

# CHALMERS



## User Participation as an efficient work method in the construction sector

A case study of Krokslätt Fabriker Söder

*Master of Science Thesis in the Master's Programme Design and Construction Project Management*

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CHALMERS UNIVERSITY OF TECHNOLOGY  
Göteborg, Sweden 2012  
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ABSTRACT

User participation in the construction sector can be described as a work method used to involve the future users of a facility in the design process. Although there are several benefits connected to user participation in construction, the method has not yet been widely used. In order to change this, a research project aiming at developing a common method for efficient user participation in the construction sector is currently being performed in an on-going housing development. This thesis aims at describing the process of user participation in the on-going development in order to identify aspects that are of importance in achieving efficient user participation in construction. The results of the thesis can also be used as input for the research project. The thesis is mainly based on a case study including observations made during the user participation and connected project meetings in the development, as well as on interviews with involved practitioners. The study showed several factors that are important in order to achieve efficient user participation in construction which relates to the participation process itself, the overall project process and the construction industry in general. Some of these aspects were to develop a method for ensuring that a representative selection of users is performed, to schedule and perform all the steps of the participation early in the project process, to allow continuous evaluations and implementation of improvements throughout the process and to ensure a positive attitude among practitioners towards incorporating the users.

Key words: user participation, interaction, sustainable living, housings

Brukarmedverkan som en effektiv arbetsmetod i byggsektorn  
Fallstudie Krokslätts Fabriker Söder  
Examensarbete inom Design and Construction Project Management  
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## SAMMANFATTNING

Brukarmedverkan i byggbranschen kan beskrivas som en metod som används för att involvera framtida användare av en anläggning eller byggnad i dess designprocess. Trots att det finns flera fördelar kopplade till brukarmedverkan i byggsektorn så har metoden ännu inte använts i större omfattning. För att ändra detta och sprida kunskap om brukarmedverkan i branschen pågår just nu ett forskningsprojekt som syftar till att utveckla en gemensam metod för effektiv brukarmedverkan i byggsektorn. Forskningsprojektet genomförs i ett pågående bostadsprojekt och detta examensarbete syftar till att beskriva processen av brukarmedverkan i projektet samt att identifiera aspekter som är av betydelse för att uppnå en effektiv brukarmedverkan inom byggsektorn. Resultaten av examensarbetet kan också komma att användas som underlag för forskningsprojektet. Arbetet bygger huvudsakligen på en fallstudie där observationer har genomförts under brukarmedverkan och relaterade projektmöten, samt på intervjuer med projektdeltagare. Studien visade på flera faktorer som är viktiga för att uppnå en effektiv brukarmedverkan i byggsektorn, vilka relaterar till processen av medverkan, den övergripande projektprocessen samt byggbranschen i allmänhet. Några av de aspekter som identifierades var att utveckla en metod för att genomförandet av ett representativt urval av brukare, att schemalägga och utföra alla steg i processen i ett tidigt projektskede (även beslutsfattande och implementering), att genomföra kontinuerliga utvärderingar och förbättringar under hela processen samt att säkerställa en positiv attityd till brukarmedverkan bland projektdeltagarna.

Nyckelord: Brukarmedverkan, deltagande, hållbart boende, bostäder

# Contents

1	INTRODUCTION	1
1.1	Purpose and goal	2
1.1.1	Research questions	2
1.2	Methodology	2
1.3	Background to user participation in construction	3
1.3.1	Former housing projects including user participation	3
2	FRAME OF REFERENCE	5
2.1	Participation	5
2.2	Factors influencing participation	6
2.2.1	Intrapersonal factors	6
2.2.2	Interpersonal factors	6
2.2.3	Environmental factors	7
2.3	Communication	8
2.4	Selecting the group	8
2.5	The construction industry	9
2.5.1	The complex nature of construction	9
2.5.2	The phases of a construction project	10
2.6	User participation in construction	10
2.6.1	The Carpenter model	11
2.6.2	Methods for user participation	11
2.6.3	The interaction process between users and practitioners	12
3	KROKSLÄTTS FABRIKER SÖDER	14
3.1	The project	14
3.1.1	Background to the project	14
3.1.2	Prerequisites for the project execution	15
3.1.3	Organisation	15
3.1.4	Time frame	16
3.2	The user participation in the project	16
3.2.1	Aim and goal	17
3.2.2	Time frame	18
3.2.3	Budget	18
3.2.4	Organisation and actors involved	19
4	THE CASE STUDY	20
4.1	Aim and method	20
4.2	Time frame	21
4.3	Findings	21
4.3.1	Finding and selecting possible future users	21

4.3.2	Planning for interaction	22
4.3.3	The participation process	22
4.3.4	Hand-over of results	28
4.3.5	Decision making	28
4.3.6	Method development	29
4.4	The users' opinions regarding the process	29
5	DISCUSSION	31
5.1	Finding users and motivating participation	31
5.2	Early involvement	32
5.3	The participation sessions	33
5.4	Communication and coordination in the project	34
5.5	Priority in the overall project process	35
6	CONCLUSIONS	36
7	REFERENCES	37
	APPENDIX 1 - THE QUESTIONNAIRE STUDY	1

## **Preface**

This master's thesis is based on a case study of the process of user participation in an on-going housing development with focus on sustainability. The study was performed between January and May, 2012. The study was carried out at the Division of Construction Management at Chalmers University of Technology, Sweden, in collaboration with Husvärden AB, the developer of the housing. The work is intended to be used as input for a research project aiming at developing a method on how to perform efficient user participation within the construction sector. The development of the method is carried out by Husvärden AB and is financed by governmental funding from the Delegation for Sustainable Cities and by the developer.

This master's thesis has been carried out by student Emelie Heijmans with associate professor Göran Lindahl as supervisor. Cooperation has also been performed with Heidi Papillero at Husvärden AB and Johanna Engberg at White Arkitekter who were involved in the process of user participation in the studied project.

Finally, a large appreciation is directed towards everyone who has contributed to the work with this thesis.

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Emelie Heijmans



# 1 Introduction

Rapid changes in the environment and surroundings are significant features of society today, which leads to challenges for organisations. To successfully continue to meet the requirements of customers; new ways of working has to be used (Brooks et al, 2004). One work method that is becoming more frequently used in several industries today is user participation. User participation can be described as a process of incorporating and engaging a group of people, usually the future users of a product or service, in a change or design process (Granath et al, 1996, Jarl, 2001). The method is performed for various reasons, for example to achieve a design solution or service that is better adapted to the end-users needs, as a means to share knowledge, for moral aspects or for democratic reasons (Carroll and Rosson, 2007, Fröst, 2004, Ryd, 2008b). Further, there are several different ways in which user participation can be executed, such as through questionnaire studies, voting, interviews or workshops (Ryd, 2008b).

One sector in which user participation is becoming more common is the construction industry where several benefits are connected to the incorporation of users (White Arkitekter, 2011). For example, user participation in construction can lead to that the design solutions of a building or facility are better adapted to the users' needs. It can also be used to incorporate aspects regarding social sustainability in the built environment and contribute to cost savings and fewer errors during the construction phase (Fröst, 2004, Boverket, 2010, Svetoft, 2008). However, there are also challenges in performing user participation in construction. Aspects that obstruct the incorporation of users can for example be the uniqueness of every construction project, the need to incorporate the users early in the project, often years before the facility is finished and the attitudes among the involved practitioners (Winch, 2010, Svetoft, 2005). In addition, there is no common method developed on how to perform user participation within the industry. In order to change this, a construction project is currently being performed including a research project aiming at developing an efficient method for user participation that can be used within the entire construction industry (White Arkitekter, 2011).

The research project is a part of an on-going housing development in Krokslätt, Mölndal. The development has a large focus on sustainability and aims at developing new solutions that can be implemented in the built environment in order to contribute to a sustainable development. One part of this is to perform a process of user participation in order to gain input regarding the future users' needs and requirements in order for them to be able to live sustainable. The goal is therefore to involve the users to ensure that appropriate sustainable solutions are incorporated in the buildings and surroundings. By evaluating and analysing this user participation process, a method for efficient user participation that can be used throughout the entire construction industry will be developed. In order to succeed in this, governmental funding has been received from the Delegation for Sustainable Cities and a large number of practitioners from different practices are included in the project (White Arkitekter, 2011, Papillero and Engberg, 2011). This master's thesis is based on a case study of this project and can therefore also be used as input for the research project.

## **1.1 Purpose and goal**

The purpose of this master's thesis is to describe how a process of user participation can be performed in the construction industry and identifying aspects that are important in order to achieve an efficient user participation in the construction sector.

### **1.1.1 Research questions**

- How is the process of user participation performed within a construction project (the Krokslätt project)?
- Which challenges exist when performing a process of user participation in the construction industry?
- Which aspects are important to further develop in order to achieve a method for efficient user participation in the construction sector?

## **1.2 Methodology**

This master's thesis is mainly based on a case study of an on-going housing development where the process of user participation has been studied and analysed. The study is based on observations made during the user participation sessions and connected meetings held in the project. In addition, conversations with the two facilitators of the participation process and an interview with one of the project managers have also been conducted and used as input for the study. Further, a questionnaire study was performed among the participating users after the last participation session had been held, in order to review their opinions regarding the participation process. In order to provide a full picture of the aspect affecting the process of user participation in the studied project and in the construction industry in general, a literature review was also conducted including a wide spectrum of fields of research, see Chapter 2.

The thesis is based on a qualitative research approach with the case study in focus. A qualitative approach aims at identifying and determining unknown relations based on observations of occurrences or processes (Starrin and Svensson, 1994). According to Ritchie and Lewis (2003, pp.3), "qualitative research is a naturalistic, interpretive approach concerned with understanding the meanings which people attach to phenomena (actions, decisions, beliefs, values etc.) within their social worlds". This method was chosen in order to be able to analyse how a user participation processes in the construction industry could be performed as little research can be found within this field. Furthermore, the interview performed was qualitative and semi-structured. This interview method is based on open-ended questions asked in a conversational form with the aim of understanding the interviewees' point of view regarding a specific topic (Wengraf, 2001). This method was chosen in order obtain information regarding the project and the context in which the user participation process were performed, which could not have been obtained by observations.

## **1.3 Background to user participation in construction**

User participation in Swedish construction originates from the participation processes that took place in the development of workplaces during the late 1960's and early 1970's. Architects then began to take interest in involving the users in the design process of work places in order to achieve a more efficient operation. This was well in line with the spirit of the time where new laws were established, giving employees a greater ability to influence their work place and work environment (Granath et al, 1996, Lindahl, 2001). Further, the early user participation was mainly driven by three aspects; democratic reasons, quality improvements and organisational development. The process was performed through formal procedures with a large focus of following legislations and a bargaining of power between the involved actors (Granath et al, 1996). During the same period of time, Sherry Arnstein presented her ladder of citizen participation containing eight steps of different degrees of citizen involvement ranging from nonparticipation to citizen power. This further highlights the main focus of participation processes during the time, which was put on power relations (Arnstein, 1969). As the experience of performing user participation processes increased during the 1980's and 1990's, practitioners realized that the large amount of knowledge possessed by the users could be used to raise the output quality of products or services (Granath et al, 1996, Granath, 2001). Therefore, the interest in user participation increased and focus shifted from power relations to ways of sharing knowledge and incorporating the expertise of the users (Lindahl, 2001, Granath et al, 1996).

In the construction industry, projects including user participation have been performed parallel to the development described above (Olivegren, 1975, Brahme, 2008). Although, user participation has not yet had any major breakthrough in the industry and there is still a lack of a common method on how to perform efficient user participation (White Arkitekter, 2011). However, as new challenges face the industry it is becoming more important to focus on the end users and a common method for user participation is currently being developed (Egan, 1998, White Arkitekter, 2011).

### **1.3.1 Former housing projects including user participation**

One of the first housings projects in Sweden including user participation took place in Gothenburg in the early 1970's. The development was a part of a research project aiming at enhancing social aspects in the development of society and the built environment. The project involved 12 families that were actively involved in the design of their future homes and the close surroundings, together with a project group consisting of architects, a psychologist and a sociologist. The goal of the relatively small project was to test and develop new techniques for involving users in design and construction processes in order to later apply the technique on larger projects. This goal was regarded as well fulfilled after the project had been finished. The participation process also aimed at fulfilling four goals for the participants which were:

- To give the neighbours/users the possibility to get to know each other.
- To give the users the opportunity to design and take care of their own close environment.

- To give the users insights into the construction process.
- To give the users tools for continue to cooperate with each other.

(Olivegren, 1975, Smideman, 1997).

Another housing development including user participation is the Bo100 project in Malmö, see Figure 1. The project was initiated after an exhibition had taken place in Malmö in 1986, where a seminar regarding participation in construction took place. The seminar aimed at evaluating the knowledge regarding user participation as well as creating a larger interest in incorporating users in the process of design and construction. The housing project took place between 1987 and 1991 and the initial aim was to create 100 apartments in the central parts of Malmö, in cooperation with the future tenants. However, due to lack of available land, only 39 apartments were later realized. (Brahme, 2008, Liedholm, 1997, see Brahme, 2008).

The project were performed through an extensive cooperation between the municipality of Malmö, the municipality owned housing company in Malmö, the residents' association (Hyresgästföreningen) and several architects. This cooperation enabled the identification of possible users which were made based on the municipality's housing queue. After inviting people from housing queue and giving them extensive information regarding what to expect from the process and which obligations they would have if they chose to participate, a selection of the interested users could be made. This extensive selection process contributed to that all the participating users later moved in to the individually designed apartments and although some of the tenants today have moved, there has not been any problem to find new tenants and the project has been regarded as successful (Brahme, 2008, Liedholm, 1997 see Brahme, 2008).



Figure 1 Bo100 in the central parts of Malmö (www.malmo.se, 2012-04-12)

## 2 Frame of reference

*Several different aspects affect the process and outcome of user participation in the construction industry. Therefore, this chapter provides an introduction to a wide spectrum of theory related to aspects such as participative work, organisational research and the construction industry. The chapter aims at providing an understanding of the many aspects influencing the process of user participation in the construction sector and in the case study.*

### 2.1 Participation

Participation can be described as “the process of taking part in something” (MacMillan, 2007, pp.1088). However, this is a too wide definition which can include several different meanings. In order to be more precise, the level of participation can be graded based on the degree of influence the participants have, ranging from passive to active participation (Taylor, 2004). Seven main different levels of participation are described below, starting with the most passive involvement:

- *Passive participation*; participation only through receiving information.
- *Participation in information giving*; participation through providing information, i.e. through participating in surveys.
- *Participation in consultation*; participation by being consulted by experts without expecting anything in return.
- *Participation for material incentives*; participation by providing resources in exchange for receiving research results.
- *Function participation*; participation by meeting already determined objectives connected to the project, often after decisions already have been made.
- *Interactive participation*; active participation in articulating the problem, analysing it and providing conclusions regarding measures to take.
- *Self-mobilisation*; participation through self-mobilisation to achieve changes without the involvement of authorities.

(Gobo, 2008, Taylor, 2004,)

There are different ways in which participation can be performed, for example through interviews, observations, information giving, communication, exhibitions, voting, study trips, questionnaire studies or workshops (Ryd, 2008b). However, a successful participation process is not just about informing or listening to the participants, it is about getting them to participate actively and thereby influence the outcome of the project (Karlund and Karlsson, 2011). According to Taylor (2004) active participation is often based on a dialogue between different participants where diverse perspectives are discussed and valued. Through this process of sharing knowledge, new solutions and a wider perspective on different issues can be developed (Fröst, 2004).

Active participation can for example be performed through two common techniques; workshops and focus groups. Workshop is a method of sharing knowledge, experiences and ideas between different participants through exercises and discussions. This method allows new and better adapted solutions to be developed during problem solving exercises where the different participants' needs are highlighted (Fröst, 2004). Workshops can also bring other benefits to the process such as building trust, foster relations and enhancing communication (Project Management Institute, 2008). Focus groups, on the other hand, are a form of group interview where 6-10 people participate. The aim is to get the participants to share and discuss their opinions and attitudes regarding a pre-determined topic. The session is led by a facilitator and often has the aim of providing information for research or for market surveys. (Wibeck, 2010).

## **2.2 Factors influencing participation**

When performing a process based on the participation of different individuals, several factors influence the process and the outcome (Wibeck, 2010). According to Wibeck (2010), important aspects in participation are intrapersonal, interpersonal and environmental factors, which are described in this section.

### **2.2.1 Intrapersonal factors**

Intrapersonal factors could be defined as factors describing individuals such as personality, appearance, age and gender (Wibeck, 2010). According to Wibeck (2010) these factors affect how different people act in a group environment and how and to what extent they can influence the group. The intrapersonal factors often contribute to difficulties and inefficiency during the interaction process due to the different personalities and wills of the participants. These difficulties are likely to occur mainly in the initial stages and diminish when the group becomes more familiar with each other. Although, the intrapersonal differences could also be positive for a participation process as people with different knowledge, experiences and skills can enrich the process and higher the output quality. (Eklund, 2011).

### **2.2.2 Interpersonal factors**

Interpersonal factors refer to the interaction between individuals in a group (Wibeck, 2010). To perform a collective process in a group of different people can provide several benefits, but it can also bring unwanted behaviour that aggravates the process and lower the outcome (Clegg et al, 2009). Some examples of different behaviour that can occur during collective processes are group conformity, group cohesion, group thinking, social facilitation and social loafing (Clegg et al, 2009, Svedberg, 1992, see Wibeck, 2010).

#### **Group conformity**

Conformity can be described as “a behaviour that is acceptable because it is similar to the behaviour of everyone else” (MacMillan, 2007, pp.308). The most famous example of group conformity is the experiment performed by Solomon Asch in 1955. The experiment included a group of six people who were assigned to answer questions in a group environment. Five of the participants had been told in advance to

pick a certain alternative to a question that was clearly wrong. The sixth unknowing individual was asked to answer the same question as the rest of the group, but after that all the other participants had given the same wrong answer. The result of this experiment showed that the unknowing individual gave the same answer as the rest of the group members in one third of the cases, although it was clearly the wrong alternative (Clegg et al, 2009). This example show how individuals in a group environment can be influenced by the group and conform to the accepted behaviour.

### **Group cohesion and group thinking**

Another behaviour that can occur in a group environment is group cohesion which can be described as the degree of connection the participants feel to the group or the degree of longing to be a part of the group. The level of cohesion is mainly based on similarities in intrapersonal factors among the participants and affects the members' willingness to participate in the collective process. However, too much group cohesion is not to strive for as it can discourage ideas outside the accepted sphere of the group and lead to group thinking. (Svedberg, 1992, see Wibeck, 2010).

The concept of group thinking can be used to describe why a group of smart people sometimes make very bad decisions. This is likely to occur due to a strong culture in a group where opinions outside the common believes are not raised in order to keep the harmony in the group. (Clegg et al, 2009). Group thinking can lead to several consequences such as:

- The solutions discussed are limited and important solutions can therefore be missed.
- The majority decision is often accepted without further investigation.
- Previous dismissed alternatives are not discussed again.
- Expert opinions are not valued high.
- The collection and evaluation of information is very selective.
- If decisions have been made, alternative scenarios are ignored.

(Janis, 1972)

### **Social facilitation and social loafing**

Social facilitation and social loafing are two concepts describing opposite behaviour that can occur in a group environment (Clegg et al, 2009). Social facilitation is a term describing the fact that people often perform better when they are being watched by other people, i.e. when they are in a group environment (Zajonc, 1965). The opposite of social facilitation is social loafing which can be used to explain the fact that some group members perform poorly in a group environment (Clegg et al, 2009). This mainly occurs due to the fact that people feel that their non-effort will not be notices as other people will take responsibility of performing the task (Harkins and Szymanski, 1989, see Clegg et al, 2009).

### **2.2.3 Environmental factors**

Environmental factors also have an influence on the participation process and the outcome of it. For example, research has revealed that groups executing a task in a small room experience a more intense collaboration than groups performing the same task in a larger room (Stewart et al, 2007, see Wibeck 2010). How the room is furnished also affect how the different members interact with each other, for example

round tables encourage and enable more interaction than square tables and if work in smaller groups is performed, the premises ought to allow this, for example by incorporating several small work places (Wibeck, 2010). Other factors such as air quality and noise level also affect the performance of the group (Eklund, 2011).

## **2.3 Communication**

According to Eklund (2011), a participation process is highly dependent on the participants' ability to communicate with each other. The word Communication originates from the Greek word "Communicare" which means "to do something in common" (Larsson, 2001). If consulting a dictionary, communication is described as: "the process of giving information or of making emotions or ideas known to someone" (MacMillan, 2007, pp.294). Two distinct meanings of the word communication can therefore be identified; to share ideas or attitudes, or to perform a collective process.

Communication involves at least two persons; a sender who is transmitting a message and a receiver who is interpreting it (Ryd, 2008a). According to Clegg et al (2009), the communication process is complex and connected to several different meanings and interpretations which are dependent on the sender's and receiver's attitudes towards each other and the subject discussed. Further, the communication between individuals, also referred to as dyadic communication, is based upon a mutual dependency where the behaviour of one person is dependent on the other (Clegg et al, 2009). How the message is interpreted is therefore affected by several factors such as, body language, voice level, age and gender of the sender as well as the receiver's frame of reference, previous experience and preconceptions (Ryd, 2008a).

Communication can occur at different levels based on the degree of personal and social involvement (Clegg et al, 2009). In small groups the communication is highly affected by the culture of the group and on the different roles that the members possess. It is also dependent on the development of sub-groups and peer pressure. (Littlejohn, 1983). In larger groups, such as organisations, the communication is also based on recurring patterns of behaviours developed as a result of shared understandings and implicit rules among the members (Littlejohn, 1983).

## **2.4 Selecting the group**

When putting together a group of different individuals several aspects affect the efficiency and result of the group, for example the size of the group and the diversity of individuals (Eklund, 2011). There are several different opinions regarding how large a group should be in order to be able to work the most efficiently (Wibeck, 2010). According to Eklund (2011) a group including more than 10 members risks to develop sub-groups or to lose efficiency. Others argue that no more than four members ought to participate in order to keep the group members active in the conversations and discussions (Dunbar 1997, see Wibeck, 2010). In addition, the larger the group becomes, the smaller the influence of the participants gets and the physical distance between them increases (Wibeck, 2010). If the group is homogeneous, i.e. the intrapersonal factors of the participants are similar; the information exchange is likely to be smoother. On the other hand, if the group is heterogeneous, diverse opinions and attitudes are more likely to be detected and unwanted behaviour such as group thinking is less likely to occur (Wibeck, 2010).

The process of selecting a group of people can be performed in different ways, four statistical sampling methods have been identified and are described below:

- *Random sample*; based on a random selection within a studied population.
- *Systematic sample*; starts with a randomly selected element and thereafter a sample is chosen according to a pre-determined scheme, i.e. every tenth element from the first random selection.
- *Stratified sample*; is based on a selection process performed within different sub-groups of a studied population. The sub-groups are divided based on similarities in characteristics and the selection in this group could either be random or systematic.
- *Cluster sample*; is a method of clustering small groups based on diversity in characteristics in order for the smaller groups to represent the large population. A random selection is thereafter made in one or more of the clusters.

(Westfall, 2009).

## **2.5 The construction industry**

When performing user participation within the construction industry, features of the sector are also likely to affect the process. Therefore, some main characteristics of the construction industry are described in this section.

### **2.5.1 The complex nature of construction**

One significant feature of the construction industry is the complex nature that can be found throughout a construction project. For example, the industry contains a project based structure where every project has its unique features and specific set of practitioners involved (Winch, 2010). Further, the involved practitioners, such as architects, engineers and the owner, have different needs in the project which provides major challenges in being able to satisfy all diverse needs and wishes (Pemsel et al, 2009, Ryd, 2008a). The needs of the different actors might also be in conflict with each other or change during the project which further adds difficulties in managing the different interests in the process (Svetoft, 2005). Another aspect that contributes to difficulties in the sector is the rapid changes in the environment that can cause the prerequisites of the project or the clients' needs to change during the construction process (Fröst, 2004). In addition, a large framework of legislations regulates the industry such as: national legal systems, zoning regulations, construction regulations, labor market regulations and procurement policies (Winch, 2010). Aspects that further contribute to the complexity of the industry are:

- Almost all construction projects are custom designed and require several years to complete which adds complexity and uncertainty to the process.
- Due to the uniqueness of every site, the project is affected by several local characteristics such as weather conditions, local regulations, culture, etc.
- A building or facility has a long life time, making it hard to anticipate future occurrences that might take place years ahead.
- Due to changes in the environment, changes in the design during the process are common and costly.

(Project Management Institute, 2008).

## 2.5.2 The phases of a construction project

A construction project contains several different phases where different tasks are performed and different people are involved. According to Sutt (2011), a construction project contains phases such as preparation, procurement, design, preparation for construction, construction itself, handover and implementation. These can roughly be divided into four different phases: briefing, design, construction and facilities management, see Figure 2 (Hansson et al, 2010).

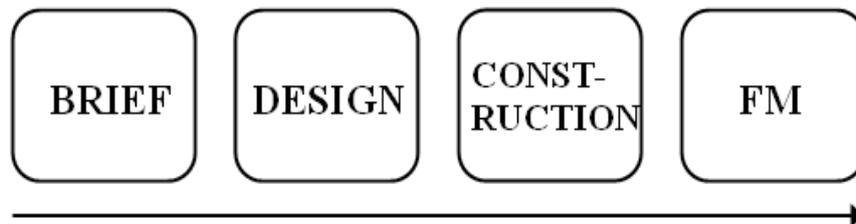


Figure 2 The phases of a construction project (Hansson et al, 2010).

The early phases in a design and construction project are of great importance for the outcome of the project as the main prerequisites are determined and important decisions are made (Ryd, 2008a). The early phases could be defined as the processes taking place before the construction starts, in other words, the brief and design (Ryd, 2008). The brief is a document aiming at describing and analyzing the impact of different aspects in the facility such as cost, quality, functionality and aesthetics, and should be based on the clients' requirements (Pemsel et al, 2009). The design solutions of the facility are thereafter established during the design phase and are based on the needs and requirements expressed in the brief (Nordstrand, 2007). After the early phases have been finished, the construction phase takes place where the established design solutions are realized into a finished facility. After the facility is finished, it is handed over to the client and the phase of facility management, FM, takes place, which could be described as the process of maintenance and takes place throughout the lifetime of the facility (Jensen, 2008, Nordstrand, 2007).

## 2.6 User participation in construction

Traditionally, the design solution of a building or facility is established during cooperation between various practitioners such as architects and engineers. However, the design is therefore based on the experiences and ideas of the practitioners and not on the actual needs of the users (Ryd, 2008a). By including the users in the establishment of the design solution, i.e. performing a process of user participation, several benefits can be achieved. For example, the building can be better adapted to the users' actual needs rather than the beliefs of the practitioners (Svetoft, 2008). A better adjusted design solution is also likely to lead to that tenants experience an increased level of satisfaction with their accommodation which brings benefits such as tenants stay longer in the building and take better care of it and the surroundings, leading to cost savings for the landlord. (Boverkett, 2010, Svetoft, 2008). Involving the users can also lead to fewer faults in the finished building, primarily due to more carefully prepared design solutions (Fröst, 2004, Svetoft, 2008). Another positive

feature of involving the end-users in construction is to promote the development of social sustainability in the built environment (Svetoft, 2008). In addition, by incorporating a wide variety of users, different kinds of people and needs are represented leading to a design that are able to satisfy diverse needs and is therefore better adjusted to the market (Kristensson et al, 2007).

### 2.6.1 The Carpenter model

According to Åhlström (2001), user participation within design and construction is part of two different processes, the participation process itself and the overall project process. The Carpenter model can be used to visualize the involvement of end-users and the connection to the rest of the project process, see Figure 3.

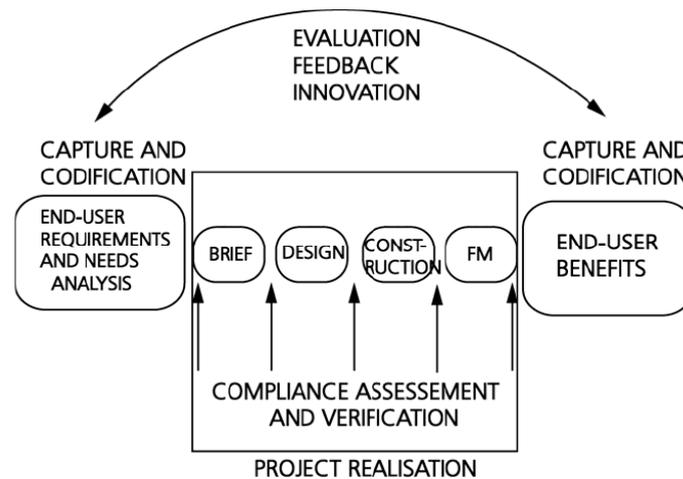


Figure 3 The Carpenter's model (Hansson et al, 2010)

According to the Carpenter model in Figure 3, the users ought to be involved early in the construction project, before the brief and design is established, as mentioned in Chapter 2.5.2. Further, the model highlights the importance of feedback and evaluation of the experiences made in the project in order for improvements to be made (Hansson et al, 2010). Evaluation is necessary in order to explore how well the requirements of the end-users were met. In order to get a full picture of the process, it is important that all the participants are given the opportunity to reflect and express how they experienced the participation session (Eklund, 2011).

### 2.6.2 Methods for user participation

There are several techniques that could be used within the construction sector to involve the end-users in the early phases and to collect information regarding their needs such as:

- *Interviews*; are used to collect information directly by talking to the stakeholders or users.
- *Focus groups*; are a form of collective interview based on a conversational session monitored by a facilitator. It is used to collect a group of people's attitudes and expectations regarding a certain topic.
- *Facilitated Workshop*; is a form of collective process which brings together cross functional key stakeholders in the project in order to discuss different users' requirements, see Figure 4.

- *Questionnaires and surveys*; are used to collect the opinions of a large group of people and where a quick response is needed.
- *Observations*; can be used when the users have difficulties in expressing their needs.

(Project Management Institute, 2008).

However, as mentioned in Chapter 2.1, active user participation such as through workshops or focus groups is to strive for. In design and construction, there are several concepts describing an active involvement of the users such as design dialogues, collaborative design and participatory design (Ryd 2008b). These methods are based on participative work between different stakeholders such as users and practitioners, mainly architects. The sessions often have the form of workshops and the aim of developing new and appropriate design solutions that satisfy the users' needs. This is done through different exercises and discussions where important issues are highlighted and solutions are discussed (Fröst, 2004).



Figure 4 Illustration of a workshop session (Hellquist Forss, 2011).

### 2.6.3 The interaction process between users and practitioners

Several different actors are involved in the process of user participation within construction such as the future users, the architect and the facilitator. During the interaction process, challenges can occur due to differences in skills, knowledge, position and attitudes (Svetoft, 2005). One major challenge in participative work between people with different knowledge and experiences is to create a common language understandable for all participants (Granath, 2001). This is especially important in fields where practitioners have developed their own concepts and language, such as in construction. In order to overcome this, different tools that enable the development of a common understanding in the group could be used such as drawings, models or computer programs (Fröst, 2004).

During the user participation process in construction, the users are the experts on how they use a facility or buildings and their main role is to communicate this knowledge (Fröst, 2004). However, this might be a challenging task as the users can have problems in communicating or even identifying their needs (Granath, 2001). Further, the users often lack knowledge of the construction industry and the special features affecting a construction project. This lack of knowledge can lead to a lack of understanding of the connection between costs and demands and therefore lead to unrealistic expectations (Svetoft, 2005).

The main role of the architect during the participation process is to collect and translate the needs and wishes of the users and implement them into the project (Fröst, 2004, Svetoft, 2008). This means that the architect has two roles, both the artistic role of creating a building design that satisfy the users' needs and a social role with focus on interaction with the users. However, these two roles can sometimes conflict as architects often quickly create a vision of the design solution which in turn can affect their interpretation of the users' wishes. (Granath, 2001). The attitudes among architects towards incorporating the users in the design process can also be an obstacle as some architects feel reluctant to involve the users in their artistic process (Svetoft, 2005). In addition, it is important that the designing architects are present during the participation process due to the fact that much information and the context of it could be lost when it is transferred between different people (Svetoft, 2005).

The facilitation of the collective process is also vital in order to achieve a successful participation and interaction (Taylor, 2004). The facilitator is the leader of the participation sessions and can have various backgrounds. To achieve a positive process, it is important that the facilitator have enough social skills in order to be able to manage the different individuals and professionals that participate, both to avoid conflicts or unwanted behaviour but also to enable each participant to contribute with his or hers unique knowledge and skills. (Eklund, 2011, Smideman, 1997). To achieve a process where every participant is able to contribute it is important to have established techniques for cooperation and decision making from the start, otherwise there is a risk that the more communicative participants rule the meeting (Smideman, 1997).

## 3 Krokslätt Fabriker Söder

*The aim of this chapter is to provide background information regarding the studied project and the process of user participation in the project. The chapter is based on texts regarding the project, provided by the developer; see White Arkitekter, 2011, Papillero and Engberg, 2011.*

### 3.1 The project

In the area of Krokslätt Fabriker Söder in the city of Mölndal, a new sustainable city district is about to be developed by a privately owned small property developer and manager. Today, the area consists of old mill buildings from the late 19<sup>th</sup> century which have been refurbished and are now incorporating 80 different companies. In this area 200 new apartments with three different letting forms will be integrated and create a new city district. The vision of the development is to achieve an international role model of a city district offering the residents a sustainable lifestyle. In order to achieve this, a large focus is put on creating an area that is sustainable based on the three aspects of sustainability; ecologic, economic and social sustainability. For example, all the new buildings will be certified according to the highest standard of Green Building, which put requirements on a low energy consumption. In addition, a large focus will be directed towards developing and incorporating new sustainable solutions in order to achieve a built environment with a small ecological footprint. This also provides the opportunity to test new solutions in a full scale. To be able to execute this, five different development areas have been established in which new solutions will be developed. These are:

- Energy-smart systems
- Climate-adapted architecture
- Water and vegetation
- Sustainable mobility
- User participation

#### 3.1.1 Background to the project

The project was initiated in 2009, after the developer had developed an office building with high environmental standards in the same area. That project was initiated when a large client contacted the company requesting an office building with the best possible environmental standards. The developer, who already had a large interest in issues regarding sustainability and was a member of the Swedish Green Building Council, saw this project as an opportunity to further develop knowledge in the field of building sustainable. The development led to that the detail plan for the area was altered and a possibility to expand with additional buildings appeared. As the office building with its high environmental standards became very successful, the idea to further develop the area with a large sustainable focus was born.<sup>1</sup>

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<sup>1</sup> Lage Persson, Project Manager Husvärden AB. Interviewed 2012-03-08

### 3.1.2 Prerequisites for the project execution

To be able to execute the project, a large cooperation with different practitioners and fields of practice is performed, such as the public sector, the business world, education and research. For example, all the five development areas include consultants with special knowledge in that specific field. In addition to developing new sustainable solutions, the cooperation also aims at enabling the spread of the knowledge gained during the project, both national and international. Furthermore, the project is a part of Mistra Urban Futures which is a centre for sustainable urban development in the region of Västra Götaland, offering knowledge and innovative sustainable solutions.

In order for the relatively small company to realise the great ambition of a new sustainable city district, governmental funding has been received from The Delegation for Sustainable Cities, which is a governmentally appointed delegation distributing funding to promote the development of a sustainable built environment. An initial 2 million SEK were received in 2009 for planning of the project and in 2010 an additional contribution of almost 18 million SEK was received for the development of new sustainable solutions.

### 3.1.3 Organisation

The development contains two parallel processes, the traditional construction process and the development of new solutions within the five different development areas. In charge of this work is the developer who is responsible for coordinating the two parallel processes and to make decisions regarding which solutions to incorporate in the project. Representing the developer in this task is a steering committee put together by the company's CEO, three managers from the company and one project manager who have been hired specific for this project. The construction process is performed in a traditional manner and will therefore not be described any further. The organisation of the development of new solutions in the five different development areas is displayed in Figure 5.

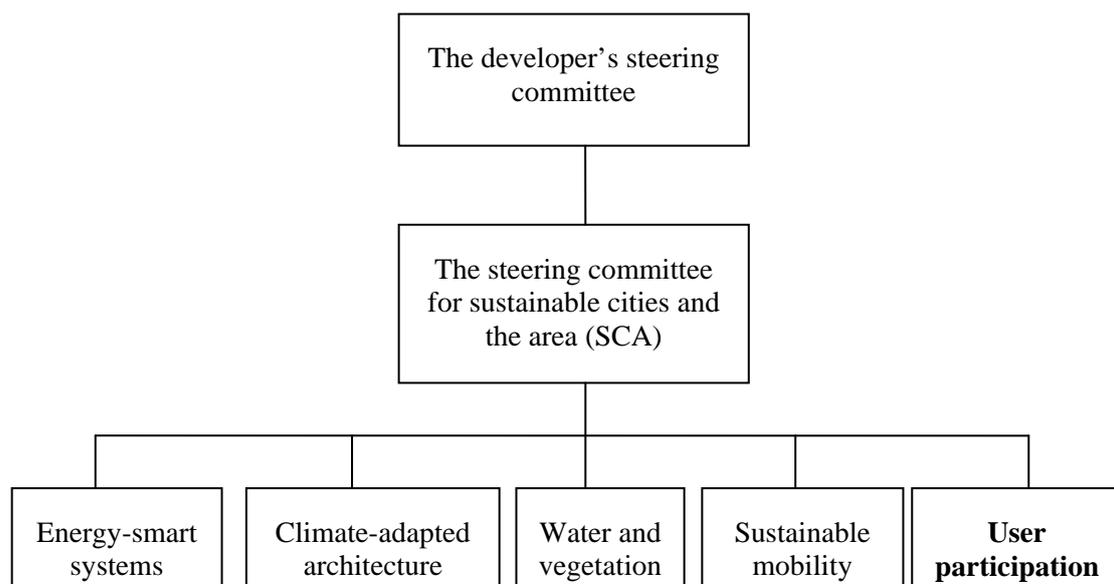


Figure 5 The organisation of the project with the different development areas

At the bottom of Figure 5, the five different development areas are illustrated. These include a large number of different actors from a variety of sectors such as the municipality, education, research and the business world. The different development areas are responsible for managing timeframes, keeping budget, to report deviations from the schedule and to make sure that the determined goals are reached. To be able to manage this work, a consultant is responsible for each of the five development areas whose responsibilities are to coordinate the development area with the rest of the project. These consultants are also part of the steering committee for sustainable cities and area (SCA). The Steering committee SCA's main tasks are to organise and coordinate the five different development areas and to report results, providing evaluations and to raise questions regarding financing and strategic decisions to the developer's steering committee. Except from the consultants responsible for the different developing areas, the steering committee SCA also includes two representatives from the developer and the overall project manager hired for the development. The developer's steering committee, see the top of Figure 5, is thereafter in charge of making the final decisions on what to incorporate in the project and is responsible for providing the architects and others with this information.

### 3.1.4 Time frame

The project was initiated in the beginning 2010, after funding had been received for initial planning in 2009, and is scheduled to be finished in late 2014. The schedule of each of the different activities is displayed in Figure 6 below.

2010				2011				2012				2013				2014							
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Application				Coordination and planning, Steering Committee Sustainable Cities and Area																			
				Detail plan																			
								Cooperation with municipalities and incorporation of users															
				Performance of work in the developing areas																			
				Layout design																			
				Construction																			

Figure 6 Schedule of the different activities in the project

## 3.2 The user participation in the project

User participation is one of the five different development areas in the project, mentioned in Chapter 3.1. This section provides information regarding the aim, goal, time frame, budget and the organisation of the process of user participation in the project. The chapter is based on the investigation of the user participation made in the project before it started; see Papillero and Engberg (2011).

### 3.2.1 Aim and goal

The overall aim of the user participation process in the Krokslätt project is to develop a method for efficient user participation that can be used within the construction industry. This will be performed by analysing, evaluating and continuously improving the process of user participation that is performed in the project. Therefore, the aim of the user participation could also be claimed to be to incorporate the future users of the apartments in order to collect input for the design solutions regarding features that the users see as important in order to be able to live sustainable in an easy manner. This input will be used in the design of the indoor and outdoor environment and the available services in the area. The focus of this process is not on the design solutions of the apartments as such, but rather on how the area can be designed in order to provide the possibilities to live sustainable. The two aims and their relation to the project are illustrated in Figure 7.

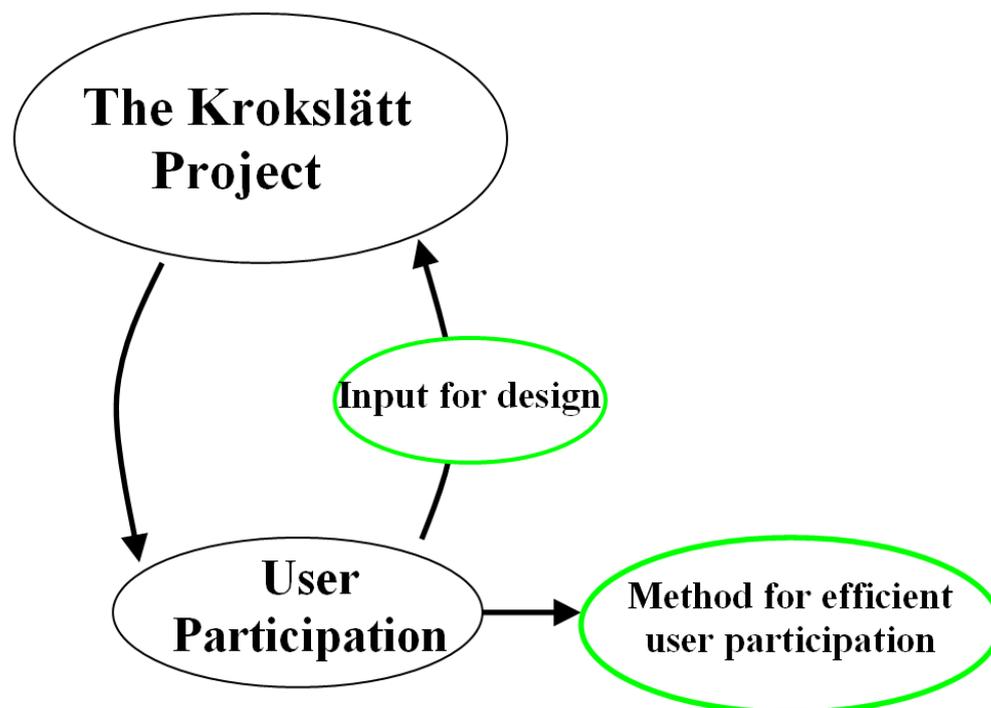


Figure 7 The aims of the user participation process (marked in green) and the relation to the rest of the project.

To achieve the aims of the participation process several goals have been established which are described in Table 1 below.

Table 1 The goals of the user participation in Krokslätts Fabriker Söder.

Ecological sustainability	Economic sustainability	Social sustainability
Methods for valuing ecological aspects.	<i>Efficient method for user participation.</i>	Anchoring the project with the existing and future users.
Reduced impact on natural resources through the behaviour of the users.	Common use of resources for better economy.	A better understanding and communication between the parties involved.
		Better communication and smarter solutions for people living and working in the area.

### 3.2.2 Time frame

According to the overall time frame of the project displayed in Figure 6 in Chapter 3.1.4, the user participation is scheduled to start in the last quarter of 2011 and continue during the whole project process. The first step of this process is to find and select users to incorporate in the project and to design the participation sessions. This will be performed during the last quarter of 2011. The second step is to perform the first phase of the participation, including 4 sessions which are scheduled to take place during the first quarter of 2012. The aim is then to continue the cooperation with the user group throughout the project process but the method for this is not yet decided due to the fact that the process is being evaluated and developed continuously. After evaluating the first sessions, appropriate actions for further user participation will be decided.

### 3.2.3 Budget

The costs of performing the user participation in the project will be due to the additional time spent for planning, performing the participation and evaluating the process. No further investments than in a project without user participation will be needed. Although, additional investments must be allowed for follow-up in order to see how well the aim and goals were met.

The calculated cost for the participation is approximately 1 430 000 SEK whereof 30% will be financed by the funding received from the Delegation for Sustainable Cities and 70 % will be financed by the developer. However, according to past experience, fewer faults in the finished buildings are to be expected when allowing more time in the early phases of the projects, contributing to cost savings in the project.

### **3.2.4 Organisation and actors involved**

As the user participation is one of the five development areas in the project, the overall organisation which can be seen in Figure 5 in Chapter 3.1.3, applies when it comes to the connection to the rest of the project. The participation process is managed and coordinated by a consulting architect who also is a part of the Steering committee SCA where she is responsible for coordinating all the sustainable work in the different developing areas in the project. Her responsibility during the participation process is to plan and design the sessions and facilitate them in order to achieve the aim and goals of the user participation, see Table 1. She is also responsible for managing timeframes, keeping budget and to report any deviations.

In the participation process a representative from the developer is also present who is mainly responsible for the sales of the apartments. Her role during the participation process is to assist the consulting architect in the planning and managing of the sessions. Further, she is also responsible for the practicalities of the process such as ordering food, booking the premise for the meetings and contacting the users.

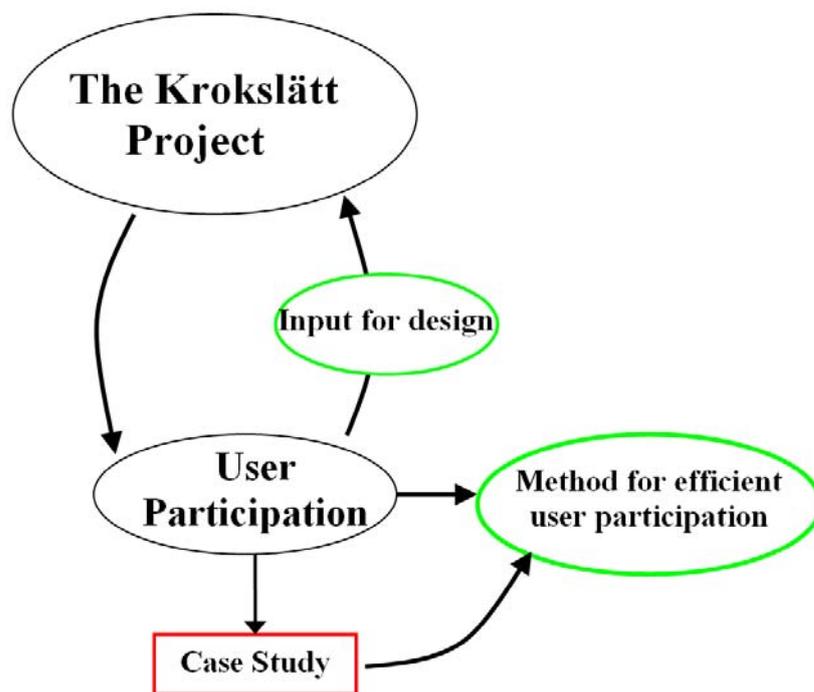
In the participation process, a group of possible future users will also be participating whose tasks are to communicate and discuss their ideas and thoughts regarding sustainable living in the area, within the themes of the different sessions.

## 4 The case study

*This chapter presents the aim, method and time frame of the case study that was performed in the Krokslätt project and the findings made during this study.*

### 4.1 Aim and method

The aim of the case study presented in this thesis is to describe the process of user participation in the Krokslätt project and to identify aspects that are important to focus on in order to achieve an efficient process of user participation. Further, the aim of the study is also to be used as input for the method development in the research project performed by the developer, see Figure 8.



*Figure 8 The relation of the case study to the rest of the project and the user participation process.*

The method used in the case study is primarily based on observations made of the participation process and connected project meetings. Several conversations have also been held with the two facilitators of the participation and an interview was performed with one of the project managers to collect background information of the project and the process of user participation. Further, a questionnaire study was also performed among the participating users in order to collect their thoughts and opinions regarding the process.

## 4.2 Time frame

The case study was performed during the two first quarters of 2012, between January and May. This period included the first phase of user participation scheduled in the project, containing 4 participation sessions, see Figure 9. However, in order to provide a full picture of the participation process, the planning and selection of the users that took place during the last quarter of 2011 is also described.

2010				2011				2012				2013				2014			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Project																			
								User participation											
								Case Study											

Figure 9 The time frame of the user participation and case study of the Krokslätt project.

## 4.3 Findings

This chapter presents the main findings made during the case study of the user participation in Krokslätt. The findings are described in chronological order of when they occurred in the project.

### 4.3.1 Finding and selecting possible future users

In order for the user participation sessions to be performed, a group of possible future users needed to be identified. The developer's representative was assigned this task when she started at the company in August 2011. As there was no record established of possible future users, she created a web-page of the project where people could express their interest in living in the area. On this web-page a questionnaire study regarding sustainable living was also added which the interested people could participate in. From the group of interested people that participated in the questionnaire study, the developer's representative began to select candidates for the participation process. The goal was to achieve a group of approximately 20 people who would represent a diversity of the people interested in the project.

The developer's representative performed the selection process by analysing the interested people based on family situation, age, current accommodation, wanted letting form and size of apartment. Thereafter, she began to contact the people she had selected in order to get them to participate in the user group. However, this process proved to be difficult as most of the people she contacted did not want to spend the time and effort required for the participation. Especially hard was it to motivate people in the age of 31-50 with children to participate, which were the largest interested group in the project. This obstacle led to that the final user group did not fully meet the diversity of people that was intended from the beginning and that it became smaller than wanted as only 10 people participated instead of 20.

### **4.3.2 Planning for interaction**

Before the design of the sessions could be decided, the method and the content needed to be established. This process was performed by the consulting architect and the developer's representative who together discussed the aim and goal of the sessions and thereby came up with four different appropriate themes for the sessions. As the consulting architect had previous experience in holding workshops, this method was chosen for the participation process. The exercises for the sessions were chosen by the consulting architect from an "exercise guide" developed by the architect's firm containing suggestions of different exercises to use and when they ought to be used. In addition to this, material from a course in how to perform workshops that the architect previously had participated in was also used. Before each workshop, the consulting architect and the developer's representative met in order to go through the selected exercise and decide the agenda for the coming workshop.

### **4.3.3 The participation process**

The participation process in the project took place between January and March, 2012, when the project was in the design phases, meaning that the general layout for the buildings had already been set but the final design had not yet been decided. The process included four workshop sessions held at evenings between 5.30 and 8.00 pm at weekdays. At the sessions, 10 possible future users that had been selected and contacted based on their application of interest in living in the area at the project's web page were present.

The three first sessions were held at Idélabbet which is situated in a building next to the site of the new development, containing a small exhibition with a model of the existing area and the planned new buildings and posters of the different development areas. Except the small exhibition, Idélabbet also contains a medium sized meeting room and some smaller rooms, a kitchen area, office rooms where managers of the project have their work places and a lecture room. The fourth and last meeting was held at Ekocentrum, which is a learning platform and inspiration of sustainable solutions providing lectures and an exhibition regarding sustainable solutions (Ekocentrum, 2012). During the sessions different exercises and discussions were performed within different themes for each session and with focus on sustainability. The themes covered during the four sessions were:

1. Sustainability in general
2. Common indoor spaces
3. Common outdoor spaces
4. Service

After each workshop a follow-up meeting was held in order to evaluate the session and compile the results of the discussions held by the users. These meetings included the consulting architect and the developer's representative which evaluated and discussed the process in terms of how well the sessions were managed and how the exercises were performed. In addition, other observations made during the sessions of factors that could be improved in order to make the process more efficient for the coming sessions were also discussed. A document with the main requirements and wishes of the users as well as how important they regarded them to be was prepared at each follow-up meeting and was sent to the overall manager of the project.

## Workshop 1

The first workshop session began with all the participants introducing themselves to the rest of the group in order for the participants to get to know each other. After that a short introduction of the project, including the main layout of the area and the buildings, took place. The reason for performing user participation in the project and the aim of the process were also explained before the first exercise began.

### Exercise 1

The first exercise was to choose a picture that represents sustainability for the users. For this exercise several pictures were arranged at the table in the meeting room and the participants could choose freely out of these, see Figures 10 and 11. Some aspects that the users regarded as sustainable during this exercise were locally produced food, renewable energy sources and the importance of nature in the close environment to the home.



*Figure 10 and 11 Pictures of exercise 1 during the first workshop*

### Exercise 2

During the second exercise, the group was divided into two smaller groups which got the task to brainstorm factors that they believe limits the possibilities for sustainable living. A large piece of paper was handed to the groups where the ideas should be written down. One group got the task of focusing on ecological sustainability and the other got the focus of social sustainability. However, both of the groups had a rather hard time coming up with ideas within the field of the exercise and the consulting architect had to stimulate their work by suggesting different fields to discuss. In addition, several of the participants did not understand the aim of the exercise which led to that they steered the group into discussions outside the topic.

### Exercise 3

The third exercise was to find solutions to the factors identified in exercise 2, which obstruct a sustainable living. The solutions were assigned to be written on post-it notes and put on the large piece of paper from the previous exercise. This task was easier for the participants to perform as some solutions had already been discussed at the previous exercise.

After the last exercise was finished a short wrap up of the session was held where the participants requested to get updated regarding the project, i.e. through e-mails with newsletters.

### **Follow-up meeting**

During the follow-up meeting the different ideas discussed at the first workshop was compiled. An example of two interesting aspects that were discussed during the workshop were the importance of having a solution for storing different materials for recycling in separated bins in the apartment and the possibility to have smaller fridges if a larder is installed.

Areas of improvements for the next session were also discussed. For example, some of the participants showed anxiety in not having much knowledge regarding sustainability and therefore felt that they were not able to “say the right things”. This highlighted the need to be clearer regarding what is expected from the users in the coming sessions. Furthermore, several of the participants were not used to the method of working with different exercises which lead to that they had problems in coming up with ideas to discuss. Therefore, it was decided to provide some inspiration in the beginning of each of the next sessions to stimulate the participants to come up with ideas and to take part in the discussions. The importance of communication was also observed during the first workshop as some of the participants did not understand the aim of the exercises. For this reason, it was decided that the exercises should be put on the PowerPoint presentation in order for the participants to be able read it again if they did not understand it or forgot it during the session.

## **Workshop 2**

The second workshop had the theme of common indoor spaces and began with a repetition of the introduction held last time in order to remind the users of the project and the aim with the user participation. The expectations on the participants was also described as a result of the insecurity that some participants had shown the previous sessions of what they should contribute with. The results from the last workshop were also briefly presented.

### **Exercise 1**

The first exercise of the second workshop was to brainstorm as many ideas as possible regarding common indoor spaces during 15 minutes where the one with the most ideas would be rewarded a small price. The participants were divided into pairs based on the neighbour next to them at the table and post-it notes were distributed among the pairs. Before the exercise began, the architect also gave examples of possible common indoor spaces to inspire the participants.

To get some privacy, the pairs spread out in the different parts of Idélabbet. However, due to the fact that they were in different rooms, the exercise was hard to manage as the facilitators could not be at more than one place at the same time. This also led to that the effort of putting the exercise on the PowerPoint presentation, as was decided during the follow-up meeting, did not fully pay off as the participants could not see it when they were in other rooms.

## **Exercise 2**

The second exercise was to present the ideas developed in the pairs to the rest of the group and to commonly cluster the different suggestions based on similarities in their nature. During the presentation to the large group it became evident that some pairs had not cooperated; instead they just added their own ideas on the post-it notes without talking to each other, whereas other pairs had successfully cooperated.

## **Exercise 3**

The third exercise was to value how good the suggested indoor spaces seemed to be based on the three main aspects of sustainability, ecologic, economic and social sustainability. This was done by discussing and commonly placing the suggestions in a matrix where they were graded based on if they contribute to, aggravate or do not have an impact on sustainability.

## **Exercise 4**

The fourth exercise was to value which of the suggested ideas that felt most important for the participants to have in the close surroundings to their home. To do this, the participants were given six stickers to place next to the suggestions they felt was necessary or wanted for them.

## **Follow-up meeting**

The second follow-up meeting was similar to the first. The main ideas suggested and discussed by the users was compiled and issues such as if a common laundry room or an own washing machine in the apartment is to prefer, were discussed. The group had divided opinions in what they prefer but after some discussion the group commonly came to the conclusion that a washing machine in the apartment could be optional and that some laundry rooms ought to exist in the area. Another important remark made during this workshop was that all the participants suggested that a sauna could be a positive feature in the area but none of them marked it as important or wanted during the following exercise.

The changes made after the last session in order to achieve a more efficient process was also evaluated. The idea to put the exercise on the PowerPoint did not fully pay off as the participants spread out in the building. Therefore, it was discussed that the exercises also could be put in writing on paper to hand out for the next sessions. The inspiration provided before the exercise proved to be successful as the participants had easier to come up with ideas. However, this could also be due to that they had become more used to way of working or that they felt that it was easier to discuss in pairs rather than in a larger group. In addition, some new issues were also observed during this workshop. For example, the importance of intrapersonal and interpersonal factors became visible as some pairs cooperated successfully whereas others did not. Therefore, a discussion took place regarding which participants to pair up for the coming sessions in order to achieve successful pairs. The importance of continuous feedback to the participants of the project process and their contribution was also discussed in order to keep them motivated and due to that some of them had requested it.



Figure 12 and 13 Pictures from the workshops

### Workshop 3

The third workshop had common outdoor spaces as theme and took place a month after the former session. Therefore, a longer repetition was held covering the project, the user participation and the results of the previous workshop sessions. The result from the online questionnaire containing similar questions as the workshops was also presented and the results proved to be similar to what the users had discussed during the workshops. Before the exercises began, the architect also showed some pictures of different outdoor spaces in order to inspire the participants.

#### Exercise 1

The first exercise of the third workshop was to describe for each other, in pairs, how a Saturday spent outdoors in the close surroundings to the home could look like. The pairs was also given different seasons to imagine and were told to write down their imaginary day on a provided stencil. In opposite of the last workshop where pairs were also used, this time the architect divided the participants into pairs based on the people she believed could cooperate well together. The participants were then asked to present their imaginary days to the rest of the group.

#### Exercise 2

The second exercise was to brainstorm ideas of qualities or functions of the outdoor environment in the same pairs as in the previous exercise and to put these ideas on post-it notes. The result of each pair were then presented to the large group and discussed and the post-its were put on a large paper on the wall. During the discussion of the ideas, two of the participants got into an argument as one of them felt that the other repeatedly had interrupted him and the architect had to calm them down and continue the session.

#### Exercise 3

The third exercise was to mark the ideas that felt important for the participants with stickers, as in exercise 4 during the second workshop. However, this time the participants were only given four stickers compared to six as the last time because some of the participants then expressed that they though it was too much with six stickers.

### **Follow-up meeting**

Several important remarks were made during the third workshop which was important to note. One observation made during the workshop was that the participants did not express any greater interest in having allotments for cultivation. This was important to note as the landscapers have suggested making a large part of the common outdoor space into allotments. Another interesting remark made during this workshop was that many participants expressed a wish to have smaller sitting areas protected from insight in order to make the area feel more like their own garden. In addition, it was also noted that the third workshop had been performed without any major findings of improvements that needed to be performed which indicates that the previously performed improvements had been positive for the process.

### **Workshop 4**

The fourth and last workshop session took place at Ekocentrum. The session started by a short introduction of the agenda followed by an introduction of Ekocentrum. Thereafter a guide and lecturer at Ekocentrum took over the session. He held a short lecture regarding what Ekocentrum is, how it has developed and which sustainable solutions that is incorporated in the building. After that he performed a guided a tour in the exhibition, which contained different rooms with different sustainable themes such as energy, recycling and mobility. The tour contained facts and tips on how to save both resources and money and the participants seemed very interested and asked a lot of questions. As the time for the tour was limited due to the following exercises on service, the tour had to be ended before every room of the exhibition had been visited.

#### **Exercise 1**

When the guided tour in the exhibition was finished the sessions continued with an exercise. The theme of the session was service in the area of the development and the exercise was to describe for each other in pairs how a normal day could look like and what kind of services that the participants would like to use. Before the exercise began, the architect read a story of a day in her life and what services she would like to use in order to inspire the participants. The architect thereafter divided the participants into pairs and handed out stencils for them to write down their story as in exercise 1 during workshop 3. As in the similar exercise before, the participants then got to tell the rest of the group of their imaginary day and the services they used.

#### **Summary**

After the exercise was finished, the developer's representative summarized the participation sessions and explained that this process was something that they developed in the autumn in order to support the design of the area and buildings. She further explains that they are happy with the participation group and therefore would like to continue the cooperation in the future, but they have not yet decided on when and how yet. The participants also expressed a wish of wanting to continue to be a part of the group and sadness over that this was the last session.

### **Follow-up meeting**

At the last follow up meeting the result from the former workshop was discussed and compiled. One aspect that was discussed was that many of the participants had problems coming up with ideas of services that they could benefit from. The younger participants had most trouble while the older came up with more ideas. However,

during this session there were no participant with young children present except from the architect and the developer's representative which the architect saw as negative as she believes that it is this group of people that probably could benefit the most from a large extent of available services.

It was also decided that the developer's representative would compile the material from all the workshops into a document including the user's wishes and how important the different wishes were.

#### **4.3.4 Hand-over of results**

According to the organisation of the project described in Chapter 3.1.3, the results from the participation process should be communicated to the steering committee SCA for evaluation. Further, the information should then be forwarded to the developer's steering committee which will make decisions of which ideas from the participation process to incorporate in the project and make sure that the architects or others responsible for the design receives this information. When the process of user participation began, no other method of communication and transferring of knowledge than the one stated above had been given. Therefore, the developer's representative in the participation process sent a document with the results from the sessions after each follow-up meeting, to the overall project manager who is a part of both the developer's steering committee and SCA. However, she did not receive any feedback or comments on this work and she later found out that this material had not been used.

When the question was raised to one of the project managers on how the information from the participation sessions were supposed to be transferred to the steering committee he stated that there were no method decided for this yet but that he obviously ought to arrange this. As a response to this, it was decided that all the information gained during the four user participation sessions should be presented at a meeting after the last session. However, when this meeting was held, other development areas in the project had also been added and were discussed before the participation process, giving very little time to evaluate and discuss the results of the user participation. In addition, one of the project managers could not stay during this part of the meeting and left. When finally discussing the users' wishes, the overall project manager regarded some of them as being hard to execute or too costly and complicated to incorporate in the project. Further he stated that the user do not have the skills enough to know what is possible to incorporate in the area. For example, the request of the users to have a roof over the recycling station in the area to motivate more people to recycle was regarded as impossible as there is no such solution developed yet.

#### **4.3.5 Decision making**

After the hand-over meeting, described above, another meeting has also taken place where the developer's steering committee has taken decisions regarding which aspects of the users' requests to incorporate in the project. The majority of the wishes have been handed to the architects for implementation in the project and some are further investigated by the developer. However, due to the complexity of the project and many different development areas to coordinate, this meeting was held relatively late, approximately 2 months after the last workshop session and thereafter handed to the architect. If consulting literature an early hand over to the architect is recommended.

However, in the Krokslätt project, the time of hand over has not been regarded as a problem due to the fact that the users' wishes that are going to be incorporated in the project have an overall character and can be incorporated successfully even at this time. Further, one of the facilitators also express that they have been satisfied with the first phase of user participation in the project.

#### **4.3.6 Method development**

The overall aim of the user participation within the project is to develop a method for efficient user participation within the construction industry. This is a continuous process that will be developed during the whole project and therefore not finished until late 2014. The process will be managed by the consulting architect who manages the participation process in the project. To be able to develop the method, material from the evaluations made during the follow-up meetings of the participation sessions, the users' opinions and other aspects observed in the project will be used. In addition, cooperation with universities and research will also be performed throughout the project to assist this work, which this master's thesis is a part of.

### **4.4 The users' opinions regarding the process**

After the last participation process had been performed, a questionnaire was sent to the participating users in order to collect their opinions regarding the process. The questionnaire contained both multiple choice questions and questions where the participants could give their own answer. In the multiple choice questions there were also a possibility to give another answer than the provided choices if no choice felt appropriate. The response rate of the questionnaire was 80% and the main thoughts and opinions of the users are described below. For the full answers, see Appendix 1.

The main reasons for the users to participate in the process were that they were interested in the project and saw the participation process as a chance to get more information about the project and a possibility to influence the outcome. Most of the participants had no hesitation to participate but some felt insecure of what they could expect and what was expected from them. Many of the participants also expressed that they would have wanted to get more information about both the project and sustainable living before the sessions began.

The participation sessions with workshops and exercises was regarded as a positive as the participants felt that it gave everybody the ability to actively contribute and that the results of the exercises were presented in an easy manner. Many participants also expressed that the large diversity of group members was a positive feature as many different experiences and knowledge enriched and improved the discussions. However, several of the participants felt that the aim of the exercises could have been more precise. One participant expressed: "The workshops were very good but there were some mixed messages regarding if the focus was on sustainable living or everything regarding living". Several respondents also claims that an obstacle during the workshops was that the focus of the session often were trespassed which lead to that the time for the actual theme of the sessions was reduced. The wish to have had more time for the sessions or more sessions was also highlighted. Further, many participants wished that economic aspects should have been discussed more, or ought to be discussed in coming participation sessions, as this is the main contributing factor if they decide to live in the area or not.

After participating, all of the participants had a larger or equal interest in the project compared to their attitudes before participating in the process. The majority of the respondents also expressed an interest in continuing being part of the user group in the future; only one person had some insecurities of further involvement due to the time of the sessions, in evenings. The wish to receive information regarding the project during the process was also raised.

Overall, the participants felt happy with their participation and they believed that their opinions was valuable for the project, both as confirmation to already existing knowledge but also to highlight issues that otherwise could have been missed. The feeling of being able to influence the project and aspects such as gained knowledge about sustainable living and the project was also regarded as positive outcomes of the sessions.

## 5 Discussion

*During the case study of the Krokslätt project many factors affecting the process of user participation in the construction industry were observed. Factors within the industry, the overall project process and the participation process itself all proved to have an influence on the user participation. In this chapter, the main aspects that affected the efficiency of the user participation process are highlighted and discussed.*

### 5.1 Finding users and motivating participation

One initial problem in the Krokslätt project was to find the future users of the apartments, or to select a corresponding representative selection. This issue led to problems throughout the participation process as questions were raised regarding how representative the user group was and how much effort that therefore ought to be put on realising their requirements. This problem is likely to be heavily dependent on the structure of the construction industry with long periods of time between the start and finish of a new development, where the users often needs to be incorporated years before the project is finished. This can lead to that it is hard to find the actual users that are going to move into the buildings as the future residents may not even be aware at this point of time that they are going to live in the area. This problem could also contribute to that people that are interested in living in the area becomes less motivated to participate as they are not certain yet if they actually end up living in the area.

To motivate people to participate was another problem that occurred in the Krokslätt project. According to the people that turned down the offer to participate, the time consumption of the participation was stated as the main reason for not wanting to participate. This was mainly the issue among the group of people between 31 and 50 with children and resulted in that this group was not fully represented during the participation in Krokslätt. As this group are the largest interest group to the area, this issue led to further questions regarding how representative the final user group became. As mentioned in Chapter 2.1, it is argued that an active participation is to prefer, which also requires more time consumption. However, in the Krokslätt project a questionnaire study covering similar questions as the active participation was performed at the project's web page, which showed similar answers as were obtained during the active participation. This indicates that a less time consuming alternative could be a complement to an active participation in order to include groups that are harder to incorporate in a more time consuming participation. However, if reviewing the participating users' opinions of the process, the lack of information regarding what to expect from the process and what was expected from them appeared to be a reason for hesitating to participate. This further indicates that more information also is necessary to motivate participation, especially as user participation in construction has not yet been commonly used and people might therefore not be aware of what to expect.

In the two successful housing developments including user participation described in Chapter 1.3.1, the problem of finding users and motivating participation was solved by using a thorough selection process where much information was distributed to the participants before they chose to participate or not. Both projects had access to the municipality's housing queue which gave them a list of a large number of people who wanted a new accommodation. The recruitment process of the future users was then

performed by contacting people on that list, giving them much information regarding the extent of the project and the expectation of them, before they agreed to participate. This contributed to that the people not interested or not having the required time available could be sorted out early and a selection could be made among the motivated and interested people who had all the information necessary regarding the coming process. In the projects, all the participating users later moved in to the housings and both projects were regarded as successful (Olivegren, 1975, Brahme, 2008). However it could also be argued that it is not necessary to attract the specific group of future users. By incorporating a diverse group of people in the participation process, the needs of different groups in society are more likely to be fulfilled in the project and although none of the participants might actually move in to the finished apartments, it is still likely to believe that their participation contribute to that different needs of the market are fulfilled, which is beneficial in a commercial aspect. This indicates that it might not be necessary to include the specific group of people that actually will move in to the apartment, but that any group of people that represents the market could successfully be incorporated.

In summary, the issue of which to include in the process, how to perform the selection and how to motivate participation appears to be central in order to perform an efficient user participation in construction and to ensure a representative selection. When examine literature in this field, diverse opinions and advices are given, see Chapter 2.4. This indicates that attention needs to be directed toward this issue and focus needs to be put on developing a strategy of how to perform an efficient selection of users.

## **5.2 Early involvement**

According to several authors, the involvement of users ought to be performed in the early phases of a construction project, preferably during the brief phase in order for the users to be able to influence the project (Ryd, 2008a). In the Krokslätt project, the user participation was initiated during the design phase when the main layout of the buildings had already been set, which according to the statement above is rather late. However, the aim of the participation process in the Krokslätt project was not to involve the users in the design of the apartments as such but rather in aspects that are of importance in achieving an area where it is easy to live sustainable. This aim could probably be achieved also with a later involvement than recommended above. Although, the process of transferring the knowledge and results gained during the user participation to the architects was delayed, which could have contributed to unnecessary difficulties in realizing the users' wishes. However, one of the facilitators of the participation process explains that this is not the case in the project as the solutions discussed during the participation still can be easily incorporated in the project.

Although no significant problems were found in Krokslätt related to the start time of the participation, there is still an indication that this could be a problem in other construction projects. Therefore, it is necessary to note that it is not just the participation process itself that needs to be scheduled and performed early, but also other parts of the project connected to the participation, such as transferring

knowledge, decision making and implementation. Therefore, these aspects need to be regarded as a part of the participation process and consequently be given the same priority during the early phases of the project as the participation sessions in order to achieve an efficient participation.

### **5.3 The participation sessions**

The main reaction towards the participation sessions, i.e. the workshops, in the Krokslätt project was positive, both from the users' and the facilitators' point of view. This is likely to be the result of the carefully prepared sessions where the architect's previous experience in holding and leading workshops contributed to the fact that appropriate exercises could be chosen in an easy manner. This highlights the importance of having practitioners with necessary skills in the field but also the significance of previous experience. The evaluations and improvements that were performed continuously throughout the process also contributed to the development of successful workshop sessions. This was possible to perform as there were several workshop sessions with time between, allowing follow-up meetings to take place after each workshop. These meetings gave the facilitators the opportunity to discuss and develop the process in order to make improvements and reflect upon issues such as group dynamic. This process also led to that several improvements could be made for the coming workshops which in turn led to a more efficient process.

However, several of the participants expressed that discussions outside the theme of the sessions took place which contributed to less time for the actual topic of the evening. This indicates that the discussions ought to have been managed more strictly in order to keep the focus of the sessions or that other themes could have been used in order to allow wider topics to be discussed. Otherwise, the facilitation of the workshops was regarded as positive and the facilitator had the required skills to handle conflicts and other unwanted behaviour in the group, highlighted by Smideman (1997), see Chapter 2.2.2. However, as the group only met at four occasions, negative behaviour that can occur in a group environment did not get much time to develop. If the same group continues to meet, the facilitator might face a greater challenge in managing the group to avoid unwanted aspects from occurring. Further, the spatial conditions of the premise in which the workshops were held could have been more appropriate for the sessions in terms of having several smaller workplaces in the meeting room. However, this issue was not found to influence the process significant, probably due to that rather overall topics were discussed at the sessions which could be managed without optimal environmental conditions.

The different topics discussed during the user participation sessions could also be discussed. The idea was to focus the sessions on sustainable living in the area in terms of ecological, economic and social sustainability. However, when evaluating the users' opinions, they stated that the economic aspects could have been discussed in a greater extent as this is the most significant factor for many of the users deciding if they are going to live in the area later or not. On the other hand, economical aspects might be hard to discuss early in the process when the design is not yet established. However, an important conclusion could be drawn from this; that the economic aspects are significant to the users, hence, the project ought to strive for achieving the best possible cost efficient sustainable standard rather than the best possible sustainable standard. The participation session could be a vital opportunity to examine which aspects that the users are prepared to pay for and to find or develop cheaper

solutions that still satisfy the users' needs. This further highlights the need to evaluate and perform improvements during the process in order to be able to incorporate the aspects the user find important to discuss rather than just following a pre-determined scheme.

Another difficulty mentioned in literature regarding user participation in construction is the users' knowledge regarding the construction industry and the language used by the practitioners (Svetoft, 2005). This was not observed to be an issue in the workshops in the Krokslätt project, mainly due to the fact that rather overall topics were discussed related to sustainable living rather than constructional aspects. However, in other user participation processes where the participation is performed in order to assist these constructional aspects, this is likely to be a larger challenge than in Krokslätt and if this is the case, appropriate solutions to develop a common understanding are necessary. However, it was noted that the users felt insecure in the beginning of the process but became more confident over time. This indicates that multiple participation sessions is preferable in order for the users to develop confidence and get familiar with the method.

Further, according to Svetoft (2005) it is important that the designing architects take part in the processes when the users formulate their needs due to the fact that much information, as well as the context of the requests, is lost when it is transferred between different people. This was not the case in the Krokslätt project. Instead, the two facilitators of the sessions reported the result to the steering committee SCA who then evaluated the material and further reported to the developer's steering committee which has taken decisions on what to incorporate in the project and distributed this information to the architects. This process includes several steps and it is therefore likely to assume some loss of both information and context will occur. However, it is too early to draw any conclusions at this point of time.

## **5.4 Communication and coordination in the project**

A main constraint within the Krokslätt project process was, according to one of the project managers, that there was no manager responsible for coordination of the different development areas in the project, leading to a lack of communication and coordination. The process of transferring the result from the user participation to the steering committee clearly showed this lack. As there were no specific method decided for how to transfer the gained knowledge from the user participation when the process began and due to the lack of communication between the practitioners in the project, valuable time was lost in the project. Another aspect that further contributed to problems with communication was that several of the involved practitioners in the project were part of additional development areas at the same time during the project. This led to that a large extent of information was shared between some of the practitioners through informal communication outside the scheduled meetings and that all involved practitioners did therefore not receive all necessary information. This shows how the complexity of a construction project affects the incorporation of new methods in the industry.

The problem in the Krokslätt project stated above are however highly dependent on the large complexity of the project where new ways of working have been used in

order to be able to develop new solutions. However, many construction projects are becoming more complex which highlight the need to find ways to solve these problems also in complex projects. In order to achieve a process of efficient user participation, the problems with unclear ways of communication and coordination therefore need to be eliminated. In order to succeed in this, it is important that ways of communication and coordination are developed and used and that these are clear to all the involved parties.

## **5.5 Priority in the overall project process**

A lot of factors in the overall project process indicate a lack of priority of the user participation in the project. For example, the project meetings covering the user participation were performed relatively late in the process and other parts of the project were discussed instead of the user participation at the scheduled meeting. This contributed to delays in transferring the results to the architects which in turn affect the possibility to incorporate the users' wishes into the project. However, as mentioned above, the Krokslätt project is very complex with many different development areas where prioritizing constantly has to be made. The lack of a person in charge of coordinating the different parts of the project, discussed above, could be one factor contributing to that the user participation got a lower priority than desirable. Another explanation to this could also be that it is a rather undeveloped method to use within the construction sector which leads to insecurities regarding how and when to implement it and practitioners might not have gained the required skills yet. This highlights the need to establish a common method in the industry, and to spread knowledge on how to perform efficient user participation to practitioners in the industry.

Another aspect found in literature that could lead to obstacles in the user participation process in construction is the attitudes among the practitioners, which can be negative towards incorporating the users in the process (Svetoft, 2008). The fact that the user participation received a rather low priority in the project could be an indication of this. In addition, the overall project manager showed some concerns regarding how possible it would be to incorporate the users' wishes in the project and dismissed some of the ideas because there are not yet any developed solutions for satisfying the users' wishes. However, the project aims at trying to develop new solutions to incorporate in the area that contributes to a sustainable living, and the user participation is one part of gaining input for this process. By dismissing ideas of the users without further investigation could therefore be negative for both the project process and indicate a negative attitude towards user participation. By developing a common method for user participation in the construction industry and spread this in the sector, it is likely to assume that attitudes will change and become more positive over time towards incorporating users in construction projects.

## 6 Conclusions

When evaluating the aspects that proved to be important in order to achieve an efficient user participation in construction, features in the participation process, the overall project process and the construction industry all proved to have an influence. Therefore, it can be concluded that it is not enough to perform a flawless participation process in order to succeed, there also needs to be a method of how to incorporate this process into the overall construction project and into the industry.

A main aspect that was highlighted as important for the efficiency of the user participation was the process of finding, selecting and motivating users to participate. In order to be able to perform efficient user participation, a representative selection of users needs to be identified. However, this process includes difficulties due to the fact that the users need to be identified and incorporated before the facilities are developed which makes it hard to identify representative users. Therefore, further investigation needs to be directed towards finding a method for how to identify and select a representative group of users.

The success of a user participation process is dependent on early involvement. Therefore, it is vital that the entire process of participation is scheduled and performed within the early phases of the project, including the participation, decision making and implementation. Further, the ways of communication in the project and how to incorporate the participation in the overall project process also needs to be established before the process is initiated in order to ensure an efficient process. To succeed in this, it is also important that the practitioners involved in the process are motivated and have a positive attitude towards incorporating the users. This puts requirements on enabling the practitioners to do so by allowing them the time and resources necessary.

As all participative processes include different people with diverse personalities, it is important that the process is dynamic in order for the sessions to be adapted to the unique features of the group and its individuals. It is therefore important to allow time for continuous evaluations and implementation of improvements throughout the process. Further, an active participation of users is to prefer, such as through workshops. However, due to the time consumption of this method other techniques could be used as a complement, such as questionnaire studies, to include people that otherwise would be excluded. In order to enable users and practitioners to successfully cooperate, a common language and base of knowledge needs to be created, for example through different tools such as drawings or models. Further, this also puts requirements on the leadership of the session in order to contribute to a successful cooperation.

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## Appendix 1 - The Questionnaire study

Fråga	Svarsperson 1	Svarsperson 2
1. Varför valde du att tacka ja till att vara med i brukarrådet?	För att kunna påverka projektet då jag är intresserad av en bostad i området	För att kunna påverka projektet då jag är intresserad av en bostad i området
2. Hade du någon tvekan inför att ställa upp?	Nej, jag visste direkt att detta var något för mig	Nej, jag visste direkt att detta var något för mig
3. Hur upplevde du brukarråden?	Bra, men hade varit mycket bättre om vi alla hade hållit oss till uppdraget. Kändes som om vi inte hann prata färdigt om den kvällens rubrik	Givande, bra med en mix personer med olika civilstånd.
4. Vad tyckte du fungerade bra under brukarråden och varför?	Mycket bra, då det var intressant att tänka i nya perspektiv	Bra upplägg och bra att man inte gick in i detalj på alla punkter. Det kändes väldigt fritt och man kunde lägga fram sina synpunkter även om dom inte var realistiska. Alla vara engagerade och visade intresse. Bra uppstyrt från ansvariga i projektet.
5. Vad tycker du fungerade mindre bra under brukarråden och varför?	Att deltagarna inte höll sig till kvällens rubrik, utan blandade in för mycket av allt	Lite för kort tid vid träffarna, ibland kändes det som man fick stressa på lite. Ev. skulle det varit någon träffa till. Samt en sista träffa närmare slutet/målet. Tråkigt att alla inte kunde närvara vid nästan alla tillfällen. Man vill ju ha stabil grupp där alla kan medverka då det är viktigt med alla synpunkter, ideer m.m. Gruppen skulle varit lite större eftersom det oftast blir något bortfall vid träffarna.
6. Hur tydligt tyckte du att syftet och målet med brukarmedverkan i projektet framgick?	Mycket tydligt	Eftersom information innan första träffen var knapp, så visste man inte riktigt vad som förväntades. Jag trodde först att det främsta kring projektet skulle handla om själva boendet. Men efter 2 träfferna fick jag mer kläm på det och förstod hela projektet o syftet. Så ska jag välja en punkt ovan så - TYDLIGT dock efter andra träffen. Innan första mötet kände jag NÅGOT OTYDLIG!
7. Tycker du att du hade/fick rätt förutsättningar för att kunna delta aktivt under brukarråden?	Ja	Ja
8. Hur tror du att de synpunkter som kom fram under brukarråden kommer att påverka projektet?	Jag förväntar mig att de kommer att användas, annars är det falsk marknadsföring	Jag tror redan att man har bra kunskap och vet hur människor vill ha det, men ibland behövs bekräftelse på det man redan vet utifrån. Dock kan det alltid komma upp något man inte tänkt på. Efter våra träffar känns det som man fick bekräftelse på det man redan visst.
9. Vad har du för förväntningar på uppföljning under projektets gång?	Jag ser framemot uppföljning, då en annan fördjupning behövs	Jag hoppas på en återträff i höst få att få känna delaktighet i fortsättningen i projektet, eftersom detta inte kommer att vara klart för kanske runt 2014
10. Vad har du fått ut personligen av att vara med i brukarrådet?	Positiva tankar och vikten att leva hållbart	Visa delaktighet, intresserad av området, fått mer kunskap om området. Bra att träffa nya människor och ta del av deras erfarenheter, bra med olika åldersgrupper eftersom det skall vara ett långsiktigt tänk.
11. Är du intresserad av att fortsätta vara med i brukarrådet framöver?	Ja	Ja
12. Om du inte kan tänka dig att fortsätta delta i brukarrådet vad beror detta på?	-	-
13. Om du kan tänka dig att fortsätta delta i brukarrådet vad skulle du vilja ta upp då?	Mer av värderingar utifrån hållbarhet. Hållbar ekonomi, går det att bygga hållbart till normal hyreskostnad. Ett grönt koncept, är det en livsstil?!	Hur lägenheterna kommer att se ut, planering, inte i detalj men smarta lösningar, förvaring m.m. Att ytor planeras väl och nyttjas till max. Idag byggs en del som har "konstiga" ytor som inte kan användas fullt ut!
14. Har ditt intresse för boende i Krokslätt Fabriker Söder ändrats efter att du deltagit i brukarrådet?	Jag är intresserad, om man kan påverka utformningen och val av inredning utformas av hyresgästen som skall flytta in. Alla produkter bör vid bygger klimatmärkas	Nej, mitt intresse är oförändrat
15. Har du några övriga kommentarer eller synpunkter angående brukarmedverkan i Krokslätt Fabriker Söder?	Avslutningsgåvan var positivt, men inte hållbart. Den röda tråden hållbart skulle genomsyrat gåvan	Ekonomi och möjligheter att förverkliga idéer inom ramen för att hyresgästerna har "råd" att bo i någon lag. Jag hade hellre sett att vi kunnat diskutera/prata om, vilka idéer kan förverkligas. Lite mer information om vad hållbara städer står för, hade varit bra, kanske kommer.
16. Vad tyckte du om metoden för brukarråden med workshop och olika övningar?	Mycket bra, även om det blev lite dubbla budskap, antingen spånar man fritt eller så har jag tänkt runt hållbart. Det är ingen idé att spåna på allt och inget om det inte är hållbart	Intressant. Ev. skulle vi fått lite mera information innan om hur upplägget var tänkt. Även om vi fick schema innan med träffarna om vad vi skulle diskutera skulle jag viljat ha mer djupare information som beskrev varje punkt. Delas för att kunna förbereda lite mera och tänka igenom, eftersom detta trots allt är viktiga punkter att ta del av och för att kunna påverka och ta rätt beslut för ett bra boende och bra område. Ang. övningarna så var dom bra, lite ont om tid.

Fråga	Svarsperson 3	Svarsperson 4
1. Varför valde du att tacka ja till att vara med i brukarrådet?	För att jag tycker att temat med hållbart boende är intressant	För att få mer information om projektet
2. Hade du någon tvekan inför att ställa upp?	vad som förväntades av mig	Nej, jag visste direkt att detta var något för mig
3. Hur upplevde du brukarråden?	Bra med olika åldrar på medverkarna. Det finns många olika synsätt och erfarenheter.	blandad yrkes/intresserad grupp
4. Vad tyckte du fungerade bra under brukarråden och varför?	Bra struktur och tider hölls	seriösa upplägget
5. Vad tycker du fungerade mindre bra under brukarråden och varför?	Det blev åsikter utöver "vårt" område, som tog en del av tiden.	besöksgruppen gav vardagliga ideer näring,,men var ibland ointressant
6. Hur tydligt tyckte du att syftet och målet med brukarmedverkan i projektet framgick?	Något otydligt	Tydligt
7. Tycker du att du hade/fick rätt förutsättningar för att kunna delta aktivt under brukarråden?	Nej, jag hade velat ha mer information om hållbar utveckling och hållbart boende	Nej, jag hade velat ha mer information om projektet
8. Hur tror du att de synpunkter som kom fram under brukarråden kommer att påverka projektet?	Det vill jag tro	vet ej
9. Vad har du för förväntningar på uppföljning under projektets gång?	Uppskattar att få ta del om hur det gick med våra synpunkter någ.gång .	intressant
10. Vad har du fått ut personligen av att vara med i brukarrådet?	Jag är en nyfiken natur, har aldrig varit med i brukarråd tidigare. Har alltid bott i villa och för mig är det nytt med gemensamma intressen.	intressant,väntar på effekt
11. Är du intresserad av att fortsätta vara med i brukarrådet framöver?	Skulle tro det	Ja
12. Om du inte kan tänka dig att fortsätta delta i brukarrådet vad beror detta på?	-	-
13. Om du kan tänka dig att fortsätta delta i brukarrådet vad skulle du vilja ta upp då?	-	valfrihet,ekonomi,socialt byggande
14. Har ditt intresse för boende i Krokslätt Fabrik Söder ändrats efter att du deltagit i brukarrådet?	Nej, mitt intresse är oförändrat	Ja, jag har blivit mer intresserad
15. Har du några övriga kommentarer eller synpunkter angående brukarmedverkan i Krokslätt Fabrik Söder?	Tack för presentkortet, god mat och trevligt bemötande .	att ingående pröva några ideer i detalj,,som visn.ex
16. Vad tyckte du om metoden för brukarråden med workshop och olika övningar?	Bra med gruppövningar och presentation på stora papper, det blev lättåskådligt	något lamt

Fråga	Svarsperson 5	Svarsperson 6
1. Varför valde du att tacka ja till att vara med i brukarrådet?	För att kunna påverka projektet då jag är intresserad av en bostad i området	För att kunna påverka projektet då jag är intresserad av en bostad i området
2. Hade du någon tvekan inför att ställa upp?	Ja, på grund av att jag inte visste vad jag kunde förvänta mig	Ja, på grund av tidpunkten för brukarråden (kvällstid, vardagar)
3. Hur upplevde du brukarråden?	Trevliga.	Informativa och kreativa
4. Vad tyckte du fungerade bra under brukarråden och varför?	Tiderna -det hans med ganska mycket på kort tid.	Upplägget med olika teman att diskutera. man kände att ledarna lyssnade på våra synpunkter.
5. Vad tycker du fungerade mindre bra under brukarråden och varför?	Möterna kunde varit mer styrda. Det var kanske lite mkt "svammel" på nått möte	vet ej
6. Hur tydligt tyckte du att syftet och målet med brukarmedverkan i projektet framgick?	Tydligt	Tydligt
7. Tycker du att du hade/fick rätt förutsättningar för att kunna delta aktivt under brukarråden?	Ja	Nej, jag hade velat ha mer information om hållbar utveckling och hållbart boende
8. Hur tror du att de synpunkter som kom fram under brukarråden kommer att påverka projektet?	Vet ej	Förhoppningsvis kommer våra synpunkter fram. Det var väl syftet... Även om man förstår att allt inte går att genomföra pga ekonomi etc.
9. Vad har du för förväntningar på uppföljning under projektets gång?	Jag hoppas gruppen kan fortsätta arbeta ihop och stödja/hjälpa projektet.	Vill gärna veta hur det fortskrider och hur man har tagit tillvara våra synpunkter.
10. Vad har du fått ut personligen av att vara med i brukarrådet?	Trevliga kvällar!	Fått veta mer om projektet, eftersom jag är intresserad av att bo i området.
11. Är du intresserad av att fortsätta vara med i brukarrådet framöver?	Ja	Kanske/Osäker
12. Om du inte kan tänka dig att fortsätta delta i brukarrådet vad beror detta på?	-	Tidpunkten
13. Om du kan tänka dig att fortsätta delta i brukarrådet vad skulle du vilja ta upp då?	Att skapa något i området som gör att man kan tjäna pengar, med miljöinriktning	vet ej
14. Har ditt intresse för boende i Krokslätt Fabriker Söder ändrats efter att du deltagit i brukarrådet?	Ja, jag har blivit mer intresserad	Nej, mitt intresse är oförändrat
15. Har du några övriga kommentarer eller synpunkter angående brukarmedverkan i Krokslätt Fabriker Söder?	Tack för att jag fick vara med!	-
16. Vad tyckte du om metoden för brukarråden med workshop och olika övningar?	Bra, men kunde haft tydligare mål	Bra upplägg

Fråga	Svarsperson 7	Svarsperson 8
1. Varför valde du att tacka ja till att vara med i brukarrådet?	För att kunna påverka projektet då jag är intresserad av en bostad i området	För att kunna påverka projektet då jag är intresserad av en bostad i området
2. Hade du någon tvekan inför att ställa upp?	Nej, jag visste direkt att detta var något för mig	Nej, jag visste direkt att detta var något för mig
3. Hur upplevde du brukarråden?	mycket givande	Mycket bra & trevligt
4. Vad tyckte du fungerade bra under brukarråden och varför?	profetionellt upplagt	Alla fick komma till tals
5. Vad tycker du fungerade mindre bra under brukarråden och varför?	vissa personer låste sig fast på vissa teman	Inget
6. Hur tydligt tyckte du att syftet och målet med brukarmedverkan i projektet framgick?	Tydligt	Tydligt
7. Tycker du att du hade/fick rätt förutsättningar för att kunna delta aktivt under brukarråden?	Ja	Ja
8. Hur tror du att de synpunkter som kom fram under brukarråden kommer att påverka projektet?	bör påverka byggnationen	Vet ej men det kommer med all säkerhet räknas, hoppas jag!
9. Vad har du för förväntningar på uppföljning under projektets gång?	ja	Vi får ju info fortlöpande hela tiden när det är något nytt och det är jättebra
10. Vad har du fått ut personligen av att vara med i brukarrådet?	mera ideer om folks önskemål	Ny erfarenhet då jag aldrig varit med om det tidigare
11. Är du intresserad av att fortsätta vara med i brukarrådet framöver?	Ja	Kanske/Osäker
12. Om du inte kan tänka dig att fortsätta delta i brukarrådet vad beror detta på?	-	-
13. Om du kan tänka dig att fortsätta delta i brukarrådet vad skulle du vilja ta upp då?	ekonomi under bygget	-
14. Har ditt intresse för boende i Kroksläotts Fabriker Söder ändrats efter att du deltagit i brukarrådet?	Nej, mitt intresse är oförändrat	Nej, mitt intresse är oförändrat
15. Har du några övriga kommentarer eller synpunkter angående brukarmedverkan i Krokslätt Fabriker Söder?	ägarrätt för de som vill	-
16. Vad tyckte du om metoden för brukarråden med workshop och olika övningar?	givande	Jättebra