.2 Documentation Study

The documentation study is undertaken in accord with Yin (2009). As the project group and other stakeholders have developed a lot of the material, the study has strived to be critical to potential bias. The documentation study has been useful for establishing an understanding of the process, developing research questions and interview questions as well as for tracing the development of the project priorities. As the Brøset Project is, and has been, a high-profile undertaking, there is no shortage of available information. This study has studied case documents and presentations as well as the official municipality plans such as the planning program and zoning plan documents. These were mostly found through the municipality's web pages. The research project has published a great deal of material regarding the process in general, evaluation of the parallel commission process and detailed analysis of technical and sociological aspects. The book "Utopia revisited: Towards a Carbon-Neutral Neighbourhood at Brøset" (Støa et al., 2014) has been very useful. However, all of the available material published in relation to the research project has neither been read nor reviewed. The focus has been on what has been perceived as the most relevant to the study. Furthermore, documents such as Parliament White paper, publications from the Cities of the Future program and documents on plans and strategies for sustainable urban development both Brøset-specific and in general has been reviewed. Additionally, newspaper articles and Internet sources has been explored. Some of the projects that have influenced the Brøset Project have also been looked into. Two previous master theses from the NTNU on the Brøset Project have been of great help. Especially "Klimanøytral bydel på Brøset. Fra visjon til realitet" (Aspestrand, 2013) with its comprehensive collection of newspaper articles on Brøset. Both have provided much useful input on the opinions of industry stakeholders, a perspective lacking in this study.

2.2.3 Interviews

This study use data from 11 semi-structured in-depth interviews with case relevant stakeholders. Additionally, informal conversions with experts at the NTNU have provided useful insight for developing the study. In accord with Yin (2009), the interviews has been more guided conversations than structural queries. The interviewer has strived to follow the intended line of inquiry while allowing for elaborative answers and side tracks that allow the interviewees to provide the desired information "at their own terms". While the interview guide (appendix 1) has been the basis for all interviews, the amount of time spent on the various topics has varied greatly relative to the interviewee's interests and expertise. The lengths of the interviews vary, but the mean is about one hour. Audio from the interviews was recorded and later transcribed. These transcriptions are not submitted as a part of the Master Thesis, but they are stored for potential later use. As the stakeholder function of the interviewees is perceived to be more relevant to the study than their names, and as it was perceived that the responses would be of greater quality by doing it this way, the names of the interviewees are not stated in this document.

The 11 interviewees were selected to represent the primary stakeholders of the Brøset Project. The selection was based on connection to the project and knowledge and/or interest. As such, one may say it was a selection by convenience (Ringdal, 2013). The number of interviews per stakeholder affiliation is found in Table 1. A total of 17 persons were asked to participate, though the target was to get about 10. Of the 6 asked that did not participate, four did not respond, one were unavailable and one turned out

to be less relevant than at first assumed. Of the four that did not respond, three were politicians and one was an employee of the municipality. Other interviewees represent their perspectives in this study. Some of the interviewees were identified by the documentations study as potential informants. Others were recommended by the early interviewees. It was attempted to include interviewees that had an understanding of the project from different stakeholder perspectives. Additionally, both supporters and critics of the project were represented. However, no member of the industry or representative for the landowners has participated. This was neglected because the industry has not participated actively in the process, and because the complexity of the ownership issues were not realised at a sufficiently early stage. It was attempted to have an interview with a representative from a major entrepreneur late on in the process, but this was not successful. However, there are substantial input from other studies of the Brøset Project with overlapping topics that has included this stakeholder perspective (Aspestrand, 2013; Mathisen, 2013). In hindsight, the study might have benefited from interviewing stakeholders at the national level for a better understanding of the expectations associated with the Cities of the Future program and the Brøset Project. Given the time allocated to this study, the number of interviewees is considered to be appropriate. It is not believed that more could have been achieved by increasing the number of interviewees per se, but perhaps some perspectives not included could have proved beneficial. Is it was, several of the interviews gave quite similar results. Naturally but not given, this was most often the case with interviewees of the same stakeholder affiliation.

Number of Interviewees	Stakeholder Affiliation
3	Municipality planning office
2	Municipality administration
2	Local politicians
3	Research group
1 (+2)	Independent experts
11 (13)	Sum

Table 1 Number of interviewees per stakeholder affiliation

As stated previously, the interview guide is just that, a guide. It was never followed point for point and some of the questions were in fact never asked. During the process, some questions not included in the guide that helped get the conversation going in the right direction were included. Furthermore, the way the questions were posed varied greatly as it was attempted to make the conversations as natural as possible.

2.3 Use of the Interviews

The interviews were recorded and later transcribed. The transcriptions are somewhat moderated and the questions are standardized for easier comparison. Some explanations considered necessary for understanding the context is added in parentheses. The transcriptions are not found in this document, but may be provided if requested.

The interviews are a difficult material to approach. The interviewees were not consistent regarding facts, there were a lot of opinions being presented as facts and there were a lot of instances where fact clearly is relative to belief. It is often difficult to discern what the interviewees actually emphasise as the perspectives are very varied both vertically and horizontally. For instance, when asking how the interviewees understand the concept of Sustainable Development, the range of answers is beyond any reasonable scale. In general, it has been the intent to generalise opinions into stakeholder groups for simplicity. Recurrent factors rather than details has been emphasized. Furthermore, the use of names and statements that identify individuals has been avoided. Only a few of the interviewees requested anonymity, but this approach was found to benefit both the interview process and the presentation. The interviewees are relevant due to their station, not their name.

3 Theoretical Framework

This section present the Theoretical Framework applied in this study. Most of the presented theory is found in a compressed version in the academic paper. The additional theory is mostly Policy-oriented and used for establishing a more thorough understanding of the Case as well as the background and context for this study and propositions for further work. In short, the section seeks to provide a more comprehensive picture of the issues at hand and the choices made in this study.

The first chapter establishes further the "project perspective" applied in the academic paper and provides insight into the reasoning behind the belief that it is applicable to the case. The second chapter explores the concept and implications of Sustainable Development, a key component of the academic paper. The third chapter provides some elaborations of the applied Public policy theory, both for the academic paper and this report. The sequence in which the theory is presented is not consistent with the academic paper. The sequence used in the academic paper is due to the limited number of pages.

3.1 The Project Perspective

The project perspective used as the basis of analysis in this study is defined by the emphasis placed on long-term project impacts, rather than the characteristics of the project itself. The project is first and foremost a means to an end, with output value relative to time and stakeholder perspective (Klakegg, 2010; Kliem and Anderson, 2003; K. 1946- Samset, 2008). Thus, the projects role in the greater societal process is of the utmost importance (Klakegg and Haavaldsen, 2011; Samset, 2010a). The applied project perspective views projects in a cradle-to-grave perspective, considering the whole project life cycle. This is illustrated in Figure 1.

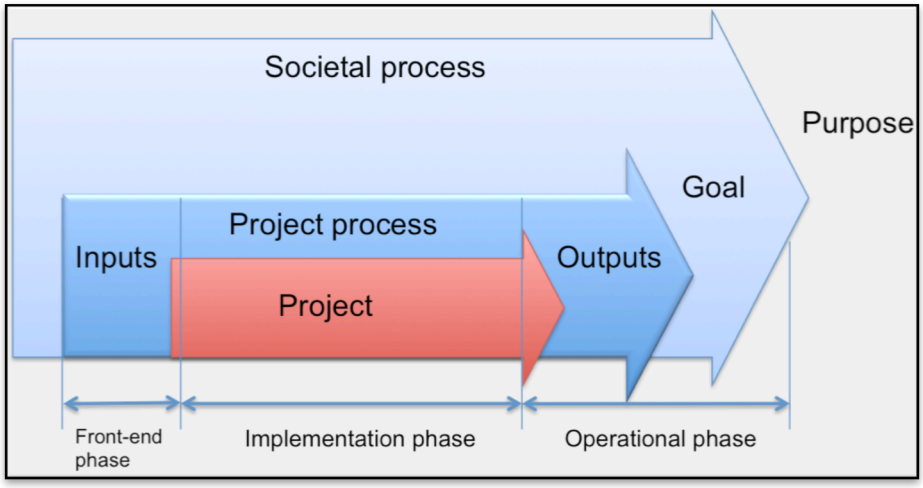


Figure 1 The Project in a greater societal context. Based on (Samset, 2010a)

This project perspective is compatible with more traditional project definitions. A project is essentially a way of organising work. It is common to differ between project and operations, where projects are temporary endeavours used for producing unique results (Samset, 2003). Project input i.e. in the form of knowledge, people and equipment are used to produce for instance a product, a service or a new state or condition (Kousholt, 2006). Key to this is that a project is limited in time and has a (or a set of) specific preordained objective (Pinto and Slevin, 1997).The applications of projects are many and the variations of use are increasing (Jessen, 2010; Lester, 2014; PMI, 2013).

3.1.1 Project Stakeholders

According to Samset (2010), Project stakeholders or shareholders are actors who have an interest in the execution and or outcome of the project. The stakeholders are identified with regards to their attitude towards the project, their needs and desires, and their influencing power. While a project may have many different stakeholders, the key stakeholder functions are the operator, the users and the financing party. These three each have their own perspectives and interests/focus in the project environment. The operator of the project is the party responsible for the implementation of the project and as such is concerned with the project output. This output is designed to provide some utility for the users, the immediate effects of the project. The financing party initiates the project on the basis of achieving the long-term effects, the purpose of the project (Samset, 2003). The stakeholder-perspective relationship is illustrated in Figure 2.

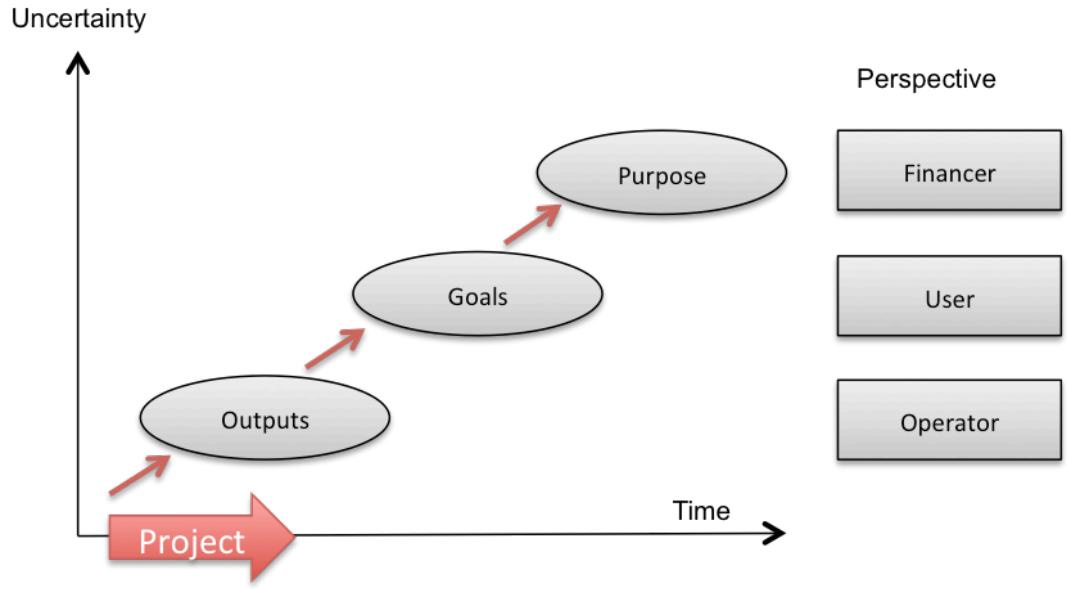


Figure 2 Main categories of stakeholders and their perspectives on the project. Based on (Samset, 2003)

3.1.2 Project Success and levels of analysis

> *"…to think that one can objectively measure the success of a project is an illusion" (de Wit, 1988:169)*

The key to understanding project success is through recognising that it is a relative construct. As seen in the previous section, the different stakeholders have differing expectations to the project, in no small part based on time perspective. To accommodate these different perspectives, the Strategic, Tactical and Operational levels of analysis (Haavaldsen et al., 2014; Priemus et al., 2008; Samset, 2003) are applied. These separate levels of analysis constitute a tool for stratifying the causal relations between objectives and success criteria in complex projects.

The operational level represents the traditional Project management criteria of time, cost and quality, and can be viewed as the operator's perspective. These are the most common measures of success and those that most often get discussed in the public and in the media (Samset, 2003). Project success in an operational perspective is viewed as the aggregate of these factors and can be viewed as the productivity of the project. Project success at the tactical level is concerned with the extent the project fulfils its stated goals as well as the nature of impacts (both positive and negative) made by the project and to witch extent the project outputs are relevant to the needs of its users. Thus, the tactical level can be viewed as the users perspective. These success factors are more reliant on supporting factors outside of the project and are as such more uncertain. Project success in a tactical perspective can only be fully evaluated some time after the completion of the implementation phase. The aggregate of these factors measures the usefulness of the project. The strategic level is concerned with the long-term effects of the project, namely the long-term economic effects, the level of needs satisfaction and the sustainability of the project. Thus the strategic level can be viewed as the financers (or in the case of public projects, the society's) perspective. This can only be fully evaluated at a late stage in the operational phase and success is largely dependant on external factors. Success is therefore highly uncertain. Measures of success in the three levels on analysis are illustrated in Figure 3.

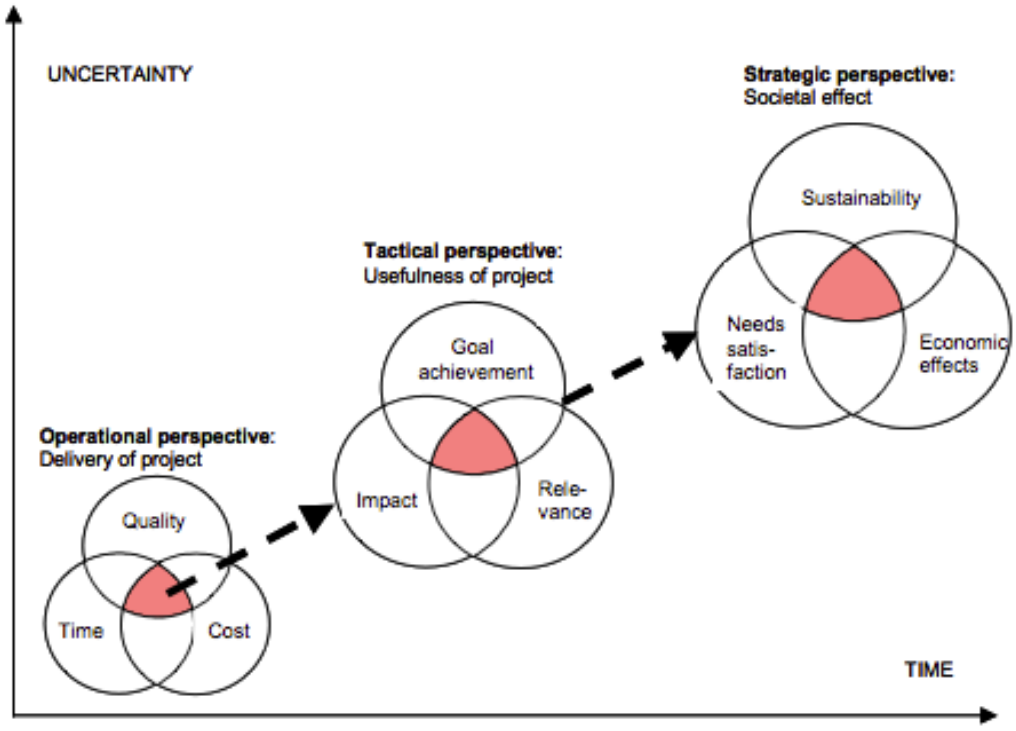


Figure 3 Measures for Project Success in the Strategic, tactical and Operational perspectives (Samset, 2003)

A key attribute of these analytic levels however, is that they are not static relative to the perspectives used as examples here. For instance, when applied in a business context, the strategic level priorities is the overall business strategy, not the overall societal strategy (Cooke-Davies, 2002; Hjelmbrekke et al., 2014). This flexibility makes the analytic levels applicable on a broad variety of problems.

Criteria for project success are a matter of some debate. A simplified view is that project success is determined simply by performance relative to ambition, and as such highly dependent on the ambition of the stakeholders (Samset, 2003). While this view is useful for highlighting the importance of setting realistic objectives, overlooks the responsibility for setting objectives for the projects contribution towards the greater societal process. As stated by de Wit (1988), the difference between doing things right and doing the right things is significant.

- *"Operational success: The delivery of the project is as promised and is both time- and cost efficient.*
- *Tactical success: The project produces the maximum utility/benefit for the users at the lowest possible cost.*
- *Strategic success: The project contributes to a desired societal development (as expressed by its long term objective), at the lowest possible cost and in financially sustainable manner."*

(Samset and Volden, 2013:17)

A successful project is identified by the intersections illustrated in Figure 3. Shortly put, total project success is achieved by succeeding to satisfy the needs of the three main

stakeholder functions: Operators, Users and Financers (Samset, 2003). The OECD apply the five quality criteria of Efficiency, Effectiveness, Impact, Relevance and Sustainability for evaluating project success (DAC, 1991; OECD, 2010a). A short summary of the OECD quality criteria is presented in Table 2. The OECD quality criteria are compatible with the three analytical levels, though some are seen as overlapping (Samset, 2010a)

It is important to note that while an ideal project is successful in all analytic levels by satisfying all five quality criteria, this is not an absolute prerequisite for project success. There are numerous examples of successful project that fail to meet several quality criteria (Samset, 2010a). Delays, defects and cost overruns are not uncommon even for successful projects (de Wit, 1988). However, project success is dependent on success in the strategic perspective (Samset, 2003). Performance relative to other criteria cannot compensate for failure to achieve Relevance and Sustainability (Klakegg, 2010). As such, they can be considered as the superior quality criteria for project success.

Quality Criteria	Interpretation
Efficiency	A measure of project output relative to project input. This quality criteria is concerned with time, cost and quality. A criteria for Operational success
Effectiveness	A measure of the extent a project has or is likely to accomplish its stated objectives in the Tactical perspective.
Impact	The impacts the project has on the society. A consideration of positive and negative, intended and unintended impacts from the project. Both the tactical and strategic perspectives.
Relevance	A measure of how the project has or will perform relative to the needs and priorities of the target population over time and whether the project will continue to provide societal utility during its entire lifetime. A measure on how the project can meet the needs and priorities of the future society.
Sustainability	A measure of whether the benefits from the project in a social, economic and environmental perspective will continue after the project is completed. In other words, a measure of how the investment is justified by positive impacts.

Table 2 Summary of OECD quality criteria (OECD, 2010a; Samset, 2003)

3.1.3 Project phases and project uncertainty

Projects are commonly viewed as consisting of several distinct phases. The number of phases and defining characteristics vary among users and analysts, though in general the "Front-end", "Implementation" and "Operational" phases are found to be representative (Haanæs et al., 2006; Pinto and Slevin, 1997; Porter, 1996; Robert G. Cooper, 2002; Samset, 2010a; Samset and Volden, 2013). The front-end phase is defined as the time from the project is conceived until funds are appropriated. The implementation phase is defined as the time from detailed planning until the project output has been delivered. The operational phase is defined as the time until the project is no longer in use (Samset, 2010a). These main phases may be further divided, and different organizations are likely to have their own phase definitions tailored to their own use. An example is shown in Figure 4. It is important to note that project phases overlap in practice (Samset, 2010a), though such models are still useful for illustrating the general sequencing of the project process.

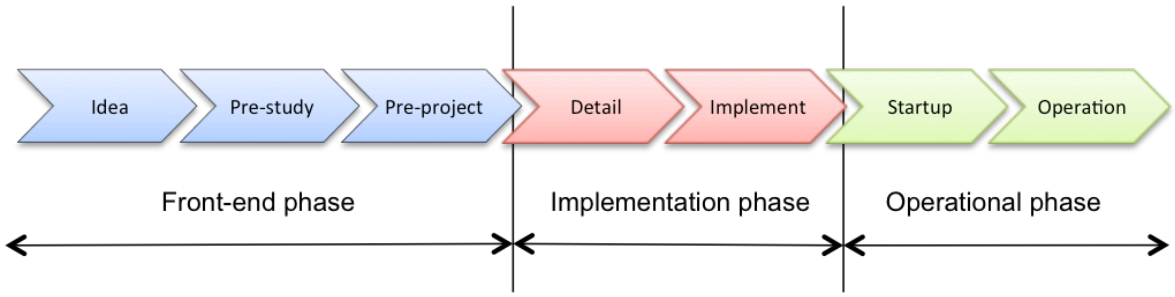


Figure 4 Example of the project life cycle divided into phases. Based on Samset (2010) and Berg et al. (1999).

Du to the unique nature of projects, there are substantial uncertainty associated with project performance (Samset, 2003). The decisions made in the early phases of the project have the most impact on the final outcome (Olsson et al., 2004; Samset, 2010a). The cost of making changes to the project design increases over time, while the flexibility is reduced. This is illustrated in Figure 5. Early assessment of the project concept while the uncertainty is high, though difficult, is therefore of great importance (Samset, 2010a).

A complete picture of the project performance can only be attained long after the project implementation when the projects impacts on society can be thoroughly evaluated. This means that ex-ante assessment of the long-term outcome of projects is complex, difficult and has a high grade of uncertainty (Samset, 2003).

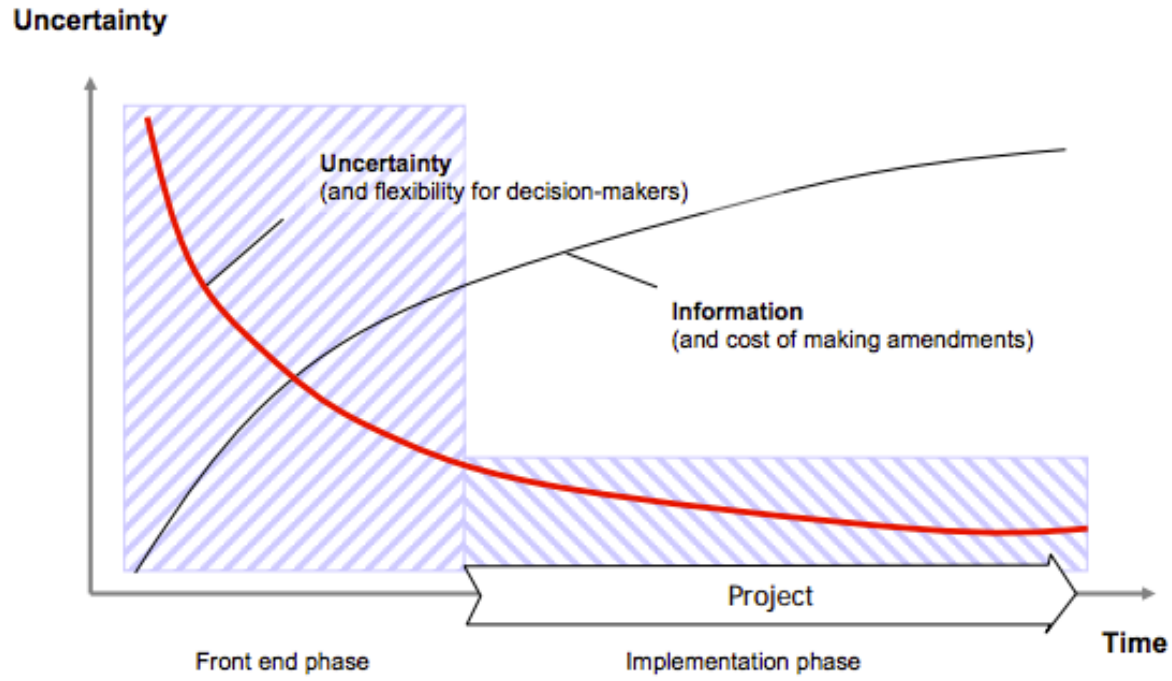


Figure 5 The relationship between project uncertainty and cost of making amendments (Samset, 2009)

3.1.4 Visions, purpose and goals. Formulating objectives for project success

> *"Most people, it seems, are notoriously bad at formulating objectives. The strange thing is that the readers generally tend to accept even nonsensical expressions, and find some kind of meaning by interpretation" (Samset, 2010b:1)*

The objectives of a project is a formal statement of intent regarding a desired situation or event (K. Samset, 2008). Furthermore, the objectives are central success criteria for the project. Complex projects often have complex goal-hierarchies with multiple objectives that to various degrees support one another. By a goal-hierarchy it is meant the system of how various objectives relate to each other. These goal-hierarchies are systems for substantiating cause and effect relations between the project and its desired (and undesired) effects. The Strategic, tactical and operational analytic levels and the LFA-matrix (described later) are useful tools for analysing the feasibility of goal-hierarchies. This subchapter address the importance of selecting feasible and measurable objectives.

Studies have shown that ambitious objectives are beneficial by stimulating project performance (Næss et al., 2004; K. Samset, 2008). However, as too ambitious or outright impossible objectives have the opposite effect, there are need for a balanced approach (K. Samset, 2008). Samset (2010b) argues that the overarching (Strategic) objectives may be ambitious as long as the gap between cause and effect is not excessive. In other words, each gap in the goal-hierarchy must be logically sound and supported by reasonable probability for the realisation of the intended effect. K. Samset (2008) presents the following guidelines for goal-hierarchies (translated from Norwegian and adapted to the analytic levels).

- The Strategic objective should describe the desired state or event and provide basis for the choice of conceptual solutions.
- There should be a unifying objective at each level. Optionally with specified secondary objectives.
- When secondary objectives are used, prioritization and the allocation of resources between the objectives should be clarified
- The strategic objective should be of a sufficiently high order to allow for justification of the project and opportunity for considering alternate solutions
- The strategic objective should not be of such a high order that realisation cannot be attributed back to the project
- The Tactical objectives should be realistically feasible within the allocated time frame, given the realisation of operational objectives.

Common failings in the formulation of objectives are for instance lack of verifiability, stating activities as objectives, lack of prioritization between objectives and the lack of

objectives altogether (Berg et al., 1999). An acceptance for "trial and error"-approaches seems to be common (K. Samset, 2008).

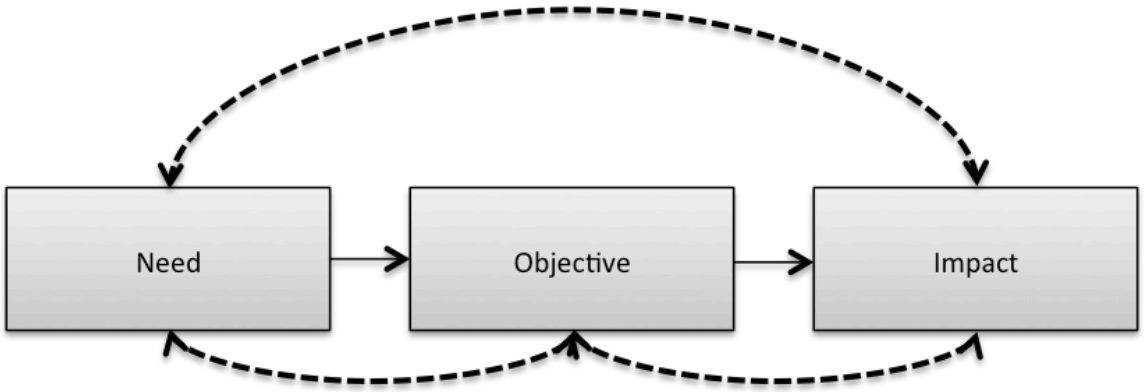


Figure 6 A good project is identified by consistency between the underlying need, the objectives and the intended impacts. Based on (K. Samset, 2008)

K. Samset (2008) propose the following guidelines for formulating objectives

- The objective should stand alone
- The objective should be unambiguous
- The objective should be tangible, not general as in "contribute towards"
- The objective should be verifiable

3.1.5 Some tools for ex-ante assessments of projects

This subchapter presents some tools that have been used in the analysis of the Case. The tools are not explicitly mentioned in the academic paper due to the limited number of pages allowed, but they have been an important part of the basis for analysis.

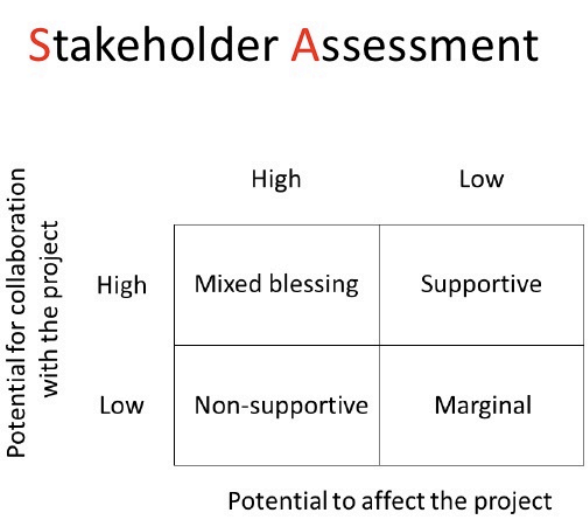


Figure 7 Framework for Stakeholder Assessment (Savage et al., 1991)

The first tool is the Stakeholder Assessment (K. 1946- Samset, 2008). The Stakeholder Assessment is used to identify and categorize the project stakeholders by their role in (or relation to) the project, their influencing power and their attitude or stance towards the project (Phillips, 2003; Savage et al., 2011). Figure 6 illustrates the framework for stakeholder assessment. The tool categorise stakeholders into four categories based on their influencing power and potential for collaboration. The point is to identify is to optimise stakeholder relations by applying

tailored collaboration strategies towards each stakeholder category. This is a useful tool for project developers, both public and private.

It is, however, a subject to subjective assumptions and should be complimented by other assessments to be used as a basis for decision-making (Sunnevåg, 2007). In the context of this study, the Stakeholder Assessment is somewhat modified. This is explained in section 6.

The next tool is the Logical Framework Approach (LFA) (K. 1946- Samset, 2008). The LFA is an analytical tool for assessing project strategy. The LFA matrix illustrates the project in light of its goals and purpose. Tactical objectives are set to achieve goals leading to fulfillment of strategic objectives i.e. the purpose of the project. An important part of LFA analysis is identifying and assessing the uncertainty associated with each element in the matrix. The LFA highlights uncertainty connected with achieving the objectives, and provides basis for revisiting the strategy or implementing risk-minimizing measures. The LFA represents an iterative process for developing strategic concepts. The divide between the actual (project) and hypothetical (objectives) is to illustrate the much grater uncertainty related to achieving the long-term tactical and strategic objectives compared to implementing the project. In addition to its usefulness in developing project strategy, the LFA is a useful basis for evaluation at later stages. The LFA is illustrated in Figure 8.

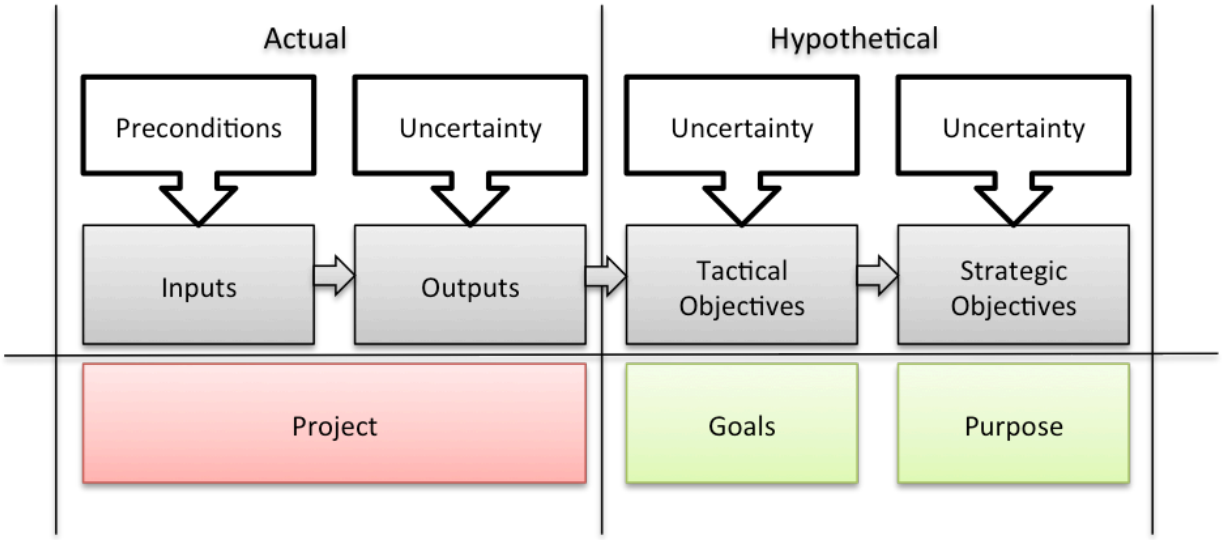


Figure 8 The LFA Matrix. Based on Samset (2008)

In the context of this study, the LFA is used to illustrate the objectives and purpose of the project as well as associated uncertainty. The LFA is somewhat modified according to the purpose of this study. This is explained in section 7.

3.2 Sustainable Development

This section provides some background and general aspects of Sustainable Development. The basis for the interpretation applied in this study is also provided.

3.2.1 The concept of Sustainable Development

The term Sustainable Development first gained recognition in the wake of the World Commission on Environment and Development report "Our Common Future" (WCED, 1987), also known as "the Brundtland report". The Brundtland Report coined the following definition

> *"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987:41)*

> *"In essence, sustainable development is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development; and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations." (WCED, 1987:43)*

The defining concepts here are needs and limitations. The basic economic and social needs of each generations must be met in a way that recognise the limitations posed on and by environment to meet the needs of future generations. The Brundtland definition emphasized equity between generations. Our Common Future must also be considered in light of equity whiting generations, specifically the fight against poverty in third world countries. Since then, however, the term Sustainable Development has taken on a legion of different meanings and substance. A universally agreed-upon interpretation of what Sustainable Development entail in practice and the correct policy application still remain elusive, though many have tried (Jabareen, 2006; Marshall and Toffel, 2005; Mondelaers et al., 2011; Santillo, 2007; Victor, 2006; Weaver and Jordan, 2008). A general trend is that Sustainable Development is increasingly taken to mean a development in accord with the limitations of the environment (Drexhage and Murphy, 2010). Unfortunately, it seems that Sustainable Development has lost some of its appeal, as some perceive it to be irrelevant in light of the described lack of agreement (Béal and Pinson, 2014; Fergus and Rowney, 2005). As this study is not a discussion of the limitations and potential of the Sustainable Development concept, but rather an attempt at practical application, the interpretation applied in this study is presented. Sustainability and Sustainable Development are used interchangeably in this study.

3.2.2 Three Pillars and long-term benefits

Sustainability, as defined in Our Common Future, can be interpreted as the reconciliation of social, economic and environmental considerations; the three pillars of sustainability (Haavaldsen et al., 2014; Strange and Bayley, 2008). The point being that the economy, society and environment is interconnected and interdependent.

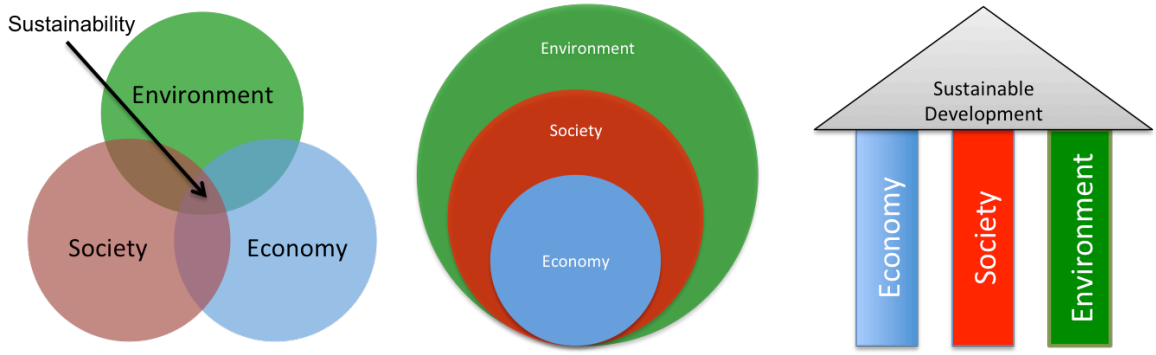


Figure 9 Common ways of illustrating the three pillars economy, society and environment

Figure 9 shows three common ways of illustrating the sustainability concept. The one to the right illustrated sustainable development supported by the three pillars. The one in the middle illustrates how the economy exists within society, which exists within the environment. This is not meant to illustrate economy as the core, but rather that society exists within the environment and that society is more than the economy (Giddings et al., 2002). The one to the left illustrates sustainability as the intersection of the three pillars. It is worth noticing that, while common, these models are not above criticism. Giddings et al. (2002) argues that these models suggest that the three pillars are separate and autonomous. This underplays the interconnected nature of the economy, society and environment and encourages the use of trade offs as a balancing instrument for achieving sustainability. According to Gibson (2006) trade offs between the pillars may sometimes be a necessity, but should always be a last resort. The argument being that neglecting the environment in favor of social or economic considerations is not sustainable in the long run, for instance one cannot substitute biodiversity with capital. This challenges the idea of sustainable development as a balancing act and proposes integrated mutually supportive solutions thinking. In this regard, the model in the middle might be the best one.

It is important to note that the use of uniform pillars is a simplification. There are, for instance, not much in common between the melting polar ice and bad air quality of urban areas, despite both being environmental issues (Giddings et al., 2002). Viewing society and the economy as one entity gives precedence to our own (western society/economy) and neglects diversity. In the context of public investment projects, Haavaldsen et al. (2014) use the strategic, tactical and operational analytical levels for decomposing the pillars. The argument is that Sustainability is not an objective measure, but rather a measure relative to perspective (Klakegg, 2010). As Sustainability is subject to value judgment (Lædre et al., 2014), the choice of objectives and success indicators for achieving Sustainability is also relative. Hence, there is a difference between choosing the sustainable projects (strategic) and doing projects more sustainable (operational, tactical). The Organisations for Economic Co-operation and Development (OECD) and the Norwegian Treasury (Finansdepertamentet, 2008) use the following definition on Sustainability (The Treasury use a formulation roughly translated into Norwegian)

> *"The continuation of benefits from a development intervention after major development assistance has ben completed. The probability of continued long term benefits. The resilience to risk of the net benefits flow over time." (OECD, 2010a)*

This definition, as pointed out by Haavaldsen et al. (2014), point out four key components of sustainability; the focus on long term benefits, the concept of net benefit, resilience to risk and the dependence between sustainability and intended benefits. For a project to be deemed sustainable in this view, there must be reason to believe that long-term benefits will be realized. This implies that the intended long-term benefits must be identified and expressed in the form of objectives. Resilience to risk entails robustness for countering the inherent uncertainty of a long-term perspective. The concept of net benefit implies that positive impacts larger than negative impacts equal sustainability (given other criteria). This includes all impacts of the project; even impacts not intended or related to project goals (Lædre et al., 2012).

As emphasized by Haavaldsen et al. (2014), three-pillar reconciliation and long-term achievement of objectives are not conflicting. However, as the two are intertwined they are both mutually supportive and mutually destructive. For instance, there are limits to how sustainable one can implement a fundamentally un-Sustainable concept. Furthermore, the project-triggering objective may only be related to one of the three pillars, and a concept with net benefit reconciliation of three pillars will not necessarily contribute towards achieving the objective. Choosing the Sustainable concept is therefore key (Klakegg, 2010). In other words, achieving sustainable objectives is dependent on setting objectives that substantiate long-term net benefit when considering all three pillars. It should be noted that there is a difference between achieving sustainability by the long-term effects of a project (tactical and strategic levels), and carrying out a project in agreement with the principles of sustainability. Likewise, there is a difference between achieving sustainability at the tactical level and achieving sustainability at the strategic level.

Sustainability Impact Assessment (SIA) is an approach for assessing this net impact, in the context of three pillars, of projects, policy initiatives etc. ex ante (Bond et al., 2012; OECD, 2010b). The SIA is not in itself a basis for decision-making (Lædre et al., 2014), but it is a useful facilitator for more evidence-based and transparent decision-making, by illustrating stakeholder perspectives and priorities, illustrate how alternate concepts contribute towards objectives and substantiate impacts (OECD, 2011). Figure 10 illustrate a framework proposed by Lædre et al. (2014) for categorizing sustainability indicators. The “horizon” and “weight” factors are relative to application, but the main idea is that the choice of indicators can be made more comprehensive and objective if based on such a framework.

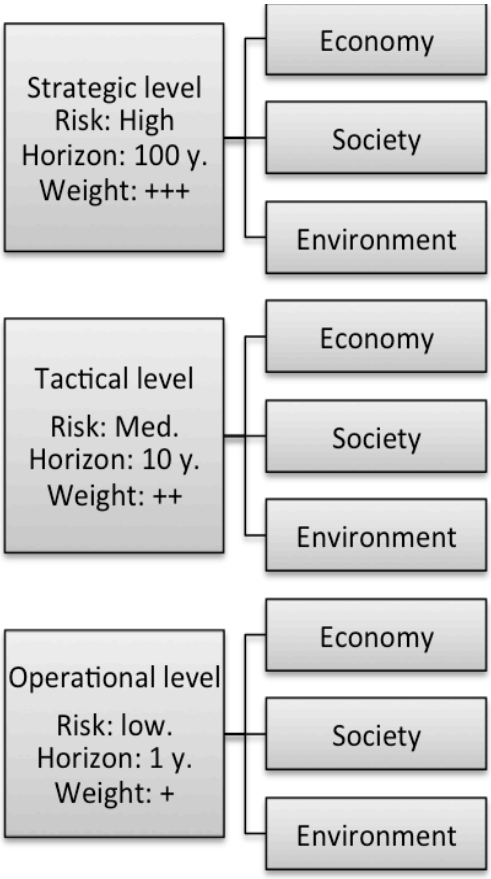


Figure 10 Recommended Sustainability indicator framework (Lædre et al., 2014)

3.3 Public Policy

> *"In the broadest sense, public policy is whatever a government decided to do or not to do, to deal with a particular problem or concern. … More specifically, public policy is a set of decisions by government concerning the selection of goals and the methods of attaining them, within a specified situation. These may be expressed in a variety of forms including legislation/laws, local ordinances, regulations, executive orders, court decisions, or decisions of administrators. " (Kendall et al., 2007:1)*

This introduction to Public Policy by Sue Kendall is neither famous nor often referenced, but its comprehensiveness is fascinating as it manages to capture a number of key elements of public policy, using simple language and only three sentences. Other definitions on Public Policy are, of course, legion, but another that embodies, what are defined as, key aspects in a more comprehensive way, has not been found. First of all, this introduction gives some perspective on the implications and scope of public policy. "*Whatever a government decides to do or not do*" implies that public policy is of great importance. Also from the first sentence, one might glean that public policy is about decision-making, and that a lack of active policy is also in itself policy. Furthermore, policy is problem-oriented in the sense that improving society is the policy purpose. The next sentence introduces case-specific policy areas and, more importantly, multiple levels of abstraction. Both the selection of goals and the methods of achieving them are aspects of public policy. Finally, the third sentence presents various policy measures or instruments.

As the academic paper had a very limited number of pages, the theory had to be compressed. This chapter is intended to provide insight into the policy theory used as a basis for this study. The concept of Policy-to-project processes, as defined in this study, is explained. This chapter provides some insight into Public policy theory that is perceived relevant for this study. The first subchapter describes the multiple levels of abstraction, the second subchapter explores types of policy instruments and the third subchapter provides some insight into the policy process.

3.3.1 Levels of Abstraction

As already established, the label "public policy" can be put on a number of elements of remarkably varying nature. For a broader understanding of public policy, one must examine how policy exists on different levels of abstraction as well as how they relate to each other. This has proven to be a field with limited academic resources. It may be that this is because it is perceived to lack application or because it is deemed to be obvious or self-explanatory. It may also by that the literature search conducted in this study has not been broad enough. No matter the reason, literature found is somewhat limited.

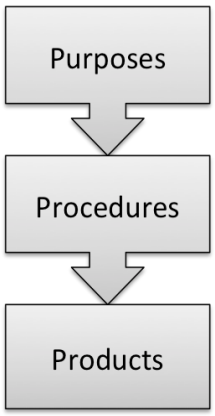


Figure 11 A simple vertical policy hierarchy based on Prince (2012).

Public policy can be categorized in horizontal and vertical dimensions (Torjman, 2005). Horizontal policy categorization describes how policy involving multiple priorities and/or organizations are designed and implemented. Our main concern in this subchapter, the vertical categorization of public policy, concerns manifestations of public policy at various levels of abstraction. This includes how goals and objectives of policy are structured and related to policy measures. A few examples from the literature are presented.

Figure 11 illustrate a simple vertical policy hierarchy. The key attribute of this example is the divide between purposes (goals, objectives, etc.), Procedures (ways and means of designing and delivering purposes) and products (policy impacts). The products of public policy are the result of procedures which themselves are means to achieve purposes. Dror (1983) use an even simpler model consisting of policies and subpolicies. In this model, policies are the major guidelines for development a policy area, and subpolicies are the specific measures necessary for executing the policies. Dror (1983) explain the relationship between the two levels as continuously overlapping and influenced by each other.

> *"In many cases, these two flows of decision-making, from the top down and from the bottom up, proceed simultaneously, and even partly overlap; policy is often partly "formed" and partly "executed" by the same subdecisions" (Dror, 1983:14)*

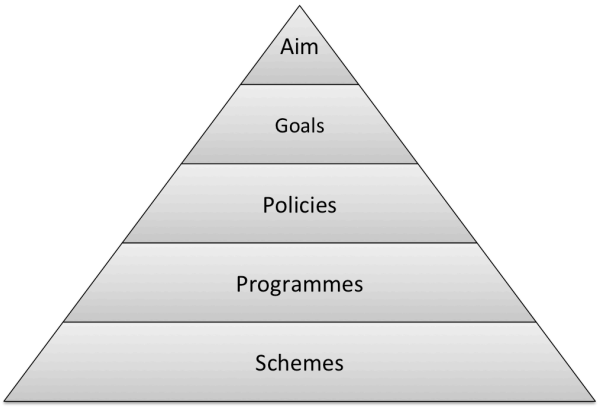


Figure 12 Vertical policy hierarchy based on Agnihotri (1995)

Figure 12 illustrate a more complex example of vertical categorisation based on (Agnihotri, 1995). The pyramid shape indicates that there one Aim and branching Goals, Policies etc. that are vertically consistent. In the policy definition applied in this study, all of the levels in this model are various manifestations of policy. The model explains how numerous policy measures can be applied towards achieving one aim or purpose. There are many examples of vertical categorisation, though variations seems to be based on application more than fundamental differences (Warfield, 1976; Zwirner et al., 2008).

A rather different view is presented by (Page, 2006), based on policies being either intentions, actions or a mixture of the two. This model is illustrated in Figure 13.

> *"It is possible for a policy to be simply an intention. The proposals of a party unlikely to gain office or participate in a coalition are 'policies' even though they have no chance of being put into action. Moreover, it is possible for a policy to be simply an action or a collection of actions. Where, for example, immigration officials do not look closely at dubious applications for entry into a country we might describe immigration policy as 'lax.' " (Page, 2006:208)*

These two faces of policy are each divided into two sub-categories. Page divides Policy intentions into principles and policy lines. Principles, representing policy intentions in the broadest sense, are very general in nature, and consist of ideas or views on how the affairs of society should be conducted. Examples of policy principles are for instance deregulation, new public management, countering climate change and gender equality. Principles are characterized by low level of detail concerning "how to achieve" and are mainly concerned with "what to achieve". Policy lines are policy intentions in a more focused (not so broad) sense, related to a specific area of policy/government. Page (2006) describes differing policy lines as different approaches to the problem or topic witch may or may not complement each other.

> *"Taking the UK's Adoption and Children Act 2002 as an example, one policy sought to increase the number of potential adoptive parents, another line on 'intercountry adoption' addressed the problems posed by lax adoption laws in other countries. Yet another line was to develop registers of adoption agencies, and there were several other distinct lines in this broad law." (Page, 2006:209)*

Page divides policy actions into measures and practices. Policy measures are the instruments or tools witch can be applied for implementing a specific policy line. This is the subject of the next subchapter. Practices are defined as the *"behaviour of officials expected to carry out policy measures"* (Page, 2006:209). This includes all specifics concerning how activities, control, user-interaction, work routines etc. are carried out. Practices are policy actions on the most specific level and are separated from measures on the grounds that practices exists and evolve separately; not all behavior is regulated by measures.

Figure 8, illustrating the level classification of Page (2006) is not meant to emphasize the divide between intentions and actions, as most policy is a combination of the two (action based on intent) but rather illustrate the different levels of abstraction from which policy originate. According to Page, policy initiatives originate from all levels. Policy lines or strategies are developed based on principles stating the ideal state of affairs. These strategies express how the principles are to be achieved. Following this, policy measures are selected and implemented and in doing so establishing policy practices. This is the obvious sequence. However, as Page (2006) states, policy has a tendency to feed of one another in several ways. As such, policies are often successive, meaning that the objective of a policy implementation more often than not is optimizing an already existing policy measure, rather than a result of altered principles or establish new areas of policy. This can also be the case if a policy measure has unexpected impacts and new policy measures must be undertaken to correct it or minimize damage. In these cases, the measure itself is the origin of policy initiatives.

The point is that though there are many ways of conceptualizing it, there are basis for defining policy as existing on distinct levels of abstraction, as done in the academic paper. A policy-to-project process is a process that transfers policies from the highest levels of abstraction to the project level. The project level, in this context, is the instrument level (Page, 2006; Warfield, 1976) which is the subject of the next subchapter.

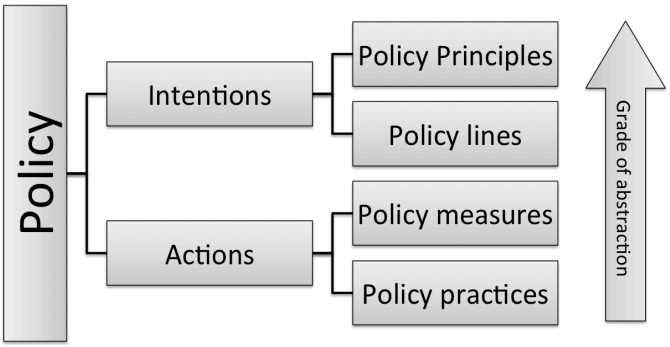


Figure 13 Vertical policy hierarchy based on Page (2006)

3.3.2 Types of Policy Instruments

Public policy is about achieving objectives for public utility (Agnihotri, 1995). More specifically, public policy is about achieving political goals through influencing the societal behaviour (Bemelmans-Videc et al., 2011; Dolan et al., 2009; Ingram and Schneider, 1990). Public policy may target the population as a whole, but more often it is targeted at a specific sample of the population, identified by geographical or behavioural distinction (Schneider and Ingram, 1993). This subchapter describe the instruments available to government for influencing behaviour. Table 3 contains a summary of various classification schemes.

Origin	Method	Classes
Collins et al. (2003)	"Carrots, sticks and sermons". General	• Legislation • Economic instruments • Provision of information • Marketing and influencing strategies
Hood (1983)	NATO. Theoretical framework. Based on the basic resources of government.	• Nodality • Authority • Treasure • Organisation
McDonnell and Elmore (1987)	MICS. Theoretical framework. Based on expected effect of government action.	• Mandates • Inducements • Capacity building • System changing
Linder and Peters (1989)	Combined by examining other literature.	• Direct provision • Subsidy • Tax • Contract • Authority • Regulation • Exhortation.
Ingram and Schneider (1990)	Theoretical framework based on theory of behavioural assumptions	• Authority • Incentives • Capacity • Symbolic and Hortatory proclamations • Learning
Bemelmans-Videc et al. (2011) and Hand (2012)	Theoretical framework based on theory of behavioural assumptions	• Regulations • Subsidies • Information
Samset and Volden (2013)	General	• Regulations • Financial instruments • Information and training

Table 3 Classifications of Policy instruments

Though there are some differences between the classifications seen in table 3, the similarities are more obvious. One might notice that economic, legislative, capacity building and various use of information are recurrent themes. The main difference lies in the perspectives used for classifications. Though all of the examples recognize that policy tools are means for altering behavior, the classic classifications, as seen in (Hood, 1983) are based on the tools themselves and thusly focus mainly on institutional divides (Sabatier, 1991). The classifications based on behavioral assumptions however, are more concerned the nature of the nature of addressed population. Why do people act as they to and how do one influence them to act otherwise? Central in this work is the assumption that public policy is to counter the reasons for people not to behave in a desired way. Thus, public policy is to remove the obstacles for desired behavior. Ingram and Schneider (1990) describe such obstacles in the form of five "reasons" for undesired action that can be addressed by government interaction (policy measures).

> *"…there are five reasons that can be addressed by policy: they [people] may believe that the law does not direct them or authorize then to take the action; they may lack incentives or capacity to take actions needed; they may disagree with the values implicit in the means or ends; or the situation may involve such high levels of uncertainty that the nature of the problem is not known" (Ingram and Schneider, 1990:514)*

The policy tools available for countering these challenges are: Authority, Incentives, Capacity, Symbolic and Hortatory proclamations and learning (Ingram and Schneider, 1990). For illustrative purposes, a short summary of the five classes introduced by Ingram and Schneider is presented below.

Legislative tools are the use of legislative power to allow, prohibit or require certain behaviour in specified circumstances. These instruments are based on the assumptions that individuals and organisations behave according to the law (are law-abiding by nature), but are often accompanied by motivating sanctions; punishment or reward. Incentive tools are instruments witch gives positive or negative pay-off depending on the behaviour of individuals or organisations. These instruments are based on the idea that individuals are willing to alter their behaviour for personal gain (if not for common gain). Types of incentive tools include inducements, charges, sanctions and force. Capacity tools are tools witch enables desired behaviour trough providing information, training, education and resources. These instruments are based on the assumption that lack of skills, information or resources and not incentive are the barriers preventing the desired behaviour. Thus, it is assumed that if the targets of the policy is educated and or allocated the right resources, they will make the right choice. Construction of public infrastructure and capacity-increasing facilities fall within this category. Symbolic and hortatory tools consist of presenting and spreading information in a certain light to encourage certain behaviour. It is assumed that desired behaviour can be attained more easily if it is presented as being aligned or consistent with these beliefs and values, presented as important or crucial for society or associated with positive symbols, labels etc. Symbolic and Hortatory tools is about altering perception and manipulating perspective. These instruments are based on the assumption that individuals make choices based on their personal and cultural beliefs and values as well as intangible values such as justice, fairness, equality and right or wrong. Symbolic and Hortatory tools differ from capacity tools by the nature of presented information. Capacity (in the informative context) is about facts while Symbolic and hortatory tools are about

perspective. Furthermore, they differ from incentive tools as the conditions for the choice is unaltered, and from authoritative tools as there are still freedom of choice. Learning tools are tools for reducing uncertainty when it is not understood or agreed a solution to some recognised problem. These instruments are based on the assumption that agencies and populations are able to learn about behaviour and use new knowledge to apply effective tools from other categories. Examples include participation tools (hearings, advisory boards, citizen panels etc.) mediation and arbitration programs as well as formal evaluations of existing policy situations. These tools are often characterised by granting discretion to lower level policy agents regarding choice of specific policy tools.

The choice of policy instrument for achieving an objective is a complicated one. Eliadis et al. (2005) describe how the choice of instrument often is a value related issue as the policy outcome shapes the public repute, legitimacy and accountability of the responsible party i.e. the government as a whole or the elected officials. Hence, the choice of tool is often a symbolic one seen in a political context. Different ideologies favor different tools (free market vs. regulation for instance). While some tools may be more suited to some problems, there are no ultimate connection between problems and policy tools (Peters, 2005).

> *"...the answer about the circumstances in which to employ each tool as always, fundamentally, "It depends."" (Peters, 2005:351)*

Landry and Varone (2005) proposes that the instruments or tools can be distinguished in terms of feasibility using the criteria resource intensiveness, targeting, political risk and financial and ideological constraints. Resource intensiveness may be defined as the operating cost of the solution. Targeting describes the preciseness of the policy regarding target population. Political risk constitutes the public visibility of the policy as well as the perceived impact on voters. Financial and ideological constraints are limitations consisting of value-based "do`s and don'ts" and financial concerns. These are the factors that limit the choice of instrument or instruments, and therefore a serious shortcoming considering the problem-solving perspective on policymaking. Eliadis et al. (2005) describe how instrument mixing, while frequently used, is severely lacking in terms of impact assessment. Much of the traditional research on policy tools is based on the use of single instruments in a vacuum, while the reality is that policy initiatives consist of bundles or portfolios of different instrument types.

3.3.3 The policy Process, Policy Windows and Garbage Cans

This subchapter provides insight into the implementation of public policy. This is intended to focus the theoretical further exploration towards establishing further basis for understanding the Brøset Project case in a policy perspective. In the literature, the terms policy initiative and the policy process are used interchangeably. In this study the term policy process is to be understood as "the making and implementing of public policy".

The conducted literature study has found three main ways of conceptualising the policy process; the linear model, the iterative model and the integrated model. The linear policy process (illustrated in Figure 14) is defined by having a clearly stated objective, distinct process phases and an identifiable and measurable output in the form of impacts (Torjman, 2005). This is the simplest model and one that is closely related to what is common in the project literature (Berg et al., 1999; Samset, 2010a).

Figure 14 The linear Policy process. Based on Torjman (2005)

A more common conceptualization of the policy process is the iterative one, illustrated by distinct stages in circuit diagram (Cairney, 2013; Mintrom, 2011; Soer, 2013). This approach is illustrated in Figure 15. The stages used in the circuit diagram vary to some degree between various sources. Stages not included in Figure 15 are for instance "agenda setting" and "policy maintenance, succession or termination" (Cairney, 2013). The first difference one notices, with regards to the linear model, is the focus on repetitious iterative policy based on problems, rather than "interventional" policy where the starting point is an objective. Torjman (2005) describe different processes as current vs. futuristic and proactive vs. reactive. Current vs. futuristic is the divide between policies established and not established in the political agenda. In this context, the two models are not contradictory per se, if one envisages the linear model with a loop. Given that policy more often than not are focused towards areas with established political agenda and existing measures (Page, 2006), viewing the policy process as iterative might be a more realistic perspective in general.

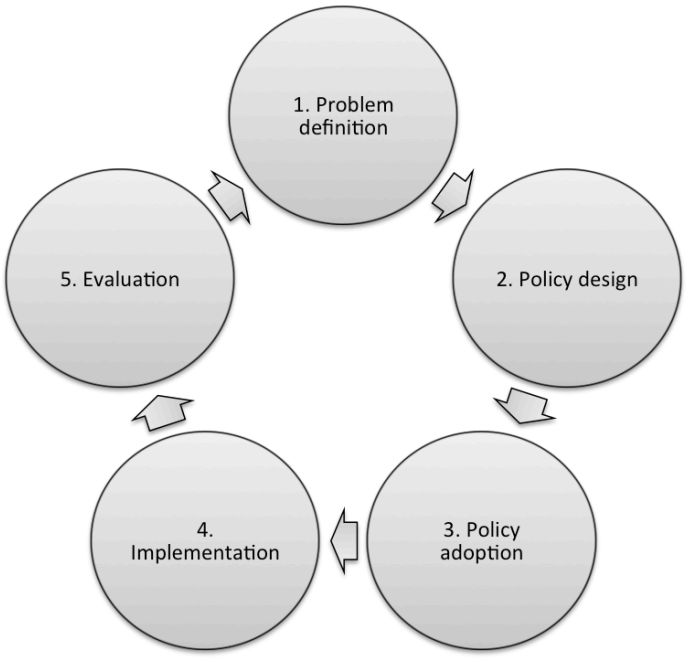


Figure 15 The iterative Policy process. Based on Mintrom (2011)

A rather different approach is the basis for the integrated model. A study undertaken by the

UK Institute for Government (Parker and Rutter, 2011), as part of its research into governmental policy making, concludes that the idea of policy stages, while somewhat useful, is fundamentally misleading.

> *"The 'stages' of policy making do not just often overlap, they are often inseparable. In the real world, policy problems and policy solutions frequently emerge together, rather than one after another. In other words, plans may be present at the same time, or before, a need to act has been identified."*
> *(Parker and Rutter, 2011:6)*

Furthermore, the study emphasizes the need to include external impacts in future efforts to map the policy process. The policy process does not, in fact, function in a vacuum and is greatly dependent on external events i.e. in setting the policy agenda, defining problems, etc. The idea of policy evaluation as an integral part of the process is also challenged. Firstly because of the long time required for proper assessment of policy impacts (impacts sometimes being indirect, diffuse and late). Secondly, because lessons from evaluation seldom feed back into the process.

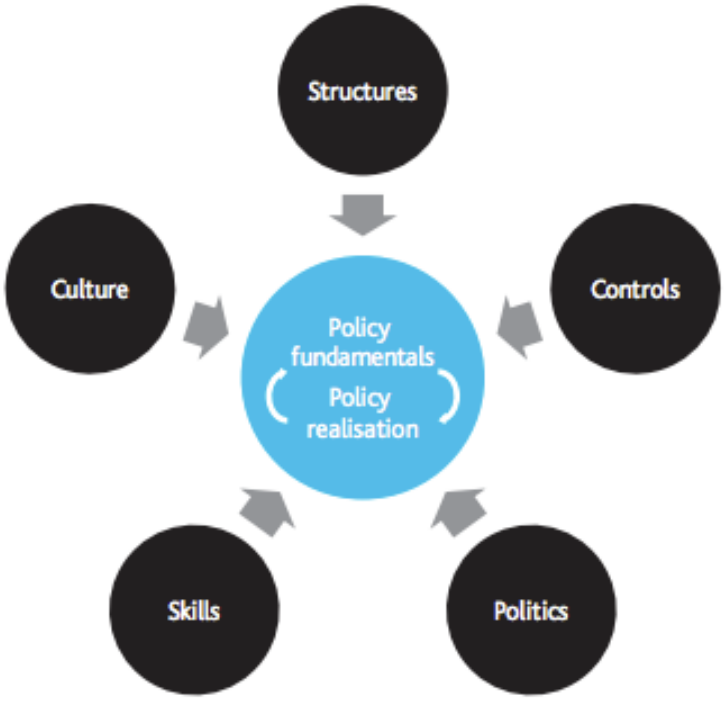


Figure 16 The integrated Policy process (Rutter, 2011)

In a subsequent report "Making Policy Better", Rutter (2011) proposes a new model to explain the policy making process in a more realistic way. This integrated model (illustrated in Figure 16 consists of two connected (not discrete) parts; "policy fundamentals" for good policy development, and a set of roles that the government is to perform in implementation. These two parts are framed by five categories of executing means or tools for achieving goals and objectives. The most important aspects of this model are the two parts in the middle constituting the model core: Policy fundamentals and Policy realization. The Policy fundamentals are seven distinct elements viewed to be integral for successful policy development. A short summary is provided in Table 4. These "fundamentals" differ from the stages- or phases-approach seen in the linear and iterative models, as they are not dependent on being undertaken in sequence. The point is that each of these actions needs to be addressed at some point in the policy process, but that the sequence and timing is relative to the individual policy (Rutter, 2011)

Policy fundamental	Key words
Goals	Problem and objectives must be adequately defined. How is the policy to achieve its goals? How does the policy goals relate to the higher-level objectives of the government?
Ideas	The policy process must be informed. Evaluation of previous practice, innovative thinking, ideas from other sectors and other countries must all be considered.
Design	The policy design must be realistic, implementable and resilient to adaptation by implementers. Testing on end users and or implementers
External engagement	Affected parties should be engaged. Needs and priorities should be mapped and taken into consideration.
Appraisal	Alternatives should be assessed regarding cost-effectiveness, risk, befits and resilience to changes in external environments.
Roles and accountability	Roles and responsibilities should be specified. The appropriate level of government involvement should be identified
Feedback and evaluation	The policy should be developed with a plan for obtaining timely feedback and evaluation. Indicators for success should be established.

Table 4 Summary of policy fundamentals as described by Rutter (2011)

The other part of the model core is policy realization. Rutter (2011) presents research indicating that the policy outcome in many cases changes drastically during implementation. Not only are the effects of policies on society highly uncertain, but the people who implement them also shape the policies. Thus the policy impact is not assured at policy approval.

> *"A policy is not just made and then executed; it is made and constantly remade by multiple players throughout the system" (Rutter, 2011:17)*

The integrated model is highly descriptive in nature. It is useful for explaining how the policy process work in practice and for highlighting key components of successful policy implementation. It is important to nice because it challenges the idea of distinct phases in the policy process.

Other important perspectives for explaining policy processes in practice are the Policy Window Theory and the Garbage Can Theory (GCT). The Policy Window describes how problems, policies and politics may convergence in time and thus produce a window of opportunity for the implementation of policy (Ashford et al., 2006; Galligan and Burgess, 2005). Problems, policies and politics are described as three independent "streams". The problem stream consists of the identification and recognition of problems or challenges as results of events or indicators of more continuous shifts. The policy stream consists of policy communities producing policy proposals. The political stream describes shifts in public opinion, changes in administrative and the activities of interest groups. The theory states that all the streams are needed for setting the policy agenda. For instance, if a problem is identified and the political environment is favorable, lack of viable alternatives from the policy stream will substantiate the risk of the issue fading from the agenda before action can be taken (Galligan and Burgess,

2005). Put simply, the policy Window Theory emphasize the importance of the political environment as well as available policy solutions for setting the agenda. As public policy is highly political in nature (Agnihotri, 1995), it is if great importance for policy advocates to tie policies to identified problems or concerns that are relevant to the public agenda. In other words, it is very helpful for advocated of a particular policy initiative if the policy can be seen to address a problem or concern that is already on the agenda.

The Garbage Can Theory is quite similar to he Policy Window Theory, but is of a more skeptical nature. The Garbage Can Theory propose that streams consisting of problems, solutions and participants converge more by chance than by design (Aberbach and Christensen, 2014; Bendor, 2010; Kingdon, 2003). The implication of this is that policy decision-making are characterized more by random convergence than by good intent. The Garbage Can is a metaphor for the policies resulting from these random intersections.

> *" As problems, solutions, and participants move independently about the organization, various combinations find themselves dumped into these cans, and whatever decisions come out depend on the mixtures the intersecting streams happen to generate." (Bendor, 2010:124)*

> *"Because the process often entails solutions in search of problems, rather than problems in search of solutions, the match of the two is likely to be quite imperfect, even under the best of circumstances" (Aberbach and Christensen, 2014:14)*

The theory explains how policy advocates might exploit opportunities in times where the society is in crisis or bewilderment. This is more often relevant in processes that have a long time span, where the inherent randomness has increased probability for effect (Christensen, 2009). On the other side, as pointed out by Christensen (2009), the randomness provided by Garbage Can processes may also prove beneficent in a design perspective. Solutions initially advocated for some areas of policy may be transferred to others with success by the random connections of actors, problems and solutions. As such GBC theory may be seen as a process for innovation.

3.4 Urban Development

The Brøset Project is in essence an urban development project. The ambitions of the project reach way further than what is typically associated with urban development, but the measures are still the same ones that are available to other urban development projects. This chapter gives a short presentation of the available measures available to in the Norwegian context

3.4.1 The Plan and Building Act, the legal framework for urban development

The Planning and Building Act (PBA) regulate urban development in Norway. The law is intended to *"promote sustainable development for the benefit of the individual, the society and future generations"* (Kommunal- og moderniseringsdepartementet, 2008: §1-1). More specifically, the law is to assure that local and national priorities are co-aligned by promoting transparency, predictability and participation. The planning hierarchy is illustrated in Figure 17. The municipality is responsible for approving Municipality planning strategies, Municipality plans and Zoning plans in accord with the BPA.

As seen in Figure 17, the planning system is hierarchical in nature. This implies that higher level plans provide the guidelines for underlying plans (Salvesen et al., 2011). Zoning plans are plans that provide the parameters for the usage of a geographically limited area within a municipality. Zoning plans may be developed by both private actors or the municipality, but must be approved politically be the municipality (Salvesen et al., 2011). The zoning plans are of a general nature and comprises of parameters for building height, density, ratio of outdoor space and so on (Støa et al., 2014).

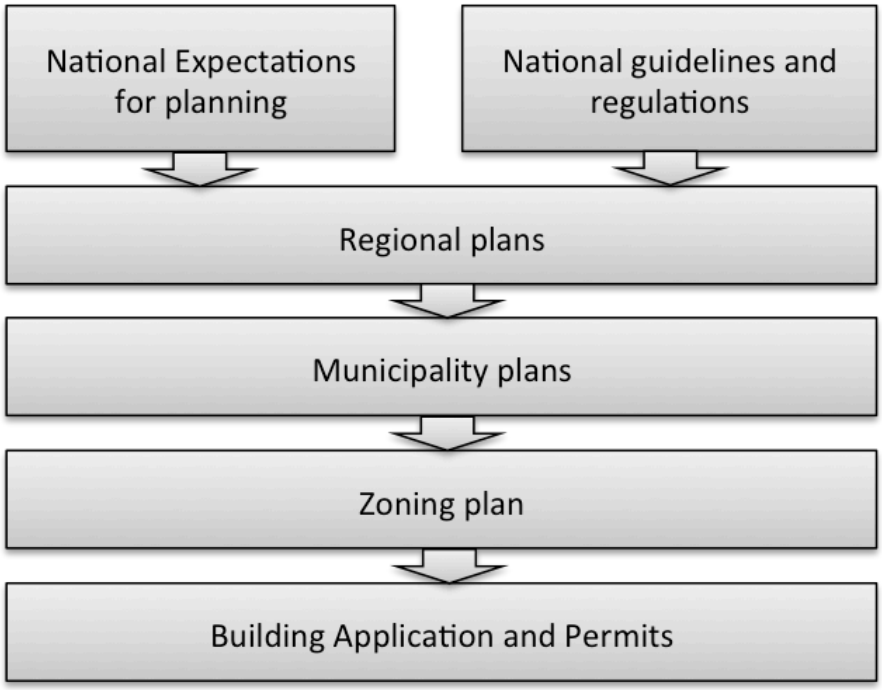


Figure 17 The Norwegian Planning Hierarchy. Based on (Salvesen et al., 2011)

4 Applied theory

This chapter presents some applications of the literature presented in chapter 3. The first chapter presents some comparison between projects and policy. The second chapter describe how policy may be categorised by the three analytical levels. The third chapter present a model for structuring the policy process. The contents of these chapters have been an important basis for application of theory and structuring the applied project perspective towards public policy in this study. Some considerations on achieving sustainability is are included in the final subchapter.

4.1 Comparing policy initiatives and projects

Based on the theory presented in section 3, there seems to be a lot of overlapping aspects between projects and public policy initiatives. Both are, in theory, goal-oriented endeavours intended to provide benefits. There are, however, some important differences to consider when applying a project perspective on policy initiatives (as for instance policy-to-project processes). This is perhaps best illustrated by an example.

Given a certain problem such as urban traffic jams, the government perceives the need to act towards bettering the situation. One alternative may be to build a new road around the congested area. This is seen as a typical project response to the problem. Another alternative may be to cut the prices for public transport, while a third alternative is disseminating information concerning the local environmental issues caused by the traffic jams. These are seen as typical policy responses to the problem. In a policy instrument perspective these three alternatives are all considered to be policy instruments, though different in the way that they encourage different behavior (Ingram and Schneider, 1990). The road project is providing capacity to drive more cars into the area and thus encouraging the current behavior. Cutting prices on public transport is providing incentives for alternative ways of transportation, and seen as encouraging an alteration of behavior (in accordance with the principles of benefit/cost- analysis, stating that decreased cost gives increased demand ((Mishan and Quah, 2007)). The third option, the "sermon" option, appeals to the conscience of the car users. The main difference lies in the attitude towards the problem, i.e. at a higher level of policy.

There are two important aspect of this situation. First, that all three alternatives are policy alternatives i.e. investment project are policy at one level (Warfield, 1976). Investing in a road, investing in dissemination of information and investing in public transport are basically just three, of many, ways of influencing the societal behavior. In this case the immediate problem (traffic jams) are (perhaps) solved in all three cases. The second important aspect, and the key difference, as defined in this study, is that Policy is multi-dimensional, while projects are policy in one dimension. Policy goes beyond the "action" (the instrument level) and includes the higher-level considerations concerning which behavior is desired and which is not.

The LFA matrix (K. 1946- Samset, 2008) identifies a project as an input-output mechanism delivering output at three levels; the direct output, the secondary output

(tactical) and the tertiary output (strategic). Thus projects exist on one level, but have goals and objectives that can be viewed in a multi-level context. Policy on the other hand, exists at all these levels. In this context, policy can be viewed as an integrated concept spanning all levels or as a collection of separate connected policies spanning all levels. The difference is a matter of perspective and not that relevant in itself. The relevance of the multi-dimensional nature of policy is illustrating how the policy concept consists of the problems, the solutions, the tools and most importantly, the purposes for governmental activities. Projects on the other hand, are limited to a small part of the policy concept, the tools. This means that the political aspects of public policy is much more present in public initiatives than in projects.

A policy-to-project process, in this perspective, is about developing the policy basis for a project. In other words, spanning the gap between policy purpose and policy instrument.

4.2 Policy at the Strategic, Tactical and Operational levels

This chapter presents some insight into how this study views policy in light of the Strategic, Tactical and Operational analytic levels. The project work, predating this study, developed several models for conceptualising public policy initiatives. One of these is used for structure in this study. This model is illustrated in figure 18.

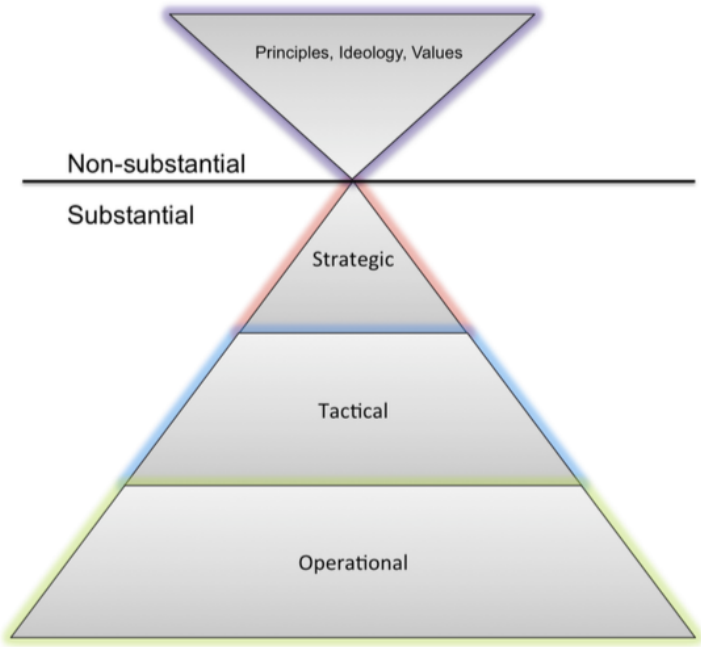


Figure 18 A Conceptual model for illustrating policy at various levels. Based on the LFA matrix and policy literature

The model divides between substantial and non-substantial policy, where substantial policy is defined as policy with measurable impact. Non-substantial policy in this case is therefore policy in the intentional sense, as described by Page (2006). The divide is set at an imaginary point where a Policy cannot be "held responsible" for an impact using backwards tracing causality. Thus the divide set between substantial and non-substantial can be seen as a divide between applied and theoretical policy. The result is the exclusion of certain aspects often referred to as strategic policy and therefore a more focused concept for the strategic level policy definition. The term strategic or strategy is not used unambiguously in policy literature and requires some delimitation to be useful in this context. Page (2006), (Zwirner et al., 2008) and other describes the most abstract form of policy (sometimes referred to as strategic (Zwirner et al., 2008)) as consisting of value considerations, ideology and principles. These elements of policy fall into the non-substantial category. The divide is important because

1) Policy at this level of abstraction is general and not related to a specific policy area (Sabatier, 1988). This makes setting objectives based on policy of this level less meaningful.
2) Policy at this level of abstraction is of an intentional nature (Page, 2006) and does not provide a direct line towards implementable action.
3) Policy at this level is close to the core of the individual belief system which is extremely resilient to change (Sabatier, 1988). The relevance of objective assessment of policy at this level is therefore questionable

Thus for the strategic level policies to be considered substantial, they should be expressible in terms of concrete intentions or objectives related to a particular area of policy. This are can be broad or small as long as the policies are reasonably tangible. Strategic level policy is defined as policy in the form of guidelines or adequately described long-term intentions regarding a desired societal development. In simple terms, strategic policies are policies expressing "what we want to achieve".

The tactical level policies are defined as the ways/targets and means with which the strategic policies are achieved. These policies can be seen as subpolicies and are more specific regarding how to achieve the strategic level policies. Tactical level policies identify targets and means. Targets are solutions for achieving strategic level policies and means are ways of altering societal behavior accordingly. Societal behavior can be seen as the aggregated behavior of individuals in society (as described by Ingram and Schneider (1990)). The tactical level polices are policy area specific. By this it is meant that they relate in some way to one or more strategic level policy. It may be useful to consider the tactical level policies as solutions to the problems or challenges stated at the strategic level.

The operational level policies consist of rules, plans and procedures on how the public government acts on a day-to-day basis. This includes laws, regulations, practices etc. describing how the government is run. These are the "physical" manifestations of governmental action. Implied in this definition is that all public policy must have elements at the operational level to have effect. One other way of viewing it is that all higher-level policy has corresponding subpolicies at the lower levels, in accordance with the views of Dror (1983).

One important aspect of this model is that strategic, tactical and operational level policies are seen to be hierarchical dependent. Agnihotri (1995) views hierarchical consistency as a normative requisite for policy making. Dror (1983) has a more descriptive approach using the difference between decided and actual policy to illustrate the possible (and often inevitable) gap between stated intent of higher-level policy and delivered results of lower-level policy. This study proposes that all policy on the tactical and operational level belong in context of some past or present strategic level policy. Dependency is therefore viewed as a relative rather than a constant, in the sense that lower level policy may not be completely in line with corresponding strategic level policy, but still belong in the context of a strategy. As described by Page (2006), there are elements at the lowest level of policy ("procedures" in his model) without stated context. This may be "habits" more than procedures mostly, but there are probably a great many aspects of governmental behavior that have no apparent basis. This begs the question of whether lack of stated policy is in fact just as substantial as stated policy in terms of effect. The hierarchical dependence implicates that a policy can be seen in a multi-level perspective as described in the previous chapter.

4.3 The policy process

Some theory for understanding the policy process is presented in subchapter 3.3.3. This chapter expands on this and presents the conceptual model used during this study for structuring the understanding of the policy-to-project case. The model is illustrated in figure 19.

The model is based on integrating policy networks theory (Klijn and Koppenjan, 2000; Sabatier, 1988; Vuković and Babović, 2014), the policy window theory (Galligan and Burgess, 2005; Kingdom, 2003) and the iterative models (Mintrom, 2011). Policy networks are not seen as particularly relevant to this study and are thus not further explained. The model was developed by the project work, predating this study, where policy networks were a component. This study recognizes that the use of stages to describe policy processes might be misleading (Parker and Rutter, 2011), as real life policy processes seems to be more integrated and less linear than one might believe when looking at for instance Mintrom (2011). However, for practical purposes, some sequencing is seen to be beneficial for understanding the policy process. The model consists of eight elements; society, agenda, opportunity, design, measure, implementation, output and impact.

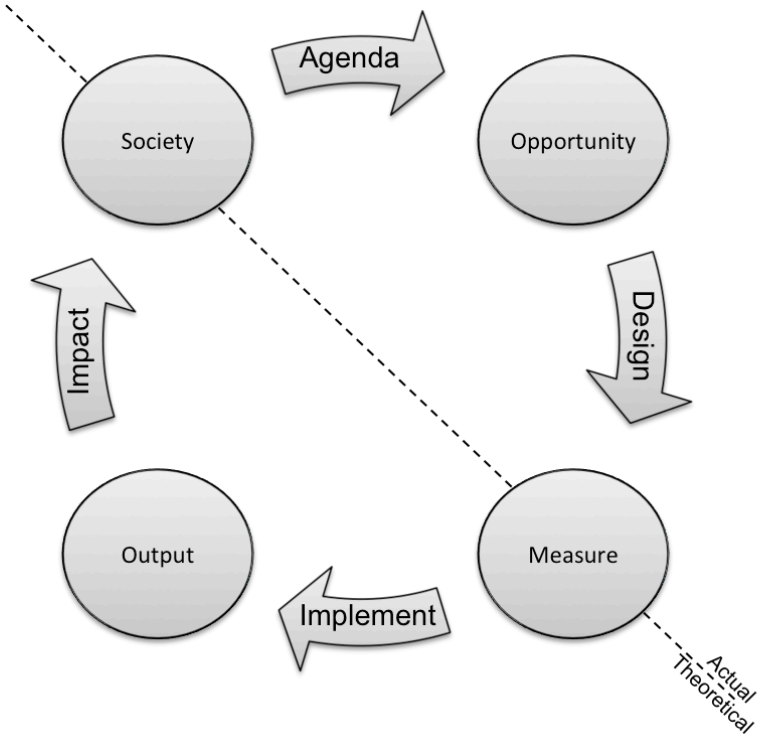


Figure 19 A conceptual model of the policy process based on policy networks theory, policy windows theory, iterative models and input from real-life policymaking

Agenda represent the process where a need or desire in society triggers a response. This process represents how a perceived problem gains public attention trough active advocacy (Torjman, 2005) and according to the Policy Window theory (Kingdon, 2003). This process is often represented by one or more stages in models such as the one used by (Mintrom, 2011).

A typical policy process starts with the agenda triggering a response(Galligan and Burgess, 2005). This represents an opportunity. The opportunity is constricted by the perceived need (policy- triggering need if you will) identified in Agenda, relevant higher-level policies, stakeholders, external impacts, resources and constitutional aspects. In addition, the political risk and ideological aspects are constraints (Landry and Varone, 2005). The opportunity is not a stage in time, but rather a manifestation of the possibilities and constrictions relevant to the policy process. It is therefore constantly evolving relative to the policy environment during the process.

Policy design is another constant, non-linear process (Parker and Rutter, 2011). The design process develops one or more measures within the constraints of the opportunity, and so is illustrated as connecting the two. A policy design model is shown in figure 20. The policy-to-project process can also be seen as a policy design process.

A measure in the form of legislation, incentives, capacity or information or, more commonly, a combination is identified as the product of design. This may be seen as the "formulation of policy recommendation" seen in Dunn (2008). As described by Parker

and Rutter (2011), policies are sometimes made very quickly as a situation may require a quick response (relevant in Policy Window perspectives), and may be the result of a longer process. Regardless, at some point a measure is identified for implementation, "ready or not".

The implementation process includes political adaptation (if necessary) and organizational implementation at the operational level. The result of this process, the policy output, is uncertain relative to the complexity of the policy (Dror, 1983; Parker and Rutter, 2011). Furthermore, the political feasibility of a policy may change during design and impose alterations in the implementation phase. This view is based both on the concept of Policy Windows (Galligan and Burgess, 2005) and the constraint of political risk (Landry and Varone, 2005).

The final part of the model concerns the output and its impact on society. After implementation, the policy becomes a constant in society until altered, and will impact the societal behavior in one way or another. The impact is highly uncertain, as the conditions for change (behavioral assumptions (Ingram and Schneider, 1990)) are not accurate tools. Furthermore, the policy is not alone in affecting the society. Hence, a well-designed policy implemented to perfection may not have the intended impact because of external events or policies changing the preconditions for the policy design.

Lastly, the society itself is highly uncertain. At the strategic level, policies are meant to contribute to a desired societal development. The Society element in the model represents the society as the basis for Agenda and society as the Impact recipient.

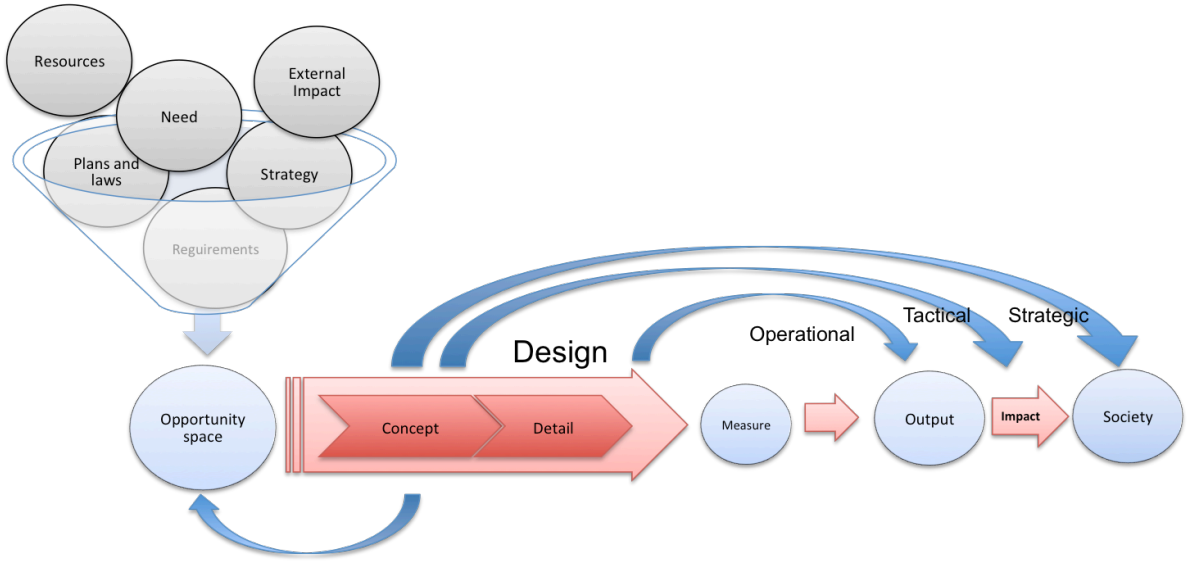


Figure 20 The policy Design process. This is one way of illustrating a policy-to-project process. The funnel illustrates the components or preconditions constituting the opportunity space. The blue arrows indicate how various level objectives are aimed at various components of the policy process (figure 19). The backwards-pointed blue arrow indicates that the choice of concept influences (restricts) the opportunity space. The model in influenced by the Norwegian Quality Assurance Scheme for large public investment projects

4.4 Achieving Sustainability

This chapter provides some insight into the interpretation of sustainability used in this study. The basis for this chapter is found in section 3. The key sustainability principles applied in this study are long-term benefits, resilience to risk and three-pillar reconciliation. The three are somewhat integrated.

The application of Sustainability is not limited to projects with "achieving sustainability" as an explicitly stated objective. Sustainability is considered as an overarching success criterion and as an aid for developing objectives (Haavaldsen et al., 2014).

As stated, there is a difference between achieving sustainability at the three analytic levels. Strategic sustainability is the long-term perspective. A sustainable project should have a strategic objective that identifies some long-term benefit for society. Furthermore, this objective should be resilient to risk, understood as a reasonable probability for success (and reasonable causal relation to the project). Three-pillar reconciliation in this regard implies that the project should not have significant negative impacts in in any of the three pillars in a strategic perspective. This does not mean that the project must have positive impact in all three pillars (economy, society and environment). Most project and policies are aimed at one at the strategic level. In the case of Brøset, the strategic policy is aimed at environmental benefits.

Tactical sustainability is the target group, user and instrument (policy perspective) level. Long-term benefit is considered as compliance with strategic objectives. Resilience to risk in this perspective is the likelihood of intended impact being materialised. Three-pillar reconciliation is both a quality criterion for assuring net benefit (without unacceptable trade-offs) and a tool for reducing risk. For Brøset to be considered sustainable at the tactical level, there must be reasonable probability for achieving strategic objectives, in other words a substantial environmental impact, while the project is socially sustainable and economically sound.

Operational sustainability is the system level (plans, etc.). In construction projects, sustainability issues at this level are first-order effects in the three pillars. In this study, long-term benefit is considered as compliance with tactical objectives. Resilience to risk and three-pillar reconciliation are somewhat integrated. In short, the project must have reasonable probability for achieving tactical objectives while the net benefit stays positive.

Trade-offs, as previously described, is a recurrent issue. One might argue, that the end might justify the means to some degree. In this light, a substantial strategic benefit might justify a negative three-pillar impact at the tactical and/or operational level. Achieving sustainability in the case of Brøset, is considered to be dependent on compliance with strategic objectives and net positive social and economic impacts at the tactical and operational levels. The environmental impact (strategic objective) is seen as dependent on potential inhabitants viewing Brøset as an attractive (both social and economic) place to live. In this regard, Sustainability is both a general objective and a useful tool for achieving it.

5 The Case

This study is built around the analysis of a case. The chosen case is a policy-to-project process in the form of an urban development project in the Brøset area of Trondheim, Norway. At the time of writing, implementation of the project has not yet begun, though the zoning plan was approved in 2013. This section provides an extended description of the Brøset Project case, based on findings from the interviews and the documentation study.

5.1 The Brøset Project: Looking back at the process.

Figure 21 Brøset as it might look when implemented (Trondheim kommune, 2013a)

In 2007, the newly elected red-green majority coalition in the city of Trondheim presented their political ambitions in the, so called, "Lian Declaration" (Trondheim AP et al., 2007). A component of this statement of intent was to develop a new progressive environmental-oriented residential area in the city. By then, the idea had been around for some time in the political environment, the municipality administration and the researcher communities. The idea is said to have originated in the city's research community at and around the NTNU. A bold statement by the Mayor of Trondheim, claiming that the city was to become the national leader in reducing climate emissions, caught the interest of a researcher. The researcher subsequently gathered a coalition of colleagues for exploring how they could contribute towards this bold vision. The idea caught hold in the administration and was quickly advocated by the Green Party representatives who managed to get it included in the political platform of the red-

green coalition. The interviews conducted in this study uncovered several somewhat conflicting versions of this story. However, the point is that in general terms the idea emerged, was the subject of cooperation between the administration and research communities, and was prioritised by the municipality politicians.

The Brøset area, a predominantly agricultural area of about 34 ha some 4 km from the city centre, was chosen as the location for the development project. The area was already scheduled for development into a residential area, only awaiting the relocation of an aging psychiatric hospital (Støa et al., 2014). Both the documentation study and the interviews are inconclusive regarding whether the Brøset area was a prerequisite for the project or not. In any case it seems to have been quickly decided and the area was defined at the time of the project approval in 2007.

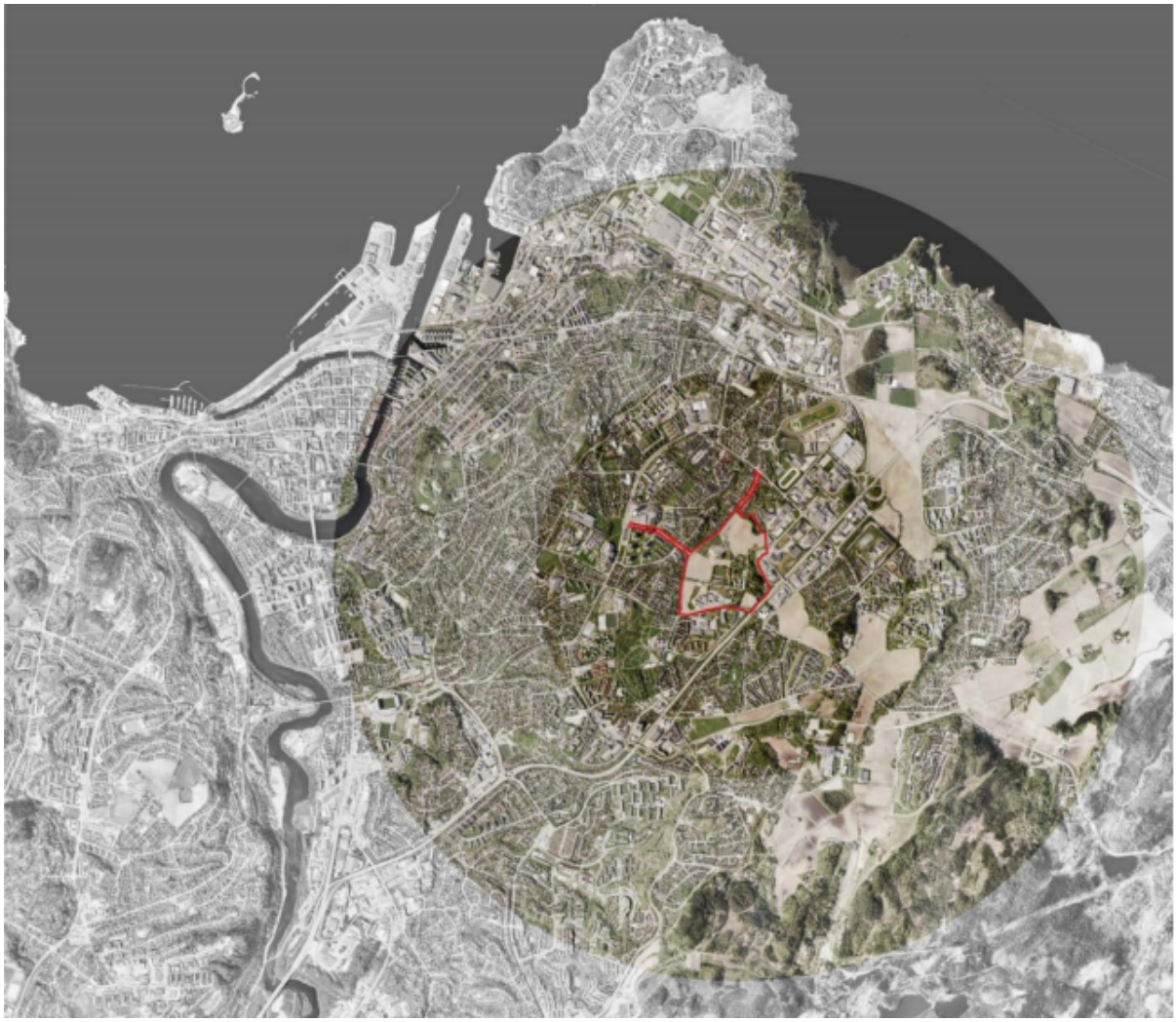


Figure 22 The Brøset area. Inner circle has 1,5 km radius. Outer circle has 3 km radius (Trondheim kommune, 2013a)

The hospital building is quite old and relocating of the facilities had been on the agenda for a long time. The three owners, Statsbygg, Sør-Trøndelag County, and St.Olavs Hospital, started preparations for selling the land in 2005, but this process was put on hold awaiting the development of the Brøset project in 2007 (Støa et al., 2014).

With the Brøset area secured, the project group, consisting of members from the municipality planning office and the research community, started developing the project further. The primary objective was to produce a comprehensive zoning plan for the Brøset area in accord with the political vision, but the project was also intended establish a best practice for climate friendly and environmental urban development (Trondheim kommune, 2010). The term "Learning while planning", indicating that by going through this process the municipality would gain valuable experiences for future projects, was a central component of the project's mandate. In other words, the project group was approved to explore unknown territory. In 2008, the city of Trondheim became a part of the Cities of the Future (CotF) national program. CotF was introduced by the central government for exploring the potential for reducing urban emissions of climate gasses in Norwegian cities through network building and development of pilot projects (Trondheim kommune, 2009a). The Brøset project became the first CotF pilot project in 2009.

The main project vision was established by the approval of the Planning Program (Trondheim kommune, 2010b) in 2010.

> "Brøset – a progressive and attractive district. A Carbon Neutral district with less than 3 tons of CO2-emissions per inhabitant per year"

The 3 tons target represents a reduction of 70-90 percent compared with the norm. It is noted that the Brøset documents in Norwegian use the term "Climate Neutral". In this study, this is considered the same thing as "Carbon Neutral". The Planning Program identify the following five focus areas for the project

- Attractive and healthy housing and urban environments with distinct architectural qualities, diversity of services and functions, and cost-efficient solutions
- High density in order to ensure sustainable transport and solutions that make it easy for residents to live without owning a private car
- A high degree of energy efficiency in buildings and infrastructure as well as a climate friendly energy supply
- Reduced consumption and waste, environmental-friendly waste management, and design that supports and inspires a low-emission lifestyle
- Buildings, infrastructure, and outdoor areas adapted to future climate changes, with specific emphasis on storm water management.

Figure 23 Illustrations showing the different concepts from the parallel commission. The central collective transport axis is a recurrent theme (Trondheim kommune, 2013a)

1800 residences
4000 inhabitants
3 kindergartens
1 primary school
Health and fitness centre
Local services
1300 parking lots

Figure 24 Key attributes of the Brøset Zoning Plan

For advancing the vision into reality, the project sought inspiration from other projects (Wyckmans and Solbraa, 2010) and applied a "parallel planning commission". Four interdisciplinary teams were selected to develop proposals in an open parallel process (Gansmo et al., 2011; Trondheim kommune, 2009b). The teams worked partly separate and partly together, and differing from "normal" practice no winner was selected. The results from all four groups was presented in 2011 and in combination provided the basis for the development of a Zoning Plan. Up until this point, the project had received positive press and gained a lot of positive attention both locally and nationally. Following the results of the parallel commission however, critics began to emerge. Claims that the plan was economically unfeasible and not in line with the needs and priorities of the market were fronted by politicians from the opposition and representatives from the building industry (Aspestrand, 2013). A total of 37 written comments from various organisations and individuals were received after a public consultation in 2012. Among these comments were found opinions both supportive and critical. Especially the restrictions on parking lots (see figure 24) harvested complaint. Some were of the opinion that that the proposed density was to high, other thought it was to low. The price level of Brøset housing was also questioned, as were the lack of action plans for realising the project (Van der Meer, 2012). In 2013, the finished Zoning Plan was approved by the city council after some revising (Trondheim kommune, 2013b). At earlier stages, the project had been approved unanimously, but his time the opposing political parties voted against it.

Since then, nothing has happened at Brøset, no resources has been allocated towards further development and the future of the project is highly uncertain (Trondheim kommune, 2015). The cause for this lack of progress is seemingly quite complex. Lack of agreement concerning the allocation of funds from a sale of the land among the owners as well as complications related to relocation of the psychiatric hospital seems to be the most pressing challenges.

6 Findings

This section presents the findings of this study. The findings section includes the addressing of the first research question. Furthermore, stakeholder and strategic assessment is presented. Findings concerning the second and third research questions are also presented. Finally, the subchapter "unused data" gives a short summary of data that has not been used in the study and the reasoning for doing so

6.1 Governing Policies of the Brøset Project

This chapter addresses the first research question:

RQ1: What policies justify the Brøset Project?

For structuring the section, the Strategic, Tactical and Operational analytic levels are applied. The Strategic level is defined as the National level, the Tactical level is defined as the local level and the operational level is defined as the project output: The Brøset Zoning Plan. In this sense, the Strategic level is society's perspective, the tactical level is the user's perspective (including both politicians, inhabitants, researchers and other policy stakeholders) and the operational is the operator's perspective. The operators are the project group and must not be mistaken for the potential operators of the "physical" development project.

The main strategic policy, at the time, was the Norwegian Parliaments White Paper on climate policy (Regjeringen, 2007). This has been updated later, but the essence remains roughly the same at the time of writing (Regjeringen, 2012). The policy vision is avoiding dangerous global climate change. Reducing global emissions of Green House Gasses (GHG) is stated as the strategic objective. Additionally, achieving a Carbon Neutral Society by 2050 (later 2030) is presented as a national ambition. A Carbon Neutral society is to be achieved through a combination of international cooperation, investing in environmental projects abroad and reducing emissions in Norway. The Kyoto protocol is identifies as an example of international cooperation's that must be reinforced in the future. Investing in environmental programmes abroad is identified as the most cost effective measure. However, it is stated that this must be balanced by reducing emissions in Norway. For reducing emissions in Norway, several measures are identified. One of those was the Cities of the Future Program.

The Cities of the Future program (Regjeringen, 2007) was a national level program running from 2008 until 2014 with the purpose of assessing measures for reducing climate emissions in the largest cities in Norway. The policy program was implemented due to an apparent lack of focus on sustainable development in local investments into construction and infrastructure, and due to a lack of knowledge into the potential for reduced emissions in urban areas. The Cities of he Future program was a facilitator network where representatives from the 13 largest cities and the construction industry exchanged experiences under the supervision of the Environmental Protection Agency. The wording in the parliament bill emphasizes effective land use and transport policies, including high-density development built around collective transportation as well as measures for reducing the use of personal cars. It is interpreted that the program was intended to provide a basis for future urban development-related climate policy.

Explicitly stated objectives for the Cities of the Future program have not been found. The following two objectives are deduced from the Parliament White Paper

1) Explore the potential of measures for reducing GHG emissions from the largest cities of Norway

2) Build the necessary capacity for developing the cities of the future in light of five focus areas

At the tactical level, there are a lot of policies influencing the Brøset Project. The study is limited to policies affiliated to the strategic level policies. At entering the CotF network, the municipality of Trondheim signed a partnership agreement outlining how Trondheim was to cooperate with Cities of the future in achieving national objectives. Subsequently, the Brøset Project was established as a pilot-project for the CotF program (Trondheim kommune, 2009a). Central to this agreement was the four focus areas *land use and transport, energy consumption in buildings, consumption and waste,* and *climate adaption* with more or less specific objectives in each focus area. (Quality urban environment is sometimes referred to as a fifth focus area) The Brøset project is also an important part of the municipality's energy and climate action plan (ECAP) (Trondheim kommune, 2010a). The objectives set for Brøset in this document is for it to be a progressive urban development stimulating towards green living (low energy use, green transportation and progressive waste management), a positive contributions towards national and international goals concerning reduced climate emissions trough holistic planning and development and distribution of knowledge. The common denominator in the CotF partnership agreement and the ECAP is the objective of developing a Carbon Neutral district at Brøset and thus establish a "best practice". The Carbon Neutral concept is not defined in these documents, though low climate emissions are implied.

The main tactical level policy is the Planning Program document (Trondheim kommune, 2010b). The planning program was developed by the project group and approved by the municipality building board at the recommendation of the municipality administration (Trondheim kommune, 2010c). In this document Carbon Neutral is defined as localized emissions corresponding to 3 tons of CO2-equivelants per inhabitant per year. This definition was deduced from the 2°C target established by the UN and IPPC, and recognized by the strategic level policy (Regjeringen, 2007; Støa et al., 2014; UNFCCC, 2009), based on carbon footprint measurement (Solli and Bohne, 2014). The planning program presents general objectives within five focus areas corresponding to the CotF program, and states that measurable success indicators are to be linked to each objective. A climate emission accounting system is to be established for this purpose. By separate approval, four teams were to developing parallel propositions for the zoning plan (Trondheim kommune, 2009b).

The operational level policy, as defined in this study, is the Brøset zoning plan approved by the city council in 2013. Figure 25 illustrates the policy relations.

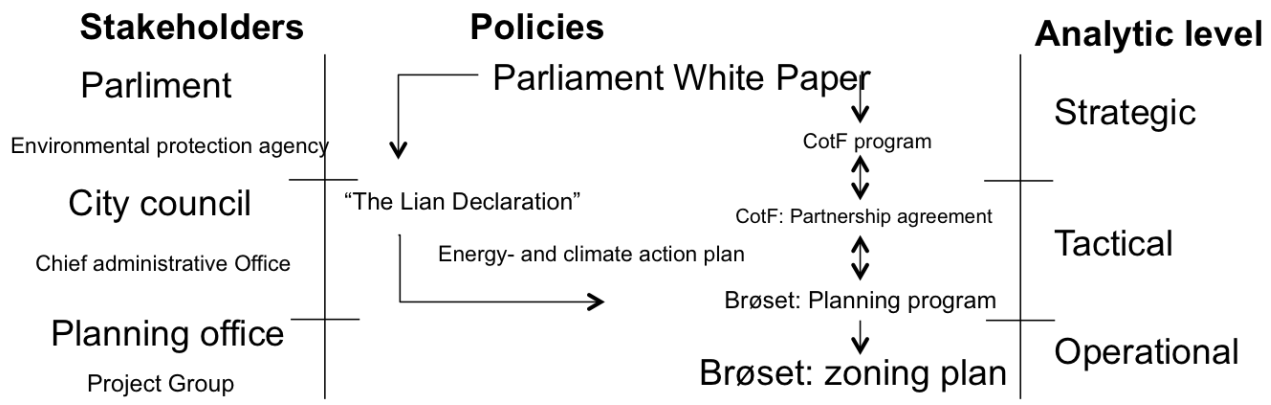


Figure 25 Illustration of the policies that justify the Brøset Project in light of defined analytic levels and relevant stakeholders

6.2 Formal Objectives

Based on section 4 and chapters 5.1 and 6.1, the objectives of the Brøset Project has been categorised in figure 26. This figure was used to develop the interview guide used in this study. The objectives have later been reviewed and analysed in section 7.

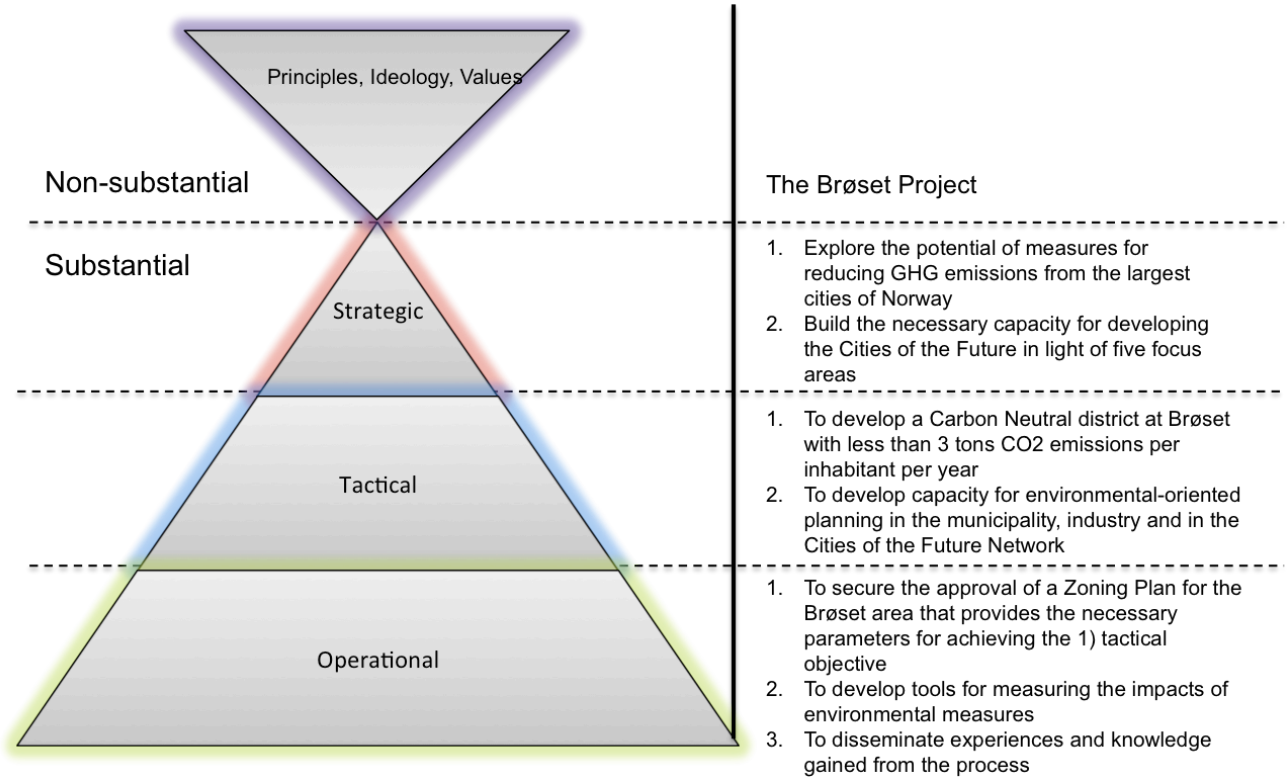


Figure 26 The objectives of the Brøset Project. These will be further discussed in section 7

It should be noted that the strategic objectives identified in figure 26 is not the "final" strategic objectives. As seen in chapter 6.1, the Cities of the Future program is only a part of the National policy on Climate Change. These, however, are the formal objectives for the Brøset Project as seen in this study.

6.3 An overview of Project Stakeholders

This chapter presents an overview of the project Stakeholders. For structural purposes the study distinguishes between involved stakeholders and other stakeholder. The involved stakeholders are defined as the stakeholders with an active role in the project. This categorisation is not entirely representative as some of the other stakeholders have also been somewhat involved. For instance, there have been some involvement of the public (potential inhabitants) at various points in the process, and the owners are not as excluded as this categorisation suggests. However, as this categorisation is viewed to be practical, it is used henceforth. Table 5 provides an overview of involved and other stakeholders.

Involved Stakeholders	Other Stakeholders
• The municipality planning office • The research group • The municipality administration • The local majority politicians	• Cities of the Future • The owners of the Brøset area • The construction Industry (potential developers) • Environmental NGOs • Potential inhabitants • The local minority politicians

Table 5 Overview of the Brøset Project Stakeholders divided into involved stakeholders and other stakeholders

The term "the project group" is used frequently in this study. The project group consisted of members from the research group and the municipality planning office. According to the interviewees, the project group was largely a harmonic organisation and in general the interests of the two parties seem to overlap. Thus the project group is used to indicate the operating party in the project and for representing the interests of the two stakeholder parties. The following subchapters present some findings regarding the stakeholders influencing power, their attitude towards the project, their understanding of the project in a greater context.

6.3.1 The project group

The project group has been represented in this study through the input from 6 interviewees (3 researchers and 3 from the planning office) who has had different roles in the project. Based on these interviews, interviews with other stakeholders and the documentation study, this subchapter provides an overview of the Project group's role in the project and its influencing power.

In terms of the key stakeholder functions presented in the theoretical framework, the Project group is the project operator. However, as the project group has developed both the main tactical and the main operational project output (planning program and zoning plan), the operator function is somewhat different from the project operator described in the theoretical framework. One might also argue that both the planning office and the research group have the user function, as the learning's from the project are intended

partially for both stakeholders. The project strategy will be addressed further in section 8, but in general terms, it seems that the project group has been highly influential regarding how the strategic objectives has been interpreted (and therefore operationalized). The project group is therefore perceived to have had high influence at the strategic level. It is worth noticing that this perception is highly relative to how the analytic levels are defined in this study.

The interviews indicate that the project group has ben a largely autonomous organisation. The mandate from the administration was largely, according to a municipality planner, "to explore unknown territory". The project group were inspired and influenced a great deal by projects such as the Vauban Project in Freiburg, Germany, (Coates, 2013; Hamiduddin, 2015) and others (Wyckmans and Solbraa, 2010). However it is unclear to what extent ideas from other project has been directly transferred. The relationship between municipality planners and the research group seems to have ben quite balanced. The municipality had the project manager function, but many of the conceptual ideas, such as Carbon Neutrality and the emphasis on life-style changes, seems to have originated with the researchers. The term Carbon Neutral were already widely in use, though as several interviewees pointed out, it did not have any established interpretation. The project group deduced the interpretation applied in the project from the UN 2° target. The Carbon Footprint methodological approach seems to have been a prerequisite from the start from the researchers. A belief that technological measures would be insufficient for countering climate change seems to have been firmly established even before the formal constitution of the project group. Key project aspects such as low car-per-residence ratio, collective and localized life-style and reduced consumption seem to have been established long before the planning programme established the official objective. Even though some of the planners admitted that it took some time before they fully understood the implications of Carbon Neutrality, all of the project group interviewees were firmly behind it. It seems clear that the project group had a high influencing power at the tactical analytical level.

During the operational phase of the project (the development of the zoning plan), it seems that the balance of power shifted somewhat towards the municipality side of the project group. An interviewee from the research group stated that the established balance and good working relationship were somewhat distorted when new parties from the municipality entered the process close to the end. Due to the internal organisation of the municipality, the Real Estate section became increasingly influential as the project became more tangible towards the end of the process. These new parties did not, according to the researcher, fully share the established understanding of what the project was about. However, up until then, the research group and municipality planners are perceived to have been highly influential at the operational level.

6.3.2 The municipality Administration

The municipality administration has been represented in this study through the input from 2 interviewees who has had different executive roles. The administration stakeholder is defined as the executive branch, as the municipality representatives in the project group represented the administration in the project. Based on these interviews, interviews with other stakeholders and the documentation study, this subchapter provides an overview of the municipality administration's role in the project and its influencing power.

In terms of key stakeholder function, as described in the theoretical framework, the administration is most closely related to the financer. However, it is important to note that the administration is primarily engaged at the tactical level, as the strategic level is the national policy level. The Brøset Project has commonly been described as "the administration's project" by the interviewees. According to the interviewees, the administration was primarily important for two reasons: putting the proposed sale of the Brøset area on hold, and by prioritising the project internally. The administration is perceived as a key stakeholder for making the project happen in the first place. Furthermore, the administration will be a central stakeholder for realising the project. Neither of the two interviewees from the administration seemed to have had much hands-on experiences with the Project. It is therefore perceived that the administration had low influencing power at the operational level and high influence at the tactical level. It is further perceived that the administration had low influence at the strategic level. This is highly relative to how the strategic level is defined in this study. In terms of attitude towards the project, it is perceived that the administration is impartial and will follow the directions provided by the politicians.

6.3.3 The local majority Politicians

The local majority politicians have been represented in this study through the input from 1 interviewee. Based on this interview, interviews with other stakeholders and the documentation study, this subchapter provides an overview of the local majority politician's role in the project and their influencing power.

In terms of key stakeholder function, as described in the theoretical framework, the local majority politicians (henceforth "politicians") are most closely related to the financer function. Though, as is the case with the administration, the politicians are not especially engaged at the strategic level (as defined in this study). They are however, the financing party in practical terms as the project is mostly financed through the municipality. In terms of influencing power, the politicians were most important for approving the project in the first place. Interviewees from the project group also point out that the politicians have been supportive throughout the process and contributed greatly to establishing and sustaining the projects high profile. Furthermore, the politicians have approved the project at different stages along the way (planning program, parallel commission, zoning plan, etc.). The politicians are perceived to have had high influence at the tactical level.

The politicians are considered an involved stakeholder in terms of their executive role. However, in terms of actual involvement this might be misleading. The interviews indicate that the politicians have not been an active party in the process, approval aside. Some politicians have participated in focus groups etc. but in general terms the project seems to have been developed quite autonomously by the project group. Both the documentation study and the interviews indicate that discussions of the project, in the various political bodies, pending approval have been limited. There seems to have been great confidence in the project group. One might argue that the politicians have great influencing power at the operational level based on the formal potential for influencing the project, but as it were, this potential was not used. The politicians are perceived to have had low influence at the operational level.

The interviewees from the research group pointed out that the politicians might not fully understand what the project was and the implications of the Carbon Neutral objective. They stated that they had expected more debate and controversy and they were surprised at how easily the planning program (especially) was approved. The politician who was interviewed in this study seemed to have a clear understanding of the contents of the project, at least at a cursory level. There is, however, nothing to indicate whether or not he is representative for the greater body of majority politicians. Interviewees from the municipality planning office believed that the politicians understood the contents of the project. Whether or not they understand it, it seams clear that the politicians have had limited influence at the interpretation of the strategic objectives. It is perceived that the politicians have had low influence at the strategic level.

As the project is currently on hold, several interviewees from the project group and others believed that the politicians could have done more towards realising the project. It was pointed out that a ownership dispute between three public bodies should be possible to sort out given that sufficient political will is applied. It was also pointed out that while the politicians were positive and supporting during the project, the optimism and goodwill have diminished drastically since the approval of the zoning plan. The Brøset Project is seldom given any political spotlight, and other development projects have been prioritised. The politician interviewed in this study was still very positive, but it is not known how the greater body of majority politicians view the project today. It is worth noticing that the same majority coalition that approved the project in 2007 is still in power (at least until the elections in the fall of 2015).

6.3.4 Cities of the Future

This study has not interviewed any representatives from the national side of the Cities of the Future program. However, several of the interviewees from the municipality had useful insight into the program. Based on these interviews and the documentation study, this subchapter provides an overview of the Cities of the Future program's role in the project and its influencing power.

In terms of key stakeholder function, as described in the theoretical framework, the Cities of the Future is perhaps most closely related to the financer function as the representative of strategic objectives. However, in practice this seems to be a highly misleading categorisation, as this study is inconclusive as to the overall importance of the Cities of the Future Program for the development of the Brøset project. One interviewee from the administration described the Cities of the Future program as largely irrelevant to the project on the basis that neither the idea nor most of the resources came from there. Others were more moderate and even some even stated an opposing perception. The municipality planners especially stated that the funding received from the program was important and that the network with other cities and industry representatives were very useful. The cities of the Future program as an arena for shearing expertise and exchanging ideas was greatly appreciated by the interviewees from the project group.

The influencing power of the Cities of the Future program is not obvious. Several project group members stated that the program served the purpose of justifying the high ambitions of the project. The Brøset Project became a Pilot project of the Cities of the Future, and, as stated by the project group members, the Cities of the Future network/environment was

very positive and supporting of the Brøset Project vision. However, the measure of guidelines or demands imposed on the Brøset Project from the Cities of the Future program seems to be highly limited. The Brøset Project adopted the five focus areas of the Cities of the Future, but aside from that there are not found anything that indicates substantial influence from the Cities of the Future program. In fact, according to several interviewees, it may have been the other way around. The Cities of the Future network contributed greatly as an arena for "spreading the word" of the Brøset Project learning's. In this light, it may be prudent to consider the Cities of the Future more as a user than a financer in terms of key stakeholder functions. As perceived in this study the Cities of the Future had low influencing power both at the tactical and the operational levels. The Cities of the Future is the representative for the strategic level objectives (more on this later), though its influence of the interpretation of said objectives in the Brøset Project seems quite limited. Therefore it is perceived that the program had low influencing power at the strategic level.

6.3.5 The potential developers (the construction industry)

This study has not interviewed any representatives from the construction industry. However, Aspestrand (2013) provide useful insight based on a number of interviews related to another study. Based on these interviews, interviews from this study and the documentation study, this subchapter provides an overview of the construction industry's role in the project and its influencing power.

In terms of key stakeholder function, as described in the theoretical framework, the construction industry is perhaps most closely related to the user stakeholder function in this context. An important component for realising the project is to contract developers for building the actual residences and infrastructure. Developers are businesses, and therefore dependent on making a profit when contracting out their services. Furthermore, the Brøset Project operational output, the zoning plan, is to be the basis for a future development project. In this light, the developers can be seen as potential users of the project output. Additionally, the developers are an important component for achieving the tactical objective. Several interviewees pointed out that including environmental monitoring programs in development contracts was key to achieving the Carbon Neutral objective. It was pointed out that some aspects of the project, such as low car-per-residence ratio and aspects that would be components of monitoring programs, are seen as high-risk aspects by potential developers. Some interviewees claimed that potential developers would seek to avoid aspects with high risk towards economic profit. The level of influence potential developers will have in negotiations is unclear. However, it seems safe to assume that there will be no development if the developers do not perceive a potential for profit.

The Brøset project has deliberately not included representatives from the industry in the project. According to members of the project group, this was decided based on a belief that a public project without private interference would be better able to put public priorities first. One researcher stated that private developers tend to avoid the risk implied by high ambitions. A planner from the municipality stated that by excluding the industry the learning experience for the municipality was increased. There seemed to be some general repugnance towards private (economy-oriented) actors from the researchers. The municipality interviewees in general, expressed a desire for more public involvement and control in planning processes. It is perceived that the industry has had low influence at all

analytic levels. However, it is clear that the developers will have high influencing power at the tactical level in the future.

Several interviews pointed out that the exclusion of the industry might have been a mistake, in hindsight. However, there seems not to be a unified view on this issue. Most project group members seemed still to back the decision of excluding the industry. A portion of the public criticism pointed at the Brøset Project comes from representatives of the industry (Aspestrand, 2013). Some interviewees pointed out that a lot of the criticism was based on propositions from the parallel commission that was in fact not included in the zoning plan. It was also speculated as to how much of the repugnance and criticism from the industry was based on the industry feeling challenged by the public taking on a task that they usually perform (urban planning, zoning plans). Several members of the project group stated that there are developers with a positive attitude and the necessary ambition for realising the project. The Brøset Project has not the high profile it once had, and it has not been found any recent statements from the industry. Based on Aspestrand (2013), it seems that the industry in general is quite sceptical towards the project.

6.3.6 The owners

This study has not interviewed any representatives from the owners of the Brøset area. Based on interviews of representatives from other stakeholders and the documentation study, this subchapter provides an overview of the owner's role in the project and their influencing power.

There are three owners: Sør-Trøndelag County, St.Olavs Hospital and Statsbygg. Statsbygg is the national central governments building commissioner, property manager and developer. Statsbygg is a potential partner for the realisation of the project, but though there have been negotiations towards this end, nothing seems to have been agreed upon (at least not publically). St.Olavs Hospital is the Hospital responsible for the psychiatric Hospital at Brøset. Sør-Trøndelag County is the regional governmental body in the county Trondheim is located.

The owners have a largely passive role in the project. As things stand, the official reason for the lack of progress is "unresolved ownership issues". In order to start the development at Brøset, the psychiatric hospital must be relocated. This is dependent on resources being allocated to establishing new facilities. According to one of the interviewees, the "unresolved ownership issues" largely comes down to financing the new hospital. Due to the organisational structure of the Norwegian public agencies and governmental bodies, funds from a potential sale of the Brøset are cannot be directly allocated to building a new hospital. In any case, it seems safe to assume that achieving a Carbon Neutral at Brøset, while not directly conflicting with the owner's interests, is not in the owner's interest. They might be interested in selling the land and Statsbygg might be interested in developing parts of the area, but none of the owners have any direct obligation or obvious interest to contribute.

In terms of influencing power, the owners are not perceived to have had any influence at any of the analytic levels. One might argue that the ownership issues blocking the project progress are a manifestation of influencing power at the tactical level. However, this is perceived as a political issue and therefore allocated to the local majority politicians.

6.3.7 Minority Politicians, potential inhabitant and NGOs

The remaining stakeholders are considered of limited relevance to this study for varying reasons. The stakeholders and the reasoning for their perceived limited relevance to this study is presented below.

The minority politicians are represented in this study by one interviewee and statements from this interview are not considered "of limited importance". Several parties voted against the zoning plan, and several minority politicians have been quite vocal in their criticism of the project. However, due to their nature as minority politicians, they have not been very influential in this context. Thus, the local minority politicians are perceived to have low influence at all levels.

The potential inhabitants of the Brøset area are not properly identified by this study, or by the project, as it seems. Several interviewees seemed to believe that Brøset is only for "the most righteous" and "especially invested environmentalist". Others claimed that Brøset is for everyone. The official stand on this is that Brøset is to be a diverse area for many different types of people. Several interviewees pointed out that though Brøset might be different, the first inhabitants would show that Brøset is a representative for good quality of living. As it stands, the future inhabitants are not identified nor organised. In any case, the reason that potential inhabitants are perceived of limited relevance in this context is that they seem to have had little to no influence on the project.

NGOs have participated in the process to some extent through focus groups and workshops. Additionally, several of the interviewees pointed out that they and others who have worked with the project have affiliations to environmental NGOs. As such, other stakeholders indirectly represent the NGOs. This study has not found anything indication that any NGOs has had any direct influence on the project.

6.3.8 Stakeholder analysis summary

The stakeholders of the Brøset Project has been identified and categorised by a stakeholder assessment in table 6. The sorting criteria differ from the stakeholder assessment described in the theoretical framework to some extent to accommodate for the study purposes. The purpose of this stakeholder assessment is not to develop strategy, but rather to describe the stakeholder's influence on the project ex post. Additionally, the main stakeholder functions of operator, user and financer are included when applicable. In this chapter the "project group" is divided into "the municipality planning office" and "the research group". For illustrating future challenges, the stakeholder categorisation (Savage et al., 1991) is included on the right side of table 6.

Stakeholder	Role in the project	Influencing power			Attitude	Stakeholder category (Savage, 1991)
		Operational	Tactical	Strategic	Further development	
The municipality planning Office	Operator (user)	High	High	High	Positive	
The research group	Operator (user)	High/Medium	High	High	Positive	
The municipality administration	Owner	Low	High	Low	Positive/conflicted	
Local majority politicians	Financer	Low	High	Low	Positive/conflicted	Mixed blessing
Cities of the Future		Low	Low	Low	Positive	Marginal
The industry	User	Low	Low (high)	Low	Negative	Non-supportive
The owners		Low	Low	Low	Passive/negative	Marginal
Potential inhabitants	User	Low	Low	Low	Uncertain	Mixed-blessing
Local minority politicians		Low	Low	Low	Negative	Marginal
Environmental NGOs		Low	Low	Low	Positive	marginal

Table 6 Stakeholder assessment of the Brøset Project. It is worth noticing the high level of influence that the Project group is perceived to have had at all levels.

6.4 Finding the purpose of the Brøset Project

The official documents of the Brøset project present a number of objectives for the project. The established objective from the planning program, as previously presented, is the development of a Carbon Neutral district defined as less than 3 tons per inhabitant per year. The first political statement, "the Lian Declaration", states the objective of establishing a new progressive environmental-oriented residential district. The Energy and Climate Action plan states the objective of establishing a progressive urban development stimulating towards green living, a positive contributions towards national and international goals concerning reduced climate emissions trough holistic planning and development and distribution of knowledge. Other objectives such as inspiring other cities, good and attractive urban environment, low energy use, green transportation, progressive waste management and low car-ratio are found in the zoning plan (complimenting the main Carbon Neutral objective). Most of these objectives are complimentary, but as they are not presented in a goal-hierarchy or organised in any other system (found by this study), the priorities of the project are largely unknown. Based on this, a component of the study has been to establish what the purpose of the Brøset Project is, as viewed by the project stakeholders. This is seen as an important component for addressing the second and third research questions in this study. The interviewees were asked what the purpose of the project is. This chapter presents the relevant findings.

Establishing a Carbon Neutral district at Brøset is pointed out as the main objective by most of the interviewed stakeholders. However, it is not consistently interpreted, and most seem to view it more as a guiding vision than an actual objective. None seemed to believe that the objective would be realised any time soon. The researchers stated that the objective was to show how one might reach the UN 2° target, or more precisely, to find out what needs to be done in local urban development so that Norway might contribute. The municipality planners mirrored this view, but also that the purpose was to develop capacity in the municipality for handling the increasing demand for environmental measures. The interviewees from the administration seemed more concerned with providing residences (to counter a shortage), and emphasised that the purpose was to challenge the established density-norms. The administration representatives also stressed learning as an objective in its own right. The politicians were divided in opinion. The majority politician stated that implementing established knowledge in practice by developing a pilot that others could learn from was the most important purpose. The minority politician on the other side emphasised developing more residence for the city, but also the need for progressive environmental measures and increased density. The involved stakeholders were almost unanimous in stating that the Carbon Neutral objective represented a societal necessity and that others would follow the Brøset project in attempting to achieve this objective..

The interviews found limited interest in objectives at the strategic level, as defined by this study. As seen in the stakeholder assessment, the Cities of The Future seems to have had limited influence on the project, despite being the justifying policy at the Strategic level. Several interviewees knew the Parliament White Paper on Climate policy, but it seems not to have had a great influence. It seems clear that the Carbon Neutral Objective was developed based on UN/IPPC statements and consumption-oriented emission appraisal, not on national climate policy. It must be noted, however, that the Norwegian National

Government recognise the UN 2° target, and that "A Carbon Neutral society" by 2030 is a stated national ambition (Regjeringen, 2012).

None of the interviewees seemed to believe that the Brøset Project would make a substantial impact on climate change by reducing local emissions. However, it is not clear exactly how the Brøset Project impact is to contribute. Most stated the "pilot effect" as the overarching purpose. Brøset is to influence other project by illustrating how the Carbon Neutral Objective might be reached.

As seen in this chapter, the involved stakeholders all back the Carbon Neutral objective. However, they are not consistent in their priorities and some consider the objective to be more of a guiding vision than a realistic objective.

6.5 Framing sustainability in the Brøset Project

Sustainability, or Sustainable Development, is an important component of this study. As stated in section 3, this study views Sustainability both as a general objective and as a means for achieving other objectives. As a part of the interviews conducted in this study, the interviewees were asked how they define the concept of Sustainable Development, and how Brøset embodies Sustainable Development. This chapter presents the relevant findings from involved stakeholders.

As no general correlation between stakeholder affiliation and the answers to these questions was found, this chapter is not structured using stakeholders. The term Sustainable Development was familiar to all of the interviewees. However, they did not consistently explain it. Some used the Brundtland definition, others used the three pillars and some focused on non-renewable resources. Common for most of the interviewees was a disproportionate emphasis on environmental aspects, often to the point where there seemed to be little to no difference between Sustainability and environmental friendly development in their understanding of the concept. Social aspects were present in most of the answers, though less often tied to the concept itself. For instance, several pointed out the importance of good living conditions for realising the project ambitions, but without using the term social sustainability explicitly. Economic aspects, however, were less often emphasised. Even when starting out with three pillars, the interviews would most often focus on environmental and social issues. Some claimed that the economic aspects (and sometimes social) were irrelevant in light of the greater climate threat. Though some expressed a view that the concept lacks substance and practical relevance, most considered Sustainable Development to be important. However, this perceived importance seemed to be limited to theory. Most of the interviewees stated that the Brøset Project is a Carbon Neutral project, not a Sustainability project, and that carbon Neutrality is an operationalization of environmental sustainability.

There were a number of statements identifying various measures applied at Brøset (low-car use, green areas, local production of food, local energy production, local energy storage, etc.) as sustainability measures. As this study do no go into details at the operational level, this is considered outside of the scope and will not be discussed further.

None of the interviewees connected long-term benefits to the Sustainability concept. When asked in what time perspective the Brøset project is most beneficial, several seemed to believe that the project held most value today. Most agreed that the project would be even more useful if actually materialised, so this is somewhat inconclusive. This could also be interpreted as an emphasis on the need for action today for countering climate change long term.

6.6 The Brøset policy process

This subchapter presents an overview of the Brøset Policy Process based on the stakeholder's perception of purposes and the documentation study findings. The policy process model described in section 4 structures the overview.

The Agenda seems to have been set by Climate Change and a lack of capacity (knowledge and experience) for implementing environmental measures (in light of new demand). The Opportunity consisted of the factors illustrated in Figure 27. The policy design, or policy-to-project process, roughly consists of the three phases Idea, planning program and parallel commission. The result is the zoning plan and research results. The "theoretical" or future part of the process is still uncertain. The ambitions are pointed out in the figure. The figure represents subjective interpretation of the process.

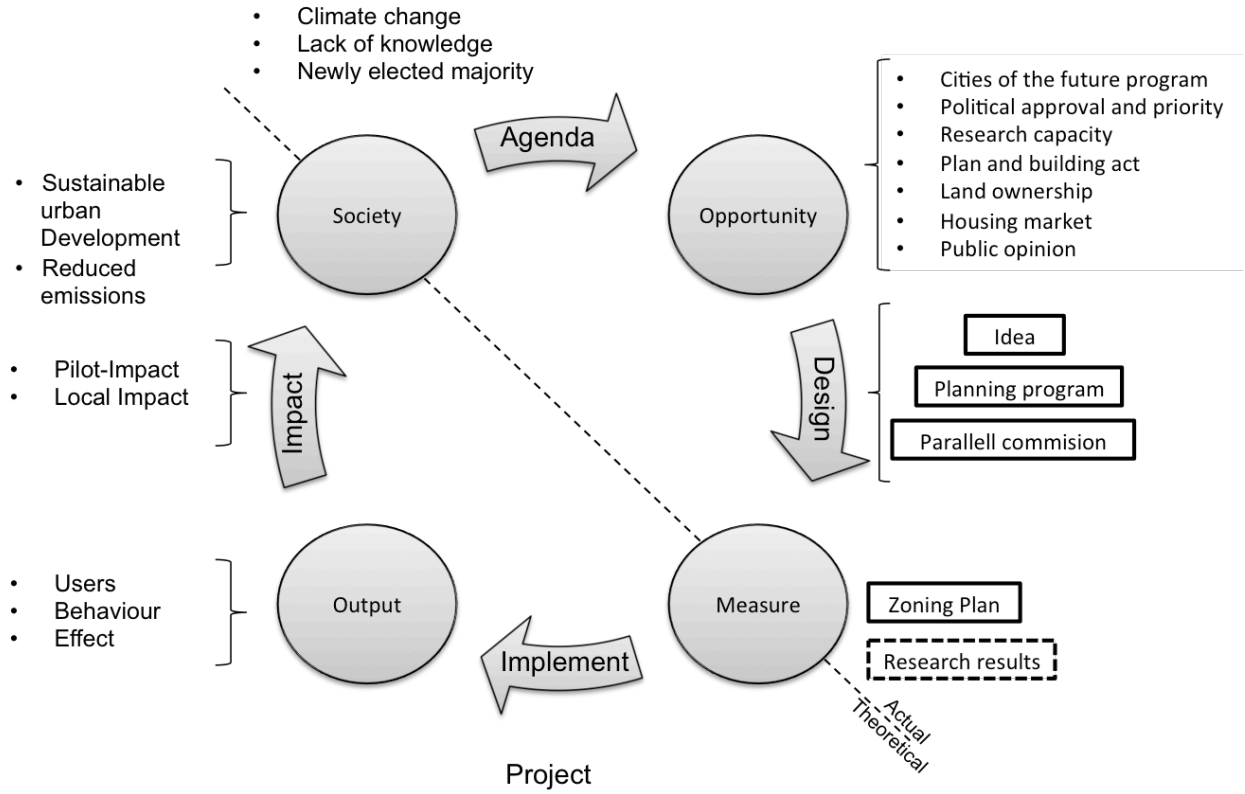


Figure 27 The Brøset Policy Process. Based on stakeholder interviews and documentation study

6.6.1 Consumption vs. Production

During the research of this study, it became clear, based on interviews and the documentation study, that the Carbon Neutral definition applied in the Brøset Project is a key aspect of the project. This subchapter provides a short introduction to consumption- and production-oriented appraisal of emissions, and point out the most important differences.

When reading about climate emissions in newspapers, the emissions are more often than not appraised and categorised by emission sectors. This is the production-oriented appraisal, where emissions are allocated to the activities and geographical locations they occur (Solli and Bohne, 2014). In this perspective, production of fossil fuels for instance is a substantial contributor to global emissions. This method of appraisal is common in policymaking, and is for instance used to define the Kyoto protocol objectives, the Norwegian national ambitions and the reduction objectives of Trondheim municipality.

The Brøset Project applies a consumption-oriented appraisal. This implies that the all emissions connected to production, use and disposal of products and services are allocated to the consumer (Solli and Bohne, 2014). In this perspective, the consumption of fossil fuels rather than the production is the activity "responsible" for emissions. Figure 28 shows the emissions for the typical Norwegian household calculated by consumption-oriented appraisal. The column far to the right indicates the emissions tied to general consumption. In the case of Brøset, the choice of a consumption-oriented appraisal has two key impacts. Firstly, as the appraisal includes both production and disposal, in addition to use, of products and services, the total emissions connected to all activities are drastically increased compared to a sectorial appraisal. Secondly, the emissions connected with general consumption are added to the Brøset account. In a sectorial appraisal, these emissions would have been allocated to the production of products and services and eventually the transport sector (imported goods) (Solli and Bohne, 2014).

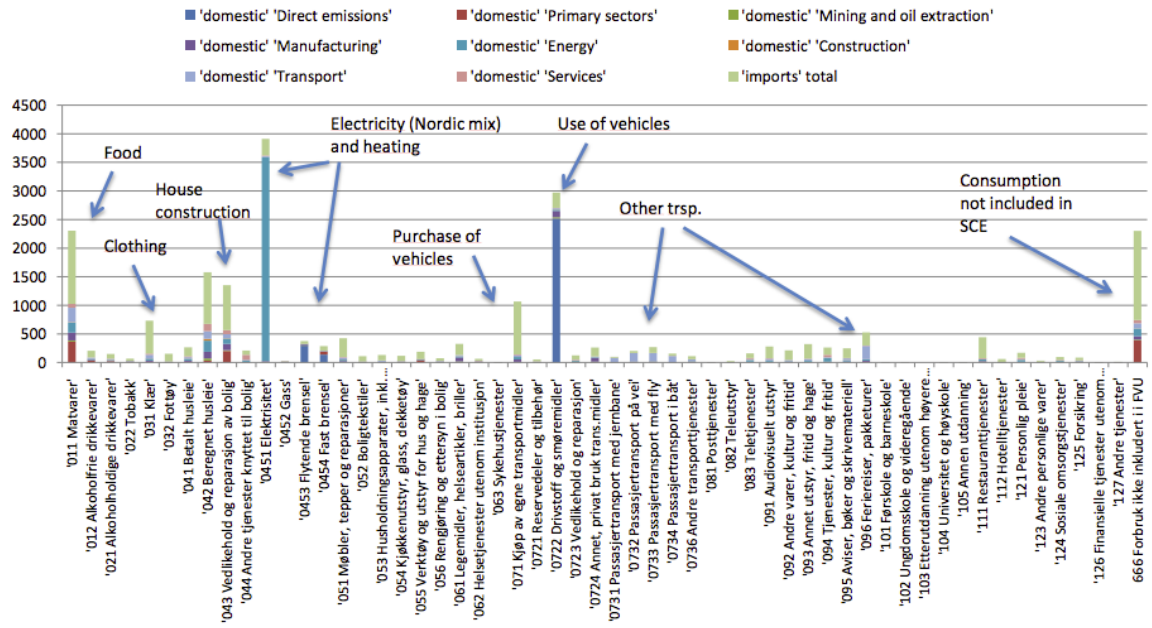


Figure 28 Climate emissions appraisal of Norwegian households today (Trondheim kommune, 2013c)

The interviewees based this choice of appraisal on that the consumption-oriented appraisal provided a much stronger link to the actual problem, the underlying causes for emissions. The following statement by Dodman (2009) illustrate the argumentation

> *Although well-planned, energy efficient cities with good public transportation systems may appear to be winning the battle to reduce emissions if these are accounted for on a "production" basis, these apparent gains will be undercut unless the consumption patterns of these cities' inhabitants – who purchase imported manufactured goods, consume energy intensive diets and travel extensively around the world – are not changed as well. (Dodman, 2009)*

Due to limitations into what can and cannot be legally enshrined in a zoning plan, the project group was unable to implement an emission appraisal system as demanded by the planning program. Thus, there is no basis for accurately evaluating how the operational level policy satisfies the main tactical objective. It must be stated, however, that none of the interviews uncovered any desire, from any of the stakeholder parties, to assert the necessary measure of control on the future population for guaranteeing the environmental impact. Rather than controlling how the inhabitants live their lives, the chosen approach was making the easiest choice the right one. This study does not go into detail on individual measures. The interviews found two main approaches applied for achieving the objectives: a collective life-style and a localised life-style. The collective life-style approach is promoted by collective facilities and services as well as somewhat reduced floor space relative to the norm (more space for public space). Measures for increasing the quality of living conditions and green areas are intended to promote a localised life style with less travel.

The teams participating in the Parallel Commission applied an appraisal system, though none of them managed to reach the 3 tons target in their propositions. Their proposals were assessed to be in the area of 7-9 tons (Miller, 2011). Interviewees from the project

group stated that the Carbon Neutral object is not achievable within the limitations of the zoning plan format, and that additional measures implemented by monitoring programs, and a bettering of the "background economy" (technological advancement, reduced household income, etc.) are necessary supplements for achieving the Carbon Neutral target.

6.7 Data not used

The collected interview data from this study consists of over 10 hours of sound recordings. The available written material on the Brøset Project is also quite extensive. Additionally, the theory on projects and policy is overwhelming. During this study, much more than what is presented in this document have ben reviewed, partially reviewed, looked at, etc. It is not deemed practical to provide a comprehensive overview on unused data, however, a short summary will be provided in this chapter.

The study started out with a somewhat broader scope. It was hoped that the study could undertake a more comprehensive evaluation of the policy-to-project process based on the OECD quality criteria presented in section 3. However, during the research process, it became clear that this would not be possible given the vast data available and the limited time frame for the study. A portion of the interviews focused on behavioural assumptions and measures. This is not included in the study. Furthermore, there was carried out some work on establishing whether or not the intended population at Brøset is sufficient for sustaining a shuttle service (as this is a recurrent criticism). Findings from this work are not included.

7 Discussions

7.1 Strategic analysis. What are the Brøset Project Objectives?

This chapter discuss the objectives of the Brøset project is light of the presented theory and findings. The strategic analysis is not representative for the project strategy as understood by most of the project stakeholders interviewed in this study. The differences are addressed.

7.1.1 Interpretation of the Strategic Objectives

As seen in the findings section, the Brøset project is justified through the Cities of the Future program. The Cities of the Future program is anchored in the national climate policy. The national climate policy is further related to international climate policy and has several other approaches viewed to be outside the scope of this study. This study is focused at the Brøset Project, and is thus limited to what is perceived relevant in this context. As defined, the strategic objective of the Brøset project is found in compliance with the Cities of the Future program. As previously presented, the Cities of the Future program has the following two objectives

3) Explore the potential of measures for reducing GHG emissions from the largest cities of Norway

4) Build the necessary capacity for developing the cities of the future in light of five focus areas

Both of these objectives describe activities rather than a desired state or event, as the guidelines for strategic objectives stipulate, and as such constitute an unsatisfactory project basis (K. Samset, 2008). Furthermore, the objectives are unspecified, not verifiable and the time frame is not defined. However, by viewing the stated objectives in light of the overarching purpose there is a basis for a more applicable interpretation. Firstly, The Cities of the Future Program is a measure for reducing national emissions. Secondly, the approach is a result of limited knowledge regarding the potential for urban contribution towards reducing national emissions. Thirdly, the Norwegian national climate policy is still a work in progress. In this light, “exploring potential” and “building capacity” is seen as a more viable approach, given the following interpretation of the strategic objectives

1) To Defined the potential for reducing national GHG emissions in the largest cities

2) To established the necessary capacity for realising said potential

Given this interpretation, the purpose of the Cities of the Future is to provide a basis for future climate policy by defining the potential contribution from urban measures and assuring the implementation of these measures. These strategic objectives are still not ideal (lacking time frame, ideal state, etc.). However, given the scope of this study it is seen as a beneficial limitation. Both the fact that the Cities of the Future program was initiated after the Brøset Project and findings from this study indicate that this is not a

correct representation of the strategy. That being stated, in formal terms the Brøset project is justified through the Cities of the Future program and should therefore be subject to these strategic objectives.

7.1.2 Interpretation of the Tactical Objectives

The tactical objectives are stated in the Brøset Planning program. Two main objectives have been identified by this study

1) To develop a Carbon Neutral district at Brøset with less than 3 tons CO2 emissions per inhabitant per year

2) To develop capacity for environmental-oriented planning in the municipality, industry and in the Cities of the Future Network

The first tactical objective describes a state and the criteria for verification. This is in line with the guidelines for formulating objectives. The method for measuring the objective (carbon footprint) is provided in the policy document. However, the time frame is not defined. The second tactical objective is not specified and lacks success criteria. It seems, though, that this objective is more of a (intended) side effect of the process than a separate objective. The Research Project aside, only limited resources seem to have been allocated toward this objective alone. It is however, an important tactical level success criterion for the project and an important aspect of the project-triggering need. A third objective is also found in the planning program

3) To develop tools for measuring the impacts of environmental measures

This objective is seen as an operational activity for achieving the second tactical objective, and is considered an operational objective.

7.1.3 Interpretation of the Operational Objectives

In light of the findings of this study, the operational objectives of the Brøset project are perceived to be

1) To secure the approval of a Zoning Plan for the Brøset area that provides the necessary parameters for achieving the 1) tactical objective

2) To develop tools for measuring the impacts of environmental measures

3) To disseminate experiences and knowledge gained from the process

As described in section 6, there are many more formal and informal objectives to be found. However, most of these are perceived to be either descriptions of activities or supporting objectives related to one or several of the four presented in this subchapter. There are for instance several objectives used to define the 1) operational objective. For the purposes of this study, it is considered that these objectives are representative.

7.1.4 The Brøset Project Goal-Hierarchy: A balanced approach

A goal-hierarchy based on the LFA matrix, presented in the theoretical framework, is developed based on the previous subchapters. The Strategic objectives have been modified according to the discussion in subchapter 7.1.1. This is done in order to address the second research question in accord with the interpretation established in this study. The tactical and operational objectives are largely as stated by the project policy documents and are ordered in accord with the defined analytical levels. The column named “uncertainty” in the LFA presented by Samset (2008) has been renamed to “assumptions”. The presented assumptions are based on findings from this study and subjective considerations. A “balanced approach” indicates that this goal-hierarchy is a combination of subjective considerations (strategic objectives) and the formal objectives. The numbers indicate dependency within the same level.

	Objectives	Objectively identifiable indicators	Assumptions
Strategic objectives	1) To define the potential for reducing national GHG emissions in the largest cities 2) To establish the necessary capacity for realising said potential	1) The potential for urban reductions in quantifiable terms. Established cause and effect relations 2) Qualitative assessment of capacity	1) 2) Carbon Neutrality, as defined by the Brøset project, is (perceived) relevant in light of national strategy 2) The Brøset approach is transferrable to other projects 1) The sum of findings from the Brøset Project and other projects are sufficient basis for defining the potential.
Tactical objectives	1) To establish a Carbon Neutral district at Brøset 2) To establish capacity for environmental-oriented planning in the municipality, industry and in the Cities of the Future Network	1) Less than 3 tons CO2 emissions per inhabitant per year 2) Qualitative assessment of capacity	1) Developers are contracted at terms that upholds the key aspects of the project 1) The inhabitant's behaviour is influenced by the project and exceeds expectations
Operational objectives	1) To secure the approval of a Zoning Plan for the Brøset area 2) To develop tools for measuring the impacts of environmental measures 3) To disseminate experiences and knowledge gained from the process	1) Achieved 3) Number of references, etc.	1) Political agreement 3) Sustaining a high profile

Table 7 A Goal-hierarchy for the Brøset project based on a balanced approach

The presented assumptions will be addressed in subchapter 7.2. Figure 29 illustrates the contents of table 7 in a simplified format.

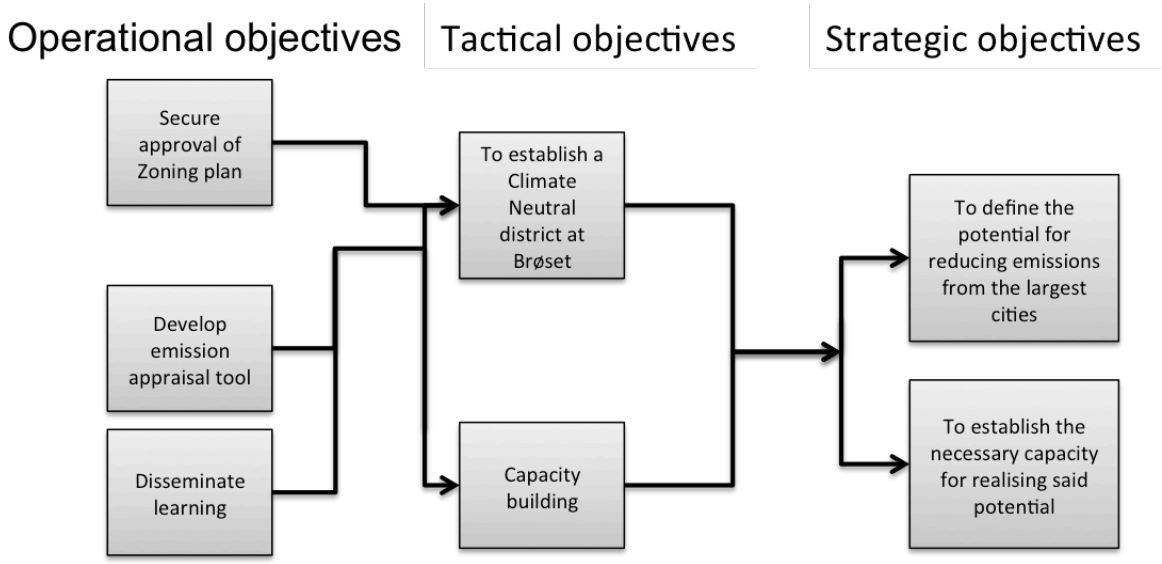


Figure 29 Illustration of the Brøset Project goal hierarchy based on a balanced approach

7.1.5 The Brøset Project Goal-Hierarchy: A alternate deductive top-town approach

The Cities of the future represents a bottom-up inductive approach. The program functioned as a facilitator network and provided only wide guidelines. The project perspective applied in this study is based on goal-oriented project governance. This perspective favours a top-down approach to strategy development. This subchapter provides an alternate descriptive approach to the strategy and presents how the goal-hierarchy might have looked using a top-down approach.

The starting point is the two strategic objectives as interpreted in subchapter 7.1.1.

1) To Defined the potential for reducing national GHG emissions in the largest cities

2) To established the necessary capacity for realising said potential

The basis for this strategy is lack of knowledge. In other words, the potential and the means for realising are is unknown. The objective is to find out what the most effective means for reducing urban GHG emissions are, how to implement them, and the scope of the potential total impact in a national perspective. The potential should be defined relative to time frame and cost/benefit-ratio.

A top-down deductive approach using a number of pilot projects trying out different approaches would be one way of achieving the strategic objective. Each project would have to be developed based on measures with known effect and a limited number of experimental measures. This approach would provide a basis for evaluating experimental measures in a (relatively) isolated state, and provide less controversial

projects with assured utility (given that "measures with known effect" performs as expected). A simplified goal-hierarchy for this approach is illustrated in Figure 30

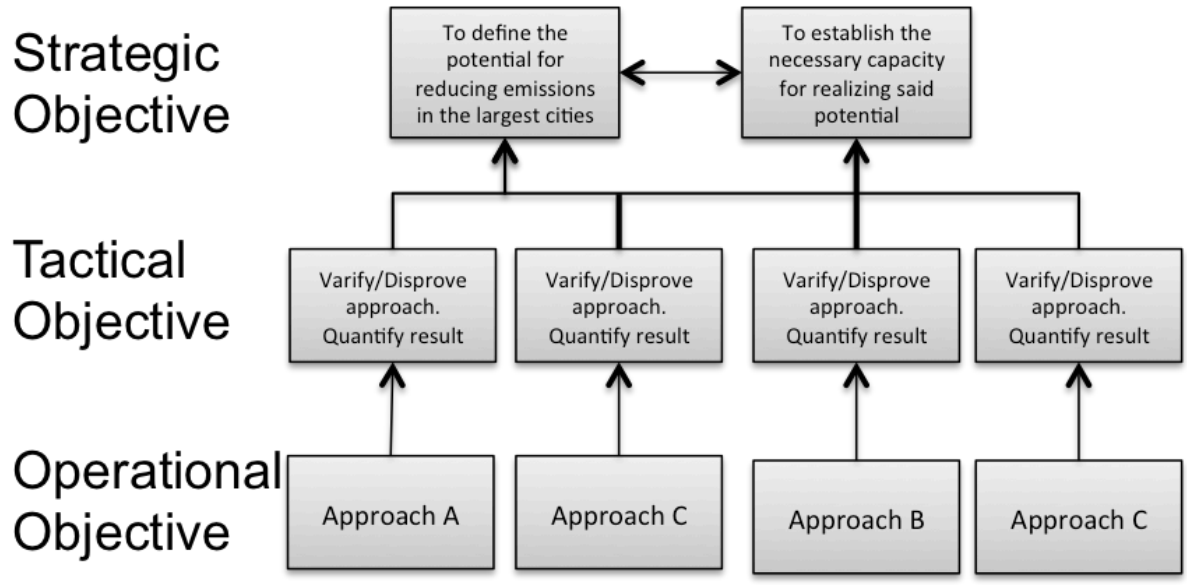


Figure 30 An alternate Goal-Hierarchy based on a deductive top-down approach. The different approaches for reducing urban GHG emissions would ideally be implemented in different projects, as this would simplify appraisal.

This approach is not necessarily realistic. In todays planning hierarchy, the municipalities are the acting representatives from the government in planning processes. A top-down approach would require a much more active role for the central government. This is an illustration of how the strategic objectives could have been met.

7.1.6 The Brøset Project Goal-Hierarchy: A Policy Window approach

This subchapter address the question "what are the Brøset Project objectives?" from another angle, that of Policy Windows and Garbage Can Theory.

The interviews found a general perception of the project as a local initiative aiming for national and international effect and acclaim. The national policy on climate change is viewed as lacking by several members of the project group. Additionally, all of the interviewees shared a perception of climate change as a pressing issue. Especially the researchers and municipality representatives from the project group stated a belief that immediate action was of the utmost importance. When asked what the purpose of the project was, the most common answer from these interviewees was "to comply with the UN 2° target". In this light it may be prudent to consider the project independent from national level climate policy.

The Policy Window Theory, described in the Theoretical Framework Section, proposes that windows of opportunity emerge at the intersections of problems, solutions and politics. At the time the Brøset Project emerged, the following conditions were present

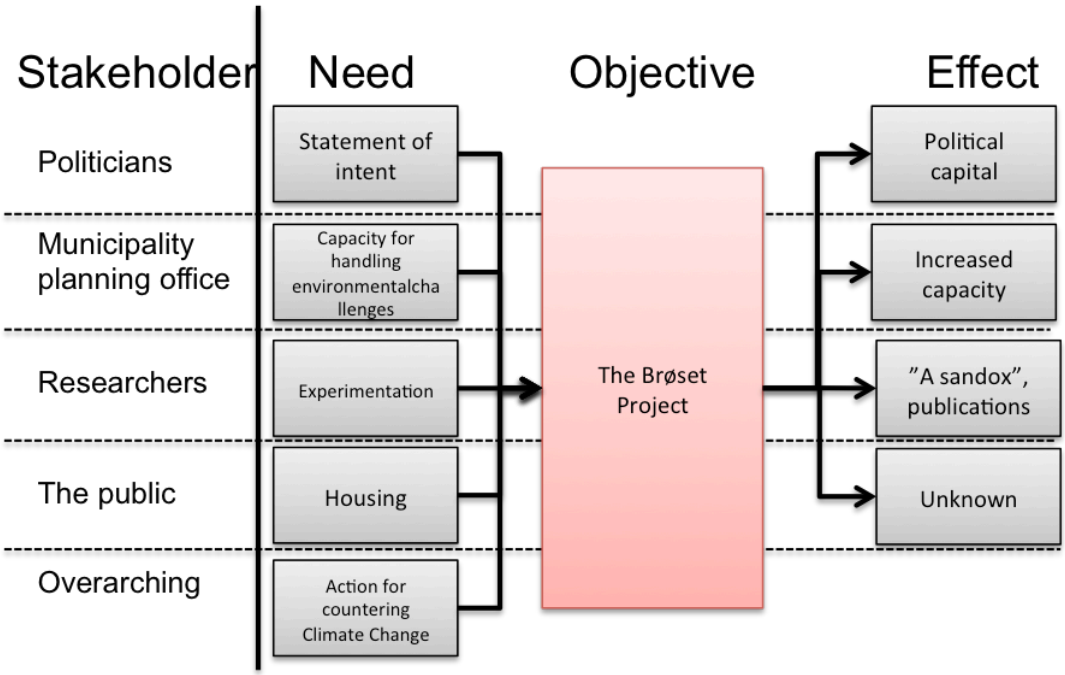
- A newly elected majority coalition preparing their state of political intent for their coming term in office

- An increasing concern for the effects of Climate Change
- A perceived lack of capacity in the municipality for handling the increasing demand for environmental measures
- The city's research capacity (NTNU and others) and reputation as the "Knowledge capital of Norway"
- Researchers engaged in the climate issue and desire for actual experimentation
- A prime area (assumed) ready for development (Brøset)
- A shortage of residences in the city

From a policy Window perspective, these conditions constitute a problem (Climate change and lacking capacity), a solution (research capacity, Brøset) and politics (change in elected politicians and favourable political environment for climate measures). The basis for the project seems to have been the reconciliation in time of a problem, a solution and the favourable political environment.

The Garbage Can theory proposes that problems, solutions and participants intersect and lead to policy decisions more by random than by good intent and that policy decision making often are characterised by problems looking fro solutions. In the case of Brøset, there can be no doubting the good intent of the involved stakeholders. Even those interviewees that were critical to the project were firm in stating that the project was based on the best intentions. However, this does not guarantee decision-making not influenced by random intersections.

Figure 31 An alternative goal-hierarchy based on Policy Window theory. As seen in this figure, several stakeholder needs are satisfied regardless of the project outcome.



In this perspective, the project itself is an objective that satisfies the needs of the involved stakeholders. This is illustrated in Figure 31. It is worth noticing that the project successfully satisfies several stakeholders even when not realised. This is in line

with how several interviewees (representing involved stakeholders) claimed that the project was a success already and that it had provided substantial utility. It seems clear, however, that all of the involved stakeholders would ideally want to see the project materialised.

7.2 Discussion of the goal-hierarchy consistency

This chapter addresses the second research question in light of the presented findings, and chapter 7.1. The strategic, tactical and operational analytic levels, as previously defined, are applied for structure. A compressed version of this chapter is found in the academic paper discussion.

RQ2: To what extent is there consistency between various level objectives?

Policy success is seen as dependent on consistency between the operational, tactical and strategic objectives. The strategic and tactical objectives are identified in Section 6, and discussed in chapter 7.1. This chapter discuss how the tactical objectives contribute towards the strategic objective and how the operational objectives contribute towards the tactical objectives.

7.2.1 Are the Tactical objectives in line with the Strategic objectives?

This subchapter seek to address whether or not the tactical objectives are in line with the strategic objectives. The 1) tactical objective is to establish a Carbon neutral district at Brøset. The 2) tactical objective is building capacity. Chapter 7.1 established the following assumptions for the realisations of the Strategic objectives.

1) Carbon Neutrality, as defined by the Brøset project, is (perceived) relevant in light of national strategy

2) The Brøset approach is transferrable to other projects

3) The sum of findings from Brøset and other projects are sufficient basis for defining the potential.

Another way of viewing these assumptions are as criteria for the Brøset Project to be relevant in light of the justifying strategic policy. The third assumption is not subjected to further discussion in this study, as this study is limited to the Brøset Project.

Given that assumption 1) is proved true (that Carbon Neutrality is relevant), both of the tactical objectives contribute towards the strategic objectives. The first question is whether or not Carbon Neutrality, as defined by the Brøset Project, is relevant in light of national strategy. This study has found two distinct issues challenging the relevance of the Carbon Neutral objective. Firstly, Carbon Neutral is interpreted to mean a very ambitious and exclusively local reduction of emissions. The term Carbon Neutral is not a part of the defined strategic objective, and when referenced in the White Paper (basis

for strategic objectives), "a Carbon Neutral society" is described as an ambition to be achieved only partially through reduced emissions in Norway. Secondly, the tactical objective is based on consumption-oriented appraisal, unlike the sectorial production-based method applied at strategic level. As described in section 6, there are arguments for applying this method, but the decision to do so seems to have no basis at the strategic level. As previously pointed out, the implications are quite radical. It is not known in this study how widespread the use of consumption-oriented appraisal is in the Norwegian context. However, as production-oriented appraisal is the norm for policy making (seen in for instance the municipality's reduction objectives), this is seen as a deviation from the strategic objective.

In short, the 1) tactical objective both overreaches the strategic objective (and national strategy) and redefines the problem. The overreaching will be addressed further in the next subchapter. Redefining the problem at the tactical level (by basing the objective on consumption-oriented appraisal) implies that the proposed solution to the problem might be less relevant at the strategic level. More important, however, is the impact on evaluation. By the use of consumption-oriented appraisal, the project's environmental performance is extremely dependent on consume. As a result, project success is extremely dependent on external factors. This dependency makes measuring the performance of the project very difficult and thus impedes the learning process, which is the main strategic objective of the project. Interviewees from the project group seemed to believe that emission appraisal of the Brøset area is feasible. However, it is perceived more doubtful whether individual measures can be evaluated, as the project measures are highly integrated and interdependent. In this light, the Brøset Project is perceived as a case that either functions as a whole or fails in the same capacity. As such, Carbon Neutrality is not perceived not to be relevant/beneficial in light of national strategy.

The second question is whether or not the Brøset approach is transferrable to other projects. This study is inconclusive in this regard. On one side there are the involved stakeholders claiming that the Brøset approach is already applied by a number of projects. This has not been verified in this study, but there seems to be no reason for doubting the claim. Furthermore, the research published by the research project is quite general in nature, and should be applicable for other cases. However, there are claims from other stakeholder interviewees and experts claiming that the Brøset approach is not substantially different from other established approaches. On the other side, the last previous established doubt as to what can be learned from the Brøset Project. Several interviewees stated that one of the main dangers of delaying the project was that new actors might not implement it correctly. This does not speak well for the project's transferability. However, the transfer value is not conclusively defined in this study.

This study does not find any of the proposed assumptions (relevance criteria) probable. It is not clear how a Carbon Neutral district at Brøset contributes to the 1) strategic objective. Achieving the 2) tactical objective (capacity building) seems to be in line with the 2) strategic objective, pending assumption 1). The project may provide increased and useful capacity even if Carbon Neutrality is not relevant in light of strategic objectives, but only at the tactical and operational level. If Carbon Neutrality is not relevant at the strategic level, capacity for building Carbon Neutral districts is not relevant at the strategic level. At the same time, Carbon Neutrality is not only about consumption, and experiences from this project will probably be useful in the

municipality some time. Achieving the strategic objectives is seen as dependent on a number of projects being materialised and evaluated, however, other project are not considered in this study. As perceived in this study, the tactical objectives do not provide reasonable probability for achieving the strategic objectives.

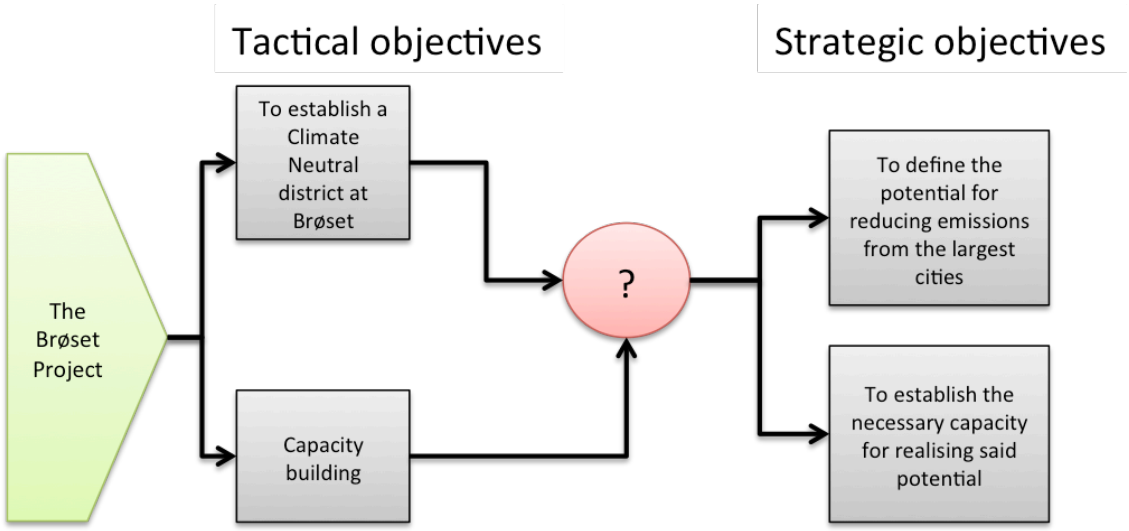


Figure 32 Illustration of the lacking consistency between the tactical and strategic level objectives. The gap between a successful implementation of a Carbon Neutral district at Brøset, and defining the (total) potential for reducing emissions from the largest is not considered within reasonable probability.

7.2.2 Are the Operational objectives in line with the Tactical objectives?

This subchapter seek to address whether or not the operational objectives are in line with the tactical objectives. The 1) tactical objective is to establish a Carbon neutral district at Brøset. The 2) tactical objective is building capacity. Chapter 7.1 presents the following assumptions or criteria for the realisations of the tactical objectives.

1.1) Developers are contracted at terms that upholds the key aspects of the project

1.2) The inhabitant's behaviour is influenced by the project and exceeds expectations

The 2) tactical objective is perceived to be accomplished by the project process itself. Further benefit would follow from achieving the 1) tactical objective. There are two assumptions that must be proved true for achieving the 1) tactical objective. The key aspect of the 1.1) assumption is "terms that upholds the key aspects of the project". As seen in chapter 6, it is not clear whether or not developers will agree to develop the project given the current contents of the zoning plan. This is also the case concerning the proposed environmental monitoring programs. Both is seen as imperative for achieving the 1) tactical objective. This study is not conclusive as to the probability of the 1.1) assumption, though it is not sees to be highly unlikely. Given assumption 1.1), the actual development of the Brøset area, according to the zoning plan, should be reasonably probable.

The 1.2) assumption needs some elaboration. As seen in chapter 6, the teams participating in the parallel commission did not manage to reduce (theoretical) emissions further than 7-9 tons per inhabitant per year (the objective is 3 tons and today's norm is 12 tons). One might note that these teams were not limited by the zoning plan format (as the developers of the zoning plan were), and could therefore propose quite radical measures (Gansmo et al., 2011).

There are two main ways the project promotes a Carbon Neutral life style: a localised life style and a collective life style. It is perceived as highly unlikely that the Brøset Project will achieve its ambitions of a localized life-style (it is intended by the project group that because of the large public and semi-private green areas and good living environment, the inhabitants will chose to travel less in their spare time). Statements from the researchers establishing that none of the proposed measures for achieving this is proved to work, back up this view. A collective lifestyle is more likely to be achieved, given sufficient transport is provided and the collective facilities are materialised. The effect of the proposed collective life style, however, is not known. As perceived in this study, the operational objectives do not provide reasonable probability for achieving the 1) tactical objective.

A "bettering of the background economy" is proposed as the means for reaching the 3 tons objective. As this is perceived, a bettering of the background economy would have to be a broad societal process with a long time frame. Bettering based on technological advancement could speed this up. In any case, a big if. The most important issue regarding this assumption however, it that it is seemingly extremely dependent on external factors. If the Carbon neutral objective is achieved because of a bettering of the background economy constituting about half of the reduction, success cannot be accredited to the project. This would seem to make the project less relevant in terms of strategic level objectives. There is also the time frame to consider. For the Brøset Project to be an effective contributor, the environmental effect of the project must be achieved in a much shorter time span than the bettering of the background economy. The one perceived viable alternative for achieving the objective is that the inhabitants at Brøset drastically overachieve (as the 1.2)) assumption suggests). This is seen as highly unlikely.

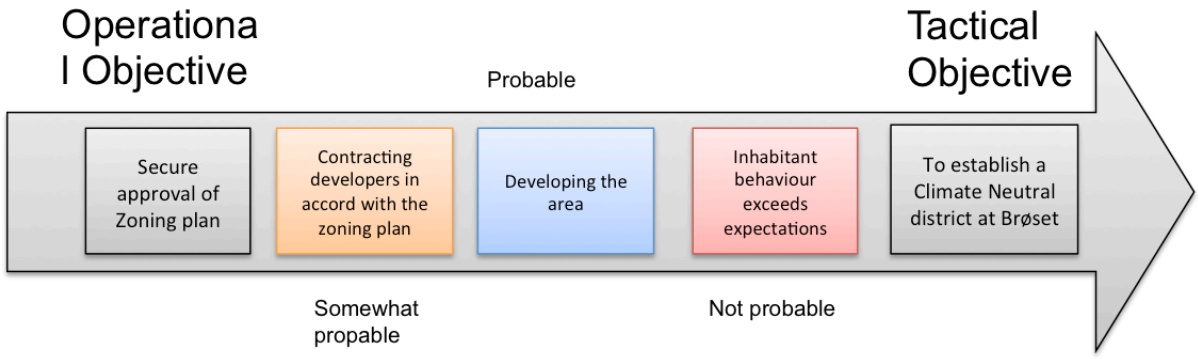


Figure 33 Illustrating the gap between the operational and tactical objectives. Assumptions for achieving the tactical objective is included with related (perceived) probability.

7.2.3 To what extent is there consistency between the various level objectives?

This subchapter sums up this chapter and addresses the second research question of the study. The following bullet points provide the summary

- The tactical objectives is not perceived to provide reasonable probability for achieving the strategic objectives
- Given that Carbon Neutrality, as defined in the Brøset Project, is perceived relevant in light of national strategy, it is not clear how the Brøset contributes towards the strategic objectives (capacity building aside).
- The operational objectives is not perceived to provide reasonable probability for achieving the tactical objective of achieving a Carbon Neutral district at Brøset
- The tactical objective of building capacity is partially achieved. Strategic significance in questionable.

In light of this, it seams clear that there are limited consistency between various level objectives. This is most critical in the case of achieving Carbon Neutrality, which is perceived to be both unrealistic and not in line with the strategic objective.

It must be noted that this analysis is based on the interpretation of strategic objectives established in subchapter 7.1.1. The formal policy documents clearly state that the Brøset Project is justified at national level through the Cities of the Future program. One might argue that the Cities of the Future program documents do not explicitly state objectives as presented in this study's interpretation and that this interpretation is not in line with how the program has functioned in practice. However, this is the only interpretation found that is seen to make the Cities of the Future program relevant in light of national strategy.

7.3 Discussion of the Brøset Project in light of Sustainable Development

This chapter address the third research question in light of the findings presented in this study. The research question is addressed separately at the three analytical levels and considers long-term benefits, resilience to risk and three-pillar reconciliation.

7.3.1 Sustainability at the Strategic level

The Brøset projects strategic relevance is perceived to be in compliance with the Cities of the Future program. Though the program is terminated at the time of writing, the program results are not a part of this study. This discussion is based on the perceived policy intent. The Cities of the Future program seems to embody three-pillar reconciliation. The program is a policy intended to provide environmental utility, but the objectives also state that social and economic aspects should be sustained. Representatives from the construction industry participated in the program network, and one of the overarching focus areas of the program was good urban environment.

The Cities of the Future program seems to have had extremely low resilience to risk. The Brøset Project is a valid example. As seen in chapter 7.2, the Brøset Project was lauded as a pilot project while disregarding the strategic objectives of the program. This is seen to indicate a lack of control and focus towards achieving the established objectives. This study has no input from high-level sources in the Cities of the Future, and no written sources indicating how this is perceived from the inside.

The Cities of the Future program on its own is seen more as a short-term fix than a long-term initiative. This view is based on the interpretation of the strategic objectives presented in chapter 7.1.1. The intended result of the program is seen to have long-term benefits as the basis for an (hopefully) effective national climate policy.

7.3.2 Sustainability at the Tactical level

For addressing sustainability at the tactical level, the planning program document is the primary basis. Previous discussions in this study are taken into account.

In terms of three-pillar reconciliation, the most obvious issue is the lack of economic focus. Is seems clear that economic feasibility has not been a priority in the project group. The tactical objectives are aimed at environmental effect, but recognise the importance of social sustainability. The consumption-oriented appraisals imply a strong correlation between Carbon Neutrality and consume. This represents a conflict between environmental and economic aspects. Findings from the interviews indicate that a Carbon Neutral district might not be possible given the general high income of Norwegian households.

The Carbon Neutral tactical objective is not perceived as resilient to risk. This is discussed at length in chapter 7.2. Liking the project directly to the UN/IPPC constitutes an extreme gap. Achieving the UN/IPPC 2° cannot possible be traced back to the Brøset Project, and therefore the objective is not considered sufficient justification for the project. The project is perceived as having a high risk of being irrelevant in the environmental/climate context. By also focusing on building capacity, the project is somewhat safeguarded to risk. By applying a "learning while planning" approach the project is certain to provide some utility. This could be increased if the project is sufficiently evaluated. The involved stakeholders consider the project as somewhat successful already today. There is low risk for reduced demand for urban residences. However, the demand for "the Brøset life-style" is unknown.

In terms of objectives for long-term environmental benefits, the tactical objectives are found lacking (further discussed in chapter 7.2). If materialised, an urban residential district represents a long-term benefit for the society, given that the project is economically sound (social and economic benefit). However, the Carbon Neutral tactical objective seems to have hampered the feasibility of the project.

7.3.3 Sustainability at the operational level

Both the interviews and the documentation study indicate that the Brøset Project favour "sermons" over "carrots and sticks" in terms of policy instruments. As a result, the environmental effect of the Brøset Project is highly dependent on the users acting as intended based on their own conscience. Consequently, the environmental impact of a

materialised Brøset is highly uncertain. The objectives for social benefits seem more certain. Green areas, inclusive design and collective solutions are guaranteed by the legally enshrined zoning plan. The project has not included economy-oriented stakeholders in the project. This seems to have alienated the construction industry. It is not obvious how including the industry at an earlier stage would have influenced the project, but it is assumed that this could have counteracted at least some of the bad press the project has received. Economic issues are a concern at present, but the zoning plan allows for substantial flexibility. This composition is somewhat ironic, given the projects environmental origins and the strong focus on environmental sustainability found among the interviewees. In terms of three-pillar reconciliation, this study finds the project to be socially sound while the environmental and economic aspects are uncertain.

The findings in this study indicate a drastic lack of resilience to risk at the operational level. As described in chapter 7.2, the operational objectives do not seem to provide reasonable probability for achieving the tactical objectives. Furthermore, as pointed out by several interviewees, the project group has not focused on reducing risk towards the materialisation of the project. The documentation study found that risk related to the suitability of the area was extensively considered, but not risk towards the feasibility of the project. Though much of the criticism in the press seems to be undeserved, it has not been publicly addressed to any effect. Thus the bad image persists and the project is at present less politically sellable than it could have been. Several interviewees stated that one of the main dangers of delaying the project further is that people unfamiliar with the project might not implement it correctly. This, and other statements, adds to the impression that the project is not particularly resilient to risk.

The operational objectives seem to promote little more long-term benefit than any other moderately dense modern residential development project. This might change with the introduction of environmental monitoring programs (as proposed in the zoning plan), but as the long-term benefits of Carbon Neutrality is seen as highly questionable, this is also uncertain.

7.3.4 To what extent does the Brøset Project embody sustainable Development

This subchapter sums up this chapter and addresses the third research question.

RQ3: To what extent does the Brøset Project embody Sustainable Development?

The following bullet points provide the summary of the previous subchapters

- The project has low resilience to risk at all analytic levels
- The long-term benefits of the project are highly questionable
- Lack of three-pillar reconciliation seems to have hampered the feasibility of the project

Based on the findings in this study, it is clear that the Brøset project is not a Sustainability project per se. No policy documents reviewed in this study states Sustainability or Sustainable Development explicitly as an objective for the project.

Furthermore, the interviewees firmly state that the project is about Carbon Neutrality, perceived as an aspect of environmental Sustainability. However, based on the findings of this study, it is considered that the lack of attention paid to important Sustainability principles, such as three-pillar reconciliation, resilience to risk and long-term benefits, have seriously hampered the project both in terms of feasibility and potential impact.

A relevant question would be whether Carbon Neutrality, if achieved as defined in the Brøset Project, is an aspect of Sustainability. Carbon Neutrality seems to represent a trade-off situation where economic considerations have been put aside based on environmental and social priorities. The environmental impact might not be compatible with the current Norwegian economy (high wages), and most likely not with increased economic growth. One might argue that e more sober economic development is a necessary component for reducing global GHG emissions. However, it is not clear how the Brøset Project contributes towards this end in a broader perspective. Reducing economic growth is certainly not in line with national strategy and the strategic objectives that justify the project.

7.4 Lessons from the Case Study: The bigger picture

As seen in the case study of The Brøset project, the lacking consistency between Strategic, Tactical and Operational level objectives constitute unconvincing probability for achieving the intended impact. Consequently, the project seems not to embody the long-term benefit intended in the strategic objectives. Both the feasibility and the environmental impact of the project seem to be highly uncertain. This chapter discuss what can be learned from this case study by addressing the fourth research question

> **RQ4: What are the main challenges towards implementing Sustainable Development in policy-to-project processes in the Norwegian context?**

The CotF program seems to have been based on a bottom-up approach with limited guidance applied towards assuring the achievement of the strategic objective. The project was given free reigns to explore Carbon Neutrality, while also given status as a pilot project and thus declared legitimate in light of strategic policy. The Carbon Neutrality tactical objective seems not to have been questioned by decision-makers, though it is not clear to what extent the implications were fully understood. The use of a network based bottom-up approach by the central government is a valid response given the circumstances, but lack of consistency between the strategic and tactical levels of policy implies a worrying lack of control. There are, however, no basis for considering whether or not this is a general failing or limited to the Cities of the Future program.

Parts of the rationale for choosing Brøset as a case was viewing the project as a “most favourable” case (Flyvbjerg, 2006). The Brøset Project is presented as buttressing National Strategy, and one would think that challenges found in this case have some probability for being general. The main insight of this study is the perceived disregard for goal-oriented project development uncovered among the stakeholders. Though, some interviewees questioned the tactical and operational objectives of the Brøset Project, none questioned the way the project seems to lack strategic context. As seen in chapter 7.2, the tactical objectives do not provide reasonable probability of achieving the strategic objectives. This perceived “failure” seems not be a failure to achieve, but

rather a failure to try. The project group seems to have developed the tactical objectives based on their own perception of need, rather than the national strategy that justifies the project. As presented in chapter 3, strategic objectives are ideally set at a level that allows for several alternative approaches for achieving them. The strategic objectives of the Brøset project, as interpreted in this study, are seen as highly flexible in this regard. Still, the project group seems to have been set at the selected approach from the start. The interviews indicate that the project group, and especially the researchers, had clear perceptions of the key attributes of the project long before the link to the Cities of the Future Program was established. This further indicates that the national climate policy was not a priority. This study uncovered a general lack of emphasis on established strategy among the project stakeholders. This constitutes a challenge for goal-oriented societal development.

Subchapter 7.6 present a perspective of the project objectives where the policy-to-project process already satisfies most first order needs of the involved stakeholders. Interviews indicate that several stakeholders do not consider the project a failure if it is not materialised. This indicates that formal objectives are not taken seriously. Projects disconnected from overall strategy and obscured objectives is not something new (Klakegg, 2010). A common denominator among such projects is a lack of structural governance (Hjelmbrekke et al., 2014; Klakegg, 2010). As seen in chapter 6.2, none of the involved stakeholders represent the strategic objectives. Furthermore, the project group seems to have been quite autonomous throughout, and not subject to an effective governance structure. However, based on the findings of this study, this seems to be considered perfectly acceptable by the stakeholders. This constitutes a challenge for goal-oriented societal development.

Subchapter 7.5 presents an alternative top-down approach for achieving the strategic objectives. In this approach, the strategic objectives are achieved through multiple projects intended to either verify or disprove a “theory” of how to most effectively reduce urban emissions. For this to work, each project would have to limit experimentation to a small number of measures that can be accurately appraised. While certainly less spectacular than the Brøset Approach, this seems to be an approach that could have provided the intended results (to find out what works and what does not). The Brøset Project does the opposite. By aiming for the spectacular, the Brøset project seems to have hampered the probability of collective success. A fitting metaphor is perhaps the football player who always shoots from impossible distances. There is the possibility of a spectacular goal, but more often than not it end with losing the ball.

Sustainable Development seems not to have had an active role in the Brøset Project. The stakeholder’s emphasis on environmental aspects of the Sustainability concept is not uncommon (Drexhage and Murphy, 2010), and neither is their view that sustainability lacks practical application (Fergus and Rowney, 2005; Weaver and Jordan, 2008). This study indicates, in line with presented research, that Sustainability has no widely accepted interpretation. Consequently, sustainability as a term seems not to be an effective aid for communicating intent. However, in practical terms, it seems that the definition applied in this study has some utility. Several challenges in the Brøset Project case can be traced back to disregard for sustainability principles (long-term benefit, resilience to risk, three-pillar reconciliation). Whether or not the perceived disregard is by intent or neglect, the resulting challenges are real. As such, the findings of this study

constitute an argument for more focus on sustainability principles in policy-to-project processes.

7.5 Review of the this study

This chapter addresses potential errors of the study, discuss the academic paper and discuss the relevance of the applied project perspective for evaluating policy-to-project process

7.5.1 Sources of error

This study is largely based on subjective interpretation of qualitative data. As such it is vulnerable to influence from the researchers agenda. The researcher's agenda is perceived to be in line with the project perspective. Goal-oriented societal development based on rational evidence-based decision-making is seen as highly important by the researcher. In this regard, this research is in line with the stance assumed by the CONCEPT program. This perspective recognises the importance of a balanced approach to decision-making. In the Case of the Brøset Project, it seems that the major priority has been environmental priorities. This represents a cultural difference that might have influenced the study. As several of the Interviewed Brøset Project stakeholders represent a more casual relation to cause and effect, this represents a cultural difference that might have influenced the research. The researcher admits to favouring the more certain effects of "carrots and sticks" to "sermons" in terms of instruments. Consequently, the researcher may have underestimated the probability for a substantial environmental impact. This could also have influenced the study.

Another possible source of error is this study's stance on Carbon Neutrality. It is perceived that the focus on consumption-oriented appraisal has focused the project on measures for reducing consume and that these measures (for instance large green areas for promoting a localised life style) has been prioritised at the expense of measures perceived (by the researcher) to have a more certain effect (such as increased density). As such, it is perceived that the Carbon Neutral objective has reduced to potential environmental impact. It is possible that the consume-oriented measures have not come at the expense of other measures to the extent assumed.

Another possible source of error is the interpretation of strategic level policy. The interpretation is based on viewing the strategic policy in the most favourable light from a project perspective. Findings from this study (discussed in the next subchapter) indicate that the project perspective might be further removed from how actual policy-making is understood by policy makers in the Norwegian context than originally assumed. This study might have misunderstood the essence of the strategic objectives and/or role of the Cities of the Future program.

7.5.2 The relevance of the applied project perspective

The applied project perspective was put to the test quite brutally in this study. The cultural differences between the project perspective and how the stakeholders understood the policy-to-project process were significant. This subchapter seeks to

evaluate to relevance of applying a project perspective on policy-to-project processes in the Norwegian context. This addresses the fifth, and final, research question

RQ5: What are the advantages and challenges related to applying a project perspective for evaluating policy-to-project processes?

This study has found several challenges, both during the interviews and the documentation study and later when reviewing and analysing the data. First of all, there is a considerable cultural difference between project management and governance sciences and the sciences (and lack thereof) represented by the interviewed stakeholders. This is perhaps best illustrated by examples of some cultural differences found during the interviews. The interview guide used in this study is found in Appendix 1. It contains 7 sections. Sections 4 and 6, especially, proved to be quite challenging. Section 4, concerning the tactical (user) perspective was developed in accord with the literature on public policy as behavioural influencing instruments. Previous experience with this scientific area was limited and the established understanding seemed to be quite out of sync with most of the interviewees. The approach was largely based on a Civil Engineering view, emphasizing cause and effect when designing measures in response to a perceived problem. As such, it seems that the interview guide assumed a much more clinical view than that found to be representative for the interviewees. It was assumed that the desired behaviour was identified in (at least) somewhat quantifiable terms, and that measures were selected based on some expected and measurable effect. As this view was not very representative for the selected interviewees, the study was not successful in getting the desired answers in this section. Section 6, concerning goal-structure, gave a similar experience, but also presented another problem. It seems to be quite a cultural difference between the project perspective and the cultures represented by the interviewees regarding the ideals of goal structures. The objective of the inquiry in section 6 was to obtain an understanding of how the interviewees interpreted the somewhat vague goal-structure of the Brøset Project, how consistent they found it and what they perceived to be the main objective. Perhaps due to cultural differences and perhaps due to limited preparation on part of the interviewer, it was never quite managed to present this question in a way that gave productive answers. What was found, however, was that most of the interviewees had a very different view on what the goal-structure should be than what is represented by the project perspective.

As touched upon in the previous paragraph, there seems to be a major cultural difference in the way objectives are perceived. The way most interviewees seemed to view formally established objectives as guidelines represents a significant gap relative to the project perspective. Additionally, the strategic objectives had to be deduced from a policy document in this study, as they were not explicitly stated. This questions the relevance of project-type success criteria. There is no reason for establishing sound objectives for achieving success, if those that are to carry out the project do not adhere to the established objectives. The cultural difference might make communication troublesome and it adds a new interface.

The project perspective favours a somewhat hard line between success and failure. As seen in this study, this can be quite brutal. The impacts of the Brøset Project are complex and span a wide range of different disciplines and stakeholder interests. As different stakeholders will have different priorities and perspectives on success, this

hard line might prove to be elusive (to a greater degree than in a more typical project context). Furthermore, it is not known how useful such tools will be perceived by policy-makers. This study indicates that goal-oriented development has some way to go. The project perspective must be perceived useful by the policy-makers to be beneficial. Studies such as this might alienate policy-makers rather than influence them.

The project perspective seems to have application on policy-to-project processes. This study has followed a logical, yet simple, approach and found a perspective that seems to have eluded the decision-makers of the Brøset Project (the alternative is that this study is fundamentally wrong, or that this perspective has been intentionally discarded). Applying the three analytic levels has been very helpful for establishing perspective. The sustainability principles seem to be both useful success criteria and tool for optimising objectives and process priorities. However, the concept is perceived subjectively and therefore a clearly stated interpretation must be established. The rest of this document will serve as further argument for the advantages of the project perspective.

As seen in this subchapter, there are both advantages and challenges of the applied project perspective in the context of policy-to-project processes. Table 8 presents a summary.

Advantages	Challenges
• Systematic tools for stratifying underlying causal relations for achieving objectives • The analytic levels are useful for establishing perspective • Viewing Sustainability at distinct analytic levels gives the concept more substance	• Success criteria might not be in line with decision-maker's priorities • Cultural differences constitute an added interface • The project perspective emphasise cause and effect relations in a more clinical way than seems common in policy-making • The project perspective represents a hard line between success and failure

Table 8 Perceived advantages and challenges of the applied project perspective in the context of policy-to-project processes

7.5.3 The academic paper: Added value or waste?

This study consists of three parts where Part II is an academic paper. As this is a somewhat new approach to the master thesis at the NTNU, this chapter will present some considerations.

The academic paper had a firm limit of 8 pages in total (including references). This constituted a challenge as a large portion of what is presented in this document had to be compressed into these pages. In hindsight, this has been a rewarding experience both for the study, and the author. For various reasons, the paper had to be completed before the delivered of the thesis. As a result of this, the study had to be structured and compressed at an early stage. This helped to focus the study and therefore was a substantial help for the rest of the work.

The other advantage of the academic paper is perceived to be the accessibility of the format. This study is much easier disseminated in the paper format than by this document. On the other hand, the compressed nature of the paper gives less space for presenting arguments. Presenting valid arguments in this context is not easy.

The main author wrote the academic paper in its entirety. The supervising professor of this study, Tore Haavaldsen, has been helpful in developing the study. Furthermore, both Tore Haavaldsen and Jardar Lohne has contributed to structuring the writing and focusing the statements of the academic paper. The layout of the paper is in accord with the guidelines provided by the IPMA world congress.

8 Conclusion

8.1 Conclusions

This study has been structures by five research questions. The Brøset Project is justified by several policy documents at the strategic, tactical and operational level (RQ1). There seems, however, to be limited consistency between the different level objectives expressed in these policies (RQ2). Consequently, the Brøset Project seems not to promote the intended long-term benefit expressed by the strategic level policy. Not other long-term benefit relevant to the justifying strategic policy has been identified in this study. Furthermore, the project environmental impact seems to be highly uncertain and the materialisation of the project seems not be very resilient to risk. This study identifies several challenges that are seen as related to lacking three-pillar reconciliation. Consequently, the Brøset Project is not seen to represent Sustainable Development, as defined in this study (RQ3). The findings of this study indicate that stakeholders do not consider lack of strategic context as problematic. This constitutes a significant challenge for goal-oriented societal development (RQ4). This study is also an experiment, and therefore the perceived advantages and challenges related to the applied project perspective have been evaluated (RQ5)

It is important to note that the applied project perspective favour a hard line between success and failure. That achieving the strategic objectives is seen as unlikely does not mean that the project will not have a positive impact. Despite the bad press, the findings of this study indicate that a developed Brøset area is highly likely to be a good living environment. Green areas, collective facilities and local services are all seen to be positive contributions. It is also noted that the social benefits of the project seems more likely to materialise than the environmental ones. The Brøset Project is seen as a positive contribution. Especially, perhaps, by challenging the norm and raising important questions as to what is sustainable. Given that the project is politically prioritised, there is also reason to believe that an environmental impact can be achieved. Additionally, the project seems to have contributed greatly to the municipality, and others, as an experiment. The Brøset Project is an experiment that should be thoroughly evaluated. There seems to be a great potential for learning.

As an urban development project, the Brøset project can be seen as an interesting and progressive project and an important contribution to the debate on sustainability. As a policy-to-project process however, the Brøset Project must be measured in terms of how it embodies the strategic objectives. In this regard, elucidating challenges seems to be the main insight from the Brøset Project.

8.2 Propositions for further studies

This chapter present propositions for further studies in the following bullet points

- More case studies could be useful for establishing insight into RQ4 and RQ5. The template provided by this study should make further studies significantly easier. Focusing the interview guide more towards addressing the research questions is recommended).
- This study is about "how thing are". A study (or more) into "how things could be" could be useful. Brøset could be a fine starting point.
- Further studies of facilitator network programs such as the Cities of the Future program. This study could have used some more insight into the expectations of the program.
- A more thorough evaluation of the Brøset policy-to-project process with more success criteria. The involved stakeholders see the project as a positive. A study focusing more on what Brøset did right could be a good compliment to this study.

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Part II: Academic Paper

IPMA 29th World Congress, 28-30 September 2015, Panama
The way to project management in multicultural context

Achieving Sustainability? A case analysis of policy-to-project processes

Schjetlein Torkil[a], Haavaldsen Tore[a], Lohne Jardar[a]

[a]*Norwegian University of Science and Tecnology, Trondheim 7491, Norway*

Abstract

Public policy initiatives are undertakings intended to alter societal behaviour in accordance with a perception of public benefit. Projects are commonly utilized for realising said public benefits. This study explores the gap between policy and projects; specifically how strategic objectives are manifested at project level. In answer to national policy regarding Climate Change, the "Brøset project" has been initiated with the purpose of establishing a "Carbon Neutral" district in the city of Trondheim, Norway. This study applies a project perspective to the policy-to-project process, focusing on the consistency in the goal hierarchy established for achieving the intended project benefits. The Brøset Project is analysed using semi-structured open-ended interviews with project stakeholders and a documentation study. A literature review on project and public policy theory is conducted. The project is described up to its current state, and assessed with regards to sustainability and consistency between the Strategic, Tactical and Operational objectives. Findings from the case study illustrate a lack of agreement regarding both the feasibility and the relevance of the Brøset project. Both lack of ambition, and over-ambitiousness are identified as reasons. Additionally, the goal structure is found to be unfocused and inconsistent. This study elucidates challenges concerning policy-to-project processes in the Norwegian Public Sector.

Keywords: Sustainability; Policy-to-project; stakeholder involvement

1. Introduction

Achieving Sustainability has been a vision ever since the term Sustainable Development (SD) gained recognition in wake of the report "Our Common Future" (WCED, 1987). Subject of much discussion these last thirty years, a universally agreed upon interpretation and established policy application still remains elusive (Haavaldsen et al., 2014; Marshall and Toffel, 2005; Mondelaers et al., 2011; Santillo, 2007; Victor, 2006; Weaver and Jordan, 2008). This study addresses challenges in implementing and maintaining SD principles in processes transferring policy visions (Page, 2006) into actual projects. Key to this study is viewing SD both as a means to an end and as an objective in its own right. The Brøset Project, an urban development project in the city of Trondheim, Norway, is chosen as a case study. The Brøset project is interesting as a case in this context for two reasons. Firstly, it challenges the traditional conditions for public policy by the way it emphasizes individual life style changes as an important condition for achieving sustainability (Støa et al., 2014). Secondly, the go-ahead for the actual development is still not given after almost eight years, whereas the municipality suffers from persisting shortage of residence. The objectives of the study have been to uncover how the stakeholders in the Brøset project understand the concept of sustainability, how sustainability has been implemented in the project, and possible lack of consistency between the strategic, tactical and operational objectives in the policy-to-project process. Because the actual development of the Brøset is yet to start, it is deemed necessary to limit this study to the policy-to-project process, concluded by the approval of the Brøset zoning plan in 2013 (Trondheim kommune, 2013a). In this paper, this process will be referred to as the Brøset Project.

In 2007, the newly elected red-green majority coalition in the city of Trondheim stated their intent to develop a new progressive environmental-oriented residential area in the city (Trondheim AP et al., 2007). The area chosen was Brøset, a predominantly agricultural area of about 34 ha some 4 km from

the city center. A project group, consisting of members from the municipality planning office and the city's research community, was assembled for implementing the project. The primary objective was to produce a comprehensive zoning plan for the Brøset area in accord with the political vision, but the project was also intended establish a best practice for climate friendly and environmental urban development (Trondheim kommune, 2010). Central to the municipality's climate action plans, the Brøset project was intended to be a prestigious project fronted by the city's politicians (Støa et al., 2014). The main project vision, established in the Planning Program (Trondheim kommune, 2010b), was to develop a "Carbon Neutral" (CN) district. CN was defined as 3 tons of Co2-emissions per capita per year (a reduction of 70-90%). For advancing the vision into reality, the project sought inspiration from other projects (Wyckmans and Solbraa, 2010) and applied a "parallel planning commission" (PC) in which four teams developed proposals for practical solutions (Gansmo et al., 2011; Trondheim kommune, 2009a). In 2013, the finished zonal plan was approved by the city council (Trondheim kommune, 2013b). The plan envisages 1800 residences with about 4000 inhabitants in an environment designed for adopting a climate friendly lifestyle. Shortly before the approval of the plan, critics of the project surfaced, claiming that the plan was economically unfeasible and not in line with the needs and priorities of the market (Aspestrand, 2013). Since then, awaiting resolution concerning persisting ownership issues, nothing has happened at Brøset, no further resources has been allocated towards development of the area and the future of the project is highly uncertain.

The Brøset zoning plan is a result of a process transferring a vision into the basis for an actual tangible development project; a policy-to-project process. This study analyzes the process from a project perspective, examining how the process has affected the project result, and thus the likelihood of the valid policy being implemented. Consistency between the Strategic, Tactical and operational level objectives is used as a measure for likelihood for success. The analysis is based on interviews with project stakeholders, a documentation study and an extensive literature review. The purpose of this study is to elucidate challenges towards SD in policy-to-project processes in the Norwegian public sector. The research questions structuring the study are as follows.

- What policies justify the Brøset Project?
- To what extent is there consistency between different level objectives?
- To what extent does the Brøset project embody Sustainable development?

The first research question will be answered in the section 3. The final two will be addressed in section 5.

2. Methodology

This study is carried out through the analysis of a single case study; The Brøset Project. The rationale for the use of a single case approach is viewing Brøset as a unique and favorable case (Flyvbjerg, 2006; Yin, 2009). Both the scale and the aim of the project as well as the combination of actors involved are, or were at the time of initiation, unique, and thus considered sufficient basis for generalizing in this study. The case study was conducted by converging three sources of evidence (Yin, 2009), a documentation study, 11 semi-structured interviews with project stakeholders and a literature review (Blumberg et al., 2014). The documentation study includes academic papers, policy documents, newspaper articles and Internet sources. The interviewees were selected to include the most important stakeholders. Former executives in the administration, local politicians, researchers, municipality planners and independent experts familiar with the project have been included. The interviews have been a constantly evolving process. Both the questions themselves and the way of presenting them have been altered along the way with the purpose of optimizing the quality of the answers. This is taken into account when reviewing the transcripts from the interviews.

3. Theoretical Framework

Public policy exist at multiple levels of abstraction (Dror, 1983; Page, 2006; Torjman, 2005; Zwirner et al., 2008), from visions to actual measures. Public Policy measures are developed for achieving public utility (Agnihotri, 1995) by influencing societal behavior (Dolan et al., 2009; Ingram and Schneider, 1990). Policy measures in general vary among the general classification of "carrots, stick and sermons" (Bemelmans-Videc et al., 2011; Hood, 1983; Salamon and Elliott, 2002). There is no ultimate connection between problems and policy measures (Peters, 2005), though some ideologies favor certain measures (Eliadis et al., 2005). The Brøset zoning plan, perceived to be a set of such measures, is a result of a vertical policy transfer process (Dror, 1983; Shiratori, 2014; Zwirner et al., 2008) organized as a project. The perspective of analysis applied in this study is that of modern project management, accentuating projects primarily as a means to an end (Samset, 2003) with output value relative to

shareholder perspective (Klakegg, 2010; Kliem & Anderson, 2003). This view is compatible with more traditional definitions emphasizing the temporary and unique nature of project, but differs by emphasizing the larger societal process into which the project is to provide utility (Samset, 2010). Central to this idea of projects, is the importance of the long term impacts upon the project users and upon the greater societal process, in addition to the direct project output (Klakegg and Haavaldsen, 2011). Project success, in this perspective, is highly dependent on linking a project to relevant policies and addressing sustainability issues in all phases of the project (Haavaldsen et al., 2014; Lædre et al., 2012). The difference between doing things right and doing the right things is highly relevant in this context (Cooke-Davies, 2002; de Wit, 1988). As project management research is dominated by studies for optimizing project operations (Jessen, 2010), there seems to be a demand for qualitative research into strategic project development and decision-making. In order to disentangle complex projects, Samset (2003) uses the strategic, tactical and operational analytic levels for stratifying the understanding of underlying causal relations.

Sustainability, claimed to be "…in many ways a higher-level test of whether a project has been a success" (Samset, 2003:88). The terms Sustainability and Sustainable Development (SD) are extensively used and incorporate a plethora of meanings (Marshall and Toffel, 2005; Santillo, 2007), often to indicate an environmental or climate perspective (Drexhage and Murphy, 2010). The report "Our Common Future" (WCED, 1987) defines SD as development that recognizes the limited ability of the environment to support future needs in light of economic growth and social development. A modern perspective on Sustainable Development focus on the reconciliation of social, economic and environmental considerations (Gibson, 2006; Haavaldsen et al., 2014), emphasizing the interconnected nature of the "three pillars of sustainability" (Giddings et al., 2002; Strange and Bayley, 2008). The OECD, and the Norwegian Treasury, apply a definition (Finansdepertamentet, 2008) (OECD, 2010) emphasizing long term benefits, resilience to risk and the concept of net benefit. It is recognized that reconciliation of the three pillars is not compatible with a interpretation of net benefit that invites unchecked trade-offs (Bond et al., 2012; Gibson, 2006; Giddings et al., 2002). Achieving Sustainability, as perceived in this study, is about achieving objectives for long-term societal utility by considering and balancing economic, social and environmental aspects at all of the strategic, tactical and operational analytic levels.

Addressing the first research question concludes this section. The policies that justify the Brøset project are sorted by affiliation to the three analytic levels. In this study, the operational level is defined as the zoning plan policy document, the tactical level is defined at municipality government level and the strategic level is defined as national policy level. The main strategic policy, at the time, was the Norwegian Parliaments White Paper on climate policy (Regjeringen, 2007). The stated policy vision, avoiding *dangerous* climate changes, is to be achieved through the strategic objective: reducing global emissions of green house gasses (GHG). Achieving a CN society by 2050 is presented as a national ambition. CN is to be achieved through a combination of international cooperation, investing in environmental projects abroad (for optimal cost/benefit) and reducing emissions in Norway. The Brøset project is linked to the Strategic level policy through the national policy program Cities of the Future (CotF) (Trondheim kommune, 2010b). CotF was established in 2008 as a facilitator network with the purpose of exploring the potential for reducing emissions from the largest cities (Regjeringen, 2007). Representatives from the central government, the municipalities and the industry participated in CotF.

At entering the CotF network, the municipality of Trondheim signed a partnership agreement, establishing the Brøset Project as a pilot-project of the CotF program (Trondheim kommune, 2009b). The Brøset project is also a part of the municipality's Energy and Climate Action Plan (ECAP) (Trondheim kommune, 2010a). The common denominator in the CotF partnership agreement and the ECAP is the objective of developing a CN district at Brøset and thus establish a best practice for environmental urban development. The CN concept is not defined in these documents, though low climate emissions are implied. The main tactical level policy is the Planning Program document (Trondheim kommune, 2010b). The Planning Program was developed by the project group and approved by the municipality building board at the recommendation of the municipality administration (Trondheim kommune, 2010c). In this document CN is defined as localized emissions corresponding to 3 tons of CO2-equivelants per inhabitant per year. This definition was deduced from the 2°C target established by the UN/IPPC, and recognized by the strategic level policy (Regjeringen, 2007; Støa et al., 2014; UN-FCCC, 2009), based on consumption-oriented emission appraisal (Solli and Bohne, 2014). The planning program presents general objectives within five focus areas corresponding to the CotF program,

and states that measurable success indicators are to be linked to each objective. A climate emission accounting system is to be established for this purpose. By separate approval, four interdisciplinary teams were commissioned to develop parallel propositions for the zoning plan (Trondheim kommune, 2009a). The operational level policy, as defined in this study, is the Brøset zoning plan approved by the city council in 2013. The zoning plan is a legally binding document and is the basis for future development and the fulfillment of the policy.

4. Findings

Interviews with stakeholders from the project group uncovered limited interest in the strategic level policies pointed out in section 3. The Parliament White Paper seems not to have had a significant influence on the project. The CotF program was described as important for the project by providing legitimacy, and as a useful network for exchanging knowledge, but conceptual influence from CotF seems to be limited. Several interviewees claimed that the project would have managed just fine without the CotF program. The municipality planners and the researchers in cooperation were commonly pointed out as the key stakeholders. The politicians had already approved the project, and the mandate from the administration was largely to explore unknown territory. Several interviewees pointed out the UN 2°C target as the main influence on the project. The need for effective local initiatives in light of a lack of decisiveness from the central government was pointed out as justification for the project. It seems clear that the project group developed the CN objective based on the 2°C target and consumption-oriented appraisal at their own accord, and that this was backed both by the administration and the local majority politicians. As this is found to be a key decision, the implications require some elaboration. Applying a carbon footprint measurement system implies that consumption rather than production is the activity "responsible" for GHG emissions. This increases the emission intensity of the area by including the life cycle load of fuel and stationary energy consumption, and adds the life cycle load of goods and services consumed by the inhabitants, to the Brøset emission account. In effect, the Brøset area is accredited large emissions related to how the inhabitants spend their income. With this in mind, encouraging a localized and moderate life-style with low consumption became the key objective for the project. The interviewees from the project group were in all agreed that the CN definition was a key aspect of the project, though some of the planners admitted that it took some time to truly understand the implications. It was emphasized that this method illustrates the true extent of the challenges in achieving CN and that it provided a direct link to the actual problem. The project has gained a lot of attention because of its ambitious CN objective, though it is unclear whether decision-makers fully understood the implications of the objective.

The formal tactical objective of the Brøset project is to develop a CN district. However, interviews indicate that the practical interpretation of the CN objective is more as a guiding vision, and that the project has been structured towards exploring whether or not it is possible to achieve CN. Due to limitations into what can and cannot be legally enshrined in a zoning plan, the project group was unable to implement an emission appraisal system as demanded by the planning program. Thus, there is no basis for accurately evaluating how the operational level policy satisfies the tactical objective. It must be stated, however, that none of the interviews uncovered any desire, from any of the stakeholder parties, to enforce the necessary measure of control on the future population for assuring the desired effect. Rather than controlling how the inhabitants live their lives, the chosen approach was making the easiest choice the right one. The teams participating in the PC applied an appraisal system, though none of them managed to reach the 3 tons target in their propositions. Their proposals were assessed to be in the area of 7-9 tons (Miller, 2011). Interviewees from the project group stated that the CN object is not achievable within the limitations of the zoning plan format, and that additional measures implemented by monitoring programs, and a bettering of the "background economy" (technological advancement, reduced household income, etc.) are necessary supplements for achieving the CN target. However, it was argued that experiences attained from the process hold great value regardless of the final outcome. Interviewees from outside the project group showed limited understanding of what the CN objective entailed, though there was a general agreement that low emissions and pilot-effect was the purpose of the project. Several interviewees expressed a lack of belief in the zoning plan measures for reducing emissions. The presented reasons were lack of ambition and evidence-based optimizing of residential density, leading to lacking passenger basis for sustaining a satisfactory non-car transport service and suboptimal energy savings. Several interviewees outside the project group were of the opinion that the true challenge lies in exploring how high density and good quality living can be combined. Project group members stated that potential inhabitants would not want to live highly dense area, and that the proposed density is a compromise between area effectiveness and quality living. Based on the docu-

mentation study and the statements from the interviewees, the zoning plan is not perceived as radical with respect to density.

Though the term SD was familiar to all of the interviewees, they did not consistently explain it. No correlation between stakeholder affiliation and SD understanding was found. Common for most of the interviewees was a disproportionate emphasis on environmental aspects, often to the point where there seemed to be little to no difference between SD and environmental-oriented development in their understanding of the concept. Social aspects were present in most of the answers, though less often tied to the concept of SD itself. Most striking was the seemingly disregard for economic aspects of SD. The project has deliberately not included economy-oriented stakeholders (potential developers) and seemingly not prioritized economic aspects throughout the process. Though some commented that this might be a weak spot, most project group members emphasized the perceived advantages of disregarding economic thinking. That a public project without private interference would be better able to set the right priorities for public benefit was a recurrent opinion. Many considered SD to be important (at least theoretically), but three-pillar thinking has clearly not been the focus of the project. CN is seen as a manifestation of environmental sustainability, and social sustainability is seen as a necessity for achieving it.

5. Discussion

This paragraph addresses the second research question: the extent of consistency between the three different objective levels. The strategic purpose of the Brøset Project, through the CotF, is perceived to be illustrating how and how much urban development measures can reduce GHG emissions. At transfer to the tactical level however, two distinct deviations have been found. Firstly, the main tactical level objective of CN is interpreted to mean an exclusively local reduction of emissions. At the strategic level, CN is an objective to be achieved only partially through reduced emissions in Norway, and not directly tied to the CotF. Secondly, the tactical objective is based on consumption-oriented appraisal, unlike the production-oriented sectorial appraisal applied at strategic level. As described in section 4, there are arguments for applying this method, but the decision to do so seems to have no basis at the strategic level. As pointed out, the implications are quite radical. In short, the project both overreaches and redefines the problem. As reduced consumption is key, success is extremely dependent on external factors. Furthermore, tactical success is perceived less relevant in light of the strategic objective. The added complexity of consumption-oriented appraisal impedes evaluation of project performance, which impedes the learning process, which is the main strategic purpose of the project. The findings indicate that the tactical objective is not achievable by the project alone and by the measures available at the operational level. As perceived in this study, the tactical objective of CN is not in line with the strategic objective. The result seems to have seriously hampered the feasibility of the project, both by making the objective harder to achieve, extremely hard to predict and measure, and most importantly less significant and therefore relevant in light of the overall strategy. This, of course, is not how most of the stakeholders view the project. The interviews found a general perception of the project as a local initiative aiming for national and international effect and subsequent acclaim. The basis for the project seems to have been the reconciliation of political ambition for something spectacular, the academic capacity and desire for experimentation, the municipality's need for developing expertise and motivated by the pressing climate change agenda. The CN objective served this purpose well, as the project gained considerable attention and provided an unprecedented sandbox for practical learning for both researchers and municipality planners.

Achieving long-term benefits and resilience to risk towards this benefit are important component of SD. Both the interviews and the documentation study indicate that the Brøset Project favour "sermons" over "carrots and sticks" in terms of policy instruments. As a result, the environmental effect of the Brøset Project is highly dependent on the users acting as intended based on their own conscience. Consequently, the environmental impact of a materialised Brøset is highly uncertain. The objectives for social benefits seem more certain. Green areas, inclusive design and collective solutions are guaranteed by the legally enshrined zoning plan. Economic issues are a concern at present, but the zoning plan allows for substantial flexibility. This composition is somewhat ironic, given the project's environmental origins and the strong focus on environmental sustainability found among the interviewees. In terms of three-pillar reconciliation, this study finds the project to be socially sound while the environmental and economic aspects are uncertain. The findings in this study indicate a drastic lack of resilience to risk at the operational level. The operational objectives do not seem to provide reasonable probability for achieving the tactical objectives. Furthermore, as pointed out by several interviewees,

the project group has not focused on reducing risk towards the materialisation of the project. The documentation study found that risk related to the suitability of the area was extensively considered, but not risk towards the feasibility of the project. Though much of the criticism in the press seems to be undeserved, it has not been publicly addressed to any effect. Thus the bad image persists and the project is at present less politically sellable than it could have been. Several interviewees stated that one of the main dangers of delaying the project further is that people unfamiliar with the project might not implement it correctly. The operational objectives seem to promote little more long-term benefit than any other moderately dense modern residential development project. This might change with the introduction of environmental monitoring programs (as proposed in the zoning plan), but as the long-term benefits of Carbon Neutrality is seen as highly questionable, this is also uncertain.

This paragraph addresses the third research question: to what extent the Brøset Project embody SD. At the strategic level, the CotF program is a policy towards environmental sustainability that recognizes both social and economic issues as important components. At the tactical and operational levels, however, the economic aspects of sustainability seem to be missing. A paradox, given the project origins, is that the environmental effect seems to be much less certain than the social effect. The project, as understood by the project group, is not a sustainability-project per se; the objective is and has been CN. SD is not explicitly stated as an objective in any policy documents reviewed in this study and it would be unfair to evaluate it purely in that way. However, the lack of three-pillar reconciliation and resilience to risk seems to have hampered both the feasibility of the project and the probable benefits, and therefore substantially reduced its utility. A fair question would be whether CN, in this form, is complimentary to SD. The Brøset project is perceived as a trade-off situation, where economic considerations have been sidelined by social and environmental considerations. This is perhaps most obvious in the emission appraisal system used in the parallel commission, which demanded that the teams negate household economic surplus, as this would increase consumption. In other words, living at Brøset and the proposed life-style changes is not promoted by economic incentives. It is perceived that such trade-offs hampers, rather than benefits, the potential environmental impact of the project by increasing uncertainty of both the feasibility and the intended impact.

6. Conclusions

As described in this paper, several documents constitute the policy fundament for the Brøset Project. There seems to be limited consistency, however, between the different level objectives expressed in these policies. Consequently, the Brøset project seems not to represent the intended long-term benefits of the justifying policies. No other long-term benefit relevant to the strategic objectives is identified, and the both the feasibility and the environmental impact of the project seems to be highly uncertain. This indicates that the project do not promote SD, as defined in this study. It should be noted that the Brøset project is an interesting and progressive urban development project, and there are reasons to believe that the project, if materialized, will be a positive contribution both in social and environmental terms. However, as the project seems not to adhere to the strategic objective, it is seen to fail as a policy-to-project process. The CotF program seems to have been based on a bottom-up approach with limited guidance applied towards realizing the strategic objective. The project was given free reigns to explore CN, while also given status as a pilot project and thus declared legitimate in light of strategic policy. The CN tactical objective seems not to have been questioned by decision-makers, though it is not clear to what extent the implications were fully understood. The use of a network based bottom-up approach by the central government is a valid response given the circumstances, but lack of consistency between the strategic and tactical levels of policy implies a worrying lack of control. The main insight from the case study is how the stakeholders view SD and overall strategy. Though, some interviewees questioned the measures, none questioned the way the project seemingly disregards the strategic objectives. The project seems to suffer some challenges related to disregard for SD principles. However, SD does not seem to have an established role in policy-to-project processes, nether as a tool nor as an objective. It seems that spending public resources on a project without probable strategic impact is perfectly acceptable. This constitutes a major challenge for goal-oriented societal development.

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Part III: Appendixes

1 Interview guide

Innledning

Intervjuet gjennomføres is forbindelse med en masteroppgave I emnet TBA4910 Prosjektledelse ved Institutt for bygg, anlegg og Transport ved Norges teknisk-naturvitenskapelige universitet (NTNU), våren 2014.

Spørsmål

Intervjuet er strukturert i kapitler. Det er ønsket at intervjuobjektet skal snakke og tenke mest mulig selv uten at det legges for mye føringer. Objektets egen forståelse er en viktig del av studien og vurderes som viktigere enn presisjonen på svarene.

0 Intervjuobjektet

a) Fortell kort om din bakgrunn
b) Fortell om din rolle/tilknytning til Brøsetprosjektet

1 Bærekraftig utvikling

a) Hva forstår du med konseptet "bærekraftig utvikling"?
b) Hvordan mener du at Brøset representerer Bærekraftig utvikling?
c) Hvordan mener du at Brøset ikke representerer Bærekraftig utvikling?

2 Prosess-struktur

a) Hva er de viktigste elementene/faktorene I prosjektet? Hva gjør Brøset spesielt?
b) Hva er de viktigste valgene som førte til disse faktorene?
c) Hvor I prosessen mener du disse ble foretatt?
d) Hvem mener du er de viktigste interessentene I Brøsetprosjektet?
e) Hvordan mener du følgende aktører har påvirket prosjektet?
    a. NTNU/SINTEF (Forskningsprosjektet)
    b. Byplankontoret
    c. Kommunale politikere
    d. Fremtidens byer
    e. Teamene som deltok i plankonkurransen
    f. Media
    g. Etc.

3 Strategiske aspekter ved prosjektet - Samfunnsperspektiv

a) Hva mener du er hensikten med prosjektet?
b) Hvilken nytte har prosjektet for samfunnet?
    a. Økonomisk
    b. Sosialt
    c. Miljømessig
c) I hvilket tidsperspektiv er prosjektet mest nyttig?

4 Taktiske aspekter – brukerperspektiv

a) Hvem mener du er brukerne/hovedbrukerne/målgruppen av/for prosjektet?
b) Hvordan tror du disse vil bli påvirket av prosjektet? Bærekraftperspektiv?
    a. Økonomisk
    b. Sosialt
    c. Miljømessig
c) Hvilken adferd mener du er ønsket I henhold til de overordnede målene for prosjektet?
d) Hvilke virkemidler benyttes I prosjektet og hvordan stimulerer de til ønsket adferd?
e) Hvorfor ble disse virkemidlene valgt?
f) I hvilken grad er årsak-virkning kvalitetssikret for vurderte virkemidler?
g) Hvilke andre virkemidler mener du kunne bidratt til ønsket adferd?
h) Hvordan vurderer du de prioriteringene som er gjort i prosjektet? Mener du vektingen av virkemidler er hensiktsmessig?

5 Operasjonelle aspekter – operatørperspektiv (gjennomføring)

Målsetningene for Brøset er utfordret av gjeldende planstruktur i form av at de ikke ”passer inn” i formatet for områdeplan etter plan og bygningsloven. Et mottiltak til dette er diverse vedlegg som for eksempel ”miljøoppfølgingsprogrammet” som ikke er juridisk bindende.

a) Hvordan tror du den videre utviklingen vil foregå?
b) Hvilke utfordringer ser du for deg for prosjektet videre?
    a. Byråkratiske
    b. Økonomiske
    c. …
c) Hva tror du utfallet for de elementene som ikke er juridisk bindende i områdeplanen blir?

6 Målstruktur

Det første politiske utspillet relatet til Brøset er et utsagn fra byens ordfører om at “Trondheim skal bli landets ledende kommune I reduserte klimagassutslipp” (boka).
Dette ble tatt videre og I samarbeid med NTNU/SINTEF og fremtidens byer, ble Brøset utpekt I Lianerklæringen (2007) som “…en ny og fremtidsrettet bydel med lavt energiforbruk og miljøvennlig materialbruk”. Utgangspunktet for konkretiseringen av dette til 3 tonn per hode er FN/IPCCs utsagn om at en global temperaturøkning på over 2 grader vil føre til “farlige klimaendringer”. Utrykket “**karbonnøytralt**” er også benyttet i den målsetningen som finnes I planprogrammet (2010).

Videre er det definert fokusområdet (**Bydelsmiljø, Areal og transport, energi i bygninger, klimatilpasning, avfall og forbruk**).

Områdeplanen har følgende paragraf for overordnet målsetning:
2.2 “Den overordnede målsetningen for planområdet er å skape en bydel som legger til rette for en livsstil hvor hver innbygger forårsaker minst mulig utslipp av klimagasser. Målet er et utslippsnivå som er i tråd med FN´s klimapanel sine anbefalinger for å unngå farlige klimaendringer.”

a) Hvordan føler du at disse målene henger sammen?
b) Hvilke av disse målene mener du er tatt mest hensyn til?
c) I hvilken grad mener du at de gjeldende målene er realiserbare?
d) Hva ville du gjort annerledes med tanke på målstruktur?

7 Diverse

a) I hvilken grad føler du at prosjektet har blitt kvalitetssikret til nå?
b) Hvordan mener du en har oppnådd nytte for de ressursene som er benyttet I prosjektet per nå? Prosjektet i et nytte/kost-perspektiv
c) Forskjellige måter å beregne utslipp. Opphav/sektor/konsum
d) Relevansen av å ta alt med byplanlegging. Kostnadseffektivitet?

e) Forholdet ”et sted for alle” og ”livsstilsendringer mot bærekraftige samfunn”? Vil ikke folk flest ha hus med hage? Er dette en motsetning? Hvorfor ikke?
f) Er det noe mer du vil si?

2 Masterkontrakt

NTNU
Det skapende universitet

MASTERKONTRAKT
- uttak av masteroppgave

1. Studentens personalia

Etternavn, fornavn	Fødselsdato
Schjetlein, Torkil Evjemo	**03. jun 1987**
E-post	Telefon
	41929680

2. Studieopplysninger

Fakultet **Fakultet for ingeniørvitenskap og teknologi**	
Institutt **Institutt for bygg, anlegg og transport**	
Studieprogram **Bygg- og miljøteknikk**	Studieretning **Prosjektledelse**

3. Masteroppgave

Oppstartsdato **14. jan 2015**	Innleveringsfrist **10. jun 2015**
Oppgavens (foreløpige) tittel **Examining the Policy-to-project Landscape** **A project governance perspective on public policy processess**	
Oppgavetekst/Problembeskrivelse In answer to national policy regarding Climate Change, the “Brøset projects” has been initiated with the purpose of establishing a “carbon neutral” district in the city of Trondheim, Norway. Public policy initiatives are, in theory, intended to alter societal behaviour in accordance with a perception of public benefit. Projects are commonly utilized for realising said public benefits. This paper examines the threshold between public policy and projects in the Norwegian context. The transfer of objectives through various levels of goal formulation is of particular interest. This study applies a project perspective on the policy-to-project process, focusing on the interrelations between the operational, tactical and strategic objectives set for ensuring the realisation of the intended project benefits. The “Brøset project” is analysed using semi-structured open-ended interviews and a documentation study. A literature study on relevant project and public policy theory is conducted. The project is described in its current state, and assessed using the five quality criteria of the OECD; efficiency, effectiveness, impact, relevance and sustainability. Findings from the case ...	
Hovedveileder ved institutt **Professor Tore Haavaldsen**	Medveileder(e) ved institutt
Merknader **1 uke ekstra p.g.a påske.**	

4. Underskrift

Student: Jeg erklærer herved at jeg har satt meg inn i gjeldende bestemmelser for mastergradsstudiet og at jeg oppfyller kravene for adgang til å påbegynne oppgaven, herunder eventuelle praksiskrav.

Partene er gjort kjent med avtalens vilkår, samt kapitlene i studiehåndboken om generelle regler og aktuell studieplan for masterstudiet.

.....
Sted og dato

....
Student **Hovedveileder**

Originalen lagres i NTNUs elektroniske arkiv. Kopi av avtalen sendes til instituttet og studenten.